



2024-2025 Undergraduate Catalog

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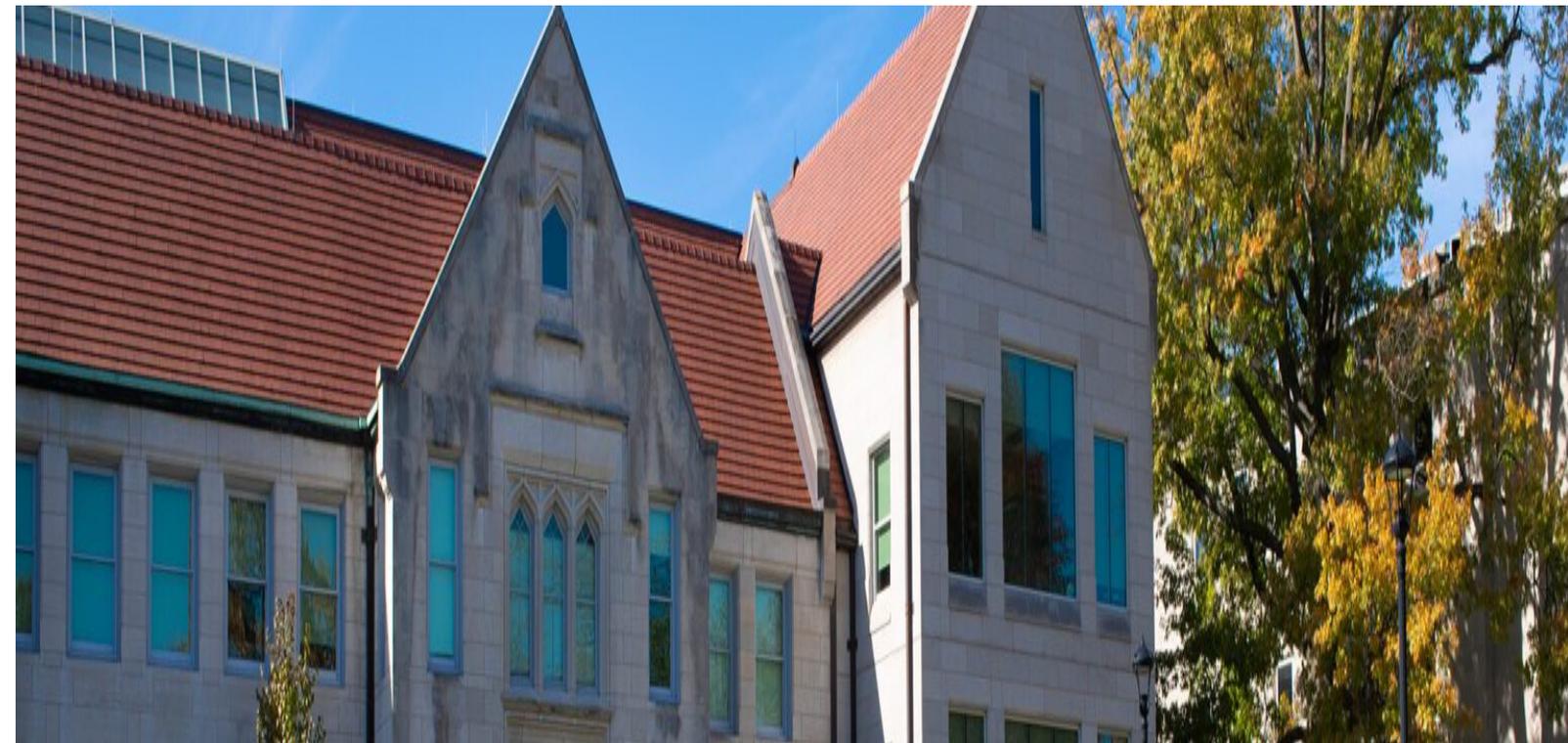
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Bradley University



Bradley University

Bradley University is a top-ranked, private university in Peoria, Ill. Bradley was founded in 1897 as Bradley Polytechnic Institute by Lydia Moss Bradley as a memorial to her children and husband, Tobias. It became a four-year college offering bachelor's degrees in 1920 and a full university offering graduate programs in 1946, at which time its name was changed to Bradley University. Bradley is accredited by The Higher Learning Commission. With approximately 5,400 undergraduate and graduate students, Bradley is home to the boundary breakers, the new thinkers, to a symphony of unique voices, stories and people who change the world. Bradley University doesn't mass produce professionals; it provides students the opportunity to grow into their chosen life path and purpose.

Through the five colleges — College of Liberal Arts and Sciences, College of Education and Health Sciences, Caterpillar College of Engineering and Technology, Foster College of Business and Slane College of Communications and Fine Arts — and Graduate Education, there are more than 100 majors and academic programs, including programs in entrepreneurship, game design, animation, nursing, hospitality leadership, internal auditing, music and entertainment industry, sports communication and physical therapy. Graduate Education offers 38 graduate, doctorate and certificate programs, including eight online advanced-degree programs in nursing, two in counseling, and one in education.

The average class size is 21 students, and the student-to-faculty ratio is 11:1. Bradley has nearly 350 full-time faculty members, who are both active researchers and committed teachers, providing personalized attention in learning and academic advising. All courses are taught by professors, not graduate assistants, and team projects and collaboration are emphasized in every area of university life. In fact, the Wall Street Journal/Times Higher Education continues to recognize Bradley among the top 15 schools in the U.S. for student engagement. In 2017, Bradley was ranked eighth in the nation.

There are abundant opportunities outside of the classroom. Students can develop leadership skills in more than 200 student organizations, including more than 60 dedicated to leadership and community service. Bradley is home to the nation's most successful speech program, as well as multiple fraternities and sororities, NCAA Division I athletics, club and intramural sports, study abroad opportunities and the Lewis J. Burger Center for Student Leadership and Public Service.

Our Facilities

The \$100M-plus Business and Engineering Convergence Center opened in 2019. The 270,000 square-foot facility unites the Caterpillar College of Engineering and Technology and the Foster College of Business under one roof in a visionary facility. This complex encourages innovative ways of thinking, teaching and learning to create opportunities for students and faculty to work across curriculums and participate in project-based learning activities. This development creates a new front door to the campus spurring more partnerships and community involvement while enhancing the Main Street corridor and surrounding neighborhood.

- Bradley's second-oldest building, Westlake Hall, was transformed into a modern, LEED Gold certified learning facility, equipped with the latest technologies. The renovation expanded the building to six times its former size, from 13,500 to 85,000 square feet.

- The Markin Family Student Recreation Center offers a swimming pool, exercise facilities and practice space for intramural sports.
- The Renaissance Coliseum is a 165,200-square foot, multi-use athletic facility. It is the primary sporting venue for women's basketball and volleyball, as well as select men's basketball events. The Coliseum includes the Mitchell "J.J." Anderson Court practice facility, an athletics museum, the university's athletics hall of fame, strength and conditioning and athletic training facilities, two student-athlete academic centers, 12 locker rooms for student-athletes and athletic department offices.
- Dingeldine Music Hall has been home to Bradley concerts since 1983. It houses the 440-seat Peters Recital Hall.

Built as an architectural companion to iconic Bradley Hall, the Hayden-Clark Alumni Center is a nod to Bradley's history. Visitors can explore the university's past through displays and interactive presentations in the first floor Shaheen Hall of Pride. Residence Halls come to life in miniature models of rooms from past decades, while digital galleries highlight campus life and artifacts honor university founder Lydia Moss Bradley. The third floor is home to the Peplow Pavilion, which provides a 300-seat upscale setting for alumni reunions, wedding receptions and other special events. It looks westward over the Alumni Quad and the Harden Circle of Pride.

Bradley University provides a comfortable setting for living and learning. A beautiful 85-acre campus contains both historic buildings and state-of-the-art learning centers, and is just one mile from downtown Peoria. Surrounded by a historic residential district, the campus has restaurants and shops within walking distance as well as a wide range of campus dining options.

Graduates of Bradley do exceptionally well in their chosen careers and advanced studies. The five-year average for graduates who started a career, graduate school, or other postgraduate experience within six months of graduation is 93 percent.

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Our Vision and Mission



Our Vision and Mission

Vision

We deliver an engaging education that transcends traditional boundaries through scholarly and practical experiences in a diverse, caring, and inclusive environment to prepare purpose-driven leaders who achieve success and build a better world. Bradley University: An investment in the life you want.

Mission

Bradley University empowers students for immediate and sustained success in their personal and professional endeavors by combining professional preparation, liberal arts and sciences, and co-curricular experiences. Alongside our dedication to students, we embrace the generation, application, and interpretation of knowledge.

Core Values

At the heart of Bradley University is a community built upon the valued relationships we find in each other as students, staff, faculty, administrators and alumni. At the core of these relationships are the values of student success, knowledge and discovery, inclusiveness and connectivity, and excellence.

- **Student Success:** We are a community that ensures student access to an individualized learning experience. This is characterized by broad opportunities for students to marry their passions and skills, by innovative academic programming, and by an exceptional level of engagement between students, staff and faculty, such that all students acquire the skills and dispositions essential to purposeful and productive living.
- **Knowledge and Discovery:** We are a community that prioritizes academic excellence by nurturing critical inquiry, research, creativity and technical skills development. We work collaboratively to engage learners in high-impact practices, in scholarship, and in leadership development opportunities in order to foster lives of purpose and advance a better world.
- **Inclusiveness and Connectivity:** We are a community that strives to contribute meaningfully to understanding and resolving the problems around us. By embracing servant leadership, purposeful civil discourse, and an inclusive identity whereby we understand that our differences are our strengths, we lend our passions and knowledge to build valued relationships with local, regional and global partners.
- **Excellence:** We are a dynamic community committed to the continuous pursuit of excellence. As individuals, as units and across campus, we welcome mutual accountability and are strengthened by our shared, collaborative efforts to ensure that we are each exceptional and passionate stewards of Bradley University.

Nondiscrimination Notice

Bradley University prohibits sex discrimination in all programs and activities. Concerns or questions may be reported to the Title IX Coordinator. <https://www.bradley.edu/legal/nondiscrimination/>

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Founding of Bradley



Founding of Bradley

What had once been a large stretch of prairie-land in central Illinois became a seat of higher learning because of the remarkable courage, strength and determination of one woman – Lydia Moss Bradley.

After all her hopes, ambitions and dreams for her six children ended in their untimely deaths, Lydia and her husband, Tobias, discussed how they might use their wealth as a fitting memorial to their children. Their first idea was to establish an orphanage.

Sadly, Tobias died in May 1867 before the couple could realize their dream. Alone, Lydia devoted herself unreservedly to achieving their goal. After traveling to various institutions, she decided instead of an orphanage to found a school where young people could learn practical skills to prepare them for living in the modern world. In 1892, Lydia purchased a controlling interest in Parsons Horological School in LaPorte, Ind., the first school for watchmakers in America, and moved it to Peoria. She specified in her will how the school should expand after her death to include a classical education as well as industrial arts and home economics: "...it being the first object of this Institution to furnish its students with the means of living an independent, industrious and useful life by the aid of a practical knowledge of the useful arts and sciences."

Four years later, Dr. William Rainey Harper, president of the University of Chicago, convinced Lydia to move ahead with her plans and establish the school during her lifetime. Bradley Polytechnic Institute received its charter Nov. 13, 1896, at which time Lydia provided 17 ½ acres of land, funds for two campus buildings, laboratory equipment, library books and annual operating expenses.

Construction moved quickly on Bradley Hall and Horology Hall (later renamed Westlake). Fourteen faculty and 150 students began classes Oct. 4, 1897 — with 500 workers still hammering away. (The Horological Department added another eight faculty and 70 students.) The formal dedication of Bradley Polytechnic Institute took place Oct. 8, 1897. Less than a year later, the institute graduated its first student, Corinne Unland.

By 1899, there were 350 pupils in the School of Arts and Sciences at Bradley, almost equally divided between men and women. Classes included biology, chemistry, food work, sewing, English, German, French, Latin, Greek, history, manual arts, drawing, mathematics and physics. Pleased with its progress, Lydia transferred the rest of her estate to the school, including nearly 1,000 different pieces of property, while reserving their use and profits during her lifetime. At Founder's Day in 1906, she announced an additional gift to build Hewitt Gymnasium, now Hartmann Center for the Performing Arts.

Lydia died Jan. 16, 1908, at the age of 91. Her original vision continued to grow to meet the educational needs of the region. Bradley became a four-year college offering bachelor's degrees in 1920 and a full university offering graduate programs in 1946, when it was renamed Bradley University.

Today, Bradley alumni total more than 70,000 worldwide. Prominent alumni include:

- **Ray LaHood '71**, former U.S. Secretary of Transportation, senior policy advisor for DLA Piper
- **General John Shalikashvili '58***, retired chairman of the Joint Chiefs of Staff
- **Congressman Robert H. Michel '48***, retired congressman and longest-serving Republican leader of the U.S. House of Representatives
- **Lillian Glass '74**, noted speech pathologist and speech communication author and speaker
- **René C. Byer '80**, winner of the Pulitzer Prize, senior photographer for the *Sacramento Bee*
- **David Horowitz '59**, consumer advocate
- **Tana Utley '86**, vice president of large power systems, Caterpillar Inc.
- **Kary McIlwain '81**, chief marketing officer, Ann and Robert H. Lurie Children's Hospital of Chicago
- **Calvin Butler '91**, chief executive officer, Baltimore Gas & Electric
- **Tami Lane '96**, Academy Award-winning prosthetic make-up artist
- The Honorable **Joe Billy McDade, '59, '60**, United States District Court Federal Judge
- **Richard Teerlink '61**, retired chairman of Harley-Davidson, Inc.
- **James Weinstein '72**, president and CEO of Dartmouth Hitchcock Hospital
- **Neil Flynn '82**, actor best known for his roles on "Scrubs" and "The Middle."
- **Major Robert H. Lawrence Jr. '56***, the first African American astronaut

* deceased

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Academic Calendar



Academic Calendar

The academic calendars are subject to revision. Students should refer to the most recent Schedule of Classes for important dates each semester.

2024–2025

Fall Semester 2024

August 12, Monday – Reporting date for faculty
August 17, Saturday – Residence halls open
August 21, Wednesday – Fall Semester & Fall Session 1 (1st half) classes begin
October 4, Friday – Fall Session 1 (1st half) classes end
October 5, Saturday – Fall Recess begins
October 9, Wednesday – Fall Semester classes resume
October 9, Wednesday – Fall Session 1 (1st half) grades due by 3 PM
October 14, Monday – Fall Session 2 (2nd half) classes begin
November 27, Wednesday – Thanksgiving Recess begins (no classes)
December 2, Monday – Fall Semester and Fall Session 2 (2nd half) classes resume
December 3, Tuesday – Fall Semester & Fall Session 2 (2nd half) classes end
December 4, Wednesday – Study Day
December 5, Thursday – Fall Semester Final Examinations begin
December 11, Wednesday – Fall Semester Final Examinations end
December 14, Saturday – Commencement (grades due by 10 AM). Fall term ends

January Interim 2025

January 2, Thursday – First day of classes (*Classes meet Monday – Saturday*)
January 20, Monday – January Interim ends
January 21, Tuesday – Grades due by 3 PM

Spring Semester 2025

January 13, Monday – Reporting date for new faculty
January 19, Sunday – Residence halls open

January 22, Wednesday – Spring Semester & Spring Session 1 (1st half) classes begin
March 11, Tuesday – Spring Session 1 (1st half) classes end
March 14, Friday – Spring Session 1 (1st half) grades due by 3 PM
March 15, Saturday – Spring Recess begins
March 24, Monday – Spring Semester classes resume and Spring Session 2 (2nd half) classes begin
May 6, Tuesday – Spring Semester and Spring Session 2 (2nd half) classes end
May 7, Wednesday – Study Day
May 8, Thursday – Spring Semester Final Examinations begin
May 14, Wednesday – Spring Semester Final Examinations end
May 17, Saturday Commencement (grades due by 10 AM). Spring term ends

May Interim 2025

May 19, Monday – First day of classes
May 26, Monday – *No classes on Memorial Day*
June 6, Friday – May Interim ends
June 9, Monday – Grades due by 3 PM

Summer Semester 2025

May 21, Wednesday – Summer Semester & Summer Session 1 (1st half) classes begin
May 26, Monday – No classes on Memorial Day Holiday
July 2, Wednesday – Summer Session 1 (1st half) classes end
July 3, Thursday – Summer Session 1 (1st half) grades due by 3 PM
July 4, Friday – No classes on Fourth of July Holiday
July 9, Wednesday – Summer Session 2 (2nd half) classes begin
August 20, Wednesday – Summer Semester & Summer Session 2 (2nd half) classes end
August 22, Friday – Summer Semester & Summer Session 2 (2nd half) grades due by 3 PM. Summer term ends

2025–2026

Fall Semester 2025

August 18, Monday – Reporting date for faculty
August 23, Saturday – Residence halls open
August 27, Wednesday – Fall Semester & Fall Session 1 (1st half) classes begin
October 10, Friday – Fall Session 1 (1st half) classes end
October 11, Saturday – Fall Recess begins
October 15, Wednesday – Fall Semester classes resume
October 15, Wednesday – Fall Session 1 (1st half) grades due by 3 PM
October 20, Monday – Fall Session 2 (2nd half) classes begin
November 26, Wednesday – Thanksgiving Recess begins (no classes)
December 1, Monday – Fall Semester and Fall Session 2 (2nd half) classes resume
December 9, Tuesday – Fall Semester & Fall Session 2 (2nd half) classes end
December 10, Wednesday – Study Day
December 11, Thursday – Fall Semester Final Examinations begin
December 17, Wednesday – Fall Semester Final Examinations end
December 20, Saturday – Commencement (grades due by 10 AM). Fall term ends

January Interim 2026

January 2, Friday – First day of classes (*Classes meet Monday – Saturday*)
January 19, Monday – January Interim ends
January 20, Tuesday – Grades due by 3 PM

Spring Semester 2026

January 12, Monday – Reporting date for new faculty
January 18, Sunday – Residence halls open
January 21, Wednesday – Spring Semester & Spring Session 1 (1st half) classes begin
March 10, Tuesday – Spring Session 1 (1st half) classes end

March 13, Friday – Spring Session 1 (1st half) grades due by 3 PM
March 14, Saturday – Spring Recess begins
March 23, Monday – Spring Semester classes resume and Spring Session 2 (2nd half) classes begin
May 5, Tuesday – Spring Semester and Spring Session 2 (2nd half) classes end
May 6, Wednesday – Study Day
May 7, Thursday – Spring Semester Final Examinations begin
May 13, Wednesday – Spring Semester Final Examinations end
May 16, Saturday Commencement (grades due by 10 AM). Spring term ends

May Interim 2026

May 18, Monday – First day of classes
May 25, Monday – *No classes on Memorial Day*
June 5, Friday – May Interim ends
June 8, Monday – Grades due by 3 PM

Summer Semester 2026

May 20, Wednesday – Summer Semester & Summer Session 1 (1st half) classes begin
May 25, Monday – *No classes on Memorial Day Holiday*
July 1, Wednesday – Summer Session 1 (1st half) classes end
July 2, Thursday – Summer Session 1 (1st half) grades due by 3 PM
July 3, Friday – *No classes on Fourth of July Holiday (observed)*
July 7, Tuesday – Summer Session 1 (1st half) grades posted
July 8, Wednesday – Summer Session 2 (2nd half) classes begin
August 19, Wednesday – Summer Semester & Summer Session 2 (2nd half) classes end
August 21, Friday – Summer Semester & Summer Session 2 (2nd half) grades due by 3 PM. Summer term ends

2026–2027

Fall Semester 2026

August 17, Monday – Reporting date for faculty
August 22, Saturday – Residence halls open
August 26, Wednesday – Fall Semester & Fall Session 1 (1st half) classes begin
October 9, Friday – Fall Session 1 (1st half) classes end
October 10, Saturday – Fall Recess begins
October 14, Wednesday – Fall Semester classes resume
October 14, Wednesday – Fall Session 1 (1st half) grades due by 3 PM
October 19, Monday – Fall Session 2 (2nd half) classes begin
November 25, Wednesday – Thanksgiving Recess begins (no classes)
November 30, Monday – Fall Semester and Fall Session 2 (2nd half) classes resume
December 8, Tuesday – Fall Semester and Fall Session 2 (2nd half) classes end
December 9, Wednesday – Study Day
December 10, Thursday – Fall Semester Final Examinations begin
December 16, Wednesday – Fall Semester Final Examinations end
December 19, Saturday – Commencement (grades due by 10 am). Fall term ends

January Interim 2027

January 4, Monday – First day of classes (*Classes meet Monday – Saturday*)
January 18, Monday – January Interim ends
January 19, Tuesday – Grades due by 3 PM

Spring Semester 2027

January 11, Monday – Reporting date for new faculty
January 17, Sunday – Residence halls open
January 20, Wednesday – Spring Semester & Spring Session 1 (1st half) classes begin
March 9, Tuesday – Spring Session 1 (1st half) classes end
March 12, Friday – Spring Session 1 (1st half) grades due by 3 PM
March 13, Saturday – Spring Recess begins
March 22, Monday – Spring Semester classes resume & Spring Session 2 (2nd half) classes begin

May 4, Tuesday – Spring Semester and Spring Session 2 (2nd half) classes end
May 5, Wednesday – Study Day
May 6, Thursday – Spring Semester Final Examinations begin
May 12, Wednesday – Spring Semester Final Examinations end
May 15, Saturday – Commencement (grades due by 10 AM). Spring term ends

May Interim 2027

May 17, Monday – First day of classes
May 31, Monday – *No classes on Memorial Day*
June 4, Friday – May Interim ends
June 7, Monday – Grades due by 3 PM

Summer Semester 2027

May 19, Wednesday – Summer Semester & Summer Session 1 (1st half) classes begin
May 31, Monday – *No classes on Memorial Day Holiday*
June 30, Wednesday – Summer Session 1 (1st half) classes end
July 2, Friday – Summer Session 1 (1st half) grades due by 3 PM
July 5, Monday – *No classes on Fourth of July Holiday (observed)*
July 7, Wednesday – Summer Session 2 (2nd half) classes begin
August 18, Wednesday – Summer Semester & Summer Session 2 (2nd half) classes end
August 20, Friday – Summer Semester & Summer Session 2 (2nd half) grades due 3 PM. Summer term ends

2027-2028

Fall Semester 2027

August 16, Monday – Reporting date for faculty
August 21, Saturday – Residence halls open
August 25, Wednesday – Fall Semester & Fall Session 1 (1st half) classes begin
October 8, Friday – Fall Session 1 (1st half) classes end
October 9, Saturday – Fall Recess begins
October 13, Wednesday – Fall Semester classes resume
October 13, Wednesday – Fall Session 1 (1st half) grades due by 3 PM
October 18, Monday – Fall Session 2 (2nd half) classes begin
November 24, Wednesday – Thanksgiving Recess begins (no classes)
November 29, Monday – Fall Semester and Fall Session 2 (2nd half) classes resume
December 7, Tuesday – Fall Semester and Fall Session 2 (2nd half) classes end
December 8, Wednesday – Study Day
December 9, Thursday – Fall Semester Final Examinations begin
December 15, Wednesday – Fall Semester Final Examinations end
December 18, Saturday – Commencement (grades due by 10 am). Fall term ends

January Interim 2028

January 3, Monday – First day of classes (*Classes meet Monday – Saturday*)
January 17, Monday – January Interim ends
January 18, Tuesday – Grades due by 3 PM

Spring Semester 2028

January 17, Monday – Reporting date for new faculty
January 16, Sunday – Residence halls open
January 19, Wednesday – Spring Semester & Spring Session 1 (1st half) classes begin
March 7, Tuesday – Spring Session 1 (1st half) classes end
March 10, Friday – Spring Session 1 (1st half) grades due by 3 PM
March 11, Saturday – Spring Recess begins
March 20, Monday – Spring Semester classes resume & Spring Session 2 (2nd half) classes begin
May 2, Tuesday – Spring Semester and Spring Session 2 (2nd half) classes end
May 3, Wednesday – Study Day

May 4, Thursday – Spring Semester Final Examinations begin
May 10, Wednesday – Spring Semester Final Examinations end
May 13, Saturday – Commencement. Grades due by 10 AM. Spring term ends

May Interim 2028

May 15, Monday – First day of classes
May 29, Monday – *No classes on Memorial Day*
June 2, Friday – May Interim ends
June 5, Monday – Grades due by 3 PM

Summer Semester 2028

May 17, Wednesday – Summer Semester & Summer Session 1 (1st half) classes begin
May 29, Monday – *No classes on Memorial Day Holiday*
June 28, Wednesday – Summer Session 1 (1st half) classes end
June 30, Friday – Summer Session 1 (1st half) grades due by 3 PM
July 4, Tuesday – *No classes on Fourth of July Holiday (observed)*
July 5, Wednesday – Summer Session 2 (2nd half) classes begin
August 16, Wednesday – Summer Semester & Summer Session 2 (2nd half) classes end
August 18, Friday – Summer Semester & Summer Session 2 (2nd half) grades due by 3 PM. Summer term ends

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Fields of Study



Fields of Study

Degrees Offered

- B.A.—Bachelor of Arts
- B.S.—Bachelor of Science
- B.F.A.—Bachelor of Fine Arts
- B.M.—Bachelor of Music
- B.S.C.—Bachelor of Science in Construction
- B.S.C.E.—Bachelor of Science in Civil Engineering
- B.S.E.E.—Bachelor of Science in Electrical Engineering
- B.S.I.E.—Bachelor of Science in Industrial Engineering
- B.S.M.E.—Bachelor of Science in Mechanical Engineering
- B.S.MF.E.—Bachelor of Science in Manufacturing Engineering
- B.S.MF.E.T.—Bachelor of Science in Manufacturing Engineering Technology
- B.S.N.—Bachelor of Science in Nursing
- D.N.P.—Doctor of Nursing Practice
- Dr.O.T.—Doctor of Occupational Therapy
- D.P.T.—Doctor of Physical Therapy
- ED.D — Doctor of Education
- M.A.—Master of Arts
- M.S.—Master of Science
- M.B.A.—Master of Business Administration
- M.F.A.—Master of Fine Arts
- M.S.A.—Master of Science in Accounting
- M.S.C.E.—Master of Science in Civil Engineering
- M.S.E.E.—Master of Science in Electrical Engineering
- M.S.I.E.—Master of Science in Industrial Engineering
- M.S.M.E.—Master of Science in Mechanical Engineering
- M.S.MF.E.—Master of Science in Manufacturing Engineering
- M.S.N.—Master of Science in Nursing
- O.T.D.—Doctor of Occupational Therapy
- P.B.C. — Post Baccalaureate Certificate
- P.M.A.—Professional Master of Arts
- P.M.C.—Post Master's Certificate

Graduate Education Interdisciplinary Degrees

- Professional Master of Arts in STEM Education P.M.A.
 - Elementary Math, Science, and Technology Education
 - Environmental Education

Foster College Of Business

- Accounting B.A., B.S., M.S.A.
- Actuarial Science – Business B.A., B.S.
- Business Analytics B.A., B.S.
- Corporate Finance B.A., B.S.
- Cybersecurity B.A., B.S.
- Economics B.A., B.S.
- Entrepreneurship B.A., B.S.
- Finance B.A., B.S.
- International Business B.A., B.S.
- Management and Leadership B.A., B.S.
 - Human Resource Management
 - Legal Studies in Business
- Management Information Systems B.A., B.S.
 - Business Analytics
 - Cybersecurity
- Marketing B.A., B.S.
 - Global Supply Chain Management
 - Professional Selling
 - Social Media Marketing
- Personal Financial Planning B.A., B.S.
- Business Administration M.B.A.
 - Management
 - Custom Concentration
- Executive Master of Business Administration M.B.A.

Slane College Of Communications And Fine Arts

Communications and Fine Arts

- General Studies, B.A., B.S.

Art

- Art History B.A.
- Studio Art B.A., B.S., B.F.A., M.A., M.F.A.
 - Ceramics
 - Drawing (B.A., B.S., B.F.A. only)
 - Drawing/Illustration (M.A., M.F.A. only)
 - Graphic Design (B.A., B.S., B.F.A. only)
 - Interdisciplinary Studies (M.A., M.F.A. only)
 - Painting
 - Photography
 - Printmaking
 - Sculpture
 - Visual Communication and Design (M.A., M.F.A. only)
 - Art Education (B.A., B.S., B.F.A. only)

Communication

- Advertising and Public Relations B.A., B.S.
- Journalism B.A., B.S.
- Organizational Communication B.A., B.S.
- Sports Communication B.A., B.S.
- Television Arts B.A., B.S.

Interactive Media

- Animation and Game Design B.A., B.S.
- Game Art B.A., B.S.
- Interactive Media B.A., B.S.
- User Experience Design, B.A., B.S.

Music

- Composition B.M.
- Music B.A., B.S.
- Music (Music Business) B.A., B.S.
- Music and Entertainment Industry, B.A., B.S.
- Music for Video Games B.A., B.S.
- Music Education B.M.
 - Instrumental
 - Piano
 - Vocal
- Performance B.M.
 - Piano
 - Piano Accompanying
 - Voice
 - Orchestra/Band Instruments

Theatre

- Theatre Arts B.A., B.S.
 - Performance
 - Production

College Of Education And Health Sciences

- Apparel Production and Merchandising B.A., B.S.
- Child Life Science B.A., B.S.
- Counseling M.A.
 - Clinical Mental Health Counseling
 - School Counseling
- Doctor of Occupational Therapy O.T.D., Dr.O.T.
- Early Childhood Education with ESL Endorsement B.A., B.S.
- Educational Leadership M.S.
 - Higher Education Administration and Leadership (H.E.A.L.)
 - Pre K-12 Education Administration and Leadership (P.E.A.L.)
- Elementary Education with ESL Endorsement B.A., B.S.
- Family Life Sciences B.A., B.S.
- Family Nurse Practitioner (FNP) M.S.N., D.N.P.
- French Education B.A., B.S.
- Health Science B.S.
- High School Education State License
- High School Education B.A., B.S.
- Hospitality Management, B.A., B.S.
- K-12 Art Education State License
- K-12 Music Education State License
- Leadership in Educational Administration, M.A.
- Learning Behavior Specialist I with ESL Endorsement B.A., B.S.
- Middle School Education with ESL Endorsement B.A., B.S.
- Nonprofit Leadership M.A., P.M.C.
- Nursing B.S.N.
- Nursing Administration M.S.N.
- Nursing Education M.S.N.
- Nursing Leadership D.N.P.
- Nutrition and Dietetics B.A., B.S.
- Physical Therapy D.P.T.
- Public Health Education B.A., B.S.

- Spanish Education B.A., B.S.

Caterpillar College Of Engineering And Technology

- Civil Engineering B.S.C.E., M.S.C.E.
- Construction B.S.C.
- Electrical Engineering B.S.E.E., M.S.E.E.
 - Computer Option (B.S.E.E. only)
 - Robotics and Controls (B.S.E.E. only)
- Industrial Engineering B.S.I.E., M.S.I.E.
 - Engineering Management (B.S.I.E. only)
 - Logistics and Supply Chain Engineering (B.S.I.E. only)
 - Supply Chain Analytics (B.S.I.E. only)
- Manufacturing Engineering B.S.MF.E., M.S.MF.E.
 - Lean Manufacturing (B.S.MF.E. only)
 - Process Engineering (B.S.MF.E. only)
- Manufacturing Engineering Technology B.S.Mf.E.T.
- Mechanical Engineering B.S.M.E., M.S.M.E.
 - Biomedical Engineering (B.S.M.E. only)
 - Energy (B.S.M.E. only)
 - Chemical Engineering (B.S.M.E. only)
 - Robotics and Autonomous Vehicles (B.S.M.E. only)

College Of Liberal Arts And Sciences

- Actuarial Science – Mathematics B.A., B.S.
- Biochemistry B.A., B.S., M.S.
- Biology B.A., B.S., M.S.
 - Cell and Molecular
 - Ecology and Evolutionary
 - Medical Technology
- Biology Education B.A., B.S.
- Biomedical Science B.A., B.S.
 - Biomedical Research and Development
 - Pre-Medicine
 - Veterinary Science
- Chemistry
 - Chemistry – American Chemical Society Certified
 - Chemistry – Pre-Pharmacy
 - Chemistry – Pre-Health Professions
 - Chemistry – High School Teacher Education
- Chemistry – Chemical Engineering B.A., B.S., M.S.
- Computational Data Science P.M.C.
- Computer Information Systems B.A., B.S., M.S.
- Computer Science B.A., B.S., M.S.
 - Computer Information Systems and Computer Science Concentrations
 - Computer Game Technology
 - Computing Management (M.S. only)
 - Data Science
 - Emerging Topics on Computer Information Systems (M.S. only)
 - Emerging Topics on Computer Science (M.S. only)
 - Mobile Computing
 - Software Engineering (M.S. only)
 - Cybersecurity
 - Theoretical Computer Science (M.S. only)
 - Web Technologies and Systems (M.S. only)
- Criminology B.A., B.S.
- Data Science and Analytics (M.S. only)
- Economics (LAS) B.A., B.S.
- English B.A., B.S., M.A.
 - Creative Writing
 - Literature

- Professional Writing
- English Education B.A., B.S.
- Environmental Science B.A., B.S.
 - Biology
 - Chemistry
 - Physics
- French B.A.
- General Studies B.A., B.S.
- History B.A., B.S.
 - Difference, Identity and Power
 - Digital Humanities and Public History
- History Social Studies Education B.A., B.S.
 - Difference, Identity and Power
 - Digital Humanities and Public History
- International Studies B.A., B.S.
- Interdisciplinary Major Program B.A., B.S.
- Mathematics B.A., B.S.
- Mathematics Education B.A., B.S.
- Medical Laboratory Science B.A., B.S.
 - Clinical
 - General
- Philosophy B.A., B.S.
- Physics B.A., B.S.
- Physics Education B.A., B.S.
- Political Science B.A., B.S.
- Psychology B.A., B.S.
- Religious Studies B.A., B.S.
- Social Work B.A., B.S.
- Sociology B.A., B.S.
- Spanish B.A.
- Statistics B.A., B.S.

Turner School of Entrepreneurship and Innovation

- Interdisciplinary Innovation B.A., B.S.

Minors

Foster College of Business

- Accounting
- Business Administration
- Business Analytics
- Business Law
- Cybersecurity
- Decision Analysis
- Innovation Through Collaboration
- Internal Auditing
- Management and Leadership
- Management Information Systems
- Marketing
- Professional Selling
- Social Media Marketing

Slane College of Communications and Fine Arts

- Advertising and Public Relations
- Art History
- Fine Arts
- Game Design
- Game Production
- Journalism

- Interactive Media
- Interdisciplinary Film Studies
- Music
- Music Industry
- Organizational Communication
- Studio Art
- Theatre Arts
- User Experience

College of Education and Health Sciences

- Family Life Sciences
- Health
- Leadership Studies

Caterpillar College of Engineering and Technology

- Construction Management
- Manufacturing
- Quality Engineering

Turner School of Entrepreneurship and Innovation

- Entrepreneurship and Innovation

College of Liberal Arts and Sciences

- African-American Studies
- Anthropology
- Asian Studies
- Biology
- Chemistry
- Computer Game Technology
- Computer Science and Information Systems
- Criminology
- Data Science
- Economics
- English
 - Literature
 - Creative Writing
 - Professional Writing
- Ethics
- European Studies
- French
- German
- History
- International Studies
- Latin American Studies
- Legal Studies
- Mathematics
- Neuroscience
- Philosophy
- Physics
- Political Science
- Religious Studies
- Sociology
- Spanish
- Spanish for Business
- Sustainability
- Women's and Gender Studies

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Accreditation



Accreditation

Bradley University is accredited by the Higher Learning Commission: 230 S. LaSalle St., Ste. 7-500, Chicago, Illinois, 60604-1411; (312) 263-0456; www.hlcommission.org

Bradley also has a number of select undergraduate and graduate programs that are accredited by the following:

- AACSB International – The Association to Advance Collegiate Schools of Business
- Accreditation Commission for Programs in Hospitality Administration (ACPHA)
- Accreditation Council for Education in Nutrition and Dietetics (ACEND)
- American Chemical Society
- American Council for Construction Education, <http://www.acce-hq.org>
- Association for Childhood Education International (ACEI)
- Council for Accreditation of Counseling and Related Educational Programs (CACREP)
- Commission on Accreditation of Educator Preparation (CAEP)
- Commission on Accreditation in Physical Therapy Education (CAPTE)
- Commission on Collegiate Nursing Education (CCNE), <https://www.aacnursing.org/CCNE>
- Council for Exceptional Children (CEC)
- Council on Social Work Education (CSWE)
- Educational Leadership Constituent Council (ELCC)
- Engineering Accreditation Commission of ABET, <http://www.abet.org>
- Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>
- National Association for the Education of Young Children (NAEYC)
- National Association of Schools of Art and Design (NASAD)
- National Association of Schools of Music (NASM)
- National Association of Schools of Theatre (NAST)
- National Council for the Social Studies (NCSS)
- National Council for Accreditation of Teacher Education (NCATE)
- National Council of Teachers of English (NCTE)
- National Council of Teachers of Mathematics (NCTM)
- National Science Teachers Association (NSTA)

University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Fees and Expenses



Fees and Expenses

The University may make appropriate changes in fees and expenses beginning in fall 2024. Quoted fees below are actual rates for 2024-2025. All checks and money orders should be made payable to Bradley University.

For additional information, visit Student Financial Services.

Tuition and Fees

Undergraduate Tuition

Full Time Charges 2024-2025

Tuition (12-16 credit hours per semester)	\$41,210
Room and Board	\$13,500
University Fees	\$950
TOTAL	\$55,160

These expenses comprise the direct costs of attending Bradley University. Some courses may require additional course fees. Credit hours in excess of 16 per semester result in additional charges of \$945/hr. The amount you will spend on books and supplies, transportation, and personal expenses, will average an additional \$3,984.

Part Time Charges 2024-2025

1–7 hrs.	\$1,090/sem. hr.
7 1/2–11 1/2 hrs.	\$1,235/sem. hr.

Summer and J-Term 2024-2025

Summer 2024	\$1,039/sem. hr.
J-Term 2025	\$1,090/sem. hr.
Summer 2025	\$1,090/sem. hr.

Summer includes:

- May Interim
- Summer Semester

Other Fees

Activity fee

- \$90/sem. – all undergraduate students with 9 hours or more

Health fee

- \$135/sem. (for all students with 7 hours or more)

Technology fee

- \$250/sem. – students registered in a given semester for six credit hours or more as an undergraduate student

Business tuition surcharge

- A surcharge of \$20 per credit hour will be assessed for all undergraduate classes taught under the direction of the College of Business. A surcharge of \$25 per credit hour will be assessed for all graduate classes taught under the direction of the College of Business.

Engineering tuition surcharge

- A surcharge of \$50 per semester hour will be assessed for all classes taught under the direction of the College of Engineering and Technology.

Nursing Simulation

- A surcharge of \$50 per course will be assessed on the following courses: NUR 307, 309, 315, 317, 403, 409, 411, 413, 417.
- A surcharge of \$100 per course will be assessed on the following course: NUR 207.

Class and lab fees

- Please consult your instructor regarding various additional fees (e.g. art fees, chemistry breakage fees, etc.)

Excess hours

- With the exception of the courses noted below, any credit hours in excess of 16 will be charged at the rate of \$945 per credit hour.
- Credit courses for which no charge is made if they cause excess hours: ART 220, 221; MUS 141, 142, 143, 144, 145, 146, 309, 310, 327, 328, 341, 342, 343, 344, 345, 346, 375, 376; HON 100, 101; LAS 101, 305; EHS 120, 305; CFA 100, 101, 305, 360; THE 107, 108, 207, 208, 307, 308, 407, 408.

Cost of Attendance

The Cost of Attendance is designed to help families budget for their direct and indirect expenses at Bradley. For information about expenses included in the Undergraduate Cost of Attendance, please visit our Undergraduate Cost Of Attendance (COA) page.

Payment Options and Due Dates

Payment arrangements are required to be completed prior to the start of each academic term. Families can either pay the full balance or enroll in the Installment Payment Plan, which requires a minimum 20 percent payment of the semester balance. The deadline for either option is August 5, 2024 for the Fall semester and January 3, 2025 for the Spring semester.

Due to the shorter period, the Summer term is compressed to three installments for the payment plan. The first payment of at least one-third of the balance is due May 1, 2025.

Accepted Forms of Payment Payments From Banks Outside the US Payment Options Claiming Classes

Accepted Forms of Payment

Payments for all charges on the billing account (tuition, fees, room and board) can be made by cash or check in person at Swords Hall-First Floor. Payments can be made via checks mailed to:

Office of the Bursar

Bradley University Financial Services Office
100 Swords Hall
Peoria, IL 61625

Payments can be made online by credit card. **A 2.95% fee is assessed on credit card transactions** when using VISA, MasterCard, Discover, and American Express for tuition and fees. The University cannot accept credit card payments over the telephone. Payments can be made by ACH debit from checking or savings accounts and have a \$.50 service fee.

Payments From Outside the United States

Bradley University has partnered with Flywire to provide a fast, secure way to submit international and wire payments. You can pay in your local or other desired currency with available payment methods (e.g., international credit and debit cards, wire transfers and other international payment options that will vary by country). Flywire allows you to:

- Track your payments from start to finish
- Make payments in more than 140 currencies, online and from banks worldwide
- Other available payment methods include international credit and debit cards, and other international payment options that vary by country
- Save on bank fees and exchange rates with Flywire's Best Price Guarantee
- Enjoy peace of mind with dedicated multilingual customer support
- Ensure accurate and timely posting of your payment to your student account

To ensure that your student's account is properly credited in a timely and expedient fashion, please click the following link to initiate your payment bradley.flywire.com:

- Select your home country and the available payment options will be displayed.
- Complete the information requested and follow the instructions that are provided.

Here are some guidelines and policies on determining your payment amount:

- On-Campus students can review their bill with their MyBradley Account
- Online / Distance students can review their bill with their MyOnline Account
- The funds sent through this process are for tuition, fees, and room and board charges billed by Bradley University. Funds received will be used for current, past due and future terms.
- Do not request funds through this process for off-campus living expenses. You will need to make arrangements to have these funds come directly to you. Excess funds may be returned to Flywire.
- If you have not registered for classes for the coming term, you may estimate the amount needed by taking the current tuition rate times the number of hours you plan to register for. Be sure to include extra for course fees, surcharge fees, activity fee and health fee. The University fee structure is online at sfs.bradley.edu – click on “Charges and Payment Options”.
- If your bank has questions about this process, you may provide them with 3rd party access to your billing by setting them up with a log in to view your bills. Instructions for this process is also at sfs.bradley.edu, click on “Charges and Payment Options” and then “Online Viewing and Payment”.

Payment Options

For the fall and spring semesters, two payment options are available.

Option 1: Pay in Full

The most economical option, the Pay In Full plan requires the entire semester balance charges, less financial assistance to be paid in full on or before the due date for that semester: August 5, 2024 for the fall semester and January 3, 2025 for the spring semester. If the balance for the semester is paid in full prior to the first day of the term, no additional fees are charged unless changes are made to the student's schedule or financial aid.

Option 2: Installment Payment Plan

This plan divides each semesters' balance into five installments. Payment is determined by taking semester charges, subtracting semester financial assistance (not including work study), and dividing the balance by 5 and adding a one-time \$30 enrollment fee. The

first payment must be a minimum of 20% of the semester balance and is required by either the Aug. 5, 2024 or Jan. 3, 2025 deadline for the respective term. A one-time finance charge of 4% will be applied to the remaining balance on the first day of the term. Remaining fall payments are due on the 15th of the month in September, October, November, and December; spring payments in February, March, April, and May. You must enroll in the installment payment plan each semester. Once enrolled in the Installment Payment Plan all payments must be made online.

Fall 2024 Payment Due Dates

- August 5, 2024
- September 15, 2024
- October 15, 2024
- November 15, 2024
- December 15, 2024

Spring 2025 Payment Due Dates

- January 3, 2025
- February 15, 2025
- March 15, 2025
- April 15, 2025
- May 15, 2025

Summer 2025 Payment Due Dates

- May 1, 2025
- June 1, 2025
- July 1, 2025

Claiming Classes

For every period of enrollment students must confirm their intentions to matriculate by taking an action called “Claiming Classes”. Classes are claimed in one of two ways: By making a payment on the balance due for each period of enrollment or, if there is no balance due (zero balance or pending refund), by completing the steps outlined on either your MyBradley account or MyOnline Account

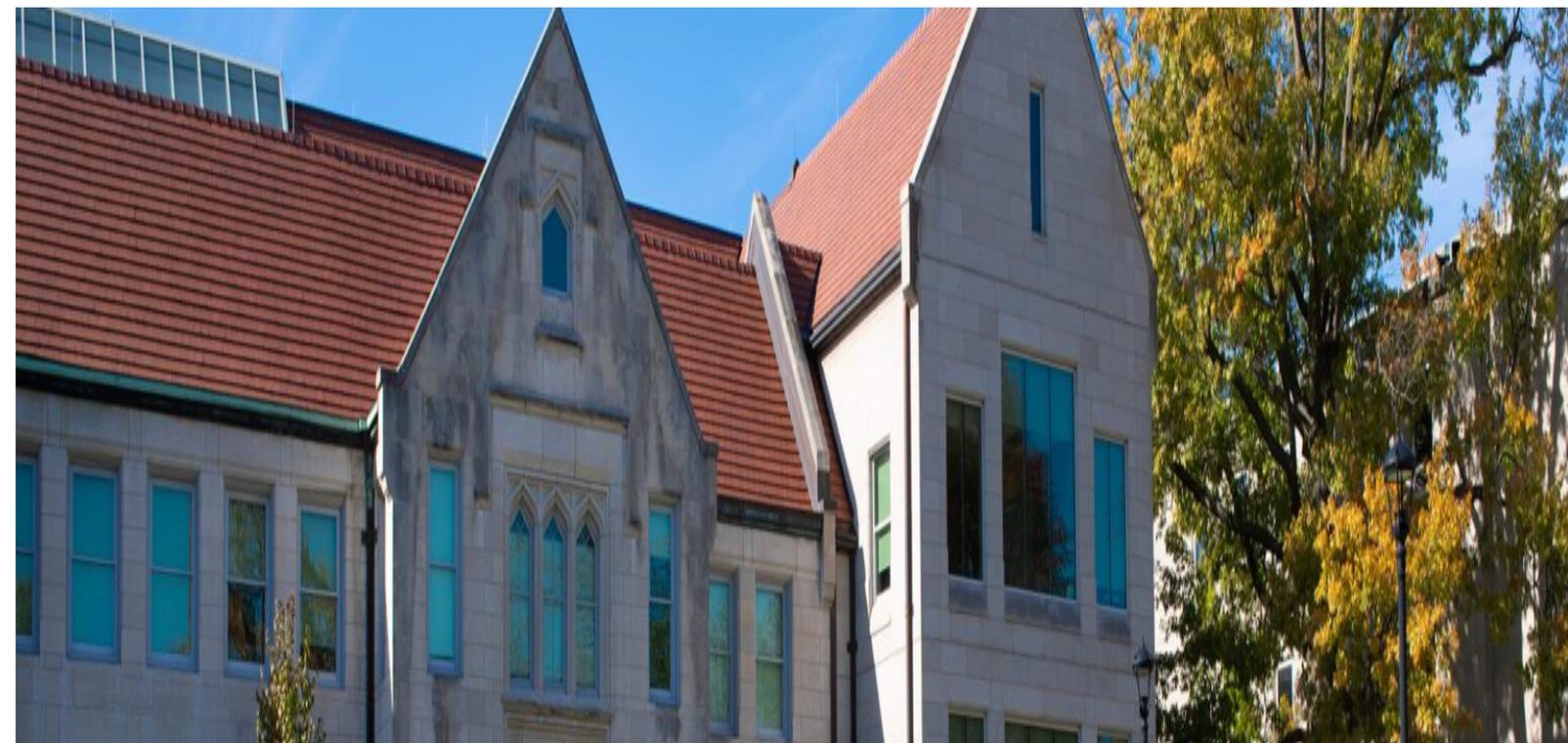
Veterans Benefits and Transition Act of 2018 Section 103

In accordance with the Veterans Benefits and Transition Act of 2018 Section 103, effective August 1, 2019, Bradley University will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual’s inability to meet his or her financial obligations to the university due to the delayed disbursement of a payment to be provided by the Secretary of Veterans Affairs under chapter 31 or 33 of this title.

For purposes of this policy, a covered individual is any individual who is entitled to educational assistance under chapter 31 or 33 funding through the federal government. The covered individual must notify the institution via submission of a certificate of eligibility for entitlement to educational assistance not later than the first day of a course of education for which the individual has indicated the individual wishes to use the individual’s entitlement to educational assistance, submit a written request to use such entitlement, or provide additional information necessary to the proper certification of enrollment by the educational institution.

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Financial Assistance



Financial Assistance

Bradley University, by providing an outstanding private education, is one of the best investments and best values in American higher education today. When making decisions about college financing, consider not only how much you can afford, but, more importantly, how much you are willing to invest. The quality of the institution must be a top priority as you weigh all of your opportunities. A high-quality education is an investment that will pay dividends for the rest of your life. At Bradley, you get distinguished, professionally active faculty; modern, complete facilities; comprehensive student services; diversified academic programs; and a valuable diploma backed by the reputation of a distinctive institution. You get more of the time and attention you need and deserve—and have paid for.

The Office of Financial Assistance views its relationship with students and parents as a partnership where we all share in the planning and managing of a Bradley education. We are committed to the belief that each family is unique and we strive to recognize individual needs and situations. We are committed to giving every qualified student the opportunity to afford the Bradley University experience. We pledge to do our very best to provide the amounts of assistance and programs needed to bring our costs within the reach of every family. Current and complete information concerning prices, sources of assistance, cost management options, policies, and application procedures is available at Student Financial Services.

Cost Of Attending Bradley

The total cost of attending Bradley is divided into two categories—direct and indirect costs.

Single Resident Student—Two Semesters

2024-2025 Direct Costs

- Tuition \$41,210
- Activity, Health, and Technology Fees \$950
- Living Expenses (including housing & meals) \$13,500*

2024-2025 Indirect Costs

- In addition to the direct costs itemized above, additional expenses for books and supplies, clothing, laundry, recreation, transportation and other personal expenses will average an additional \$3,984. These costs are not paid directly to Bradley.

**Cost based on living in a double occupancy room. Other options incur different costs.*

Cost of Attendance

The Cost of Attendance is designed to help families budget for their direct and indirect expenses at Bradley. For information about expenses included in the Undergraduate Cost of Attendance, please visit our Undergraduate Cost Of Attendance (COA) page.

Applying For Financial Assistance

Financial assistance applicants must complete the following steps to be considered for all sources of state, federal, and Bradley sources of assistance.

- **First-year Student & Transfer Applicants**

- Apply for admission to Bradley. Students must be accepted for admission before financial aid and scholarship decisions are made.
- File a Free Application for Federal Student Aid (FAFSA)

- **Continuing Student Applicants**

- File a Free Application for Federal Student Aid (FAFSA)

Financial Assistance Policies

Recipients of financial assistance are subject to the following policies:

Satisfactory Academic Progress (SAP)

- SAP Policy for Undergraduate Students
- SAP Policy for Graduate Students
- SAP Policy for Distance Education Students

Official Withdrawal Policy – Return of Title IV Funds (R2T4)

- Return of Title IV Funds Policy

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Housing



Housing

The University owns and operates 12 residence halls with a total capacity of 2,140. The experience in group living that students who reside in these halls enjoy is a valuable part of their total educational experience. The University also owns the Student Apartment Complex (SAC) located behind the Caterpillar Global Communication Center. Each of the 100 units is unfurnished and has its own living room, bedroom, bath, and kitchenette. Additionally, Bradley University also operates an off-campus apartment complex, St. James Apartments. Located near Bourland Avenue, St. James Apartments can house 600+ students with multiple options.

Since the University takes no responsibility for personal property, each student should check to see if family insurance covers personal items while in residence on campus. If not, it is recommended that each student consider fire and/or theft insurance as a protection, regardless of living accommodation.

All full-time, first- and second-year students must live in the residence halls. The Exceptions include:

- veterans,
- students who are 21 years of age by September 1 of the current academic year
- students who live with nearby immediate relatives (sister or brother who are non-Bradley students, aunt, uncle, parents, grandparents) within a 40-mile radius of the campus,
- cases involving documented medical reasons for which accommodations cannot be made within the residence halls.

To live in the residence halls, you must be a Bradley University student. Part-time undergraduate students may live in the residence halls. Requests for exceptions to these rules should be sent to the office of Residential Living and Student Conduct. Students can amend their residential choices to live in a sorority or fraternity house through a review process at the conclusion of each semester.

Housing Agreement and Housing Fee

To reserve a room in a residence hall, new freshman and transfer students must submit a non-refundable \$100 housing fee and electronically signed Residential Hall Housing Agreement. This agreement will be made available at the student's admission page by the admissions office after the housing fee is paid.

This agreement is binding for the entire academic year and includes room and board charges for both semesters. If a student moves into a residence hall it is understood that they agree to be responsible for room and board payments through the academic year, even if they have not filled out or signed a residence hall agreement. Students who enter the residence halls for the spring semester are only subject to the terms for that semester.

The halls will be closed to all students during Thanksgiving break, semester break and spring break. The halls close for the summer on the day following the last final exam in May. Students will have an opportunity to express their choice of a hall and roommate

preference on the residence hall housing application, which will be made available to them at the time of admission. Students furnish their own linens, pillows, spreads, and blankets for twin-size beds, their own washcloths and towels, waste cans, desk lamps, desk chair, and small personal items of furniture.

New Students

Entering students are urged to file their residence hall applications as soon as possible after they receive notice of their admission to the University. Application is made by the housing agreement, available online through admissions at YourBradley. Those who apply earliest before the semester in which they plan to enroll are more likely to receive the assignment they wish. Applications will not be accepted until after admission is complete.

Married Students

Furnished houses and apartments for families with children are available in the Peoria area. We advise married students to visit Peoria in advance to look at the accommodations before they enter into any lease arrangements.

Inquiries regarding Student Apartment Complex (SAC) or Residence Halls can be made by contacting:

Residential Living
Bradley University
1501 W. Bradley Ave.
Peoria, IL 61625
(309) 677-3221
housing@bradley.edu
www.bradley.edu/campuslife/reslife/housing/

Off-Campus Properties

St. James Place Apartment Complex

St. James Apartments at Bradley University is university owned, off-campus housing. Aside from being a Bradley University student, qualified individuals must be 20 years of age by September 1 of the current school year for the lease year the individual is applying. The 17-building complex offers spacious one to four-bedroom apartments. Just a short distance (.3 miles) off campus, all units come fully furnished, including dishwasher, full-sized refrigerator and electric stove. Laundry facilities are located in each building. Most utilities are provided, including internet service connected to the university's network. St. James Apartments also includes 24-hour emergency maintenance and roommate placement services.

Inquiries can be made contacting:

Off-Campus Properties
Bradley University
1103 W. Main Street
Peoria, IL 61606
(309) 677-2100
stjamesinfo@fsmail.bradley.edu
www.bradley.edu/stjames

Main Street Commons

Main Street Commons, is a five story, 184-bed, amenity-rich student housing development located just one block from campus. Independently-owned, this student housing development offers the following amenities for each unit: individual leases, fully furnished, private bathroom for each bedroom, fully-appliance kitchen with dishwasher, washer/dryer in each unit, 43" flat screen television, Wi-Fi, study/TV lounge, a multi-layered security system, elevator service, 24-hour fitness center, 24-hour emergency maintenance, tanning facilities, and enclosed parking available. The facility is open to Sophomores, Juniors and Seniors (co-ed living optional) with two and three bedroom units available. Submit your application to Live at Main today!

Inquiries can be made by contacting:

Main Street Commons
1109 W. Main Street
Peoria, IL 61606
(309) 673-4585
info@liveatmain.com
www.liveatmain.com

Students living off campus may eat in any residence hall on the same program that residence hall student's use. Two meal plan options are available. Additional information can be found at <https://www.bradley.edu/sites/quickcard/meal-plans/>

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Safety and Security

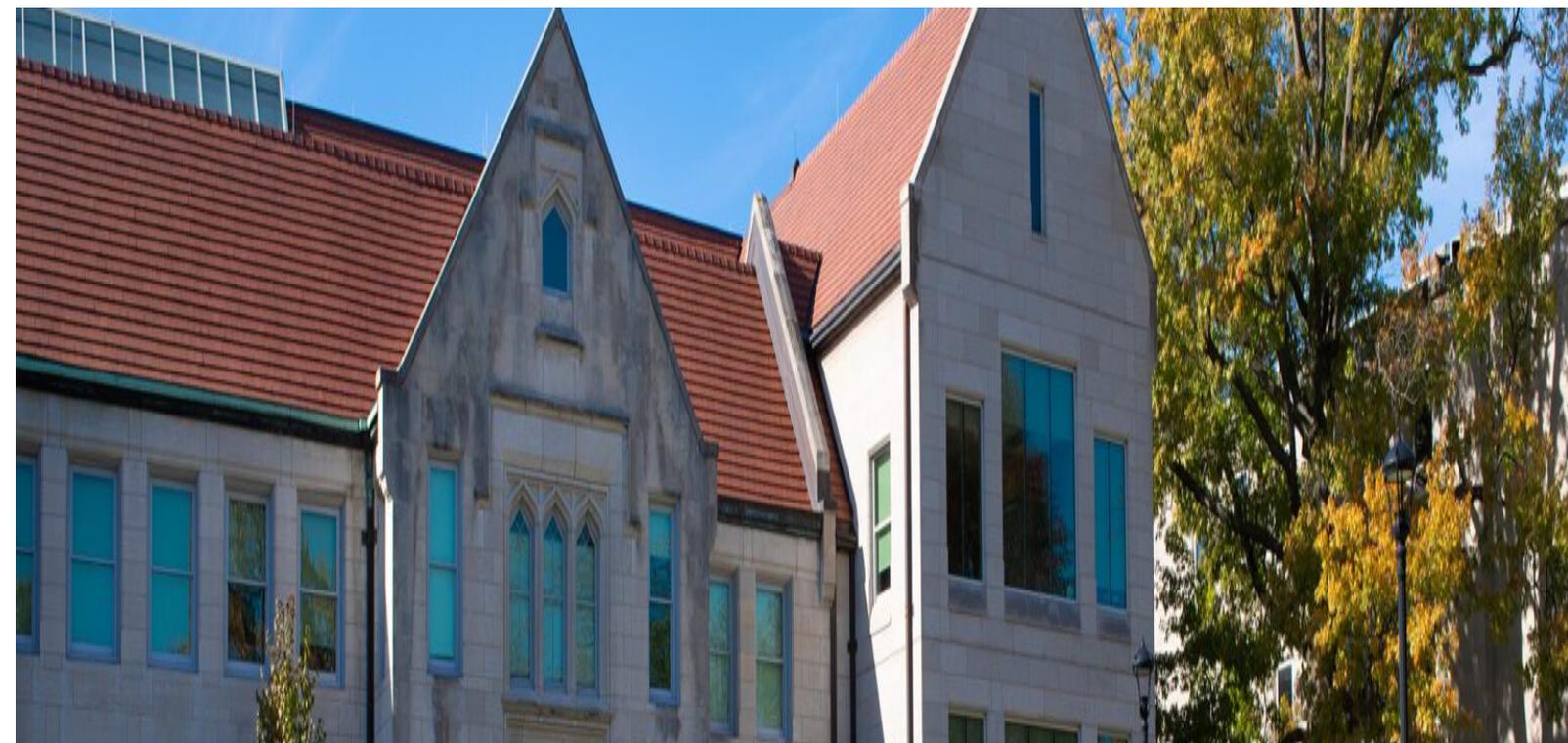


Safety and Security

The Bradley University Police Department (BUPD) mission is to maintain a safe environment for learning, living, and working at Bradley. We are staffed 24 hours a day, 365 days a year, by highly trained professionals who serve the campus and surrounding areas where students and employees reside and socialize. With our expansive patrol operations, on- and off-campus outreach efforts, and a Student Patrol Program, the BUPD continues to set the standard in excellence among campus safety departments. To learn more, visit: www.bradley.edu/police.

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Faculty



Faculty

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Emeritus



Emeritus

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

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JOANNE RICHIE, 1967–1997, Director of Payroll, Emerita.

DIANE RIGLEY, 1980-2015, Director of the Division Research and Testing, Emerita. Bradley University, B.S., M.A.; Illinois State University, Ph.D.

D. MICHAEL RISEN, 2004-2019, Associate Professor of Education, Emeritus. Illinois State University, B.S., M.S., Ph.D.

ELMO E. (JOE) ROACH, 1968–2004, Professor of History, Emeritus. University of Dayton, B.A. Ohio State University, M.A., Ph.D.

ANGELA ROBERSON, 1985–2013, Executive Director of Enrollment Management Office Operations, Emerita. Mundelein College, B.A.; Loyola University Chicago, M.Ed.

WILLIAM C. (CORKY) ROBERTSON, 1987–2000, Athletic Ticket Office Manager, Emeritus.

ROBERT ROWE, 2000–2018, Professor of Graphic Design, Emeritus. University of Florida, B.A.; Indiana University, M.A.

S

SHARON ST. GERMAIN, 1983–2012, Director of the Springer Center for Excellence in Internships, Emerita. University of Illinois, B.S.

EDWARD SATTLER, 1977-2019, Professor of Economics, Emeritus. Western Michigan University, B.B.A.; M.A.; University of Illinois, M.A.; Ph.D.

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DONALD R. SCHERTZ, 1963–2008, Professor of Electrical and Computer Engineering, Emeritus. Bradley University, B.S.E.E.; Massachusetts Institute of Technology, S.M.E.E.; University of Illinois, Ph.D.

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Bowling Green State University, MA; Ohio State University, PhD

CATHY SHERLOCK, 1997-2014, Administrative Assistant to the Dean, Emerita.

VINCE SHOWERS, 1988-2019, Professor of Quantitative Methods, Emeritus.

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MOLLY SLOTER, 1982-2019, Collaborative Pianist, Emerita. University of Missouri – Columbia, B.S.; Bradley University, M.M.

REBECCA SNYDER, 1998 – 2019, Director of Enterprise Services, Emerita. Illinois Central College, A.A.

KEVIN STEIN, 1984 – 2018, Distinguished Professor and Caterpillar Professor of English, Emeritus. Ball State University, B.S., M.A.; Indiana University, M.A., Ph.D.

CYNTHIA STEINWEDEL, 2006-2019, Assistant Professor of Nursing, Emerita. Bradley University, B.S.; University of Illinois at Chicago, M.S.; University of Wisconsin at Milwaukee, Ph.D.

ROBERT STEPHENS, 1967–2009, Associate Professor of Biology, Emeritus. Oklahoma Baptist University, B.A.; University of Oklahoma, M.A.; Oklahoma State University, Ph.D.

MARY JANE STERLING, 1982-2014, Lecturer in Mathematics, Emerita. North Central College, B.A.; University of New Hampshire, M.S.T.

THOMAS STEWART, 1959–2008, Professor of Electrical and Computer Engineering, Emeritus. Bradley University, B.S.E.E.; Massachusetts Institute of Technology, S.M.E.E.; Purdue University, Ph.D.

CHARLES STONER, 1980-2016, Professor of Management and Leadership, Emeritus. Florida State University, B.S., M.B.A., D.B.A.

JOSEPH R. STOWELL, 1956–1986, Professor of Health and Movement Science, Emeritus. Bradley University, B.S., M.A.

LINDA STRASMA, 1986–2011, Lecturer in Communication, Emerita, Western Illinois University, B.A.; M.S.

LARRY STRATTON, 1970–2009, Systems Analyst, Emeritus, in Computing Services.

CONLEY I. STUTZ, 1968–2001, Professor of Physics, Emeritus. Wayne State College, B.S.; University of New Mexico, M.S.; University of Nebraska, Ph.D.

NITA K. SUNDERLAND, 1956–1988, Professor of Art, Emerita. Bradley University, B.F.A., M.A.

ALEXEY SVERDLIN, 1991–2010, Professor of Industrial and Manufacturing Engineering and Technology, Emeritus. State Technical University, Tashkent, Uzbekistan, B.S., M.S.; University of Foreign Languages, Tashkent Uzbekistan, M.S.; Institute of Aviation Materials, Moscow, Russia, Ph.D.

GEORGE SZETO, 1968-2015, Professor of Mathematics, Emeritus. The United College of Hong Kong, B.S.; Purdue University, M.S.; Purdue University, Ph.D.

T

KEVIN M. TEEVEN, 1974–2007, Distinguished Professor and Caterpillar Professor of Business Administration, Emeritus. Eastern Illinois University, B.S.; University of Illinois College of Law, J.D.

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W

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KERRY WALTERS, 1989–2022, Associate Professor of Music, Emerita. University of Oregon, B.S.; Portland State University, M.A.T.; University of Cincinnati, Conservatory, D.M.A.

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RONALD E. WASDEN, 1967–2000, Professor of Psychology, Emeritus. Brigham Young University, B.S.; University of Utah, M.A., Ph.D.

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ROBERT WEINSTEIN, 1980–2015, Professor of Economics, Emeritus. The University of Missouri–Kansas City, B.B.A., M.B.A.; the University of Texas at Austin, Ph.D.

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Y

MARGARET YOUNG, 1995–2016, Associate Professor of Communication, Emerita. Washington State University, B.A.; University of Idaho, M.A.; University of Illinois, Ph.D.

Z

DUANE ZEHR, 1993–2020, University Photographer, Emeritus.

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Registration



Registration

Registration is an official part of the academic year. By registering, the student subscribes to the terms and conditions, financial and otherwise, which have been set forth by the University. A correct registration is the responsibility of the individual student. Payment of tuition and fees must be made by the deadlines published by the Controller's Office.

Late registrations may be processed by the student during the first full week of classes. After the first full week of classes, additions may be made only by special permission. The student must obtain the Late Add Request Form and approval signature of the advisor, instructor, and dean of the college of the student's major field. Late registrations are usually not approved after the second week of classes.

Schedule Changes After Registration

Once a student has registered for even a single class section, changes to that schedule (additions and deletions) may be made by using MyBradley, the Web registration system. Instructions are outlined in the Schedule of Classes. Students may cancel their registrations in any classes up to the end of the second full week of classes. These registrations will not be a part of the permanent record. During the third full week through the twelfth full week of classes all courses dropped will be recorded on the permanent record with the indication of "W" (Withdrawn) and the date.

After the twelfth full week of classes, the dean of the college in the student's major field may, in case of extreme hardship, authorize a student to withdraw from one or more, or all, courses. This action will be recorded on the student's permanent record with the grade of "W" together with the withdrawal date.

After the first full week of classes, classes may be added only with special permission. The student must obtain a Late Add Request Form and approval signature from the academic advisor, obtain approval from the instructor and chair of the department offering the class, and then obtain an approval signature from the dean of the college in which the course is offered. Classes are not added to a student's program and no registration is permitted after the second full week of class instruction.

A student who drops a course after the second full week of classes may, with permission of the instructor, continue to attend that class for the remainder of the semester. This privilege will not be permitted in laboratory, military, or studio courses.

Procedures for withdrawing from the University are given in the current Schedule of Classes.

Students should consult the most current edition of the Schedule of Classes for details concerning procedures, dates, and refund policies.

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Undergraduate Leave of Absence Policy



Undergraduate Leave of Absence Policy

The leave of absence opportunity is available for undergraduate students who must leave Bradley University for a period of time not to exceed 12 consecutive months. A leave of absence may be granted for various reasons, such as personal, medical, or financial. The leave of absence must be approved in advance of the semester in which the leave of absence is to begin and can not be granted to a student who is on probation or dismissed from the University. For the complete policy, consult the Registrar's Office or the dean of your college.

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Credit Taken in Residence at Bradley



Credit Taken in Residence at Bradley

Student Course Load

Twelve semester hours is the minimum load for a full-time student during spring or fall semesters. The regular load is prescribed by the college in which the student is enrolled. A student must petition to enroll in excess hours (more than 18 1/2 hours in a regular semester). The authority to approve petitions for excess hours shall be vested in the dean of the college in which the student is registered.

Summer and interim sessions are shorter terms with the following maximum course loads: January Interim students can earn up to four semester hours in classes that meet for approximately two weeks. In May Interim I, a three-week term, students can earn up to four semester hours; in May Interim II, an eight-week term, students can earn up to seven semester hours. Summer Session I, beginning in June, and Summer Session II, beginning in July, are five-week programs in which students can earn up to seven semester hours of credit in each term.

One credit hour is usually assigned to a class that meets 50 minutes a week over a period of a semester. In laboratory, fieldwork, or similar type of instruction, one credit hour is assigned for a session that meets two or three hours a week for a semester.

An Undergraduate Student-at-Large (non-degree-seeking) may not take 12 or more semester hours during either fall or spring semesters except with approval. A maximum of 45 semester hours taken as an Undergraduate Student-at-Large can be accepted toward a degree program. Students who are uncertain about their interest in pursuing a degree are strongly encouraged to apply for admission to a degree program rather than enroll as an Undergraduate Student-at-Large.

All courses taken for credit for which a student is registered at Bradley or elsewhere are counted as part of the total semester hour load the student is permitted to carry.

Student Class Standing

- First-year Student: fewer than 24 semester hours of credit.
- Sophomore: at least 24 but fewer than 56 semester hours of credit.
- Junior: at least 56 but fewer than 90 semester hours of credit.
- Senior: 90 or more semester hours of credit.

Change Of Student Status (Full-Time Or Part-Time)

Ordinarily, the classification of full-time students will not be changed after the second week of classes even though the course load drops below 12 semester hours. In cases where this rule creates undue hardship, the dean of the college involved, upon the student's request, may suspend this rule.

Prerequisites

Students should understand that listed prerequisites may be met through equivalent courses. Please consult your academic advisor if you have a question about prerequisites.

Students who enroll in courses for which they do not meet the prescribed prerequisites may be required to withdraw from the courses.

Course Numbering System

The following course numbering system is used as a guide for students in selecting courses: courses numbered **100-199** are planned primarily for freshmen. Courses numbered **200-299** are intended primarily for sophomores. Courses numbered **300-499** are designed primarily for juniors and seniors.

Courses numbered **500-599** primarily serve as graduate courses taught at the graduate level, and are open to graduate students and qualified undergraduate students. Qualified undergraduate students seeking graduate credit are seniors with at least a 3.00 overall GPA, or students who have obtained permission from the course instructor and the chair of the department offering the course, as well as the consent of the Dean of the Graduate Education. (Refer to the graduate catalog section on Bradley Seniors Taking Courses for Graduate Credit for complete eligibility requirements.) Because these courses are not open to all undergraduates, no undergraduate program of study may require a student to enroll in a course numbered 500-599. Students who wish to use 500-level courses for undergraduate credit must meet the requirements imposed by the department and the college in which the course is offered. These college and departmental requirements are available in the appropriate college and department offices and in Graduate Education.

Courses numbered **600-699** are reserved for graduate students only. Courses numbered **700-899** are open only to students in doctoral programs.

Please consult the all-University, college, and departmental requirements for the number of semester hours needed at specific course levels.

Repeated Courses

The University Senate has designated some courses as repeatable up to a specified number of credit hours. For all other courses, the following policy applies. A student at Bradley may not receive credit for the same course twice. However, a student is permitted to repeat courses within one year after completion; thereafter permission to repeat a course must be obtained from the dean of the college in which the student is registered. The last grade and credits earned for each course shall be the only ones used in computing the grade point calculations and in satisfying graduation requirements. However, the entry on the permanent record for both enrollments remain. (Proficiency exams cannot be used for repeating courses because credit earned in this manner is not used in grade point calculations.)

If a student registers again for a course which is already a part of the scholastic record and the number of the course has changed since the original enrollment, permission to substitute a course must be obtained from the dean of the college which offered the course being repeated.

Auditing Courses

All Bradley students (undergraduate, graduate, full-time and part-time) in good academic standing registered for a given academic term, along with individuals admitted "at large," for a given academic term may request permission to enroll as an "auditor." Permission to audit a course must be approved by both the instructor and the chairperson of the department offering the course. Enrollment is contingent on having available space in the class. Except in special circumstances to be determined by the instructor and department chairperson, courses involving laboratory or studio work cannot be audited. Only regular students and auditors listed on the official class roster are allowed to attend class. Forms for audit registration are available in the Registrar's Office or online. Audit registrations are accepted by the Registrar's Office only after the first day of classes of each academic term.

The extent to which an auditor participates in a course and the requirements for satisfactory performance must be specified by the instructor when approval is granted. Instructors are not obligated to grade any course work performed by the auditor. Courses taken for audit do not earn academic credit, do not apply toward any academic degree and do not count toward a student's full-time or part-time load for purposes of financial aid, loan deferments or visa status. Courses taken for audit are recorded on the student's permanent academic record as completed satisfactorily ("X"), completed unsatisfactorily ("UX"), or withdrawn ("W").

After the last day for adding classes with special permission, anyone who is registered as an auditor may not change the audit

registration to a "for credit" status, i.e. a regular registration; likewise, a student registered for credit may not change to audit status. Deadlines associated with courses taken for credit and courses taken for audit are identical. All individuals will be charged a non-refundable fee for audited courses. The current fee is published at Student Financial Services (Tuition and Fees). Persons who have audited a course may petition to earn credit by proficiency examination; however, the charge for a proficiency examination for credit is based on the standard tuition structure determined by the Controller's Office with a credit granted for charges associated with auditing.

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All-University Degree Requirements



All-University Degree Requirements

Responsibility For Meeting Degree Requirements

A minimum of 120 semester hours is required for all baccalaureate degrees. The curricula of certain departments require as many as 150-155 semester hours. Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation. A change in major could mean meeting new requirements in force at the time of the change as a condition for acceptance into that major. Students whose work has been interrupted for one or more semesters may be held to requirements in effect at the time of their re-enrollment.

Residence Requirements

Only work registered through Bradley University during the two regular semesters or the interim and summer sessions is considered as residence work. No proficiency examinations, correspondence, extension courses, or credit earned through the College-Level Examination Program may be counted as residence work. All candidates for the bachelor's degree must meet the following residence requirements:

1. A minimum of 30 semester hours earned in residence is required of all students.

Junior-Senior Credits

Candidates for a bachelor's degree must present a minimum of 40 semester hours in junior and senior courses (those numbered 300 and above). Check your college requirements for proper distribution of these courses.

Bradley Core Curriculum*

*For students entering Bradley University on or after Fall 2016. Students entering Bradley University before Fall 2016 who have not been approved to opt into the Bradley Core Curriculum should refer to the General Education Requirements as articulated in their Undergraduate Catalog year. Course listing in this 2020-21 Undergraduate Catalog include tags for both Core Curriculum and General Education for the convenience of all students currently enrolled at Bradley University.

Bradley Core Curriculum Purpose

The Bradley Core Curriculum exposes all students to the requisite range of knowledge, skills and perspectives that prepares them for further learning, as well as guides them on the path of continued development and growth to facilitate their success and fulfillment in a changing, complex world. In essence, the Bradley Core Curriculum lays the foundation for a lifetime of intellectual development. By equipping students with enhanced critical and creative-thinking, communication and quantitative skills and a greater understanding of others and themselves, they will have a foundation for effective and informed decision-making, ethical reflection, engagement with the arts and responsible action as members of society. The Bradley Core Curriculum achieves these goals by emphasizing breadth of study, exploration of multiple ways of thinking and knowing across a variety of areas of study, and the ability to integrate information and ideas from a variety of sources and viewpoints.

The Bradley Core Curriculum is grounded in *values* and is designed to help students achieve specific *learning outcomes*.

Bradley Core Curriculum Values

The Bradley Core Curriculum was designed with a set of fundamental perspectives and values in mind, values that lie at the heart of the University's scholarly enterprise:

- Curiosity
- Freedom of inquiry and expression
- Belief in the unity of knowledge
- Pursuit of knowledge as its own end
- Dedication and persistence in learning
- Strong work ethic
- Humility and circumspection toward what is known
- Habit of self-reflection
- Integrity
- Flexibility
- Civility

Bradley Core Curriculum Learning Outcomes

- **Critical and creative thinking.** Bradley graduates will think critically, independently and creatively, and will employ evidence-based decision-making to solve problems and build new knowledge.
- **Effective communication.** Bradley graduates will be effective oral, written and non-verbal communicators, as well as active readers and listeners.
- **Integrative learning.** Bradley graduates will understand that learning builds across disciplines, curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring knowledge to new, complex situations throughout their lives.
- **Practical application.** Bradley graduates will apply knowledge and skills from the classroom in real-world situations.
- **Social awareness.** Bradley graduates will understand and act ethically upon their connections to larger communities.

Bradley Core Curriculum Requirements

The Bradley Core Curriculum requires 36 credit hours, comprised of courses taken across eight Areas of Inquiry plus additional Core Practices as follows:

1. A total of three courses (9 credit hours), comprised of one course from each of the following areas within the Communication Area of Inquiry:
 - Communication (CM)
 - Written Communication 1 (W1) – 1 course
 - Written Communication 2 (W2) – 1 course
 - Oral Communication (OC) – 1 course
2. A total of seven courses (21 credit hours), comprised of one course from each of the following Areas of Inquiry:
 - Fine Arts (FA)
 - Global Perspectives (GP) one course from World Cultures (WC) or Global Systems (GS)
 - Humanities (HU)
 - Knowledge and Reasoning in the Natural Sciences (NS)
 - Knowledge and Reasoning in the Social and Behavioral Sciences (SB)
 - Multidisciplinary Integration (MI)
 - Quantitative Reasoning (QR)
3. A total of two elective courses (6 credit hours) from any two Areas of Inquiry (the two courses cannot be taken from the same Area of Inquiry):
 - Global Perspectives (GP), can be selected from World Cultures (WC) or Global Systems (GS)
 - Humanities (HU)

- Knowledge and Reasoning in the Natural Sciences (NS)
 - Knowledge and Reasoning in the Social and Behavioral Sciences (SB)
 - Quantitative Reasoning (QR)
4. A minimum of two courses or registered experiences designated as Writing Intensive (WI).
 5. A minimum of two courses or registered experiences designated as Experiential Learning (EL) experiences.
 6. No more than two courses with the same subject prefix can be used to satisfy Area of Inquiry requirements in the Bradley Core Curriculum. This rule does not include the Communications Area of Inquiry.

Approved Bradley Core Courses

Courses and registered experiences approved by the University Senate to fill the Bradley Core Curriculum Areas of Inquiry or Core Practices are listed below and are marked with the appropriate Bradley Core Curriculum code in the Undergraduate Catalog and the Schedule of Classes. Additional policies regarding the Bradley Core Curriculum may be found on the **Bradley Core Curriculum webpage** .

It is important to note that while many courses are approved for more than one Area of Inquiry (AI), only one AI tag may be used for each course. A student wishing to elect a change in the specific AI tag granted for such a course should contact their advisor. Core Practice (CP) tags are granted in combination with AI or other CP tags.

Communication

Area of Inquiry	Code	Approved Courses
Writing 1	W1	ENG 101; CIV 111/112**
Writing 2	W2	ENG 300, 301, 302, 304, 305, 306
Oral Communication	OC	COM 103

Fine Arts

Area of Inquiry	Code	Approved Courses
	FA	ART 107, 109, 131; CIV 113/114**; MUS 109; PHL 350; THE 131, 141; WLF 351; WLG 352; WLT 152, 251

Global Perspectives

All students must complete one Global Perspectives course from either the Global Systems or World Cultures group.

Area of Inquiry	Code	Approved Courses
Global Systems	GP GS	CIS 300; ECO 391; FCS 237; HIS 201, 203, 204; I B 206, 391; I S 100, 103, 305, 306, 318, 330, 363, 410; PLS 208, 317; RLS 321; SOC 326; WLS 334;
World Cultures	GP WC	AAS 200; ANT 101, 303, 305, 314; COM 315; ENG 123, 130, 140, 381, 385; ETE 280; FCS 271; HIS 205, 206, 207, 208, 209, 314, 316, 329, 330, 331, 335, 336, 337, 340, 383; I B 204, 205; I S 104, 182, 322, 353, 363, 373, 385; KHS 380; MUS 382; PHL 130; PLS 205; RLS 105, 114, 121, 225, 300, 305, 313, 320, 331, 332, 336, 338, 340; SOC 300, 311; THE 439; WGS 200; WLF 202, 370; WLG 202, 321; WLS 202, 222, 321, 322, 342, 343, 360; WLT 140, 340

Humanities

Area of Inquiry	Code	Approved Courses
	HU	CFA 250; CIV 113/114**; ENG 115, 123, 124, 125, 127, 129, 140, 190, 381, 385; ETE 115; HIS 201, 203, 204, 205, 206, 207, 208, 309, 314, 315, 316, 317, 320, 322, 323, 325, 329, 330, 331, 335, 336, 337, 340, 342, 352, 353, 383; PHL 103, 130, 347; PLS 207, 307, 308; RLS 101, 105, 114, 121, 200, 225, 300, 302, 305, 313, 320, 332; WLF 315, 341; WLS 315, 342, 343; WLT 140, 340

Multidisciplinary Integration

Area of Inquiry	Code	Approved Courses
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Area of Inquiry	Code	Approved Courses
	MI	AAS 200; ANT 305, 314; BIO 300, 304; BUS 340, 361, 362, 400****/ M L 452****; CFA 320; CHM 301; CIS 459; CIV 100, 101, 102, 111/112**, 113/114**; COM 308, 315, 384; EGT 340; ENG 125, 130, 140, 190; ENS 105, 110, 307; ETE 115, 328; FCS 350; HIS 210, 309, 317, 320, 342, 352, 353, 383; I M 191, 459; I S 275, 307, 330; IME 301; LAS 102, 300; M E 280; MUS 101; NUR 219; RLS 330; SOC 308, 322; THE 339; WGS 200

Natural Sciences

Area of Inquiry	Code	Approved Courses
	NS	AST 300; BIO 101, 103, 202, 300, 301, 303, 304; CHM 100, 102, 104, 110/111***, 112, 301; ENS 110, 305; FCS 202; GES 101, 300; PHY 100, 107, 108, 110, 123, 130, 201; PSY 201; SCI 100, 101, 102, 103, 104, 300, 302

Quantitative Reasoning

Area of Inquiry	Code	Approved Courses
	QR	ATG 101; CS 100, 101; ETE 107, 108; I M 110, 162; IMT 212, 214; MTH 101, 111, 114, 115, 116, 119, 121, 122, 223; QM 262

Social and Behavioral Sciences

Area of Inquiry	Code	Approved Courses
	SB	ANT 303; BLW 342; COM 384, 394; ECO 100, 221, 222; FCS 100, 300; FIN 220; I S 312; PLS 105, 205; PSY 101; RLS 321; SOC 100, 111, 308, 312, 313, 315, 325, 326

Core Practices

Writing Intensive

The WI courses listed below will not always be offered as WI in any given semester. To be sure that your course will be offered as WI, you must check the Schedule of Classes at the time you enroll.

Area of Inquiry	Code	Approved Courses
	WI	ANT 314; ART 131, 140, 142, 380, 490; ATG 268; BIO 152, 250; BLW 345; BUS 400, 401; C E 493, 498; CFA 320, 321, 361, 362; CHM 361, 471; CIS 475, 491; CIV 114; COM 203, 300, 305, 330, 386, 391, 409, 416, 417, 447; CON 493, 498; CS 390, 480, 490; CSD 401, 402; ECE 402, 498, 499; ECO 498; ENG 124, 207, 347, 381, 407, 408, 409; ETE 120, 227, 228, 303, 304, 305, 306, 307, 308, 310, 313, 339, 361, 373; FCS 310, 337, 340, 420; FIN 422; GES 300; HIS 205, 208, 331, 335, 353, 385, 450, 451, 452; I B 206; I M 261, 288, 355, 450; I S 295, 322, 495; IME 333, 485, 499; IMT 498; KHS 310, 380; M E 410, 411, 498, 499, 534; MIS 375; MTG 346 MTH 495; MUS 335, 380, 381; NUR 303, 410, 413; PHL 202; PLS 209, 319, 419, 420, 491, 493, 494; PSY 206, 400, 411, 439; RLS 225, 320, 321; S W 351, 395; SCI 100, 101, 102, 103, 104, 300, 302; SOC 313, 320; THE 336, 337, 338; WGS 400; WLF 351; WLS 403; WLT 152, 251

Experiential Learning

Area of Inquiry	Code	Approved Courses
	EL	ART 306, 317, 406, 410, 421, 426; ATG 430, 461; BIO 385, 485, 490; BMS 490; BUS 301, 400, 401; C E 200, 493, 498; CFA 301, 354; CHM 283, 299, 499, 599; CIS 459, 475, 491; COM 305, 326, 330, 360, 392, 414, 416, 480, 481, 492; CON 200, 493, 498; CS 390, 490, 491; CSD 451, 452; ECE 200, 402, 498, 499; ECO 498, 499; EGT 210, 310, 410; EHS 301, 309; ENC 305; ENG 180, 302, 492; ENS 470; ETE 227, 228, 301, 302, 303, 304, 305, 306, 307, 308, 313, 491, 493, 496, 497, 498, 499; FCS 173, 311, 514; FIN 325; HIS 350, 352, 450, 451, 452; I B 446; I M 344, 440, 441, 459, 460, 461, 489, 499; I S 490, 495, 498, 499; IME 200, 461, 481, 499; IMT 200, 498; KHS 230, 300, 305; LAS 301; M E 410, 411, 498, 499; MIS 483; MTG 304, 341, 391; MTH 335, 495; MUS 002, 003; NUR 207, 307, 309, 315, 317,

Area of Inquiry**Code****Approved Courses**

403, 409, 411, 413, 417; **OCP** 100, 101, 388; **PLS** 480, 485; **PLW** 300; **PSY** 295, 341, 342, 495; **SOC** 240; **S W** 356, 393, 395; **THE** 107, 108, 307, 308; **WGS** 200, 300, 400; **WLF** 301; **WLS** 306, 307

**Both courses must be completed for BCC credit: successful completion of CIV 111/112 will award W1 and MI credits; successful completion of CIV 113/114 will award FA and HU or MI credits.

***Both CHM 110 and 111 must be completed for NS credit.

****Both BUS 400 and M L 452 must be completed for MI credit.

Grade Point Average For Graduation

A minimum cumulative grade point average of 2.00 based upon hours taken at Bradley is required for graduation.

Requirements for the B.A. Degree

All candidates for the Bachelor of Arts degree must complete three semesters of college-level foreign language study or its equivalent. This requirement may be met in several ways: 1) Completion of a three-semester sequence (101-102-201) or higher in one language; 2) Completion of 102 or higher course in one language plus one course in another language; 3) Transfer of similar credits from another institution; 4) By proficiency examination (AP or CLEP); 5) By departmental examination in languages offered by the World Languages and Cultures Department. Option 5 is only available to non-native speakers. See department chair for details.

Students who have taken a foreign language in high school and wish to continue studies in the same language must take a placement examination. If a student places in 201 or higher the student will need to take only one course to fulfill the requirements for the B.A. degree. If a student places at the 102 level the student will need to take two courses to fulfill the requirements for the B.A. degree.

Students completing foreign language at the 202 level will also receive one GP in the Bradley Core Curriculum.

Requirements For The B.S. Degree

In order to receive the Bachelor of Science degree, students must successfully complete at least 15 hours of courses selected from mathematics, computer science, and the natural sciences. The following courses may be used to fulfill the requirement for the B.S. degree—all courses in astronomy (AST), biology (BIO), biomedical science (BMS), chemistry (CHM), computer science and information systems (CS and CIS), environmental science (ENS), geological sciences (GES), physics (PHY), science (SCI), mathematics (MTH); any course cross-listed with a course offered under any of the prefixes listed above; any course approved for QR or NS credit; and, in addition, all other courses approved for B.S. credit by the University Senate.

Other courses approved for B.S. credit

University Policy on Awarding of Posthumous Degrees

Upon the request of the deceased student's family, a posthumous baccalaureate degree may be considered by the Academic Regulations and Degree Requirements Committee, if at the time of death, the student was enrolled in a degree program, was in good academic standing, and had entered his or her senior year.

Upon the request of the deceased student's family, a posthumous graduate degree may be considered by the Academic Regulations and Degree Requirements Committee, if at the time of death, the student was enrolled in a degree program, was in good academic standing, and had completed two thirds of the credit hours required for graduation.

The Academic Regulations and Degree Requirements Committee will consider the family's request, verify eligibility for a posthumous degree, and forward its recommendation on granting the degree to the Provost and Senior Vice President for Academic Affairs for approval.

Upon the Provost's approval of granting the degree, the appropriate commencement program and the student's academic record will note that the degree was awarded posthumously. The diploma will be presented to the deceased student's family by the President of the University.

Death that results from unlawful activity on the part of the deceased student may result in disqualification for a posthumous degree.

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Non-Resident Credit



Non-Resident Credit

Transfer Credit From Collegiate Institutions

Credits from collegiate institutions that are accredited by one of the institutional accrediting associations recognized by the U.S. Department of Education, such as the Higher Learning Commission, will be considered for acceptance at Bradley University. Bradley University also participates in the Illinois Articulation Initiative. Bradley University also has a 2+2 Articulation Agreement with Illinois Central College. Credits from international institutions that are recognized by the government agency overseeing education in that country, such as the Ministry of Education, will also be considered for acceptance at Bradley. Official transcripts of credit, including final grades, must be requested by the student and received by Bradley directly from the institution at which the credit was earned.

Course equivalency evaluation is decided by the Academic Department that teaches the comparable subject matter here at Bradley with final approval by the Department Chair. Acceptance and course equivalency are based on comparability of the transfer work with the nature, content and level of work offered at Bradley. A copy of the course description or syllabus may be requested to evaluate the course.

Application of transfer credits to satisfy Bradley Core Curriculum (BCC) requirements shall be determined by the BCC director, who is also an Associate Dean of the College of Liberal Arts and Sciences.

Application of transfer credits to satisfy specific college graduation requirements shall be determined by the dean of the college in which the student is majoring.

Courses earning an A, B, C, or D letter grade, Pass, Satisfactory, or comparable grade will be considered for transfer credit. In some majors, D credit for transfer work does not count to fulfill specific requirements in that major or college. Grades earned in transferable credits are posted on the student's permanent record solely for the purpose of advisement and evaluation by the department chair and dean of the college in which the student is enrolled. Grades earned in transferable courses are not included in Bradley GPA calculations in any way.

A maximum of 66 semester hours of credit will be accepted from two-year colleges. If other institutions are using a quarter hour system, those hours will be converted to semester hours for transferable credit. Only work taken at the junior-senior level at the source institution will be counted toward meeting the requirement for junior-senior level work at Bradley.

Transfer Credit For Students New To Bradley

For students who have not enrolled at Bradley previously, official transcripts of credit from other institutions must be mailed directly from the institution at which the credit was earned to the Admissions Office at Bradley University for evaluation.

Work Taken At Other Collegiate Institutions By Continuing Bradley Students

All conditions of acceptance of transfer credit apply to work taken at other collegiate institutions by continuing Bradley students. Students should obtain written approval from the dean of the college in which they are majoring before registering at the other institution. If the credit is to fulfill Core Curriculum requirements at Bradley, the written approval must come from the Associate Dean of the College of Liberal Arts and Sciences. Unless such written approval is given, students electing to take courses at another institution have no guarantee that the credit will be accepted at Bradley. Continuing Bradley students should request the other institution to send an official transcript of credit directly to the Registrar's Office at Bradley. If the other institution is using a quarter hour system, those hours will be converted to semester hours.

Seniors who take work at another institution to complete degree requirements at Bradley must file proof of registration for that work in the form of a letter from the Registrar of that institution. This letter must be received in the Bradley Registrar's Office by the end of the third full week of classes. The work must be completed by the time of Bradley's Commencement. The diploma will be awarded after receipt by the Bradley Registrar's Office of an official transcript of credits from the other institution.

Level Of Transfer Credit

Transfer credit shall be accepted on the same level on which the work was offered at the source institution. For example, courses taught at the source institution on the first-year student level will be accepted for credit on the first-year student level at Bradley. No junior-senior credit will be given for work taken at a two-year college.

Credit for Prior Learning

Credits earned through current or prior military service that are posted on a Joint Services Transcript (JST), Air University Transcript, or Community College of the Air Force transcript will be considered for acceptance at Bradley University. All policies applicable to Transfer Credit Taken From Collegiate Institutions, including evaluation of credit, apply to military service credits.

Bradley does not grant transfer credit for professional certifications, licenses, employment, or other on the job training.

Credit By Correspondence And Extension

Students wishing to take correspondence or extension courses for transfer purposes must have the prior written approval of their dean. A total of thirty semester hours through extension and correspondence, with a maximum nine semester hours of correspondence, will be permitted to count toward graduation, except in the College of Engineering and Technology. In the College of Engineering and Technology, a maximum of ten semester hours of credit taken by correspondence and extension may be counted toward graduation.

Examination For Advanced Placement

Credit may be given in courses covered by Advanced Placement Examinations offered by the College Board if the score received is three or higher. The number of semester hours of credit allowed is determined by the extent of the college work covered by this examination, as recommended by the department offering the work at Bradley. Inquiries should be directed to the Admissions Office.

College-Level Examination Program (CLEP)

Bradley University is committed to the principle that college-level achievement should be recognized and rewarded without regard to where, when, or how the knowledge was acquired. The University grants a maximum of 60 semester hours to those who earn scores on the College-Level Examination Program (CLEP) examinations in the 50th percentile or higher on national college sophomore norms. Because CLEP credit is transfer credit, it cannot duplicate credit already earned from another source. The Registrar's Office maintains a list of CLEP exams that Bradley accepts. In all cases, an official copy of test scores must be sent from the CLEP office, by request of the student, directly to Bradley University.

Credit for CLEP may be used to satisfy Core Curriculum requirements or appropriate University requirements.

The CLEP exams must be taken before completing 60 college credits. The 60-credit limit includes courses taken at Bradley University, credits taken at another college or university, and other credits received by examination. Credits earned through CLEP exams may not duplicate credits received from other sources. Credits earned through CLEP exams may not be at a level lower than a course for which credit has been earned.

If you have questions about how CLEP credit applies to Bradley, please consult the following:

- if you are currently enrolled at Bradley: The Registrar's Office, (309) 677-3643
- if you are a student new to Bradley: Undergraduate Admission, (309) 677-1000

Credit By Proficiency Examination

Credit by proficiency examination is classified as non-residence credit. Upon presentation of acceptable evidence of competence, students enrolled in the University may apply for permission to attempt to earn credit by examination in certain undergraduate subjects. Applications for such examinations will be submitted to the chairperson of the department that offers the course, who will, if the application is approved, arrange for the administration of the examination. Students receiving approval to attempt to earn credit by examination will pay a non-refundable fee of \$50.00 for the examination for each course number listed in the catalog. This fee must be paid before the examination is taken. Students who have had no previous college experience, and who have been admitted as full-time students, may apply for permission to attempt credit by examination in certain undergraduate subjects. Such examination will be taken prior to the student's second registration. Credit, but no grade, will be recorded for examinations passed. Grades for examinations taken after the student's second registration will be entered on the permanent record. Students shall have the option of requesting either a letter grade or a grade of Pass/Fail. A grade of "C" or better will be considered a passing grade for both options. A grade of "D" is not acceptable for a proficiency examination. The option selected must be agreed upon by the student and the department offering the course at the time of application for the examination. Because credit by proficiency is not considered residence credit, grades are not computed in the student's cumulative grade point average. Seniors may not take examinations for credit toward any degree in courses which are numbered below 300. Application forms are available in the dean's or Registrar's Office.

Retroactive Credit (Retrocredit) Information

Students who place in a language at the 102 level or higher and take a course in the same language in the World Languages and Cultures Department at Bradley University can receive retroactive credit ("retrocredits").

In order to receive retroactive credit:

- The course must be the *first* college-level course in the language.
- The course must be taken *before* the student has earned 60 credit hours.
- The course must be designated as retrocredit eligible.
- The student must receive a *B* or higher in the course.

Upon successful completion of an approved course students will receive:

- 102 = 4 retrocredits (101)
- 201 = 8 retrocredits (101, 102)
- 202 = 12 retrocredits (101, 102, 201)
- 222 (WLS only) = 12 retrocredits (101, 102, 201)
- 303 = 15 retrocredits (101, 102, 201, 202)
- 304 = 15 retrocredits (101, 102, 201, 202)
- 306 (WLF and WLG only) = 15 retrocredits (101, 102, 201, 202)
- 308 (WLF only) = 15 retrocredits (101, 102, 201, 202)

Conditions for receiving retroactive credit:

- Grades will not be given for retroactive credit nor will they figure in a student's GPA.
- Retroactive credit will not count towards residency.
- Retroactive credit will count towards the 124 credits necessary for graduation.
- Native speakers cannot earn retroactive credit in their native language (as determined by WLC faculty).
- In order for a student with AP or IB credit to receive retroactive credit the student would need to take an appropriate language course at Bradley. Students cannot receive additional retroactive credit for a course for which they already received AP or IB credit.
- Students could earn retroactive credit in more than one language as long as they have not earned more than 60 credit hours at the time the course will be taken.
- Upon successfully completing a course, students will fill out a Retroactive Credit Form available on the World Languages and Cultures webpage, which must be completed and submitted to the Registrar's Office.

Departmental Prerequisite Examinations (Not For Credit)

At the discretion of the department offering the course, regularly enrolled students of the University may be allowed to take a special examination in any course offered by the department in order to satisfy prerequisites for subsequent courses. Before a student will be permitted to take a prerequisite examination, a \$50.00 fee for each course number listed in the catalog must be paid to the Controller's Office.

A prerequisite examination carries no University credit and no grade. Upon successful completion of a prerequisite examination an

appropriate entry will be made on the permanent record of the student.

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Majors, Concentrations, and Minors



Majors, Concentrations, and Minors

Major

The purpose of the major is to ensure that students master a subject area in depth and breadth.

A major is a coherent, structured course of study, defined by departments, and selected by students as their principal subject area.

Generally, the major is comprised of courses offered and required by the department, but it may also include designated courses from other departments offering related subjects. All students must fulfill the requirements for at least one major in order to graduate.

In addition to courses used to satisfy the Bradley Core Curriculum requirements, students must successfully complete a minimum of 24 semester hours of courses designated by the department as acceptable toward the major.

The major must include no fewer than 12 semester hours at the 300 (junior) level or above.

Students must achieve a minimum grade point average in courses in the major of no less than 2.0 in order to graduate.

Multiple majors must include at least 18 semester hours of courses that are not used to fulfill any other major the student seeks.

Concentration

The purpose of the concentration is to encourage and recognize study in depth of special areas within the broadly defined discipline of the student's major. Generally, Concentrations are comprised of courses offered by the major department and courses of other departments that are specifically acceptable for credit toward the major.

The concentration must be a coherent, structured course of study. It is comprised of no fewer than 12 semester hours of the minimum 24 semester hours required for the major. No fewer than 6 semester hours must be in courses at the 300 level or above. To qualify for more than one concentration within one major, no fewer than 9 semester hours of courses required for any of the desired concentrations must be unique to that concentration and not used to satisfy the requirements of the other concentration(s).

Minor

The purpose of the minor is to encourage and recognize study in depth of a subject for students majoring in other subject areas. A student's minor, therefore, is generally comprised of courses other than those offered by or required by the student's own major.

The minor must be a coherent, structured course of study. A minor is comprised of no fewer than 15 semester hours, a majority of which are at the 200 (sophomore) level or above with no fewer than 6 semester hours at the 300 (junior) level or above.

Students must achieve a minimum grade point average of 2.0 in courses in the minor for official designation as a minor.

Declaration of Minor

Students declaring a minor must report to the advisor in their major field to notify that advisor of their intent to seek a minor. After obtaining the signature of the advisor in their major field, the form is presented to the advisor for the intended minor for that advisor's approval. The student then presents the form to the dean of the college of the intended minor who forwards this form to the Registrar for official entry to the student's permanent scholastic record.

Requirements

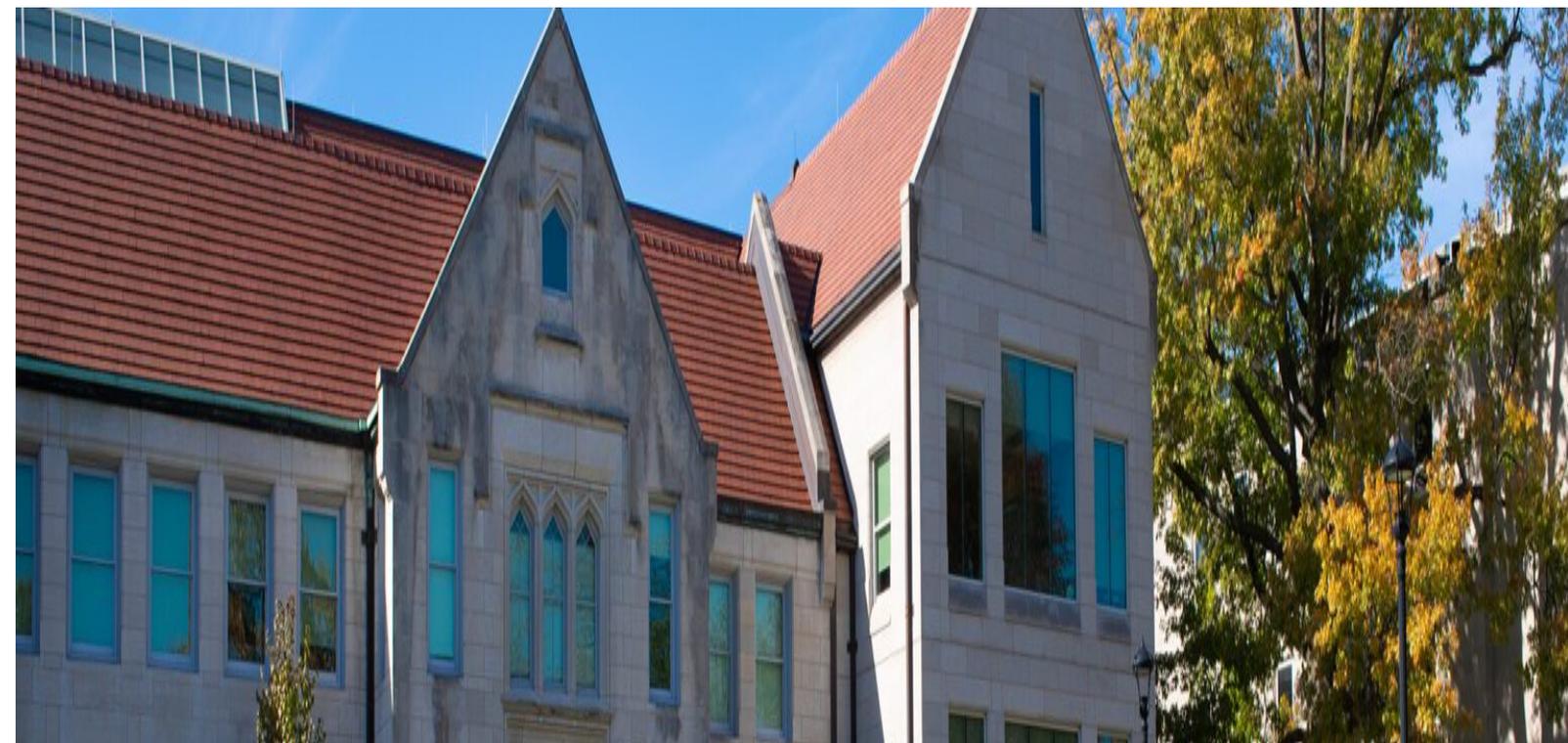
Requirements for majors and for minors are specified in the catalog under each curriculum offering them. Students may graduate with a single major or a number of majors and minors when the requirements of each, including all college and department requirements, are met at the time of graduation. Students may, with the approval of the dean of the college offering the work, complete additional majors or minors after graduation and have the completion and date noted on the permanent scholastic record.

Requirements For Two Baccalaureate Degrees

Students seeking two baccalaureate degrees from Bradley University may qualify for both degrees by meeting the specific requirements for each and presenting residence hours totaling 30 beyond the degree demanding the larger number of semester hours. The degrees may be earned consecutively or concurrently.

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Grades



Grades

Grades in individual courses should reflect achievement in the subject matter in accordance with the standards of the course. Instructors shall inform students of standards for the course, the basis for judgment in grading, and the weight of each criterion in the assessment of the final grade. The standards of grading shall remain constant throughout the semester. Students have the right to know where they stand in each course at periodic intervals throughout the semester. Any work submitted for evaluation should be assessed and returned promptly.

Incomplete

“IN” is the symbol used when the instructor lacks sufficient evidence to award a letter grade. The purpose of an “IN” is to provide the time necessary for a student to complete coursework which, through no fault of the student’s, was not completed in the normal time allowed. Reasonable time necessary for completion is decided by the student and the faculty member teaching the course. The “IN”, once assigned, remains on the official academic record upon conversion to a grade or permanent “I”. The “IN” should not be mistakenly considered as an incentive for the faculty to recommend or for students to believe that this extension permits students merely to retake courses, or to extend the time for the completion of the prescribed work beyond the end of the semester of enrollment, as the means of removing the “Incomplete.” For undergraduates, at the time the “IN” is assigned, the instructor must file with his or her director or department chair a copy of the contract specifying what must be done to complete the “IN” and the date by which the “IN” must be converted. For undergraduates, an “IN” must be converted not later than four weeks before the end of the next regular semester in which the student is enrolled or the Registrar will record a permanent “I”. If the instructor does not submit a letter grade by the specified deadline, the “I” will remain permanently upon the student’s record and may not thereafter be removed. Under unusual circumstances, the student may be granted an extension to the end of the semester with the approval of the instructor involved, provided that the request was received prior to the normal deadline for the removal of Incompletes.

Grade Point System

The grading system of the University for undergraduate students is based on the following:

Marks	Description	Honor points per semester hour
A	High competence	4
B	Competence	3
C	Minimum competence	2
D	Limited or incomplete competence	1

F	Inadequate competence for credit
IN	Instructor lacks sufficient evidence to award a letter grade
IP	Work in progress. Graduate level and certain approved undergraduate courses. Research work (theses, reading courses, special research problems) carried over more than one semester.
I	Permanent Incomplete
P	Pass (certain courses approved for Pass/Fail)
S	Satisfactory
U	Unsatisfactory
W	Official withdrawal
X	Satisfactory audit
UX	Unsatisfactory audit

Grade point average is determined by dividing honor points by semester hours. Only work registered through Bradley University is used in calculation of grade point averages. Courses taken for audit are recorded on the student's permanent academic record as completed satisfactorily ("X"), completed unsatisfactorily ("UX"), or withdrawn ("W"). Marks of "IN," "IP," "I," "P," "S," "U," "UX," "W," and "X" are not considered in calculating the grade point average. For repeated courses, the last grade and credits earned shall be the only ones used in the calculation of grade point averages. Credit earned by proficiency examination is not used in the calculation of grade point averages.

Dean's List

Those full-time students who earn a semester GPA of 3.5 or higher on a 4.0 grading scale are given the distinction of being placed on the University's Dean's list for their outstanding scholastic achievement.

Mid-Term Grades

A report of mid-term grades is prepared for all undergraduate students shortly after the midpoint of the fall and spring semesters. All students have electronic access to their mid-term grades. Mid-term grades are provided only to give students an indication of their progress and are not officially recorded on permanent records.

Final Grades

Final grades will be issued for each class in which a student is officially registered. A report of these final grades will be posted on MyBradley, the online information system, by the Office of the Registrar within a very short time following the close of the semester. All challenges to final grades must be made in the next regular semester after the grade was awarded. All completed grade change request forms must be submitted to the dean of the college in which the course is offered no later than four weeks before the end of the next regular semester.

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Academic Ombudsman



Academic Ombudsman

The Academic Ombudsman, a faculty member to whom students may bring complaints about teaching, operates under the following conditions. The Ombudsman will have a purely communicative function. If, after discussing the complaint with the Ombudsman, the student desires, the Ombudsman shall communicate the nature of the complaint to the instructor involved. Then, if the student thinks an insufficient corrective effort has been made, the student may discuss the matter with the Ombudsman and request that the complaint be forwarded to the instructor's department chair. The Ombudsman shall regard all information received by virtue of the position as absolutely confidential, except as provided in this statement. Students who do not choose to use the services of the Ombudsman can use the process of administrative appeal, starting first with the instructor, then the instructor's department chair, the dean, and finally the Provost and Senior Vice President for Academic Affairs. Complaints should be resolved at the lowest level.

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Undergraduate Academic Recovery, Dismissal, and Forgiveness Policies



Undergraduate Academic Recovery, Dismissal, and Forgiveness Policies

Academic Recovery

A minimum cumulative grade point average of 2.00 based on grades at Bradley University is required for graduation. Students must maintain this minimum grade point average each semester in order to remain in good standing. A student whose cumulative grade point average is less than 2.00 will be enrolled on academic recovery for the next semester. Students on academic recovery will be unable to register for January Interim or May Interim during early registration. A student enrolled on academic recovery who does not achieve either a cumulative grade point average of 2.00 or a semester grade point average of 2.25 at the end of the semester will be dismissed. If a student on academic recovery does not enroll in the next regular semester (fall or spring), the student must apply for readmission and all academic records will be subject to evaluation. A student who enrolls on academic recovery is urged to see his or her academic advisor who will review the academic program of the student and recommend a course of study. For students enrolled at Bradley on academic recovery, participation in the Turning Point Program is required. (See below.) A student's academic recovery status will be changed to "good standing" as soon as the student's cumulative grade point reaches 2.00 or higher. Summer school and interim terms will not be counted as academic recovery terms, but grades earned will be computed in the student's cumulative grade point average and may result in the student's return to "good standing."

Turning Point Program

The Turning Point Program, an academic support service offered through the Academic Success Center, is required for all undergraduate students on academic recovery for the first time and reinstated students as recommended by the Academic Review Board. When final semester grades are processed, students are notified in writing about being automatically enrolled in the Turning Point Program and its accompanying course AEP 115 10.

Scholastic Dismissal

A student enrolled on academic recovery who does not achieve either a cumulative grade point average of 2.00 or a semester grade point average of 2.25 at the end of the semester will be dismissed. Once dismissed, the student will not be allowed to attend any class offered by Bradley University for college credit, including any interim, summer session, or continuing education class, without reinstatement. There are no reinstatements for the interim session immediately following dismissal. In special cases, the academic dean may grant permission to enroll in summer sessions immediately following dismissal. A student's enrollment will be canceled as a result of academic dismissal if there is no reinstatement by the Academic Review Board.

Petitions For Scholastic Reinstatement

Any student dismissed for poor scholarship has the right of appeal for reinstatement. A student should not expect to be reinstated until after one full regular semester has intervened. Petitions for reinstatement should be directed to the Academic Review Board.

Academic Forgiveness Policy

To qualify for the Academic Forgiveness Policy, students must not have been enrolled in a Bradley degree program for at least five years. Persons who wish to be readmitted to Bradley University under the Academic Forgiveness Policy must petition the Academic Review Board and request forgiveness of previous grades earned at Bradley. If the petition is approved, grades for all Bradley courses taken before the hiatus of five or more years will be removed from the GPA calculation. Students will retain credit for those courses with grades of "C" or better, whether the credit was taken in residence at Bradley or from another source. The forgiven grades shall not count in determining the student's grade point average for academic recovery or dismissal or for graduation; however, they shall remain on the transcript with an appropriate notation, and shall be used in determining graduation honors. Forgiveness is a one-time option which is final and irreversible once granted.

Academic Review Board

The Academic Review Board is authorized to act upon petitions of reinstatement of undergraduate students dismissed for poor scholarship. This board also considers petitions for Academic Forgiveness and waivers of graduation regulations.

Dismissal For Other Causes

Students found guilty of a breach of academic integrity (plagiarism, cheating, unauthorized use of University computers, etc.) are subject to disciplinary action, including dismissal from the University. It is the responsibility of the faculty member to report to the Executive Director of the Center for Residential Living and Leadership any occurrences of breaches of academic integrity and the penalties assigned to the student. Specific procedures for doing so and the appropriate penalties are published in the Faculty and Student Handbooks. In addition to breaches of academic integrity, students whose actions are considered detrimental to the best interest of the University may be dismissed from the University upon recommendation of the administration, the faculty, or the appropriate University committee. Such actions are specifically described in the University's Student Handbook.

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Breach of Academic Integrity



Breach of Academic Integrity

According to Senate rules, all occasions of academic dishonesty must be reported to the Executive Director of Residential Living and Leadership, together with a statement of the penalty imposed by the faculty member. If, in the opinion of the Executive Director of Residential Living and Leadership, other problems of a personal or an emotional nature are present, a referral to the Center for Student Health Services will be made.

Cheating is officially defined as giving or attempting to give, or obtaining or attempting to obtain, information relative to an examination or other work that the student is expected to do alone and not in collaboration with others, or the use of material or information restricted by the instructor. Each instructor will indicate beforehand work that may be done in collaboration with other students. Examples of cheating include but are not limited to copying from another person during an examination, using materials not allowed by the instructor during an examination, collaboration on a take-home examination or other assignments where it has been expressly prohibited by the instructor, and the submission of a laboratory report based on data not obtained by the student in the manner indicated by the instructor. The person who provides illicit information is liable to the same punishment as the person who receives and uses it.

A "Zero," or whatever is the equivalent of the lowest failing grade possible, shall be assigned for that piece of work to any student cheating on a non-final examination or other class assignment. A "Zero," or whatever is the equivalent of the lowest failing grade possible, shall be assigned on a final examination to any student cheating on a final examination. An "F" shall also be assigned as the course grade to any student cheating on a comprehensive final examination.

Plagiarism

Plagiarism is no lesser an offense than cheating. Examples of plagiarism as stated in The Modern Language Association *MLA Handbook for Writers of Research Papers* include but are not limited to repeating another's sentences as your own, adopting a particularly apt phrase as your own, paraphrasing someone else's argument as your own, and presenting someone else's line of thinking in the development of a thesis as though it were your own. A "Zero," or whatever is the equivalent of the lowest failing grade possible, shall be assigned for that piece of work to any student plagiarizing on a non-final piece of work. In the case of a student plagiarizing on a final research paper or project, an "F" shall also be assigned as the course grade.

Repeated Offenses of Plagiarism and Cheating

For repeated or aggravated offenses of cheating and or plagiarism, additional action, including dismissal from the University, may be taken pursuant to the Student Handbook procedures related to the University Judicial System and the disciplinary sanctions for violation of University regulations.

Other Breaches Of Academic Integrity

Other examples of what might constitute a breach of academic integrity include, but are not limited to, the following: bribes, favors or threats with the intent of influencing a grade or any other evaluation of academic performance; taking an examination for another student; and grade tampering.

Grievance Procedure

If the student objects to the instructor's conclusion that a breach of academic integrity has occurred, the student may consult the University Ombudsman and/or appeal the instructor's conclusion through the instructor's department chair to the Dean or to the Dean's designee(s) of the college in which the course is offered, within 20 days of the time that the student receives written notification of the instructor's conclusion. A copy of the notification will be filed with the Director of Residential Living and Leadership. Due process requirements for a fair hearing shall be provided to all parties. The record of the hearing before the Dean or the Dean's designee(s) shall consist of written statements of the instructor and student in support of their positions provided prior to the hearing and a tape recording or transcript of the hearing itself. An appeal of the decision of the Dean's or the Dean's designee(s) may be made within 10 days of the decision by written appeal to the University Student Grievance Committee. In the event of an appeal, the Dean shall transmit the decision to the University Student Grievance Committee, and if the Dean's designee(s) rendered the decision, the Dean shall indicate whether or not he or she agrees with the decision.

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Graduation



Graduation

Responsibility For Graduation Requirements

Every candidate for a degree is personally responsible for meeting all requirements for graduation. No University official can relieve the student of this responsibility.

Application For Graduation

Seniors who plan to receive a baccalaureate degree in December should make application for graduation at registration time for the fall semester, or no later than the end of the first full week of classes in the fall semester. Candidates for the baccalaureate degree in May should make application at registration time for the spring semester, or no later than the end of the first full week of classes in the spring semester. Students can apply for graduation online via MyBradley. In addition, application forms are available in the Registrar's Office and online at bradley.edu/offices/academic/registrar/graduation-info/. Completed undergraduate applications must be filed in the Registrar's Office. If a student fails to complete the requirements at the time stated on the application for graduation, reapplication must be made for a later date.

Completion Of Degree Requirements

Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation. A change in major could mean meeting new requirements in force at the time of the change as a condition for acceptance into that major. Students whose work has been interrupted for one or more semesters may be held to requirements in effect at the time of their re-enrollment. Candidates for a degree must meet all-University requirements and requirements in the curriculum for which they have applied. The deans of the colleges give final approval for graduation and recommend the candidates for the degree. Therefore, questions concerning degree requirements should be directed to the college deans.

Students electing to take courses at another accredited institution to meet Bradley graduation requirements must obtain prior written approval of their dean. An official transcript covering this coursework must be received by the Bradley University Registrar's Office no later than two weeks after the end of the Bradley semester. The grades of all work needed to fulfill the graduation requirements, whether earned through residence at Bradley or on another campus, must be completed and received by the Registrar's Office no later than two weeks after the end of the Bradley semester.

Note the University regulations concerning incompletes and their removal deadline earlier in this catalog. Incomplete grades must be resolved prior to the degree being awarded.

Attendance At Commencement

Commencement is held following the end of each regular semester. All candidates for the degree whose names appear on the tentative list of candidates posted one month prior to the commencement may attend the commencement ceremony. Students may participate in Commencement if they have proof of registration for the work which will complete the requirements for the degree. If some coursework is being transferred, proof of registration from the Registrar of the other institution must be received by the end of the third full week of classes. Students who have degree requirements remaining may apply for permission to participate in a particular commencement if the following conditions are met: the remaining degree requirements do not exceed two courses and/or required practical experiences; and it must be possible for the student to complete the remaining degree requirements during the interim and/or summer session immediately following the commencement. Formal requests for permission must be filed with your college dean. The actual date of the degree would be the next official graduation date immediately following the completion of degree requirements.

Awarding Of Diplomas

Diplomas will be awarded at the end of the Fall, Spring, and Summer terms, whichever date follows the completion of all of the requirements for the degree, and will bear that date. Diplomas will be awarded only to students completing all degree requirements.

Latin Honors

Cum Laude, Magna Cum Laude, Summa Cum Laude

Bradley University recognizes a graduating, undergraduate student's superior scholastic achievement through the awarding of Latin Honors. Evidence of achievement is shown by the student's grade point average (GPA). A student will be awarded Latin Honors according to the following standard:

- 3.40-3.59 Cum Laude
- 3.60-3.79 Magna Cum Laude
- 3.80-4.00 Summa Cum Laude

For recognition at Honors Day and at Commencement, the computation of the Latin Honors designation earned by GPA shall be made on the basis of cumulative GPA and hours completed at the end of the semester/term immediately preceding graduation (normally after seven semesters of work).

The computation of the GPA for Latin Honors designation on the student's permanent record and diploma shall be made on the basis of all work completed at Bradley University at the time of graduation. Note that Latin Honors awarded for recognition at Commencement may not be the same as final earned Latin Honors.

Students who have successfully completed the requirements of the University Honors Program will be recognized for this achievement by a separate certificate.

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University Student Grievance Policy



University Student Grievance Policy

A student academic grievance is appropriate in cases in which the student claims unfair, prejudicial, or capricious evaluation or treatment of an academic nature. A grievance is not appropriate on actions which would impair the exercise of academic freedom. A student non-academic grievance is appropriate in cases involving access to and participation in course offerings, sexual harassment, racial discrimination, or any other act by a University faculty member that is derogatory or discriminatory in nature. No student may pursue the formal part of the following grievance procedure before exhausting all informal procedures. What follows does not preclude a faculty member's appeal to the Faculty Grievance Committee.

The grievance process is intended to deal with matters as expeditiously as possible. Although the times listed below are recommended guidelines for handling the steps of the process, it is expected that they will not be exceeded except under compelling circumstances.

A student who claims grievance as described may consult with the Ombudsman or meet directly with the instructor involved. The grievance process is as follows:

1) Informal Procedure

- The student shall meet with the instructor in an attempt to resolve the issue within 15 days on a non-academic grievance and normally within 15 days of the beginning of the next semester on an academic grievance. (The student may consult with the Ombudsman.)
- Should the issue not be resolved to mutual satisfaction, the student may, within five days, appeal an academic matter to the Chair of the given Department who shall provide the student and faculty member with a decision within five days of appeal, or appeal a non-academic matter to the office of the Vice President for Student Affairs, who will attempt to resolve the matter within 10 working days from the time of appeal. In cases involving a conflict of interest with the Vice President for Student Affairs, the student may appeal a non-academic matter to the Provost and Vice President for Academic Affairs. If any unfair or unjustifiable injury or disadvantage occurred, the decision shall include specific remedies to rectify the situation.
- Should an academic issue not be resolved to the satisfaction of the parties, the student or faculty member may, within five days, appeal the decision of the Chair to the Dean(s) of the College(s) in which the given academic concern resides and to the Dean of Graduate Education if a graduate student is involved. This appeal shall specify in writing the alleged grievance. The Dean(s) or Dean(s)' designee(s) should meet with the relevant parties within five days of the appeal. The Dean shall deliver a decision within five days after said meeting. If any unfair or unjustifiable injury or disadvantage occurred, the Dean's decision shall include specific remedies to rectify it.

2) Formal Procedure

Should the issue not be resolved to the satisfaction of the parties, the student or faculty member may, within five days of the final written decision from the informal procedure, initiate the formal phase of the grievance procedure by written appeal to the Chairperson of the University Student Grievance Committee. Legal counsel may be used by the parties at the parties' cost, as part of the formal procedure. Legal counsel for either party shall act in an advisory capacity only and not be permitted to speak on behalf of any party. The Committee shall have access to the University attorney on procedural matters.

- The Student Grievance Committee shall accept for hearing only those cases considered grievances as described above.
- The Student Grievance Committee shall meet at the call of the Chairperson upon receipt of a formal grievance. The Chairperson will:
 1. Obtain written statements from all parties involved in the appeal.
 2. Call for a meeting of the Committee to review the statements from the parties involved within 10 days of submission of the appeal, unless extraordinary circumstances require a delay, and determine a date and time for the hearing.
- The Committee will:
 1. Notify all parties of the time, date, and place of the hearing at least five days in advance.
 2. Call on other faculty, staff, and students if it would serve the purposes of due process.
 3. Retain records of all written matters dealing with each case.
 4. If the committee decides that a grievance is not in order and the alleged grievance concerned discrimination, a copy of the minutes of the meeting will be sent to the Affirmative Action Officer.
- The Committee shall submit its findings and decision to the appropriate academic officer for review within 45 days after the matter has been formally submitted to the Committee. This time period shall not include University holidays and times when the faculty are not under contract such as during the summer. If the Committee finds that unfair or unjustifiable injury or disadvantage has occurred, it shall forward to the appropriate academic officer its specific suggestions for rectifying it. The appropriate academic officer, within 30 days of the receipt of the findings and recommendations of the Committee, shall notify all concerned parties of agreement or disagreement with the Committee's decision, stating the reasons in writing. Upon agreement of the parties, the grievance process can be concluded at any time before notification by the appropriate academic officer.
- In cases where there are findings of unfair or unjustifiable treatment of students in a non-academic matter, the Vice President for Student Affairs is responsible for rectifying the situation per the Committee's findings.

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Miscellaneous University Regulations



Miscellaneous University Regulations

Absences

This is the University undergraduate policy regarding absences. Consult the policy of your own college or department for further details. Every student is expected to attend all classes regularly. Each student is responsible for all work contained in the course, even in case of absences caused by circumstances beyond the control of the student. In case of absence, provision for make-up work, insofar as make-up work is possible, may be made by the instructor at the reasonable discretion of the instructor. The grade in any given course will therefore ordinarily depend upon the quality of the work done in the course. Absence will affect the grade insofar as the quality of work is affected. Reasons for absences are presented to the instructor by the student. In cases of medical absences, reasons for absences may be presented to the instructor by Student Support Services in consistency with the Health Services class absence notification policy found [here](#).

Change Of College Or Curriculum

Changes of a student's major must be initiated with the academic advisor in the student's current major field. Students can find the name of their advisor by logging into MyBradley. Advisor names are listed under the "Other" tab. If an advisor is not assigned in MyBradley, students should consult the list of these advisors in the Schedule of Classes or contact the department. After the form has been completed by the academic advisor, the student should take the form to the dean of the college in which the student was registered for the dean's signature. The student obtains the signature of the advisor in the new major field, and then takes the form to the dean of the college to which the student is transferring and leaves the form with the new dean. If the change does not involve a change of college (merely a change of curriculum within the same college) the dean of that college will retain and process the form.

Change Of Address

Students should keep their address information current on MyBradley. This includes campus address, permanent mailing address, or parents' addresses. Students not in residence halls can update all of these addresses online.

Transcript Of Credit

A transcript of credits is an authentic copy or printout of the student's academic record. No partial transcripts will be issued. Transcripts are released only by written request of the individual concerned. Orders can be placed online, in person, or by mail to the Registrar's Office. Phone orders will not be accepted. Bradley University has authorized both the National Student Clearinghouse and Parchment to provide transcript ordering via online. There is an online processing fee in addition to the \$7.00 fee for each copy ordered and is

payable in advance.

No student who is indebted to the University will be issued a transcript until the debt is cleared by the office concerned. Bradley University does not issue nor certify copies of transcripts from other institutions.

For more information on ordering transcripts, please visit the Registrar's website.

Financial Obligation Of The Student

No report of grades is sent for the student whose financial account with the University has not been settled in full, nor will the grades be available on the Web. Likewise no diploma, professional certificate, transcript of credit, or other information concerning academic record is given until the student's account has been cleared.

Student Consumer Information

Federal regulations require universities to make student consumer information available to prospective and current students concerning: financial assistance information; institutional programs and policies; graduation rates; safety programs, policies, and crime statistics; athletic program participation rates and financial support data; and rights under Family Educational Rights and Privacy Act. This information may be obtained by requesting the Student-Right-to-Know and Campus Security Act Compliance Report from Bradley University's Office of University Relations at (309) 677-3164. Safety information and crime statistics are available online at <https://www.bradley.edu/legal/consumerinfo/>.

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Freshman (Domestic and International)



Freshman (Domestic and International)

Bradley welcomes applications for admission from all students who feel that they can benefit from and contribute to the varied academic and extracurricular offerings of the University. High school students are encouraged to apply early in their senior year but later applications will be considered as space permits.

Additional Information for International Students

Admission Requirements

Admission is based on a review of each student's comprehensive academic and extracurricular record to predict their likelihood to be successful at Bradley. In determining an applicant's qualifications, the following criteria are used:

1. Required
 1. Completed Application
 2. High School Transcript. Students may submit either an unofficial or official transcript for consideration for admission. If an official copy of the transcript is not provided at the time of application, an official copy must be sent prior to enrollment.
 3. One or two-page personal statement or essay. Be sure to include your full name on each page
 4. For non-U.S. citizens or legal permanent residents who will not earn a U.S. high school diploma, scores from one of these standardized tests are required for proof of English language proficiency: TOEFL, IELTS, Gateway English (formerly E3PT), PTE Academic, Cambridge English, ACT or SAT.
2. Optional
 1. One letter of recommendation may be valuable for some students. Students may elect to include a letter from a teacher, school counselor, coach, or school activity advisor. No specific form is required.

Entrance Examinations

Bradley University is test-free for applicants to the freshman class who graduate from a high school accredited in the United States within the year prior to enrollment at Bradley.

Non-U.S. citizens may submit an ACT or SAT score which will only be used to determine English language proficiency, and will not be used for any other admission decisions. If a student wishes to include standardized test scores, the student must request that they be forwarded to the Office of Undergraduate Admission from the testing service or request that their high school send a transcript with the official scores reported.

Student Health Form Requirement

For the benefit and protection of each Bradley student and to comply with state law, it is required that a student health form be filed with Health Services prior to the time the student begins at the University. This form is sent to each admitted student. If a form is not received, a copy may be obtained at Health Services in the Markin Center or the Admissions Office in the Visitors Center.

All students are required to have a student health form on file at Health Services before registering. To avoid penalties and delays in registration, return the form and then verify through Health Services that it has been received and is complete.

Health Immunization Requirements

Bradley students are required to be immunized against measles, mumps, rubella, tetanus, and diphtheria. Students entering Bradley University for the first time will not be allowed to register unless they provide proof of proper immunization (Public Act 85-1315). Verification of that immunization is a component of the Health Form.

General Admission Requirements

Generally, minimum curriculum requirements for all entering freshmen are as follows: 4 units (years) of English (1/2 or 1 unit of which may be speech), 3 units of college preparatory mathematics, 2 units of laboratory science, and 2 units of social sciences. See listings below for special requirements within the individual colleges and programs. (Applicants deficient in special admission requirements may be admitted but will be required to take preparatory courses in addition to the program described elsewhere in the catalog.)

Business

Required: 2 units of algebra, 1 unit of geometry, 4 units of English (1/2 or 1 unit of which may be speech). Recommended: 2 units of history and/or government.

Students entering the Foster College of Business should have a minimum of two units of algebra and one unit of geometry. Students not meeting these minimums generally must make up the deficiency, at Bradley or elsewhere. Test results will be used to help ascertain the degree of deficiency that exists. High school students are also encouraged to take additional math such as a third unit of algebra, analytic geometry, trigonometry, pre-calculus, and solid geometry. Generally, the more mathematics courses the better. **Standardized test scores, if provided, may be used to help determine math proficiency.**

Engineering

Candidates are urged to take as much mathematics and science as possible. Required: 2 units of algebra, 1 unit of plane geometry, 1/2 unit of trigonometry, 1 unit of physics. Recommended: 1/2 unit of solid geometry, 1 unit of pre-calculus, and 1 unit of chemistry; 1/2 unit of graphics for Industrial Engineering. Applicants who have not completed all of the recommended math and science courses before enrollment may be admitted. However, it is expected that students will complete these courses prior to enrollment. Standardized test scores, if provided, may be used to help determine math proficiency.

Construction and Engineering Technology

Required: 2 units of algebra, 1 unit of plane geometry, 1/2 unit of trigonometry, 1 unit of physics. Recommended: 1/2 unit of solid geometry and 1/2 unit of graphics.

Health Science

In addition to meeting University and College of Education and Health Sciences requirements, admission to the health science major as a freshman requires three units of high school mathematics and science. Biology/physiology, chemistry, and physics are recommended.

Liberal Arts and Sciences

Recommended: 2 units of a single foreign language.

Music

Required: An audition either in person or on tape. (Contact the chairperson of the Department of Music for an audition appointment.) Recommended: A minimum of four years experience in orchestra, band, choir, and/or chorus or four years of private music instruction. No musical experience or music audition is required for students enrolling in the Music and Entertainment Industry major.

Nursing

Three units of high school mathematics and science (anatomy and physiology, biology, and chemistry are preferred).

Registered nurses and licensed practical nurses must apply to the program, meet the above requirements, and submit a transcript from an approved school of nursing and evidence of licensure to practice in at least one state. All registered nurses and licensed practical nurses should contact the Department of Nursing for additional information concerning the program.

Notification Of Admission And Reply Date

Admission notifications begin September 1 prior to enrollment in the following fall semester. After that date, all notifications will be mailed as soon as the student's application file is complete and reviewed by the Admissions Committee. Applicants for spring, interim, or summer terms will be notified as soon as admission decisions are made.

Applicants respond to offers of admission by forwarding a non-refundable \$200 enrollment fee. Applicants requiring on-campus housing must submit an additional \$100 housing fee. Applicants will receive preference for university housing based on the date by which both are received. However, no student seeking notification of admission is required to respond to an offer until May 1. Students admitted after May 1 have two weeks from the date of notification of admission to respond.

Early Admission

Students Pursuing a Degree

Recognizing that the range of scholastic aptitude of high school students is great, Bradley University may accept students into a degree program, providing they have:

- completed their junior year of high school;
- attained a "B" or better high school average;
- attained appropriate SAT or ACT entrance examination scores;
- forwarded a high school transcript

Exceptions to this policy will be made only under special circumstances and with the approval of the Office of Undergraduate Admissions and the dean of the college in which the student wishes to enroll. Students that receive an admission denial decision may contact the Office of Admission about what steps to take for the deny appeal process.

Admission Decision Appeal Process

Students who are denied admission may contact the Office of Admission to inquire about the appeal process. Exceptions to the admission denial will be made only under special circumstances. The dean of the college in which the student wishes to enroll, the Office of the Provost and, in some cases, the Office of the President may be included in an admission appeal.

High School Diploma

Prior to starting classes at Bradley, freshmen are required to provide the university a final high school transcript that indicates the date of high school graduation. Students who were homeschooled must provide comparable documentation as established by their respective state boards of education.

If the institution or the Secretary has reason to believe that the high school diploma is not valid or was not obtained from an entity that provides secondary school education the Office of Admission will take the following steps to confirm high school completion:

1. Obtain documentation from the high school that confirms the validity of the student's diploma, including transcripts or other written descriptions of course requirements, or written and signed statements by principals or executive officers at the high school attesting to the rigor and quality of the coursework at the high school.
2. If the high school is regulated or overseen by a state agency, Tribal agency or Bureau of Indian Education, confirming with or receiving documentation from that agency that the high school is recognized or meets requirement established by that agency.
3. If the Secretary has published a list of high schools that issue invalid high school diplomas, the Office of Admissions will confirm that the high school does not appear on that list.

A high school diploma is not valid if it:

1. Did not meet the applicable requirements established by the appropriate state agency, Tribal Agency, or Bureau of Indian Education in the state where the high school is located
2. Has been determined to be invalid by the Department, the appropriate state agency in the state where the high school was located, or through a court proceeding
3. Was obtained from an entity that requires little or no secondary instruction or coursework to obtain a high school diploma,

including through a test that does not meet the requirements for a recognized equivalent of a high school diploma under 34 CFR 600.2.

The Office of Admissions may contact the relevant department or agency in the state in which the secondary school is located to confirm that the secondary school is recognized as a provider of secondary school education. Admission may be revoked if this information cannot be confirmed and or if the validity of a transcript cannot be verified as a final official transcript. Withholding information or giving false information to the university may make a student ineligible for admission to the university or subject to dismissal.

General Equivalency Diploma in Lieu of High School Diploma

Applicants who apply using general equivalency diploma (GED) test results in lieu of a high school diploma are required to submit GED test results.

Student Health Form Requirement

For the benefit and protection of each Bradley student and to comply with state law, it is required that a student health form be filed with Health Services prior to the time the student begins at the University. The Bradley Health Form is available online. If a form is not received, a copy may be obtained at Health Services in the Markin Center or the Admissions Office in the Visitors Center.

All students are required to have a student health form on file at Health Services before registering. To avoid penalties and delays in registration, return the form and then verify through Health Services that it has been received and is complete.

Health Immunization Requirements

Bradley students are required to be immunized against measles, mumps, rubella, tetanus, and diphtheria. Students entering Bradley University for the first time will not be allowed to register unless they provide proof of proper immunization (Public Act 85-1315). Verification of that immunization is a component of the Health Form.

Special Programs

Campus Visits

Bradley University encourages all prospective new freshman and transfer students and their families to visit campus. Students may attend one of the many campus visit programs or make arrangements for an individual visit. For further information, contact: Undergraduate Admissions, Bradley University, 1501 W. Bradley Ave., Peoria, Illinois, 61625; 309) 677-1000 or (800) 447-6460. E-mail admissions@bradley.edu or find more information online at admissions.bradley.edu.

Off-Campus Programs

Bradley University conducts many off-campus reception and interview programs throughout the year across the United States. These sessions are designed to allow prospective students and their parents the opportunity to meet with admissions or financial assistance representatives to learn more about the admissions process, degree requirements, campus life, and financial assistance and scholarship opportunities. To secure a schedule of the off-campus admissions programs or to set up an appointment with an admissions representative, interested students should call the Office of Undergraduate Admissions at (800) 447-6460 or go online to bradley.edu/admissions/.

Summer Orientation

A special invitation is extended to all incoming students and their parents to attend Summer Orientation. This program is specifically designed to introduce and familiarize students and parents with Bradley University, its faculty, student body, and special services. The program is required of all incoming freshmen and highly recommended for their parents. Transfer students are also encouraged to attend orientation sessions designed for them.

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Former Bradley Students



Former Bradley Students

Former students who wish to re-enter Bradley University must request an application for readmission from the Office of Undergraduate Admissions. Those students whose work has been interrupted for one or more semesters are subject to re-evaluation for readmission. They also may be held to any change of requirements that may have occurred during their absence. Students who have accumulated credit elsewhere during their absence are required to submit a transcript of that work. Students who were academically dismissed at Bradley must petition the Academic Review Board for reinstatement.

Dean's Recommendation Form

Prior to registering for classes, former students who have accumulated credit elsewhere during their absence are required to submit a Dean's Recommendation Form. This form will be emailed to you and is to be completed by college/university personnel from the most recent institution of attendance verifying continued good standing in conduct and judicial matters.

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Students Not Pursuing a Degree



Students Not Pursuing a Degree

High school students who have completed their sophomore year and are interested in taking classes at Bradley, but not in pursuing a degree, may be admitted at any time as undergraduate students-at-large. Contact Undergraduate Admissions and:

1. complete an application to be an undergraduate student-at-large;
2. forward a high school transcript as evidence of having attained a “B” or better grade point average; and
3. submit three letters of recommendation from secondary school teachers or guidance counselors.

Credit Courses For Undergraduate Students Not Seeking A Degree

Students who wish to enroll on a part-time basis (less than 12 semester hours) in undergraduate courses, who do not hold a bachelor’s degree, and who do not intend to complete an undergraduate degree, may apply for admission to Bradley as an undergraduate student-at-large. Must be in good standing at most recent institution of attendance.

Undergraduate students-at-large are subject to all University policies and regulations including academic probation and dismissal. If a student’s cumulative grade point average falls below 2.0, the student will be placed on probation. A minimum of a 2.25 grade point average will be required in succeeding semesters until the student’s cumulative grade point average is increased to 2.0 or higher.

Students who have been denied regular admission to Bradley and students dismissed from the University are not eligible to enroll as undergraduate students-at-large.

A maximum of 45 semester hours taken as an undergraduate student-at-large can be accepted toward a degree program. A student-at-large who decides to seek a degree should apply as a transfer student.

Non-degree-seeking students who already hold a bachelor’s degree and who wish to take undergraduate courses on a part-time basis must be admitted through Graduate and International Admission. Students who have completed an undergraduate degree should refer to the Graduate Catalog or contact Graduate and International Admission, by phone at (309) 677-3503, by e-mail at gradadmission@bradley.edu, or online at Bradley.edu/admissions/graduate. Students who already hold a bachelor’s degree and are only interested in 1) pursuing a teaching certificate or students who wish to pursue an additional bachelor’s degree should contact the Office of Undergraduate Admissions at (309) 677-1000. Students who already hold a bachelor’s degree and are interested in taking leveling courses for Speech Language & Hearing Sciences should contact the Office of Online & Distance at bradleyonline@bradley.edu.

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Transfer Admission



Transfer Admission

Each year, transfer students compose a significant proportion of the new student population at Bradley. The diversity of social and academic backgrounds that transfer students bring adds much to campus life. Accordingly, Bradley actively seeks to enroll transfer students from all areas of the United States and many foreign countries and strives to provide an atmosphere that is both challenging and rewarding. Applications to transfer to Bradley should be completed no less than 30 days in advance of the start of the semester for which one is applying. It is strongly recommended that transfer students apply several months prior to the beginning of the semester.

Official transcripts of all college work attempted are required prior to admission to Bradley. Official transcripts of credit must be requested by the student and received by the Office of Admissions directly from the institution at which the credit was earned. Transfer students having successfully completed 24 or more semester hours at an accredited institution need not supply a copy of their high school transcript unless requested by the Admissions Office. Students having completed less than 24 semester hours must submit a high school transcript. Transfer applicants must have a minimum cumulative grade point average of 2.5 to be considered for admission.

Additional Information for International Students

Dean's Recommendation Form

Prior to registering for classes, newly enrolled transfer students are required to submit a Dean's Recommendation Form to be completed by college/university personnel from the most recent institution of attendance verifying continued good standing in conduct and judicial matters.

Level Of Transfer Credit

Transfer credit shall be accepted on the same level at which the work was offered at the source institution. Junior-senior level credit will not be granted for courses taken at the first year-sophomore level.

Acceptance Of Transfer Credit

Credit from collegiate institutions which are accredited by one of the institutional accrediting associations, such as the Higher Learning Commission, will be considered for acceptance at Bradley University. Bradley University also participates in the Illinois Articulation Initiative. Credit may also be accepted in specific professional courses from certain institutions which are not institutionally accredited, but whose curricula are accredited by professional accrediting bodies recognized by the Council on Post Secondary Education. Credits from other institutions, including foreign universities, will be evaluated for possible transfer on a case-by-case basis.

Acceptance of transfer credit will be based on compatibility of the transfer work with the nature, content and level of work offered at Bradley. Application of transfer credit to satisfy specific college graduation requirements shall be determined by the dean of the college in which the student is majoring. In the event that a student changes majors while at Bradley, a new evaluation of the transferred credit will be completed by the department. Transfer credit which meets the general education requirements at the source institution may be applied to the general education requirements at Bradley. A maximum of 66 semester hours of credit will be accepted from accredited two-year colleges. Unlimited credit may be accepted from four-year institutions.

Transfer students from colleges and universities offering the baccalaureate degree must successfully complete a minimum of thirty semester hours in residence at Bradley to satisfy degree requirements.

Bradley Core Curriculum Policies for Transfer Students

- Transfer students who have earned at least two semester hours of approved coursework in an Area of Inquiry are considered to have satisfied completion of one course in the Area of Inquiry. This policy is limited to students who transfer from an institution using the quartile system.
- Transfer students may use courses taken at their previous institution to meet Bradley Core Curriculum requirements. Case-by-case transfer course articulations will be determined by the chair of the Core Curriculum Committee.
- Transfer students may use courses taken at their previous institution from the Fine Arts (FA) and Multidisciplinary Integration (MI) Areas of Inquiry to meet one or both of their two additional Bradley Core Curriculum elective courses. Students will be limited to no more than two courses in each Area of Inquiry.
- Transfer students enrolled in a second baccalaureate program will be automatically granted credit for all Bradley Core Curriculum requirements upon verification that their first baccalaureate was completed at an accredited institution of higher education that requires a minimum of 30 hours of general education.
- Transfer students who matriculate into Bradley prior to Fall 2018 will be offered the choice of completing the general education requirements as listed in the 2015-2016 Undergraduate Catalog in lieu of the Bradley Core Curriculum, pending approval by their program administration. Students must submit their request to meet the general education requirements by May 2, 2018. This supersedes the policy in this Undergraduate Catalog under All-University Degree Requirements, which states: *“Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation.”* [NOTE: This policy will automatically expire June 1, 2018.]

Student Health Form Requirement

For the benefit and protection of each Bradley student and to comply with state law, it is required that a student health form be filed with Health Services prior to the time the student begins at the University. This form is sent to each admitted student. If a form is not received, a copy may be obtained at Health Services in the Markin Center or the Admissions Office in the Visitors Center.

All students are required to have a student health form on file at Health Services before registering. To avoid penalties and delays in registration, return the form and then verify through Health Services that it has been received and is complete.

Academic Dismissal

Students dismissed for academic or non-academic reasons from their last previous institution attended must take courses at another University or community college and be in good standing before applying for admission to Bradley.

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Illinois Articulation Initiative



Illinois Articulation Initiative

Bradley University has endorsed the Illinois Articulation Initiative (IAI). The purpose of the IAI is to facilitate the transfer of courses among two- and four-year colleges and universities throughout the state of Illinois. The IAI guarantees students that completion of the General Education Core Curriculum at any participating school will satisfy general education requirements at any other participating school. This initiative is in effect for students who began college during or after summer 1998.

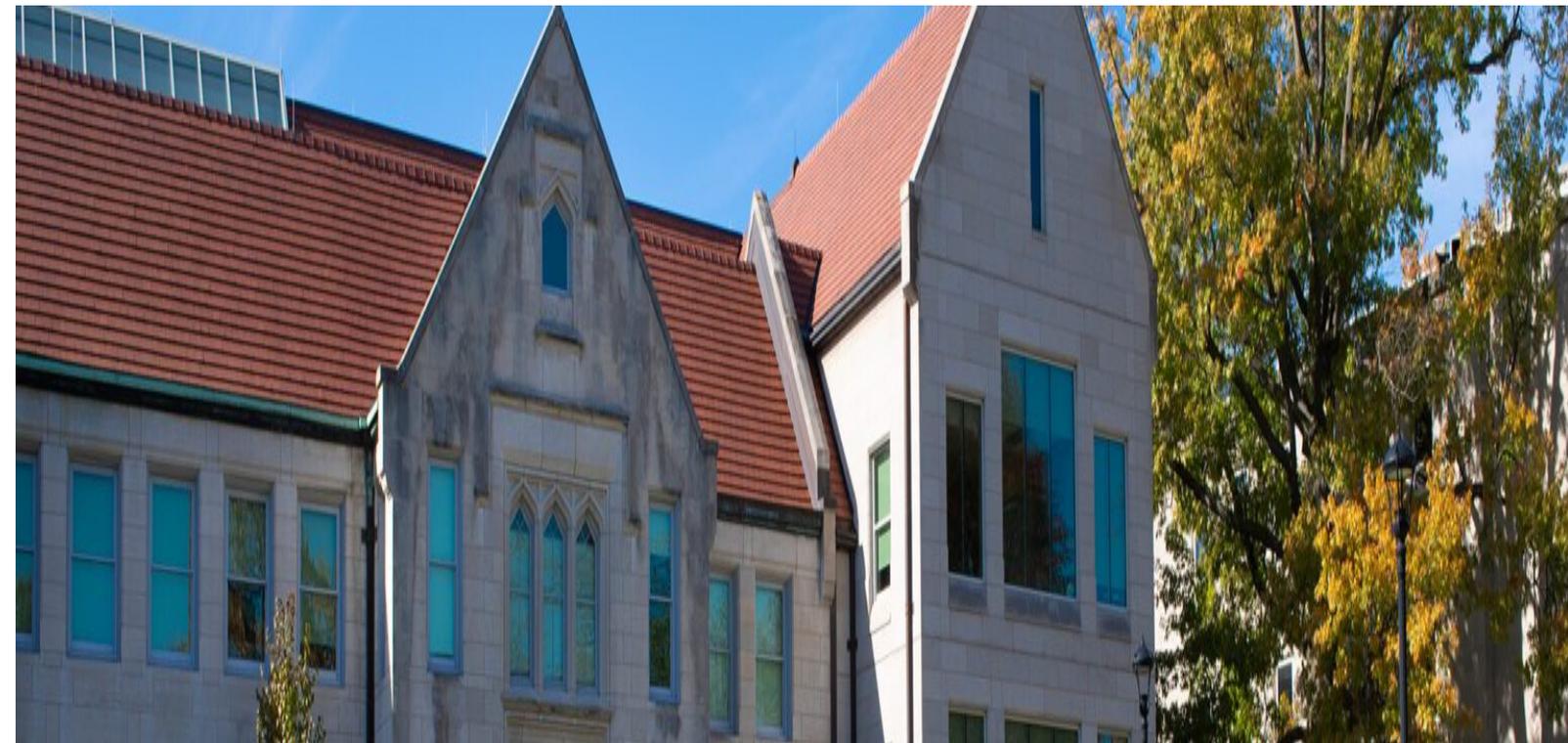
1. Students completing their Associate of Arts or Associate of Science degree at a participating IAI school and completing the IAI faculty panel-approved Illinois General Education Core Curriculum will have automatically satisfied their Core Curriculum requirements at Bradley. This does not include Core Curriculum courses that are also degree requirements.
2. Students completing the IAI Core Curriculum only at a participating IAI school without an Associate Degree, will have satisfied their Core Curriculum requirements at Bradley.
3. Students transferring to Bradley without having completed their IAI Core Curriculum will have to fulfill the Bradley Core Curriculum requirements. But if a student is only missing one or two IAI Core Curriculum courses, he may complete them at Bradley, which will then complete the Bradley Core Curriculum.
4. Readmit students must complete Bradley's general education or Core Curriculum requirements.
5. Illinois Transferable General Education Core Curriculum includes the following:
 - 3 courses (9 credits) in Communication
 - 1-2 courses (3-6 credits) in Math
 - 2 courses (7-8 credits) in Physical and Life Sciences (including one lab course)
 - 3 courses (9 credits) in Humanities and Fine Arts
 - 3 courses (9 credits) in Social and Behavioral Sciences

Official verification of IAI attainment of Associate of Arts or Associate of Science degree must be sent from the former college, by request of the student, directly to the Office of Undergraduate Admission.

For more information about IAI, see www.itransfer.org.

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International Students



International Students

International Students

International students are those who intend to study at Bradley University while on an approved visa status.

Admission Requirements

Admission is based on a review of each student's total academic and extracurricular record. Care is taken to ascertain that an applicant's goals and aspirations are consistent with their academic abilities. International students should follow all instructions for first-year or transfer student admission as listed. In addition, all international applicants are required to submit proof of English language proficiency. Approved test scores and possibilities for a waiver can be found on the international admission website.

English Language Proficiency

Applicants who are not US citizens, with the exception of Legal Permanent Residents, are required to show proof of English language proficiency. Acceptable exams and minimum scores are listed below:

- TOEFL iBT minimum 79 (paper-based minimum 550)
- IELTS minimum 6.5 overall band
- PTE Academic minimum 56
- Gateway English minimum 475 overall with all sections 405 or above (formerly E3PT minimum 68)
- ACT minimum 19 on English exam
- SAT minimum 1000 combined score
- Cambridge English C2, C1, or B2 (minimum 176)
- GCSE or IGCSE minimum A in A Levels English

*Bradley University is test-free. If an ACT or SAT score is submitted, the score will only be used to determine English language proficiency, and will not be used for any other admission decisions.

Bradley's institutional code for score reporting is 1070. All scores should be sent directly to Bradley University. Graduate and International Admission does not accept language certificates; letters from counselors, advisors, or professors; or other assessments not listed above as proof of English language proficiency.

English Proficiency Waiver

Applicants who are eligible for a waiver of English language proficiency must meet one of the following requirements:

1. Applicants that graduated from a high school where the primary mode of instruction was English. Transcripts from the secondary institution must be provided for verification.
2. One year of full-time study or more at a secondary institution located in the U.S. within the last 4 years. Transcript and proof that academic courses were taught in English must be provided for verification.
3. Two years or more of continuous full-time work experience in the U.S. within the last 4 years. A current resume and an employment letter on company letterhead stating the dates of employment for verification.

Other admission requirements:

High school transcripts

In the United States, educational records are called “transcripts.” A “transcript” is an official document issued by an educational institution which states all subjects studied, grades or marks received (including failures), the “credit” received, and the grading scale used (including the lowest passing mark). The length of time in the classroom, the number of classes per week for each subject, and an explanation of the educational system should be included.

Official Academic Records

All applicants must submit educational records (official transcripts, country examinations, diplomas and certificates) which have been certified by an officer of the educational institution issuing the documents or by a U.S. or local government official. Secondary school records should represent the last four years of study. Any document submitted in a language other than English must be accompanied by an official certified English translation. All university-level records must come to Bradley University directly from the institution attended. All university-level study will be evaluated for possible transfer credit. Accurate evaluation cannot be made without a syllabus, catalog, or course descriptions. Consequently, all transfer students must submit their foreign catalog (providing program and course descriptions) in English or in an official English translation.

Student Visa

Students wishing to attend Bradley on a F-1 student visa will need to submit the Bradley University Affidavit of Support to confirm that all college, personal, and travel expenses are covered while attending Bradley. Once a student’s proof of financial support has been received, an I-20 will be processed and instructions on how to apply for an F-1 visa will be provided.

Students who are within the U.S. on a current F-1 visa wishing to transfer to Bradley must request a SEVIS transfer from their current institution.

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Credit by Examination



Credit by Examination

Advanced Placement Credit (AP)

Credit may be given in courses covered by the Advanced Placement Examination offered by the College Entrance Examination Board. Credit is given for scores of 3 or above. If credit is given, the number of semester hours of credit allowed is determined by the extent of the college work covered by this examination. Specific information on the extent of credit awarded can be obtained from the Undergraduate Admission Office or visit bradley.edu/admissions/freshman/apguides.

International Baccalaureate Program (IB)

Credit may be given for International Baccalaureate courses taken at many participating high schools. With scores of 5 or higher for most exams, credit may be applied to the Bradley Core Curriculum or other University requirements. Information on what credit will be given for each of the exams can be obtained from the Undergraduate Admission Office or visit bradley.edu/admissions/freshman/apguides.

College-Level Examination Program (CLEP)

Bradley University is committed to the principle that college-level achievement should be recognized and rewarded without regard to where, when, or how the knowledge was acquired. The University grants a maximum of 60 semester hours to those who earn scores on the College-Level Examination Program (CLEP) examinations in the 50th percentile or higher on national college sophomore norms. Because CLEP credit is transfer credit, it cannot duplicate credit already earned from another source. The Registrar's Office maintains a list of CLEP exams that Bradley accepts. In all cases, an official copy of test scores must be sent from the CLEP office, by request of the student, directly to Bradley University.

- **Credit for CLEP may be used to satisfy Core Curriculum requirements or appropriate University requirements. The CLEP exams must be taken before completing 60 college credits. The 60-credit limit includes courses taken at Bradley University, credits taken at another college or university, and other credits received by examination. Credits earned through CLEP exams may not duplicate credits received from other sources. Credits earned through CLEP exams may not be at a level lower than a course for which credit has been earned.**

If you have questions about how CLEP credit applies to Bradley, please consult the following:

- if you are currently enrolled at Bradley: The Registrar's Office, (309) 677-3643
- if you are a student new to Bradley: Undergraduate Admission, (309) 677-1000

Illinois State Seal of Biliteracy

Eight language credits (the equivalent of two semesters) will be granted to students who have received a State Seal of Biliteracy from any state. These credits will be in a specific language (e.g. WLS 1 for Spanish) for languages offered at Bradley University or in general World Language (WLX 1) if not. No credit will be awarded for the State Commendation toward Biliteracy. Students with the Commendation are encouraged to continue their language studies and may be able to earn additional credits through other methods. Students who have the State Seal are still eligible for retroactive credit.

AAPPL

Credit is given to students who have taken the *entire* AAPPL (Assessment of Performance towards Proficiency in Languages) exam according to the following scale. Note that all four areas (Interpersonal listening and speaking, interpretive reading, interpretive listening, and presentational writing) must be completed in order to receive credit. An average of individual area scores will be used to determine credit granted.

- Novice (score of N-1 or N-2) = no credit
- Novice High (score of N-3 or N-4) = 101 credit
- Intermediate Low (score of I-1 or I-2) = 102 credit
- Intermediate Mid (score of I-3 or I-4) = 201 credit
- Intermediate High (score of I-5 or higher) = 202 credit

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Academic Exploration Program



Academic Exploration Program

The Academic Exploration Program (AEP) helps students with undecided majors and undeclared majors (exploratory students) identify and pursue their academic and professional goals. Through a combination of instruction, reflection and exposure, students gain the experience and confidence to declare a major and succeed professionally. The key to success in the Academic Exploration Program rests with the student-academic advisor relationship. Each student in AEP is assigned an advisor, with whom they will spend time in the classroom and in one-on-one advising within the first semester. The award-winning academic advisement in AEP is integrated throughout the AEP curriculum and helps students select the major and career path that's best for them through the lens of whole student development.

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Military Science



Military Science

A cross-enrollment agreement between Illinois State University (ISU) and Bradley University makes training in the Army Reserve Officers Training Corps (AROTC) available to qualified Bradley students who desire to earn appointment as commissioned officers in the United States Army. The goal of the AROTC is to commission college graduates into the Active, National Guard, and Reserve components of the Army. Military science classes are conducted on Illinois State's campus in Normal, Illinois and at Bradley University. Military science classes are recorded on students' transcripts, and the grades received and semester hours of credit are counted as if they had been taken at Bradley. For more information, please contact the College of Liberal Arts and Sciences at (309) 677-2384.

Sequence

To complete the basic course a student must complete MS 101, 102, 201, and 202, normally taken in that sequence, over a four-semester period. Exceptions are determined by law and may be discussed on an individual basis with the professor of Military Science at ISU. Entry into the advanced course requires successful completion of the basic course, basic camp or advanced placement, and acceptance by the professor of Military Science. The advanced course must be completed over a four-semester period, the usual sequence consisting of MS 301, 302, 401, and 402.

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The University Experience course (EHS 120)



The University Experience course (EHS 120)

HS 120: The University Experience is a one semester hour course available to all new students. Through interactive discussions and class activities, students explore contemporary social issues; examine topics concerning academic, personal, and physical well-being; become familiar with University policies and resources; and develop greater appreciation for diversity.

EHS 120 The University Experience 1 hr.

Designed to help new students adjust to the University environment. Assists students in gaining an appreciation for higher education, the Bradley Core Curriculum, and the value of a Bradley University education.

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Campus Recreation and Athletic Facilities



Campus Recreation and Athletic Facilities

Campus Recreation provides a variety of programs to meet the recreational needs of all students. The Markin Family Student Recreation Center is a multi-use indoor facility. The center provides opportunities for intramural events, sports and fitness classes, and unscheduled, informal activity. It has exercise and fitness equipment, an indoor pool, two racquetball courts, a rock climbing wall that stands 46 feet, a bouldering wall, a Multi-Activity Court (MAC court), a 1/8-mile running/walking track, and a juice bar. It has four basketball courts for intramural and recreational games and a championship court, which seats about 300 and will be used for, among other things, hosting championship intramural events. The intramural sports calendar includes 25 different events.

Outdoor recreational opportunities exist at the David Markin Tennis Courts and the Meinen Field outdoor recreation complex, which houses 21/2 basketball courts and a multi-sport field where soccer, softball, flag football, and a variety of other activities occur.

Campus Recreation also offers a variety of club sports students can participate in. Some of the most popular are men's ice hockey, men's and women's volleyball, men's and women's soccer, softball, and ultimate frisbee among many others.

Athletic Facilities provides facility management to the Renaissance Coliseum, Markin Tennis Courts, and Meinen Field. With a capacity of 4,200, the Renaissance Coliseum is home to some of Bradley University's largest events, including concerts, women's basketball and volleyball, commencements, and other special events. Past concerts have featured Weezer, Wiz Khalifa, The Band Perry, and Macklemore & Ryan Lewis. Students receive free or discounted tickets to most events.

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Event Services



Event Services

Event Services is responsible for scheduling and reserving rooms in most buildings on campus, including the Michel Student Center, Global Communications Center, and academic buildings other than the labs.

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Fraternity and Sorority Life



Fraternity and Sorority Life

Fraternity and Sorority Life is comprised of over 1,100 students, representing 27% of the undergraduate population. Bradley is the home to 30 fraternity and sorority chapters, which are represented by 4 governing councils.

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Campus Programming



Campus Programming

The Student Activities Office provides a number of programming opportunities for students and the campus community including programming by ACBU and Late Night BU.

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Student Government



Student Government

Student Government organizations provide leadership opportunities for students to participate in the governing process of the University, particularly as it relates to student concerns and welfare.

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Student Activities Office (Student Organizations)



Student Activities Office (Student Organizations)

The Student Activities Office provides support and oversight for student organizations including but not limited to: annual registration, creation of new organizations, student organization event approval, advertisement approval, student organization conduct, Student Organization Handbook, Student Activities Budget Review Committee policies and procedures, assists with purchasing and signs contracts on behalf of funded organizations. The Student Activities Office maintains the student organization directory and management portal, BInvolved, which can be found online at bradley.presence.io.

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Student Affairs



Student Affairs

The Division of Student Affairs' mission is to connect and prepare students through co-curricular learning and extracurricular engagement to foster student success. Alongside our commitment to students, we embrace collaboration with our university and community partners.

We foster a commitment to the University's core values of student success, knowledge and discovery, inclusiveness and connectivity, and excellence. The environment shaped by Student Affairs provides opportunities for the intentional development of the whole student, encompassing experiences beyond the classroom and addressing the complexity of the myriad environments they may face. Our goal is to ensure an enriched environment for learning, personal growth, and positive outcomes for our students.

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Health Services/Counseling Center



Health Services/Counseling Center

Center For Student Health Services

Student Health Services is an outpatient clinic that provides service to enrolled Bradley students who experience health problems. Students are assisted through advisement, treatment, consultations with health providers, and referral for extended treatment if necessary. While there is no charge for most on-site treatment, services provided through referral to outside agencies are charged by that care provider and are the student's financial responsibility. The Center's qualified staff of physicians, psychiatrist, counselors, and nurses is located in modern treatment offices in the Markin Center. They provide a point-of-entry for all university students to receive health care both at the Center and in the Peoria community. Professional counselors and supportive staff are trained to work with Bradley students in their growth and total development—social, emotional, intellectual, physical, spiritual, and occupational—as well as the environment in which they live.

Personal growth and development issues of adjustment to college, relationship concerns, alcohol and substance abuse, anxiety and stress management, communication skills, eating disorders, assertiveness, and lifestyle choices are some of the issues addressed by the counselors. Visits are confidential and free for Bradley students. The Center is open during the school year 8:00 a.m.-12:30 p.m. and 1:30-4:30 p.m., Monday-Friday. The Center is open limited hours during breaks and regular summer school sessions. Students are seen on an appointment basis. At times when the Health Center is closed, patients are referred to the afterhours number, 677-3200, which connects to OSF St. Francis Phone Nurses Triage.

In addition to regular medical services, Health Services also offers special men's and women's clinics during the regular academic year. All students are required to have a student health form on file at Health Services before registering. To avoid penalties and delays in registering, return the completed health form and then verify through Health Services that it has been received and is complete.

Immunization Requirement: To comply with Illinois State law, all students registering for classes for the first time in a four-year college must show proof of proper immunization or titer showing immunity to measles, mumps, rubella, tetanus, diphtheria and meningitis.

Counseling Center

Counseling is located in the lower level of Markin Recreation Center, Room 52. Students may bring their student ID with them to access the lower level. Counseling is staffed by a psychiatrist and professional counselors. Students may receive an assessment and therapy for disorders such as depression, anxiety, eating disorders, addictions, and relationship concerns. Visits are confidential and free for Bradley students who have paid the health fee. Contact Health Services at 677-2700 to make a counseling appointment. A nurse will speak directly with the student to gain information about the needed services & acuity of the problem. The student will be scheduled with a counselor or with the psychiatrist or physician based upon the presenting concerns.

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Off-Campus Properties



Off-Campus Properties

St. James Apartments

St. James Apartments at Bradley University is university owned, off-campus housing. Aside from being a Bradley University student, qualified individuals must be 20 years of age by September 1 of the current school year for the lease year the individual is applying. The 17-building complex offers spacious one to four-bedroom apartments. Just a short distance (.3 miles) off campus, all units come fully furnished, including dishwasher, full-sized refrigerator and electric stove. Laundry facilities are located in each building. Most utilities are provided, including internet service connected to the university's network. St. James Apartments also includes 24-hour emergency maintenance and roommate placement services.

Inquiries can be made by contacting:

Off-Campus Properties

Bradley University

1103 W. Main Street

Peoria, IL 61606

(309) 677-2100

stjamesinfo@fsmail.bradley.edu

www.bradley.edu/stjames

Main Street Commons

Main Street Commons, is a five story, 184-bed, amenity-rich student housing development located just one block from campus. Independently-owned, this student housing development offers the following amenities for each unit: individual leases, fully furnished, private bathroom for each bedroom, fully-appliance kitchen with dishwasher, washer/dryer in each unit, 43" flat screen television, Wi-Fi, study/TV lounge, a multi-layered security system, elevator service, 24-hour fitness center, 24-hour emergency maintenance, tanning facilities, and enclosed parking available. The facility is open to Sophomores, Juniors and Seniors (co-ed living optional) with two and three bedroom units available. Submit your application to Live at Main today!

Inquiries can be made by contacting:

Main Street Commons

1109 W Main Street

Peoria, IL 61606

(309) 677-2143

info@liveatmain.com

Students living off campus may eat in any residence hall on the same program that residence hall student's use. Two meal plan options are available. Additional information can be found at <https://www.bradley.edu/sites/quickcard/meal-plans/>

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Residential Living and Student Conduct



Residential Living and Student Conduct

Residential Living and Student Conduct is responsible for the general welfare of residence hall students at Bradley University, particularly concerning their out-of-class activities and living environment. This office interacts with all segments of the University including students, faculty, administrators, parents, and the community.

The Student Conduct System is responsible for protecting the rights of the University and the individual student through the University Standards of Conduct.

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Smith Career Center



Smith Career Center

The Bradley University Smith Career Center empowers students to achieve positive career outcomes through career development, experiential education, and learning opportunities. We partner in this work with stakeholders who benefit from the skills and talents of our students and alumni.

With the help of the Smith Career Center, students and alumni can explore and define career options, develop job search strategies, obtain career-related work experience and identify and connect with prospective employers. The Center provides individual career advisement, job search workshops, extensive web-based career resources, a targeted internship & full-time employment database, several job fairs, a graduate/professional school fair, and campus interviews with prospective employers.

The Smith Career Center and the Springer Center for Internships also administer Bradley's centralized co-operative education and internship program. Through internships, cooperative education, and summer or part-time employment, students have opportunities for professional development, which integrate classroom theory with supervised work experience.

Several hundred employers visit the Bradley campus each year to talk with our students, participate in job fairs and conduct interviews with candidates. Employers are eager to hire Bradley students and graduates because of the many skills and talents that were developed during their years at Bradley.

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Springer Center for Internships



Springer Center for Internships

Students are encouraged to gain career-related work experience prior to graduation. Through internships, cooperative education, and summer or part-time employment, the Springer Center for Internships provides students with opportunities for professional development that integrate classroom theory with supervised work experience.

Cooperative education and internship courses are offered to students in all five colleges of the University. Students are guided through reflective learning assignments that complement the work experiences. Students have a choice of several options to follow. The part-time option allows students to attend classes while working part-time with a local employer. The full-time option allows students to work full-time during an academic semester or summer. The full-time alternating option is based upon alternating periods of full-time study and full-time work. All the above options correspond with the academic calendar.

A series of job search workshops is offered to assist students in the co-op or intern process. Employers review resumes and/or conduct interviews to make hiring decisions. Placement is not guaranteed. Student-developed jobs may be approved if they meet the work-learning criteria. A work assignment or credit will not be approved retroactively.

While on a registered full-time co-op/intern assignment, students are considered to have full-time student status, making normal progress toward a degree in a recognized University program, and are entitled to all student privileges at the University. Also while on a full-time co-op/intern assignment, students may register for additional hours of classroom study upon departmental approval.

In order to be referred to an employer or participate in an internship or cooperative education work assignment, students must be attending Bradley University. They also must be either registered for a minimum of three hours of non-cooperative education/internship credit or be on a full-time cooperative education or internship assignment.

For additional information about the program, contact the Smith Career Center at (309) 677-2510.

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Student Involvement



Student Involvement

Student Involvement provides a cohesive plan of programs, activities, events and services designed to respond to the cultural, social, physical, and recreational needs of all students enrolled at Bradley. Opportunities for leadership and group development are provided for students to learn new skills, broaden their abilities, and manage their organizational activities. Communication between faculty, administration, students, and staff will be encouraged as a means to promote a well-informed campus community regarding student activities and government.

CAMPUS RECREATION AND ATHLETIC FACILITIES

Campus Recreation provides a variety of programs to meet the recreational needs of all students. The Markin Family Student Recreation Center is a multi-use indoor facility. The center provides opportunities for intramural events, sports and fitness classes, and unscheduled, informal activity. It has exercise and fitness equipment, an indoor pool, two racquetball courts, a rock climbing wall that stands 46 feet, a bouldering wall, a Multi-Activity Court (MAC court), a 1/8-mile running/walking track, and a juice bar. It has four basketball courts for intramural and recreational games and a championship court, which seats about 300 and will be used for, among other things, hosting championship intramural events. The intramural sports calendar includes 25 different events.

Outdoor recreational opportunities exist at the David Markin Tennis Courts and the Meinen Field outdoor recreation complex, which houses 21/2 basketball courts and a multi-sport field where soccer, softball, flag football, and a variety of other activities occur.

Campus Recreation also offers a variety of club sports students can participate in. Some of the most popular are men's ice hockey, men's and women's volleyball, men's and women's soccer, softball, and ultimate frisbee among many others.

Athletic Facilities provides facility management to the Renaissance Coliseum, Markin Tennis Courts, and Meinen Field. With a capacity of 4,200, the Renaissance Coliseum is home to some of Bradley University's largest events, including concerts, women's basketball and volleyball, commencements, and other special events. Past concerts have featured Weezer, Wiz Khalifa, The Band Perry, and Macklemore & Ryan Lewis. Students receive free or discounted tickets to most events.

EVENT SERVICES

Event Services is responsible for scheduling and reserving rooms in most buildings on campus, including the Michel Student Center, Global Communications Center, and academic buildings other than the labs.

FRATERNITY AND SORORITY LIFE

Fraternity and Sorority Life is comprised of over 1,100 students, representing 27% of the undergraduate population. Bradley is the home to 30 fraternity and sorority chapters, which are represented by 4 governing councils.

STUDENT ACTIVITIES OFFICE AND STUDENT ORGANIZATIONS

The Student Activities Office provides support and oversight for student organizations including but not limited to: annual registration, creation of new organizations, student organization event approval, advertisement approval, student organization conduct, Student Organization Handbook, Student Activities Budget Review Committee policies and procedures, assists with purchasing and signs contracts on behalf of funded organizations. The Student Activities Office maintains the student organization directory and management portal, BInvolved, which can be found online at Bradley.presence.io.

CAMPUS PROGRAMMING

The Student Activities Office provides a number of programming opportunities for students and the campus community including programming by ACBU and Late Night BU.

STUDENT GOVERNMENT

Student Government organizations provide leadership opportunities for students to participate in the governing process of the University, particularly as it relates to student concerns and welfare.

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Student Support Services



Student Support Services

- Students with Bereavement Issues or Emergencies
- Violations of Title IX (sexual assault, sexual misconduct)
- Student Withdrawal from University
- Family Association
- Academic Success Center
- International Student Services
- Moss Scholars
- Orientation
- Student Access Services

Student Support Services is designed to offer guidance to students in times of need. Our mission is to provide personal attention and resources to students as they work to achieve their academic and personal goals. Student Support Services serves as a major link between academic and student affairs striving to improve student retention through positive communication and relationships with students, faculty, staff, and families. We will help students find the necessary information or resources so they may have a personally rewarding education at Bradley.

ACADEMIC SUCCESS CENTER

The Academic Success Center strengthens comprehensive learning, enhances retention, and promotes student success by providing academic support services to Bradley students. The programs provided include:

ACADEMIC ADVISEMENT

Academic Advisement at Bradley is decentralized, meaning that all students are assigned a faculty advisor in the major they are currently declared in, including the Academic Exploration Program. If a student changes their major, they will be assigned a new academic advisor. Advisors help students to define academic and career goals, provide course planning assistance, clarification of academic policies and regulations, and provide awareness and guidance to those interested in studying abroad or in registering an internship for credit with the Smith Career Center. Students should feel comfortable contacting their academic advisor not only during registration periods, but all year long. We also provide online resources to aid students in the advising and registration process. The Academic Success Center offers supplemental advising to all students who may need help deciding on specific courses for all-university degree requirements and offers support to faculty advisors with any questions they may have about academic policies and requirements.

ACADEMIC EXPLORATION PROGRAM (AEP)

The Academic Exploration Program (AEP) helps students with undecided majors and undeclared majors (exploratory students) identify and pursue their academic and professional goals. Through a combination of instruction, reflection and exposure, students gain the experience and confidence to declare a major and succeed professionally. The key to success in the Academic Exploration Program rests with the student-academic advisor relationship. Each student in AEP is assigned an advisor, with whom they will spend time in the classroom and in one-on-one advising within the first semester. The award-winning academic advisement in AEP is integrated throughout the AEP curriculum and helps students select the major and career path that is best for them through the lens of whole student development.

ACADEMIC COACHING

Students experiencing challenges that are causing academic difficulty (such as time management, test-taking strategies, self-regulation and accountability, etc.) can meet with ASC staff members to create a plan and to identify strategies to improve their likelihood of academic success. Students are offered an unlimited number of coaching appointments each semester, contingent on staff availability.

AEP 115: LEARNING ENHANCEMENT STRATEGIES SEMINAR

The Learning Enhancement Seminar (AEP 115) is for University program students to ensure they have the college-level study skills necessary to be successful at Bradley.

TURNING POINT PROGRAM (TPP)

Many students experience some form of academic difficulty during their college career. At Bradley, students whose difficulty has resulted in academic probation are required to participate in the Turning Point Program (TPP). TPP's mission is to assist first-time probation students as they work to regain good academic standing. Program participants meet with TPP staff and create and accomplish a plan for the semester that includes the Learning Enhancement Strategies Seminar (AEP 115), as well as accountability meetings or connections to other campus resources.

TUTORING

Bradley undergraduate students qualify for three hours of free one-on-one peer tutoring per week across all subjects for which free tutoring is offered. Check the ASC website for a specific list.

UNIVERSITY PROGRAM (UNV)

The University Program (UNV) helps students get started at Bradley on the right track by ensuring appropriate academic advisement and goal setting for major(s) of interest. Students in University Program majors will be assigned an advisor in their college or a professional advisor and will spend time outside of their traditional classes working toward developing habits that enhance academic success and identifying major options that align with students' interests, skills, and goals.

INTERNATIONAL STUDENT SERVICES

International Student Services (ISS) provides immigration advising for undergraduate and graduate international students. The office primarily serves F-1 visa holders but is open for all non-residents of the United States. ISS maintains up-to-date policies and government immigration records and is the primary campus liaison to agencies regarding immigration issues including the Department of Homeland Security, Department of State, and Student and Exchange Visitor Program.

MOSS SCHOLARS

Moss Scholars provides a fee based educational program that combines appropriate supports to assist college ready neurodiverse students in gaining skills that will allow them to be independent and successful students. The Moss Scholars student will work with an executive function coach to focus on: time management, planning/prioritization, organization, task initiation, goal-directed persistence, flexibility, and self-advocacy skills. The program emphasizes academics, social skills, health/well-being and transition after college to help prepare students to be a confident, empowered, and contributing member to their communities.

ORIENTATION

First-Year Student Orientation will give students the necessary tools to deal with a wide range of emotions as they begin their "college career" at Bradley University. Orientation is a necessary introduction to college life and to the challenges and opportunities, students will encounter. Because of its importance, it is required that first year students attend one 1-1/2 day session offered during the summer. During Orientation, students will meet other students through social activities, register for fall semester classes, become familiar with campus and learn about campus life, and participate in "team orientated" events.

STUDENT ACCESS SERVICES

Student Access Services (SAS) is committed to the fulfillment of equal educational opportunity, academic freedom and human dignity for students with disabilities. The SAS exists to provide reasonable and appropriate accommodations for qualified students with documented disabilities, to assist students in self-advocacy, to educate the Bradley community about disabilities, and ensure compliance with federal and state law.

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Bradley University Bookstore



Bradley University Bookstore

The Bradley Bookstore provides the books and supplies necessary for coursework at the university. The bookstore offers new, used, rental, and digital textbooks. The bookstore also price matches Amazon and bn.com. For details, please visit the bookstore website.

A large selection of emblematic clothing and gifts, as well as reference and general reading books are available. Any book not carried in stock can be special ordered. All students, faculty, and staff with a valid school ID may purchase academically priced software online at www.thinkedu.com/bn. Snacks and soda are also stocked.

The bookstore accepts Discover, Visa, Mastercard, or American Express cards or Quick Cash. Barnes and Noble gift cards are also accepted and available for purchase and can be used at any Barnes and Noble college bookstore or superstore.

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Endpoint and Client Services



Endpoint and Client Services

Endpoint and Client Services supports both the academic and administrative aspects of university computing. Endpoint and Client Services supports campus-wide computer networks, the Campus Printing Service (CPS), connections to the Internet, and electronic mail.

Academic resources include a variety of computer systems and software used for instruction, research, and public service. Student workstations are located in the Cullom-Davis Library and many academic buildings. All residence hall rooms and St. James suites have wireless networking and wired network connections giving access to the campus network as well as the Internet. Students are encouraged to bring their own computer with them to campus. There is no charge to access the campus data network or the Internet. IT support services are available at the Service Desk in the Reserves area of the Library.

Student email accounts

E-mail and network access accounts are automatically established for every student at Bradley University. Bradley uses e-mail as an official means of communication with students, so students should check their account on a regular basis.

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Audio Visual Services



Audio Visual Services

Audio Visual Services provides a diverse range of instructional and production services in support of the academic and administrative needs of faculty, students, and staff. Primary services include classroom and event support; classroom technology training and design; AV equipment and staff assistance; course capture; web conferencing and general media services.

EMS Web App

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Duplicating Services



Duplicating Services

High-speed copying/printing is available through the Duplicating services of Learning Design and Technology. Duplicating is composed of connected high speed B/W and high-speed color copiers/printers, three-hole punch, comb binder, coil binder, a stapler, folder, paper cutter, and a padding press. Duplicating also offers fax and laminating services. The campus copier fleet is also managed by Duplicating Services.

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Learning Design and Technology (LDT)



Learning Design and Technology (LDT)

Learning Design and Technology provides a diverse range of instructional tools in support of the academic and administrative needs of faculty, students, and staff. Primary services include: training on our classroom technology and supporting classroom technology needs. Our toolbox includes Canvas as our Learning Management System, as well as Turnitin, Studio, Panopto, Respondus LockDown Browser, and Qualtrics.

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Foster College of Business



Foster College of Business

All programs offered by the Foster College of Business, Bradley University, are accredited by the AACSB International: The Association to Advance Collegiate Schools of Business.

- Courses and Curricula
- Admission and Transfer Requirements
- Graduation Requirements
- Business Administration Minor
- Business Exploration Program (BUS-BEP)
- Global Scholars Program
- Turner Center for Entrepreneurship
- Center for Cybersecurity

Mission And Vision

Vision Statement

To be the standard for engagement, innovation, and impact in business higher education.

Mission Statement

The Foster College of Business is a professional school that prepares learners to pursue success throughout their lives. We infuse interdisciplinary approaches, including convergence, in our curricula, research efforts and community service, in partnership with stakeholders, to provide students with exceptional learning experiences and the ability to contribute solutions with positive societal impact. We engage with learners of all types, conduct original research, and contribute to the betterment of our college, university, professions, and communities.

Our Values

In everything we do, we value integrity, persistence, innovation, collaboration, impact, growth, diversity, and risk taking.

Distinctive Competencies

Faculty who are scholar/educators, utilization of experiential learning, expertise in providing business acumen to technical

professionals.

Courses And Curricula

The courses and curricula of the Foster College of Business are derived from the mission and objectives of the College. There are three categories of courses that enable the college to fulfill its mission: Bradley Core Curriculum (BCC) courses, college core courses, and courses in the major areas offered by the College.

We believe that a general education is critical for preparing students for business careers, and business majors must complete BCC requirements, which can be found in the All-University Degree Requirements section of this catalog. BCC emphasizes eight “Areas of Inquiry” that will develop communication skills and more deeply engage the student in the process of intellectual growth. The student chooses from a list of approved courses, some of which may also satisfy college core requirements.

The second part of the curriculum is the college core required of all Foster College of Business graduates. This core prepares students to be well-rounded business professionals by introducing them to the various business functions of organizations and developing an understanding of how business and society interact. The core curriculum, along with BCC courses, helps to develop the analytical skills business professionals must have.

The third category of courses is derived from the college’s mission and objectives and consists of courses in the student’s major. Majors are offered in accounting, actuarial science-business, business analytics, economics, entrepreneurship, finance, international business, management and leadership, management information systems, and marketing. Courses in the major help develop the abilities and skills necessary in entry-level jobs. These courses provide a background that allows for maximum professional growth in whatever profession the student chooses.

Students who choose to double major in the Foster College of Business must complete requirements for both majors and must have at least 18 unique hours in courses in their second major that were not used to fulfill the requirements of their first major.

Foster College of Business students who choose to declare a minor within the Foster College are encouraged to take a minimum of 9 additional hours. Six of nine hours satisfy the requirements for 6 hours of FCB electives. Check minor requirements in the undergraduate catalog for more details.

Because of the dynamic world in which we live and do business, the college stresses adaptability and flexibility. Students should anticipate that courses in the core curriculum and within each major will change and evolve as circumstances warrant. To help manage course planning, students in the Foster College of Business are assigned a faculty advisor who should be consulted regularly so that a coherent course of study may be developed.

Admissions And Transfer Requirements

1. Students interested in applying for admission to the Foster College of Business must contact the Office of Undergraduate Admissions at Bradley University. All students must meet the university entrance requirements to be admitted to the college.
2. Students currently registered at Bradley University who are interested in declaring a major or minor in business should contact the Associate Dean.
3. First year and transfer students who elect the AEP Program or a major in another college may internally transfer into the Foster College of Business during their first year if they have met the entrance requirements of the Foster College of Business at the time of their admission to the University. First Year and transfer students who did not meet the admission requirements at the time of their entry into the University may change into the College after earning a “C” or better in MTH 114, MTH 115, or MTH 121, earning a “C” or better in ATG 157, earning a cumulative GPA of 2.00, and earning a 2.00 GPA in business courses.
4. Students who are transferring from an AACSB-accredited school may transfer upper-level business courses for credit.
5. Junior/senior-level business core courses or courses required in a business major taken at the first year or sophomore level at another institution will not transfer into the Foster College of Business.
6. Business courses transferred from other institutions with the grade of “D” will not be accepted by the Foster College of Business.
7. The legal environment of business requirement may be satisfied by transfer students who have completed a legal environment course at a college or university that is not AACSB accredited provided that the course has been approved for transfer credit by the Foster College of Business. Once a student is enrolled at Bradley University, this course may only be transferred to the Foster College of Business from AACSB-accredited schools.
8. Students electing to take courses at another accredited institution to apply toward credit to meet graduation requirements assume the responsibility for the transferability of the credit. Students must obtain pre-approval from their department chair and dean of the college before enrolling in a course to be taken at another school. The student is also responsible for requesting an official transcript be sent to the Registrar’s Office once the course is completed.

Graduation Requirements

Courses of Instruction

Courses numbered 100 to 199 are primarily for first year students; those numbered 200-299 are for sophomores; those numbered 300-499 are open only to juniors and seniors, although students with 42 hours may take the 300-level gateway course into their declared first business major. Courses numbered 500-599 are open only to graduate students and undergraduate students with consent of the Associate Dean. Courses numbered 600-699 are open only to graduate students.

Curriculum Requirements

Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation. A change in major could mean meeting new requirements in force at the time of the change as a condition for acceptance into that major. Students whose work has been interrupted for one or more semesters may be held to requirements in effect at the time of their re-enrollment.

University Requirements

Bradley Core Curriculum

Bradley Core (Quantitative Reasoning) – the courses offered by Bradley that will satisfy the Foster College of Business mathematics requirements are:

1. MTH 114 Applied Finite Mathematics, or
2. MTH 115 Brief Calculus with Applications I, or
3. MTH 121 Calculus I

The third option, MTH 121, is more rigorous, and should be selected by students with a strong background in math who are planning a career in one of the more quantitative areas of business or future graduate study.

A second Quantitative Reasoning requirement may be fulfilled by successfully completing QM 262, which is required in the business core.

The Social and Behavioral Science requirement may be fulfilled by successfully completing ECO 221 and ECO 222, which are required in the business core.

The Multidisciplinary Integration requirement may be fulfilled by successfully completing M L 452 and BUS 400.

One of two required Writing Intensive requirements, and one of two Experiential Learning requirements may be fulfilled by successfully completing BUS 400.

The remaining BCC courses are explained elsewhere in the All-University Degree Requirements section of this catalog.

Math Placement

The specific math course sequence that must be taken by a student is determined on an individual basis. The program presented here is designed to accommodate the typical student, but students may discuss appropriate alternatives with their advisors. A student's previous mathematical experience and performance on proficiency exams are used to establish an appropriate sequence. Students can learn more about math proficiency at Bradley by visiting the Match Success Center. Students who do not meet these requirements may be admitted to the college with a math deficiency. They must take prerequisite courses as specified by the Mathematics Department. **CLEP general mathematics credit will not be accepted in lieu of the required mathematics courses nor does the college grant any credit toward graduation for CLEP in mathematics. Students will not receive credit toward the required hours for graduation for Intermediate Algebra (MTH 100 at Bradley) or for math courses not requiring at least Intermediate Algebra as a prerequisite.** Similarly these courses and CLEP mathematics will not be accepted for credit toward the BCC requirement.

College Requirements

College Core

- MTH 114 or Higher – 3-4 hrs.
- BUS 100 Contemporary Business – 3 hrs.
- ATG 157 Accounting Principles – Financial – 3 hrs.
- ATG 158 Accounting Principles – Managerial – 3 hrs.
- MIS 173 Introduction to Business Analytics – 3 hrs.
- ECO 221 Principles of Microeconomics – 3 hrs.
- ECO 222 Principles of Macroeconomics – 3 hrs.
- QM 262 Quantitative Analysis I – 3 hrs.

- MTG 315 Principles of Marketing – 3 hrs.
- FIN 322 Business Finance – 3 hrs.
- BLW 342 Legal Environment of Business – 3 hrs.
- M L 350 Managing for Results in Organizations – 3 hrs.
- BUS 400 Business Capstone Client Consulting Project – 2 hrs.
- M L 452 Strategic Management and Business Policy – 2 hrs.
- Quantitative Skill Building – 3 hrs.
 - QM 263 Quantitative Analysis II – 3 hrs.
 - ECO 335 Managerial Economics – 3 hrs.
 - M L 353 Operations Management – 3 hrs.
- Foster College of Business Core Electives – 6 hrs.*

* Foster College of Business Core Electives include any business course not required by the student's first major.

Other Requirements

1. Students must complete 120 hours to receive a degree in business.
2. At least one-half of all required business credit hours must be taken at Bradley University.
3. A minimum of 15 hours of Foster College of Business junior/senior courses must be taken at Bradley University.
4. A minimum cumulative GPA of 2.00 (C) must be earned in all courses taken at Bradley University and in courses taken in the Foster College of Business.
5. It is the student's responsibility to meet all university academic, financial, and administrative requirements and procedures as outlined elsewhere in this Catalog.

Minor in Business Administration

In order to serve non-business students who desire a basic background in business in order to facilitate their personal career plans including to earn an MBA in the future, the Foster College of Business offers a minor in Business Administration. The following requirements must be met:

- ECO 100 – Principles of Economics (3 hours)
- ATG 157 – Accounting Principles – Financial (3 hours)
- MIS 173 – Management Information Systems and Business Applications (3 hours)
- FIN 322 – Business Finance (3 hours)
- M L 350 – Managing for Results in Organizations (3 hours)
- MTG 315 – Principles of Marketing (3 hours)
- FCB Elective – Any FCB course (3 hours) excluding the following: BUS 100, BUS 220, FIN 220, MTG 150, MTG 205, ATG 101

Students must achieve a GPA of 2.0 (C) in the Foster College of Business hours required in the minor. Students must successfully complete at least the equivalent of MTH 114. Students are strongly advised to complete their math requirement in their first two years. A minimum of 12 hours for the minor must be taken at Bradley University, including FIN 322, ML 350, and MTG 315. Written approval must be obtained from the Dean of the Foster College of Business prior to taking any business courses at another institution.

Students who elect to minor in Business Administration must declare their intention by completing the appropriate forms in the Foster College of Business. Students must have a declared major and minimum of a 2.0 grade point average. Students who minor in Business Administration must meet the requirements for the minor in force at the time the minor is declared, and they must be approved by the Dean of the Foster College of Business prior to enrolling in the program. The dean must also approve recording the completion of the minor on the transcript. Transfer policies for minors are the same as those for majors. Please refer to Section 5 above.

Minor in Innovation Through Collaboration

Students learn the processes to generate, test, and launch new technological innovations in the market through collaboration with business industry and entrepreneurs. While this minor is open to students from all Bradley majors it is designed to draw on the collaboration of technology innovation and business that stimulate the global economy. The minor includes a minimum of 15 semester hours, described below:

Required courses (6 hours):

- BUS 361 Collaboration in Organizations – 3 hours
- BUS 362 Innovations in Organizations – 3 hours

Foundation courses (4-6 hours):

- ATG 157 Accounting Principles – Financial – 3 hours

- ATG 158 Accounting Principles – Cost Management – 3 hours
- ECO 100 Introduction to Economics or ECO 221 Principles of Microeconomics – 3 hours
- ECO 222 Principles of Macroeconomics – 3 hours
- MTG 315 Principles of Marketing – 3 hours
- FIN 322 Business Finance – 3 hours
- M L 350 Managing for Results in Organizations – 3 hours

Capstone Courses (4-5 Hours):

Foster College of Business

- BUS 400 Senior Consulting Project – 2 hours and BUS 401 Senior Consulting Project II – 3 hours

Caterpillar College of Engineering and Technology

Certain sections of capstone courses deemed to demonstrate collaboration with the approval of the College of Engineering and Technology Dean's Office, such as:

- CON 493 Senior Project Planning – 1 hour and 498 Senior Project – 3 hours
- C E 493 Civil Engineering Design Project – 1 hour and 498 Civil Engineering Design Project II – 3 hours
- ECE 498 Senior Capstone Project I – 2 hours and 499 Senior Capstone Project I – 3 hours
- IME 499 Senior Industrial Project – 4 hours
- IMT 498 Senior Industrial Project – 4 hours
- M E 410 Mechanical Engineering Senior Project I – 2 hours and M E 411 Mechanical Engineering Senior Project II – 2 hours

Total hours: 15-17

Business Exploration Program – BUS-BEP

This program is for students who want to major in business but are undecided as to which curriculum to pursue. Students must meet admission requirements for entrance into the Foster College of Business. Students are strongly encouraged to choose a major by the first semester of their junior year by completing the appropriate form available from the Foster College of Business Undergraduate Advising Coordinator.

Global Scholars Program

Students enrolled in the Foster College of Business have an opportunity to earn the designation of Global Scholar in recognition of achievement in global business studies. The FCB Global Scholars designation may be earned in conjunction with any degree and major within the Foster College of Business. Requirements of the Global Scholars Program do not necessarily add to total credits necessary for graduation.

Coursework for the Global Scholars Program has been designed to broaden student perspectives by providing enhanced preparation for careers in a global marketplace. Topics and issues taught on both the Bradley campus and in international environments will develop within students a capacity to assess international business opportunities and to understand business in the context of different cultures.

The Global Scholars Program provides:

- Recognition by the dean of the college and citation at the Foster College of Business Honors Banquet
- Recognition on the student's transcript as having achieved the Global Scholars designation
- Opportunity to study abroad as early as a student's sophomore year with introductory study abroad programs in China or India
- Seminars with experienced international business leaders
- Social interaction with guest speakers, Bradley alumni, and international students

The Turner Center For Entrepreneurship

Entrepreneurship is the driving force for innovation and growth in Central Illinois. It is the means by which new ideas, novel approaches, and advanced technologies are continually introduced into the marketplace. As in every business venture, there is always some element of risk and the need to support entrepreneurs and businesses in their journey. The Turner Center for Entrepreneurship has the collective knowledge and resources to assist small and start-up businesses in creating a plan to minimize risk, take advantage of opportunities, and grow.

Established in 2001 by a gift from Robert '77 MBA '78 and his wife Carolyn, the Turner Center for Entrepreneurship builds on Bradley University and the Foster College of Business historic strength in small business education and development. For nearly 50 years, the

Foster College of Business has provided business training and technical assistance to start-up and existing businesses including one of the nation's oldest student-based consulting projects. The establishment of the Turner Center for Entrepreneurship strengthened Bradley's commitment in entrepreneurship by bringing together related services and help growth of the local economy.

Our Centers and Services

Illinois Small Business Development Center – SBDC

The SBDC provides advising, training, and other resources to assist entrepreneurs in starting or owning their own business. The SBDC also assists existing companies in strategic development, financial planning, marketing, and business valuation.

Technology Commercialization

The SBDC helps individuals and companies identify, evaluate, and pursue technology commercialization projects that lead to innovative products and services. This includes making connections with Bradley University resources, local partners, and capital providers to support related funding.

Illinois SBDC International Trade Center – ITC

Exporting is an excellent way for a company to expand its sales and diversify risk. The ITC offers assistance in all aspects of international trade including market and partner identification, logistics, trade finance, understanding the rules of free trade agreements, and complying with export regulations.

Illinois Procurement Technical Assistance Center (PTAC)

Companies need help in selling to federal, state, and local government agencies. Our PTAC helps identify those opportunities, bid on projects, and comply with related regulations. The PTAC also assists companies in their small business certifications including woman, minority, and veteran owned enterprises.

Center for Cybersecurity

The Center for Cybersecurity provides the administrative leadership, support, and infrastructure to facilitate the advancement of cybersecurity education, research, and service at Bradley University. Its efforts also support the local economy by building strong partnerships with public and private institutions.

The Center provides additional opportunities for student and faculty interaction, increasing experiential learning through collaboration with local businesses, and fostering exceptional outcomes by preparing students through cutting-edge cybersecurity education.

Bradley University is a designated Center of Academic Excellence, specifically in the area of Cyber Defense (CAE-CD). This designation is jointly sponsored by the National Security Agency (NSA) and the Department of Homeland Security.

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BUS Courses



BUS Courses

BUS 100 – Contemporary Business (3 hours)

Business in a changing society. Ethics and social responsibility, financing, production, and distribution of goods and services.
Prerequisite: Freshmen/sophomore standing only or consent of the Foster College of Business Dean's office

BUS 220 – Career Planning Strategies (1 hour)

Prepares students for internship positions and employment after graduation; research career opportunities in business; and develops a systematic approach to employment planning. Pass/fail. Credit will not be given for both BUS 220 and ELH 301. Prerequisite: Business major.

BUS 301 – Cooperative Education/Internship in Business (0-6 hours)

Core Curr. EL

Cooperative education or internship experience. Credit applies to non-departmental Foster College of Business electives. Pass/Fail. Repeatable to a combined total of six credit hours for BUS 301. Prerequisite: Sophomore in Foster College of Business; 2.0 grade point average at Bradley; 2.0 grade point in Foster College of Business; and consent of Foster College career advisor

BUS 302 – Junior Business Practicum (0-3 hours)

Solving technically challenging problems under faculty supervision, with a near-term economic benefit. May involve research in collaboration with FCB faculty, for up to three hours credit. Repeatable to a combined total of three credit hours. Not eligible for cooperative education/internship credit. Elective credit toward major will only be granted with prior approval of a FCB department chair or program director. Prerequisite: Junior/senior standing; approval by the FCB Associate Dean.

BUS 303 – Cooperative Education / International Internship in Business (3 hours)

Bradley's centralized Cooperative Education and International Internship Program provides a dynamic plan for professional development that effectively integrates classroom theory with career-related work experience. This course is only available to students registered in the Global Academic Ventures (GAV) Internship and Study Abroad in Asia Pacific (ISSAP) semester abroad programs. Prerequisite: Approval of the Foster College of Business Director of International Programs.

BUS 340 – Sustainability Issues in Business and Engineering (3 hours)

Core Curr. MI

This course will provide an overview and history of sustainability. Students will gain a greater appreciation of sustainability by integrating engineering and business methods. Topics include carbon markets, renewable resources, sustainable communities, green marketing, and innovative technologies. Cross-listed with EGT 340. Prerequisite: Sophomore standing

BUS 361 – Collaboration in Organizations (3 hours)

Core Curr. MI

Designed to provide students with knowledge and skills required to adapt to a formal team setting, where collaboration among cross-functional members occurs. Students will study leadership skills and traits, sensemaking and inventing techniques, group effectiveness tactics, and team building methods as applied within the context of product development. Prerequisite: Junior standing

BUS 362 – Innovation in Organizations (3 hours)

Core Curr. MI

Designed to provide students with knowledge related to developing a product or product enhancement based on the assessment of competitive environments and the strategic needs of the organization. Students will study methods for assessing customer needs, evaluating competitive environments, project planning, feasibility analysis, as well as product and process planning. The course will duly focus on the application of collaboration processes, applying methods of effective team interactions using peer feedback, accountability, and leadership skills. Prerequisite: BUS 361 or consent of instructor

BUS 400 – Senior Consulting Project (2 hours)

Core Curr. EL,MI,WI

Participation in a Senior Consulting Project, where students form cross-functional teams and apply knowledge to address the organizational needs of local business owners and organizational executives. Concurrent enrollment with M L 452 required. Prerequisite: FIN 322; M L 350; MTG 315; senior standing Corequisite: M L 452

BUS 401 – Senior Consulting Project II (3 hours)

Core Curr. WI,EL

Participation in a Senior Consulting Project, where students form cross-functional teams and apply knowledge to address organizational needs. Prerequisite: BUS 400; senior standing

BUS 490 – Business Topics (0-3 hours)

Topics of special interest which may vary each time course is offered. Topic and course requirements stated in current Schedule of Classes. May be repeated under different topics for a maximum of nine hours credit. May count towards a Foster College of Business degree requirement upon approval of the department chair. Prerequisite: Approval of the Foster College of Business Associate Dean.

BUS 490 – Business Topics (0-3 hours)

Topics of special interest which may vary each time course is offered. Topic and course requirements stated in current Schedule of Classes. May be repeated under different topics for a maximum of nine hours credit. May count towards a Foster College of Business degree requirement upon approval of the department chair. Prerequisite: Approval of the Foster College of Business Associate Dean.

BUS 599 – Independent Study (1-6 hours)

Studies undertaken by academically qualified students under the guidance of a faculty member, with the approval of the Associate Dean. Prerequisite: With approval of the Associate Dean.

BUS 610 – Graduate Business Practicum (0-3 hours)

This course helps the business consultant develop the statistical and decision analysis skills required for evidence-based management, providing training in the application of statistical and decision analysis tools that students need for preparation of two consultant reports. The course relies on an interactive, experiential approach, performed through simulation in an on-line context. Prerequisite: Graduate student in good standing and approval of FCB Associate Dean.

BUS 615 – Executive Coaching (1 hour)

To effectively lead today's organizations, executives need ongoing support to navigate interpersonal and organizational challenges while developing their leadership skills and competencies. While immersed in the EMBA program, students also face challenges in negotiating coursework, learning team dynamics, and work-life balance, all while their leadership skills undergo scrutiny and transformation. Executive coaching is a personalized experience to support students while in the intensely developmental EMBA program.

BUS 621 – Leadership Immersion: Awareness, Connection, Impact (2.5 hours)

Internalization of self-awareness perspectives through consideration of various leadership models, discussion, and practice. In-depth analysis of the strengths and development needs of participants through 360-degree feedback. Important interpersonal skill foundations in communication, conflict resolution, and trust building are emphasized. Prerequisite:

BUS 623 – Scanning the Environment (0.5 hours)

Uncertainty in business planning caused by the external environment. Utilization of a conceptual model to organize and frame the discussions of the macroenvironment in which the firm operates. Graded Satisfactory/ Unsatisfactory.

BUS 625 – External Economic Environment (1 hour)

Provide a broad overview of the economic environment in which business firms and consumers carry out their individual economic activities. Review the institutional structure, the social goals, and implicit values of the market system and how they establish the parameters within which choices are made. Overview of how and why business cycles occur. How economic policy, both monetary and fiscal, have impacted the business cycle.

BUS 627 – Managing Product & Process Technology (1 hour)

Exposure to processes for shaping product technology and process technology decisions within firms. The course centers on skills related to identifying and managing a firm's technology platforms and their deployment in products and services; mapping and improving processes; managing the cross-functional interactions associated with product and process improvement; and communicating technology issues effectively to senior leaders. Prerequisite:

BUS 629 – Cost Management (1.5-2 hours)

Analysis of the nature of cost. Techniques for accumulation of costs incurred in production and assignment of those costs to products. Methods for reduction and management of non-value-added costs.

BUS 631 – Competition and Pricing (1 hour)

Elasticity measurement of market response to price, income, and other influences on competitive structure from commodities to monopoly; pricing strategies based on competitive environment; price, output, and product development for competition among few firms; the techniques of Cournot, Stackelberg, and Von Neumann.

BUS 633 – Creating & Maintaining Customer Satisfaction (3 hours)

Customer-focused topics, including effective and efficient product delivery, identifying customer segments that can be served by the firm, offering customer value, and building brand and corporate loyalty.

BUS 635 – Communication Workshop (2 hours)

Business writing and presentation skills will be learned and strengthened through practice and coaching. In addition to in-class assignments, students will be coached through various writing and presentation opportunities throughout the EMBA curriculum in order to reinforce the tools developed. Executive communication internal to the organization and to external stakeholders, utilizing various media outlets, will receive primary emphasis.

BUS 637 – Attracting & Developing Talent (1.5-2 hours)

Expose students to the challenges of attracting talent and provide advice on how to develop talent within an organization. Complexities of recruiting in difficult labor markets. Continuous improvement mechanisms to stimulate ongoing talent development.

BUS 639 – Building Employee Commitment (1.5-2 hours)

Key themes and practical approaches for enhancing motivation and building high levels of commitment and continuing dedication throughout the workforce. Financial and intrinsic reward systems are emphasized, as are the keys to developing a culture of involvement and credibility.

BUS 643 – Legal Issues in Business (1 hour)

General overview of the legal principles and concepts that enable executives to understand and address legal issues they frequently encounter in business. It provides practical, real world approaches to important employment, contractual and other issues facing employers and executives, including the hiring/recruiting process, employee behaviors, discipline and termination, and starting a business.

BUS 645 – Acquiring Capital & Making Investment Decisions (3 hours)

Planning and strategies involved in identifying value-enhancing capital projects. Interpreting cash flow figures, identifying risk factors, and employing risk analysis techniques. Strategies for acquiring capital and understanding the impact of capital structure on firm value. Prerequisite:

BUS 647 – Global Environment & Issues (3 hours)

Provide an understanding of the forces shaping the international economy. Provide frameworks and guidelines for gathering, sorting, and assessing complex global and regional information to contribute to understanding organizations' strategies and tactics. Emphasis on leadership issues and diverse cultures.

BUS 649 – Developing Strategy (2 hours)

Provide an effective planning framework to integrate strategies with different functional areas. All of the functional areas will be integrated within the strategic planning framework. Emphasis on strategic planning as an ongoing, fluid process that evolves over time and adapts to environmental changes.

BUS 651 – Performance Measurement & Control Systems (2 hours)

Techniques for creation of profit plans and monitoring of success. Design and use of broad-based performance measures such as the balanced scorecard. Identification and control of risks that threaten the attainment of objectives.

BUS 653 – Strategic Positioning & Maximizing Performance (2.5 hours)

Expose managers to factors that impact different performance measures and provide strategies that maximize performance. Achieve balance at many different levels; incremental/radical strategies, flexibility/control, resources/capabilities, and growth/continuous improvement.

BUS 655 – Leading Successful Change (1-1.5 hours)

Background, insights, and skills in how to effectively challenge the status quo, create new directions, and lead organizations to embrace and successfully implement needed change. Examination of the forces for change and dynamics of resistance. Participants examine

their personal style of change and apply change management and project management strategies to their respective organizations.

BUS 658 – EMBA Topics (0.5-5 hours)

Topics of special interest which may vary each time course is offered. May be repeated under different topics for a maximum of 5.0 hours credit. Topic stated in current Schedule of Classes. Graded Satisfactory/Unsatisfactory.

BUS 672 – Assessing Privacy & Security Threats (1 hour)

Current and emerging threats to personal privacy and organizational security. Topics will include proper account management, social media use, risks of the internet of things, surveillance capitalism, and how to anonymize your digital life to avoid becoming a victim of data breaches. Techniques hackers use to exploit common vulnerabilities will be demonstrated. An introduction to the various technical and administrative aspects of information security and assurance will be discussed to provide a foundation for protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent information security posture. Prerequisite:

BUS 681 – Professional Development (1-3 hours)

Apply professional knowledge and skills in a team environment on not-for-profit, international, or research project. May be repeated for a maximum of three hours credit. Prerequisite: consent of graduate program director.

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Accounting



Accounting

All accounting programs offered by the Foster College of Business, Bradley University, are accredited by the AACSB International: The Association to Advance Collegiate Schools of Business.

FACULTY: Associate Professors Stephen Kerr (chair), William Bailey, Lucy Lu, Jason Jiao; Assistant Professors Jaime Grandstaff, Brian Webb; Instructors Shondra Johnson, Heather Longfellow.

Accounting Major

The accounting major prepares you for a career in accounting, auditing, finance and other business fields.

Preparing You for Success

The mission of the Department of Accounting is to prepare students for productive and satisfying careers. The highest priority of the department is to provide students with the knowledge and skills necessary to commence and continue their careers. Our undergraduate major meets the needs of students seeking accounting careers in private industry and the public sector and, additionally, lays the foundation for those seeking careers in public practice. Our Master of Science in Accounting program is designed both for students entering public practice and for experienced accountants desiring to further their education. Graduates should be productive, act ethically, and be responsible citizens in social and economic communities, which are becoming increasingly dynamic and interdependent.

Accounting is an extremely flexible major. Our students not only learn about accounting principles but also study business and technology concepts. This broad training opens diverse career paths. Many of our graduates accept positions with public accounting firms and corporations. However, an accounting degree will also allow movement into finance, information systems, management, or consulting positions. An accounting degree helps a student look beyond the numbers to assist both people and businesses with shaping their financial futures.

Making Your Mark

Students often use their undergraduate accounting courses to prepare for the certified public accounting, certified management accounting, and certified internal auditor exams. Professional credentials add value to your career and your faculty advisor will help you discern which designation is right for you.

Students are eligible to start taking exams for the certified public accounting (CPA) license after their undergraduate degree. Our Master of Science in Accounting Graduate degree provides additional education that supports you in the CPA exams and completing

the 150 credit hours required for the license.

Courses required for all accounting majors (36 hours of accounting)

- ATG 201 Accounting Principles—Accounting Techniques
- ATG 268 Business Ethics
- ATG 290 Accounting Careers Exploration
- ATG 301 Intermediate Accounting I
- ATG 302 Intermediate Accounting II
- ATG 314 Cost Accounting
- ATG 383 Accounting Systems and Control
- ATG 401 Advanced Accounting I
- ATG 447 Internal Auditing
- ATG 457 Auditing
- ATG 470 Data Analytics for Accounting
- ATG 471 Advanced Accounting Techniques
- ATG 477 Federal Taxes I
- ATG 478 Federal Taxes II

Accounting majors also must satisfy the following requirements:

1. A 2.0 GPA in all accounting courses beyond ATG 157, 158, and 201.
 - A minimum of 9 semester hours of upper-level accounting course work in residence.
 - This table sets out the teaching schedule for Accounting classes.
2. Students must also complete Foster College's business core.

Other requirements

- ENG 306 Business Communications – 3 hrs. (fulfills W2 Core Curriculum)

Suggested Course Sequencing

Students are advised to seek and follow faculty recommendations concerning the selection of courses to meet their career objectives. Elective courses should be chosen with care to ensure that the Bradley Core Curriculum and FCB requirements are met.

Requirements for Professional Certification

Students should consult with their advisors and their State Boards of Accountancy for the exact requirements.

Accounting Minor

The accounting minor is open to all undergraduate students. Since accounting is the language of business, this minor will provide you with specialized skills in how to prepare and use financial information. It will not only enhance your decision-making abilities, it will also expand your career options.

If you're a business major, you can complete the minor in 7 – 11 hours. For non-business majors, you'll take 20 hours to complete the minor.

Required Courses

- ATG 157 – Accounting Principles – Financial
- ATG 158 – Accounting Principles – Cost Management
- ATG 201 – Accounting Principles – Accounting Techniques
- ATG 290 – Accounting Careers Exploration
- ATG 301 – Intermediate Accounting I
- MIS 173 – Introduction to Business Analytics
- ATG 314 – Cost Accounting

Elective Hours

- ATG 302 – Intermediate Accounting II
- ATG 383 – Accounting Systems and Control
- ATG 477 – Federal Taxes I

Student Organizations

Beta Alpha Psi (BAP), the national honorary accounting organization, strives to promote scholastic and professional achievement through lectures, career-oriented events, campus and community service, and social activities. A minimum GPA is required. See the Beta Alpha Psi advisor for information.

Internship and Co-op Opportunities

Qualified students can obtain on-the-job experience in either corporate or public accounting through internship and co-op opportunities. These involve multiple work experiences and are generally started during the student's sophomore or junior year. Students interested in these opportunities should contact the Foster College of Business Co-op Coordinator as early as possible.

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Accounting Courses



Accounting Courses

ATG 101 – Survey of Accounting (3 hours)

Core Curr. QR

The course covers financial and managerial accounting topics that will assist non-business students in understanding financial statements and key accounting decision-making tools and techniques. Prerequisite: Not open to College of Business majors

ATG 157 – Accounting Principles – Financial (3 hours)

Accounting as a system of communicating to owners, creditors, governmental bodies, and others the financial results of the operation of business entities. Concepts, theories, and conventions underlying measurement, processing of business activities, and reporting of the financial results of those activities.

ATG 158 – Accounting Principles – Cost Management (3 hours)

An introduction to cost and management accounting concepts, practices and techniques needed to assist in decision making for typical business problems relating to planning, operating, and control. Key topics include: cost behavior, cost-volume-profit analysis, contribution margin analysis, relevant costs, standard and job costing concepts, fundamentals of budgeting, and related variance analysis. Prerequisite: ATG 157.

ATG 200 – VITA – Volunteer Income Tax Assistance (3 hours)

Each Spring, in partnership with the Internal Revenue Service, Bradley students can enroll in the VITA program to receive credit for volunteering to prepare free tax returns for low income individuals in the local community. To receive credit, students must pass three IRS certifications: Standards of Conduct, Intake & Interviewing, and Basic Tax Law. Students must also complete 32 additional hours of volunteer tax work in preparing or reviewing federal and state tax returns under the supervision of qualified Bradley University faculty.

ATG 201 – Accounting Principles-Accounting Techniques (1 hour)

Procedures and systems of modern accounting through case studies. Prerequisite: ATG 158 or consent of the department chairperson.

ATG 226 – Introduction to Fraud Examination (1 hour)

Introduction to fraud covering the nature of fraud, who commits fraud and why, and basic fraud prevention and detection techniques. Prerequisite: ATG 157 or consent of the department chairperson.

ATG 268 – Business Ethics (3 hours)

Core Curr. WI

Investigate the basic ethical frameworks from which business decisions can be made. Application of the frameworks to practical problems which arise in normal business activities. Prerequisite: BUS 100 or equivalent

ATG 290 – Accounting Careers Exploration (1 hour)

The purpose of the course is to develop student awareness of career opportunities in the accounting profession. The course develops a comprehensive framework through exposure to talented accounting professionals and experienced fellow students. The course enables students to explore and better understand career opportunities that may be pursued through an internship and full-time employment; gain perspective on career opportunities for long-term planning purposes; improve their professionalism. Prerequisite: ATG 158

ATG 301 – Intermediate Accounting I (3 hours)

Theory and practice of accounting, emphasizing need for and use of accounting information in measuring and evaluating entity's business income and financial status. Prerequisite: ATG 201 or consent of the department chair; 42 credit hours completed; A grade of C or better in ATG 157, ATG 158, and ATG 201.

ATG 302 – Intermediate Accounting II (3 hours)

Theory and practice of accounting, emphasizing need for and use of accounting information in measuring and evaluating entity's business income and financial status. Prerequisite: ATG 301

ATG 314 – Cost Accounting (3 hours)

Use of accounting data to: identify cost/managerial accounting concepts; explain cost functions, cost classifications, relevant costs, cost-volume profit analysis, and cost allocations. The use of accounting data for cost control, profit planning, operational and capital budgeting, performance evaluation, and managerial decision making. Prerequisite: ATG 201; MIS 173 or equivalent

ATG 383 – Accounting Systems and Control (3 hours)

Basic concepts and problems in the consideration of accounting as an information system. Theoretical and pragmatic tools for analysis of accounting systems. Internal control and exposure to concepts of internal auditing. Prerequisite: ATG 201

ATG 401 – Advanced Accounting I (3 hours)

Study of selected topics in financial accounting and reporting, including equity method investments, fair value measurements, introduction to consolidations, foreign currency transactions, fund accounting principles applied to state and local governments and government-wide financial statements within the annual comprehensive financial report; and not-for-profit organizations. Prerequisite: ATG 302

ATG 414 – Advanced Managerial Accounting (3 hours)

Specialized topics in strategic cost management. Emphasis on the role of accounting information in strategy development and implementation. Includes topics such as value chain analysis, target costing, activity-based management, theory of constraints, environmental costing, and strategic performance evaluation. Cross-listed with ATG 514. Prerequisite: ATG 301, ATG 383

ATG 430 – Professional Skills of Inquiry (3 hours)

Core Curr. EL

Planning and implementation of face-to-face encounters in order to achieve business objectives. Information interviews, interrogations, and other interviews used in business. Listening skills and analysis of non-verbal communication. Cross-listed with ATG 530. Prerequisite: ATG 301, ATG 383, or consent of instructor

ATG 447 – Internal Auditing (3 hours)

Internal audit activity's role in governance, risk, and control. Professional practices framework. Establishing a risk-based plan, conducting the internal audit engagement, reporting results, monitoring engagement outcomes. Cross-listed with ATG 547. Prerequisite: ATG 301, ATG 383

ATG 448 – Computer Assisted Audit Techniques (3 hours)

Design and implementation of data extraction and analysis techniques to achieve audit objectives. Course includes hands-on use of generalized audit software. Cross-listed with ATG 548. Prerequisite: ATG 301, ATG 383

ATG 457 – Auditing (3 hours)

Principles and procedures of external auditing. Auditing standards, ethics of the profession, risk assessment, internal control evaluation and testing, substantive testing, reporting. A simulated audit experience case performed by student teams. Prerequisite: ATG 383

ATG 461 – International Accounting Issues (3 hours)

Core Curr. EL

Significant accounting matters experienced by multi-national companies. Accounting matters include currency transactions and translations, transfer pricing, management planning and control, and taxation. Cross-listed with ATG 561. Prerequisite:

ATG 470 – Data Analytics for Accounting (3 hours)

This course will provide students with an understanding of data analytics terminology as well as hands-on experience with data analytics tools and techniques. Data analytics in accounting explores how data can be used to interpret and predict financial performance. Students should leave this course with the skills necessary to use data to translate accounting and business problems to management for enhanced decision making. While there will be use of software tools in this course, the focus is on business and accounting concepts, not algorithms or statistical math. Prerequisite: ATG301, ATG314 Corequisite: ATG 457 or consent of department chair

ATG 471 – Advanced Accounting Techniques (1 hour)

Integration of intermediate accounting transactions into the procedures and systems related to the production and analysis of financial statements. The course will include case studies and accounting simulations. Pass/Fail. Prerequisite: ATG 302

ATG 477 – Federal Taxes I (3 hours)

Principles of federal income taxation, based upon the Internal Revenue Code. Measurement and reporting of taxable income of tax entities, including corporations, partnerships, and individuals. Prerequisite: ATG 301; or permission of instructor.

ATG 478 – Federal Taxes II (3 hours)

Tax laws as they apply to aspects of the formation, distributions, and liquidation of partnerships and corporations. Also the laws of gift, estate, and trust taxation, and other advanced tax issues. Prerequisite: ATG 477

ATG 479 – Personal Tax and Estate Planning (3 hours)

Personal tax planning strategies. Characteristics of retirement planning accounts and taxation of estates. Prerequisite: ATG 301

ATG 485 – Special Topics in Accounting (1-3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated for a maximum of three hours credit. Prerequisite: Consent of department chair

ATG 530 – Professional Skills of Inquiry (3 hours)

Planning and implementation of face-to-face encounters in order to achieve business objectives. Information interviews, interrogations, and other interviews used in business. Listening skills and analysis of non-verbal communication. Cross-listed with ATG 430. Prerequisite: ATG 301, ATG 383, or consent of instructor

ATG 547 – Internal Auditing (3 hours)

Internal audit activity's role in governance, risk, and control. Professional practices framework. Establishing a risk-based plan, conducting the internal audit engagement, reporting results, monitoring engagement outcomes. Cross-listed with ATG 447. Prerequisite: ATG 301 and ATG 383.

ATG 548 – Computer Assisted Audit Techniques (3 hours)

Design and implementation of data extraction and analysis techniques to achieve audit objectives. Course includes hands-on use of generalized audit software. Cross-listed with ATG 448. Prerequisite: ATG 301, 383.

ATG 561 – International Accounting Issues (3 hours)

Significant accounting matters experienced by multi-national companies. Accounting matters include currency transactions and translations, transfer pricing, management planning and control, and taxation. Cross-listed with ATG 461. Prerequisite: ATG 302.

ATG 585 – Contemporary Issues in Accounting (1-3 hours)

Critical evaluation of concepts, assumptions, principles, and analytical methodologies of accounting and their application to factual situations. Asset valuation and income determination; implications for internal and external uses of accounting information in business decision making. May be repeated for maximum 6 hours of credit. Prerequisite: Consent of department chair

ATG 600 – Professional Career Planning (3 hours)

Prepares international students for employment in the U.S. upon completion of an accounting STEM program. This includes research of career opportunities and development of a systematic approach to employment planning. Other topics include professionalism and business communications. Prerequisite: Admission to the MSA Program

ATG 601 – Financial Accounting Research Application (3 hours)

Application of current authoritative accounting pronouncements to a variety of accounting situations. Development of analytical skills by using current authoritative and alternative measurement theories to solve current financial accounting problems. Prerequisite: ATG 401

ATG 604 – Controllership (3 hours)

Case studies of management accounting control systems and strategic cost analysis. Use of relevant costs for decision-making, planning, and evaluation of performance. Development of analytic tools drawn from cost accounting, managerial accounting, mathematics, and behavioral science. Prerequisite: Foster College of Business Graduate Student or Consent of Associate Dean

ATG 605 – Cooperative Education/Internship in Accounting (1-3 hours)

Cooperative education or internship assignment. Credit applies to Department of Accounting MSA electives. Pass/Fail. Repeatable to a combined total of three credit hours. Internships registered for ATG 605 credit may not also be registered for BUS 301 credit. Prerequisite: Foster College of Business Graduate Student or consent of the MSA Academic Director.

ATG 657 – Advanced Auditing (3 hours)

Problems affecting the auditing profession. Evaluation of alternative solutions and their implications. Prerequisite: ATG 457.

ATG 658 – Topics in Accounting (3 hours)

Topics of special interest, which may vary each time the course is offered. Topic stated in current Schedule of Classes.

ATG 660 – Readings in Accounting (1-3 hours)

Individual readings for qualified students, under the guidance of a member of the faculty. Repeatable to a maximum of 3 credit hours. Prerequisite: consent of instructor and director of graduate programs.

ATG 670 – Advanced Data Analytics for Accounting (3 hours)

Provides an in-depth understanding and application of data analytics in the accounting field; prepares students for descriptive, diagnostic, predictive, and prescriptive analyses and presentations; explores various data visualizations to help target audience better understand the results for optimal decision making. Prerequisite: ATG 470

ATG 677 – Tax Research (3 hours)

Techniques in effective tax research, planning and communication. Also includes a discussion of tax policy. Prerequisite: ATG 478

ATG 691 – Financial Statement Analysis and Reporting (3 hours)

In-depth study of selected topics in financial statement analysis and reporting, including financial statement ratios, non-GAAP measures of performance, prospective analysis, business combinations and consolidated financial statements; foreign currency transactions and consolidation of foreign affiliates; derivatives and hedge accounting; SEC reporting requirements; and selected FASB standards. Prerequisite: ATG 401

ATG 698 – Accounting Comprehensive Assessment (0 hours)

Preparation for and completion of the comprehensive assessment required for the Master of Science in Accounting. Pass/Fail. Prerequisite: Eighteen hours of graduate credit Corequisite: ATG 601, 657, 670, 677 and 691

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Economics and Finance



Economics and Finance

All programs offered by the Foster College of Business, Bradley University, are accredited by the AACSB International: The Association to Advance Collegiate Schools of Business.

FACULTY Professors Lewer (chair), Horvath, O'Brien, Roos, Sinha; Assistant Professors Arthur, Corbett, Ngwaba, Yencha;

The Department of Economics and Finance offers majors in Economics, Finance and Actuarial Science as well as minors in Economics, Finance, and Decision Analysis.

Personal Financial Planning Major

The Personal Financial Planning Major will provide students with the foundation needed to pursue a career in financial advisory services. This career track includes personal wealth management, insurance, and personal banking. The major aligns with, and will help students, earn the Certified Financial Planning (CFP) designation.

Students interested in the Personal Financial Planning Major are strongly encouraged to consider concentrations in Social Media Marketing and/or Sales. Students cannot double major in corporate and personal finance.

Departmental requirements for the Personal Financial Planning Major:

- A total of 19 credit hours of core finance topic:
 - FIN 200 Finance Career Foundations
 - ATG 201 Accounting Processes
 - ATG 301 Intermediate Accounting I
 - FIN 322 Business Finance
 - FIN 325 Overview of Investment Analysis
 - FIN 328 Financial Institutions and Markets
 - FIN 422 Financial Analysis
- A total of 15 hours of foundation courses in Personal Finance
 - FIN 220 Personal Finance
 - MTG 330 Financial Services Marketing
 - FIN 331 Personal Investing
 - ATG 479 Personal Tax and Estate Planning.
 - FIN 495 Personal Financial Planning Capstone
- Additional requirements

- o The required math option in the Foster College Core is MTH 115
- o Students complete Q M 263 as their Foster College Core Quantitative-Skill Building course

Typical Course Sequence

For a four-year course plan for each major in the Foster College of Business, go to:<http://www.bradley.edu/academic/colleges/fcba/>.

Corporate Finance Major

The Corporate Finance Major will provide students with the foundation needed to pursue a career in corporate finance. This career track includes treasury management, commercial banking and financial analysis. The major aligns with and will help students obtain the Charter Financial Analyst (CFA) designation.

Students interested in the Corporate Finance Major are strongly encouraged to consider a minor in Management Information Systems and/or Accounting Minors. Students cannot double major in corporate and personal finance.

Departmental requirements for the Corporate Finance Major:

- Finance Core – 19 hrs.
 - o FIN 200 Finance Career Foundations – 3 hrs.
 - o ATG 201 Accounting Processes – 1 hr.
 - o ATG 301 Intermediate Accounting I – 3 hrs.
 - o FIN 322 Business Finance – 3 hrs.
 - o FIN 325 Overview of Investment Analysis – 3 hrs.
 - o FIN 328 Financial Institutions and Markets – 3 hrs.
 - o FIN 422 Financial Analysis – 3 hrs.
- Corporate Finance Courses – 15 hrs.
 - o FIN 327 Derivative Securities – 3 hrs.
 - o FIN 425 Portfolio Theory and Management – 3 hrs.
 - o FIN 426 Financial Research and Modeling – 3 hrs.
 - o FIN 494 Financial Strategy -3 hrs.
 - o ECO 419 Introduction to Econometrics – 3 hrs.
 - or Q M 426 Business Forecasting – 3 hrs.
 - or Q M 464 Decision Support Systems – 3 hrs.
- Additional requirements – 7 hrs.
 - o MTH 115 Brief Calculus with Applications – 4 hrs.
 - o Students complete Q M 263 as their Foster College Core Quantitative-Skill Building course

Typical Course Sequence

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Actuarial Science – Business Major

A career in actuarial science is widely recognized as one of the most attractive professions available to college graduates. Actuaries apply a unique set of business and mathematical skills in solving financial and social problems. Examples of organizations employing actuaries include insurance companies, consulting firms, public utilities, and select regulatory agencies.

The actuarial science major is a cooperative effort between the Economics Department and the Department of Mathematics and is based on the premise that successful actuaries have mastered essential business and risk management and insurance knowledge along with specific actuarial mathematics skills.

The objective of Bradley's actuarial science-business program is to prepare majors for successful careers as actuaries. Several required courses will help students prepare for some of the standard actuarial exams administered by the Society of Actuaries (SOA) and the Casualty Actuarial Society (CAS).

A list of the program requirements is provided below, along with a recommended course sequence for actuarial science-business (ASB) majors.

Departmental requirements for an Actuarial Science – Business Major

- Complete the business core, substituting MTH 325 for QM 262 and substituting MTH 326 for the “Quantitative Skill Building” course, respectively.

Actuarial Science Business (ASB) requirements

- All students must successfully complete the following courses:
 - MTH 121 Calculus I
 - MTH 122 Calculus II
 - MTH 223 Calculus III
 - MTH 207 Elementary Linear Algebra with applications
 - MTH 325 Probability and Statistics I
 - MTH 326 Probability and Statistics II
 - MTH 335 Topics in Actuarial Science
 - MTH 335 Topics in Actuarial Science (repeated under different topics)
 - MTH 427 Applied Statistical Methods
- All students must successfully complete one “programming” course chosen from:
 - MIS 175 introduction to Developing Business Applications
 - CS 100 Introduction to Programming Concepts and Languages
 - CS 101 Introduction to Programming
 - CIS 102 Introduction to Computer Information Systems With Basic
- All students must successfully complete one “tools” course chosen from:
 - QM 426 Business Forecasting
 - QM 464 Decision Support Systems
 - FIN 426 Financial Research and Modeling
 - ECO 419 Introduction to Econometrics
 - MTH 435 Stochastic Processes
 - IME 313 Operations Research 1
- All Students must successfully complete three additional 3-hour courses chosen from:
 - ECO 301 Money and Banking
 - FIN 325 Investment Analysis
 - FIN 327 Derivatives
 - FIN 328 Financial Institutions and Markets
 - FIN 423 Advanced Business Finance
 - FIN 425 Portfolio Theory
 - ASB 315 Risk and Insurance
- All students must sit for at least one professional actuarial exam administered by the Society of Actuaries.

Typical Course Sequence

For a four-year course plan for each major in the Foster College of Business, go to: <http://www.bradley.edu/academic/colleges/fcba/>.

Minors

Decision Analysis Minor

The minor in Decision Analysis is designed to provide students with a solid foundation of mathematical and quantitative tools essential to sound decision-making. All areas of academic study such as sociology, psychology, and health sciences may benefit from the application of analytical thought. Thus, this program assists students in all majors across campus in formulating optimal solutions to common problems they will encounter in their professional lives. Students enrolled in the Decision Analysis program will acquire the skills to critically evaluate alternative solutions to complex questions in an analytical and pragmatic manner. Upon graduation these students will find themselves better prepared to assume responsible positions of authority and to perform their professional duties in a resourceful and productive manner.

In addition to the University requirements and those imposed by the student’s college, a minor in Decision Analysis must complete the following or their equivalents:

Required:

- QM 262 – Quantitative Analysis I
- QM 263 – Quantitative Analysis II
- QM 426 – Business Forecasting
- ECO 419 – Introduction to Econometrics

Elective (choose one course from below)

- FIN 425 – Portfolio Theory and Management **or** FIN 426 – Financial Research & Modeling

- MIS 272 – Business Analytics Software and Applications I
- M L 353 – Operations Management in Organizations
- MTG 341 – Marketing Research I
- QM 464 – Decision Support Systems
- QM 369 – Topics in Quantitative Methods
- QM 498 – Independent Study in Quantitative Methods

Finance Minor

A Minor in Finance from Foster College of Business enhances your financial decision making skill as you pursue your chosen major. Students with finance minors understand the importance of monetary and financial factors in business functions, thereby expanding their knowledge and enriching job prospects.

- Required Courses – 19 credit hours
 - FIN 200 Finance Career Foundations – 3 hours
 - ATG 201 Accounting Processes – 1 hour
 - ATG 301 Intermediate Accounting – 3 hours
 - FIN 322 Business Finance – 3 hours
 - FIN 325 Overview of Investment Analysis – 3 hours
 - FIN 328 Financial Institutions and Markets – 3 hours
 - FIN 422 Financial Analysis – 3 hours

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Economics and Finance Courses



Economics and Finance Courses

ECO 100 – Introduction to Economics (3 hours)

Gen. Ed. SF

Core Curr. SB

Nature, scope, and methods of economics; current economic institutions, problems, and policies. Students who have already completed ECO 221 and/or 222 will not receive credit for this course. Prerequisite: Not open to College of Business majors.

ECO 199 – Foundational Topics in Economics (3 hours)

Foundational topics of interest which may vary each time course is offered. Topic stated in current Schedule of Classes.

ECO 215 – Introduction to Risk Management and Insurance (3 hours)

This course covers four broad categories: Foundations of insurance and risk, the private insurance industry, managing individual life and health risk with insurance and managing personal property and liability risk with insurance.

ECO 221 – Principles of Microeconomics (3 hours)

Gen. Ed. SF

Core Curr. SB

An introduction to theoretical and applied analyses of microeconomics, including supply and demand analysis, elasticities, firm costs and profit maximization, market structures, wage determination, and market failures such as externalities, public goods, and monopoly power. Prerequisite: Not open to students with ECO 100.

ECO 222 – Principles of Macroeconomics (3 hours)

Gen. Ed. SF

Core Curr. SB

An introduction to theoretical and applied analyses of macroeconomics, including determinants of overall economic activity and growth, market analysis, national income accounting, employment, inflation, monetary and fiscal policies, and international economics.

ECO 240 – Environmental Economics and Sustainability (3 hours)

This course combines the economic analysis of the environment with the economics of sustainability. Environmental and sustainability economics considers the efficient and equitable use of society's scarce resources. Cannot receive credit for both ECO 240 and 340.

ECO 300 – Economics Colloquium for Juniors (1 hour)

Student-faculty discussion of books and articles concerning significant economic ideas and issues not examined in depth in other courses. Prerequisite: Economics major, junior standing.

ECO 301 – Money and Banking (3 hours)

Real and financial sectors of the economy. Emphasis on structure and process of financial intermediation and related policy issues. Prerequisite: ECO 100 or 221; ECO 222; junior/senior standing.

ECO 310 – Labor Economics (3 hours)

This course is an overview of labor economic theory and its practical applications. The course will concentrate on labor supply and labor demand and how economic conditions affect labor markets and individual labor supply and demand decisions. Topics of interest include: human capital, firm compensation policies, labor market discrimination, labor unions and unemployment. Prerequisite: ECO 100 or ECO 221; ECO 222; junior/senior standing.

ECO 325 – Urban Economics (3 hours)

Origins, economic structure, and functions of urban centers; selected economic problems and policies. Prerequisite: ECO 100 or ECO 221; ECO 222; junior/senior standing.

ECO 332 – Intermediate Microeconomics (3 hours)

Optimizing behavior and market processes. Emphasizes proficiency in numerous microeconomic tools of analysis. Encourages thought about these tools and the real world they are designed to illuminate. Prerequisite: ECO 100 or 221; ECO 222; MTH 114 or higher; junior standing or 42 credit hours and declared economics first major.

ECO 333 – Intermediate Macroeconomic Theory (3 hours)

Integrated approach to the theory of income determination; contemporary growth models; explanations of cyclical fluctuations. Prerequisite: ECO 100 or 221; ECO 222; junior standing or 42 credit hours and declared economics first major.

ECO 335 – Managerial Economics (3 hours)

Applying economic theory to the tools of operations research and business analysis: demand, cost, profit, and pricing. Decision theory of the firm. Prerequisite: ECO 100 or 221; QM 262 or equivalent; junior/senior standing.

ECO 340 – Environmental Economics (3 hours)

The theory of externalities and market failure will provide the basis for applying microeconomic concepts to the study of environmental improvement. The past and present state of environmental well-being with respect to air, water, and waste management will be summarized. Cannot receive credit for both ECO 240 and 340. Prerequisite: ECO 100 or 221; ECO 222; junior standing.

ECO 355 – Supply Chain Economics (3 hours)

Focuses on understanding the economics of supply chains. Over the past 100 years, the structure of economic organization and competition has shifted from individual firms to extended enterprises. These enterprises comprise the entire supply chain, extending from raw materials, through manufacturing, to distribution through channels to customers throughout the U.S. and the world. This change in economic organization has resulted from economic forces and has significant implications for the U.S. and global economies. Prerequisite: ECO 100 or ECO 221; ECO 222; junior/senior standing

ECO 360 – The Economics of Healthcare (3 hours)

Health economics applies the tools of economics to issues of the organization, delivery, and financing of healthcare. Prerequisite: Junior/senior standing

ECO 375 – Behavioral and Experimental Economics (3 hours)

Behavioral economics describes how individual people make economic decisions, both for themselves and in interactions with other people. Experimental economics is a primary tool in the study of behavioral economics, running controlled experiments to observe individual behavior. This course will broadly survey ways in which individuals make decisions. In many different fields, we will study how neoclassical economics predicts human behavior, and how observed behavior differs from those predictions. We will also discuss research in behavioral economics, including designing and implementing experiments. Prerequisite: ECO 100 or 221; junior/senior standing

ECO 391 – International Trade (3 hours)

Core Curr. GP GS

Welfare implications of international trade; balance of payments; equilibrium and disequilibrium; external and domestic policy effects on the balance of payments and welfare; international trade and financial cooperation among nations. Cross listed as IB 391. Prerequisite: ECO 100 or 221; ECO 222; junior/senior standing.

ECO 399 – Special Topics in Economics (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics. Prerequisite: junior/senior standing.

ECO 400 – Economics Colloquium for Seniors (1 hour)

Continuation of Economics 300, with more difficult and challenging readings. Prerequisite: economics major; senior standing.

ECO 418 – Mathematical Economics (3 hours)

Application of mathematics to selected topics of economic theory. Prerequisite: ECO 100 or 221; ECO 222; MTH 115 or higher; junior/senior standing.

ECO 419 – Introduction to Econometrics (3 hours)

Introduction to advanced regression analysis. Topics include ordinary least squares, generalized least squares, nonlinear regression, dummy variables, autocorrelation, heteroskedasticity, and serial correlation. Computer software used extensively. Cross-listed with ECO 519. Prerequisite: ECO 100 or 221; ECO 222; Q M 263 or equivalent; junior/senior standing.

ECO 434 – Readings in Economics (1-6 hours)

Individual readings for qualified students under the guidance of a member of the economics staff. Prerequisite: Approval of the department chair; junior/senior standing.

ECO 498 – Senior Seminar in Economics, Part I (1 hour)**Core Curr. WI,EL**

Student begins to explore an area of economics in which he or she has a particular interest and plans to write a senior thesis. Required for all economics majors. Pass/Fail. Prerequisite: Economics major and senior standing (junior standing with consent of instructor).

ECO 499 – Senior Seminar in Economics, Part II (3 hours)**Core Curr. EL**

Capstone project where each student completes a senior research thesis under the guidance of an economics faculty member. Student explores an area of economics in which he or she has a particular interest. Prerequisite: ECO 498; senior standing (junior standing with consent of instructor).

ECO 510 – Global Markets and Sustainability (3 hours)

Examination of global macroeconomics and its application to the modern business environment, the business cycle and economic policies, major linkages between economies, domestic and international economic indicators, institutions and cultural aspects of business, sustainable development. Prerequisite: Foster College of Business Graduate Student or Consent of Associate Dean.

ECO 519 – Introduction to Econometrics (3 hours)

Introduction to advanced regression analysis. Topics include ordinary least squares, generalized least squares, nonlinear regression, dummy variables, autocorrelation, heteroskedasticity, and serial correlation. Computer software used extensively. Cross-listed with ECO 419 and I B 402. The graduate level course will have additional requirements beyond those of the undergraduate course. Prerequisite: IME 511 or consent of Department Chair.

ECO 605 – Health Care Economics & Finance (3 hours)

Examines the economic and financial aspects of the health care system. Organizational and institutional structures through which an economy makes choices regarding the production, consumption, and distribution of health care services. Fundamental processes for the management of liquidity, major capital investments, debt, and funding. Examines both for-profit and not-for-profit health care organizations. Prerequisite: Graduate standing.

ECO 606 – Microeconomics for Managers (3 hours)

Analysis of domestic and international markets, resource allocation, applied strategic thinking and competitive analysis, market structure, impacts on business decision making and on society, ethical issues, role of government regulation in business, pricing strategies, and quantitative decision making tools. Prerequisite: Foster College of Business Graduate Student or Consent of Associate Dean.

ECO 660 – Readings in Economics (1-3 hours)

Individual readings for qualified students, under the guidance of a member of the faculty. Repeatable to a maximum of 3 credit hours. Prerequisite: consent of instructor and director of graduate programs.

FIN 200 – Introduction to Finance (3 hours)

This course will provide an orientation to the professional field of finance. Topics include available career paths in finance and necessary industry qualifications, overview of industry certifications, finance curriculum options, introduction to fundamental knowledge and skills required, practical application of investing and saving decisions, and review of the functions of the financial markets. Prerequisite: BUS 100

FIN 220 – Personal Finance (3 hours)**Gen. Ed. SF****Core Curr. SB**

Principles and practice of management of personal income, wealth, and credit: budgeting, sources of financing, savings, estate planning, and institutions of personal finance.

FIN 322 – Business Finance (3 hours)

Capital budgeting and principles of financial management. External and internal sources of funds: costs and profitable uses in business organizations. Prerequisite: ATG 157 and junior standing or 42 credit hours and a declared major in one of the following: corporate finance, or personal financial planning, or actuarial science.

FIN 325 – Investment Analysis (3 hours)

Core Curr. EL

Principles of investment analysis. Introduction to security valuation using fundamental analysis with associated trading rules.

Introduction to technical analysis/charting with trading rules. Functions and descriptions of securities markets and trading. Prerequisite: FIN 322, Q M 262 or MTH 325

FIN 327 – Derivative Securities (3 hours)

Overview of options, futures, swaps, and related financial securities. Examination of exchanges, pricing issues, arbitrage, and trading strategies. Applications emphasize the use of derivative securities for managing financial risk. Prerequisite: FIN 322; MTH 115 or higher

FIN 328 – Financial Institutions and Markets (3 hours)

Operation of financial institutions and interrelationships between their operations and economic activity; credit flow and money movements, in the context of financial institutions' operations. Structure and organization of the financial system; emphasis on markets and intermediaries. Prerequisite: ECO 100 or 221; ECO 222; junior standing.

FIN 329 – Commercial Bank Management (3 hours)

The role of commercial banks in the capital markets; introduction and application of financial management concepts, tools, and techniques to the fundamental financial decisions that managers of commercial banks make. Focus is on the dynamic banking environment, regulations, nature of risks, asset and liability management, investment and credit decisions, and financing decision of commercial banks. Prerequisite: FIN 322, FIN 328.

FIN 330 – Financial Services Marketing (3 hours)

Examination of the increasing use of marketing techniques in the financial services industry and the changing environment of financial services. Course is structured around the core marketing principles of buyer behavior, segmentation, product development, distribution, pricing and promotion, as well as topics such as relationship marketing, customer loyalty, and technological developments. Designed for students with an interest in banking, insurance, securities, and other financial services industries. Cross listed with MTG 330. Prerequisite: FIN 322, MTG 315.

FIN 331 – Personal Investing (3 hours)

Principles of investing by and for individual investors. Coverage includes fundamental concepts, theories, principles and strategies of investment planning. Examines various aspects of investment planning strategies emphasizing applicable knowledge and techniques with which a financial service professional provides client service. Prerequisite: FIN 322

FIN 421 – Liquidity Management (3 hours)

Managing firms' liquidity position; emphasis on use of positive and normative models dealing with short term assets and liabilities; ensuring liquidity while enhancing firm value. Prerequisite: FIN 322, QM 263.

FIN 422 – Financial Analysis (3 hours)**Core Curr. WI**

Interpretation and analysis of corporate financial statements. Current annual and interim reports as a source of data for management, stockholders, and creditors. Prerequisite: FIN 322, QM 263.

FIN 425 – Portfolio Theory and Management (3 hours)

Introduction to portfolio theory. Diversification concepts. Market-oriented capital asset pricing model, options pricing model, and arbitrage pricing theory. Market efficiency. Relationship of portfolio theory to fundamental and technical analyses. Portfolio management and evaluation techniques. Prerequisite: FIN 325; QM 263 or MTH 326

FIN 426 – Financial Research & Modeling (3 hours)

Modeling financial processes, cash flows, security prices, etc., for decision making. Econometric, distribution-based, Markov and Stochastic Process concepts are employed. Treats risk/uncertainty identification, measurement and management. Prerequisite: Q M 263 or MTH 326; FIN 325

FIN 429 – Topics in Finance (3 hours)

Topics of special interest which may vary each time course is offered. Topic and prerequisite stated in current Schedule of Classes. May be repeated under different topics for a maximum of nine hours credit.

FIN 494 – Financial Strategy (3 hours)

Contemporary review of theory and practice of financial risk management. Principles for managing financial risk are applied to interest rates, exchange rates, and commodity prices. Financial engineering is incorporated into unified ethical and sustainable managerial problem solving and policy decisions designed to achieve successful operations. Supporting financial elements areas are integrated to understand and appreciate their interdependencies and benefits as a culminating academic experience. Prerequisite: 12 hours of finance at 300 or 400 level.

FIN 495 – Personal Financial Planning Capstone (3 hours)

Development of comprehensive personal financial plans. Investment planning strategies will be applied to the work of the financial service professional with a client service orientation. Integration of analytical skills will be developed through mini and comprehensive cases that will be presented in written and oral formats. Prerequisite: FIN 330 or MTG 330, and FIN 331.

FIN 498 – Independent Study in Finance (1-3 hours)

Studies undertaken by academically qualified students under guidance of a faculty member. Open to Finance and Quantitative Methods Department majors only. May be repeated under different topics for a maximum of six hours credit. Prerequisite: junior/senior standing; 2.5 cumulative grade point average; consent of Department Chair.

FIN 522 – Introduction to Finance (2 hours)

Principles of financial management; financial systems and flow of funds; time value of money and its application; raising and allocation of funds; financial analysis, planning, and forecasting. Cannot be used to satisfy MBA elective or concentration requirements.

FIN 622 – Financial Management (4 hours)

Review of essential concepts necessary for foundational support of graduate topics. Areas of study include the financial framework and analysis of business; Management of the flow of funds through a company; capital and cash budgeting; valuation problems; risk analysis; evaluation of alternative methods of financing under changing conditions. Prerequisite: Foster College of Business Graduate Student or Consent of Associate Dean.

FIN 658 – Topics in Finance (3 hours)

Topics of special interest which may vary each time the course is offered. Topic stated in current Schedule of Classes.

Q M 262 – Quantitative Analysis I (3 hours)

Introduction to descriptive and inferential statistics with an emphasis on business applications. Topics covered include computation and application of descriptive measures, probability distributions, sampling, confidence intervals, hypothesis testing, correlation, and simple linear regression. Prerequisite: MTH 114 or higher.

Q M 263 – Quantitative Analysis II (3 hours)

Continuation of Q M 262. Topics covered include tests of hypotheses, correlation, time series, and multiple regression analysis with specific application to problems in business and economics. Computer software will be used extensively in regression analysis. Prerequisite: Q M 262

Q M 369 – Topics in Quantitative Methods (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours. Prerequisite: junior/senior standing.

Q M 426 – Business Forecasting (3 hours)

Introduction to forecasting, forecasting methods, features and differences using theoretical and practical knowledge gained about forecasting methods. Topics covered include regression analysis, time series analysis, understanding moving averages, exponential smoothing, autoregression and trend curves and to be able to use these modelling techniques to obtain forecasts. Cross-listed with Q M 526. Prerequisite: Q M 263 and junior/senior standing.

Q M 464 – Decision Support Systems (3 hours)

Introduction to managerial statistical tools in descriptive and predictive analytics with an emphasis on statistical learning. Topics covered include regression analysis, simulation, decision analysis, and data mining. Extensive use of computer software for model building and analysis for making better business decisions. Cross-listed with Q M 564. Prerequisite: Q M 263

Q M 498 – Independent Study in Quantitative Methods (1-3 hours)

Studies undertaken by academically qualified students under guidance of a faculty member. Open to Finance and Quantitative Methods Department majors only. May be repeated under different topics for a maximum of six hours. Prerequisite: junior/senior standing; 2.5 cumulative grade point average; consent of Department Chair.

Q M 526 – Business Forecasting (3 hours)

Introduction to forecasting, forecasting methods, features and differences using theoretical and practical knowledge gained about forecasting methods. Topics covered include regression analysis, time series analysis, understanding moving averages, exponential smoothing, autoregression and trend curves and to be able to use these modelling techniques to obtain forecasts. Cross-listed with Q M 426. The graduate level course will have additional requirements beyond those of the undergraduate course. Prerequisite: IME 511 or consent of Department Chair.

Q M 564 – Decision Support Systems (3 hours)

Introduction to managerial statistical tools in descriptive and predictive analytics with an emphasis on statistical learning. Topics covered include regression analysis, simulation, decision analysis, and data mining. Extensive use of computer software for model building and analysis for making better business decisions. Cross-listed with Q M 426. The graduate level course will have additional requirements beyond those of the undergraduate course. Prerequisite: IME 511 or consent of Department Chair.

Q M 658 – Topics in Quantitative Methods (3 hours)

Topics of special interest which may vary each time the course is offered. Topic stated in current Schedule of Classes.

Q M 660 – Readings in Quantitative Methods (1-3 hours)

Individual readings for qualified students, under the guidance of a member of the faculty. Repeatable to a maximum of 3 credit hours.
Prerequisite: consent of instructor and director of graduate programs.

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Entrepreneurship, Technology, and Law



Entrepreneurship, Technology, and Law

All programs offered by the Foster College of Business, Bradley University, are accredited by the AACSB International: The Association to Advance Collegiate Schools of Business.

FACULTY Professor Marcum (chair); Professors Dato-On, Blair, Stephens; Associate Professor Young; Assistant Professors Smith, Zheng; Instructors Fanti, Sun

The Department of Entrepreneurship, Technology, and Law curricula provide students with the educational experiences of reasoning, problem solving, and decision making so that they, through balanced programs, will be qualified to accept responsible positions in business and the public sector.

Specific departmental objectives include the following: (1) To give students the historical perspective necessary to understand the evolution of business in a global, social, political, economic, and technological environment; (2) To excite students about new ideas and knowledge; (3) To provide students with a basic understanding of entrepreneurship, information technology, and the legal environment of business; (4) To develop well-informed individuals who understand their ethical and social responsibilities in business situations; (5) To enable students to understand the operation of our business and economic systems; (6) To develop the ability to think clearly, analyze carefully, and express thoughts and conclusions logically; and (7) To help students develop competence in a major field of study.

Students enrolling in the Department of Entrepreneurship, Technology, and Law must select and complete the requirements for one of the following majors: (1) management information systems, (2) MIS with a concentration in business analytics, (3) MIS with a concentration in cybersecurity, (4) business analytics, or (5) cybersecurity. The department also offers minors in business analytics, cybersecurity, and management information systems.

Management Information Systems Major

Management information systems (MIS) is an exciting field that combines people skills with technical skills. The MIS major blends business functions with computer information technology. It enables students to be successful in developing, managing and securing technology-based business applications. Organizations have become much more data driven. For many firms, data is their business. The MIS major teaches students how to manage this vital resource.

This major prepares students for some of the nation's fastest growing career opportunities in fields such as systems analysis, cybersecurity, and business analytics. Graduates of the program can expect interesting and challenging job opportunities in a dynamic field. Typical graduates' first jobs are in technical and information related fields as support specialists, analysts or consultants. The MIS major can be a fast track to management positions or the basis for advanced graduate work. After gaining experience, graduates

transition into leaders of technical teams and then assume technology management positions.

The MIS major differs from other “computer” majors. It emphasizes interactions between the business and information technology requirements of organizations. While knowledge of computer systems is a necessary part of the program, a larger portion is devoted to serving the data, information and security needs of business professionals.

The student can acquire competence in a number of areas as a generalist or with a concentration in either cybersecurity or business analytics.

Requirements

To major in MIS, a student must earn a minimum of 24 semester hours credit in courses with the following requirements:

Required Courses for a General MIS Major:

- MIS 272: Business Analytics Software and Applications I – 3 hrs.
- CS 101: Introduction to Programming – 4 hrs
- CS 102: Data Structures – 3 hrs
- MIS 375: Business Systems Analysis and Design – 3 hrs
- MIS 478: MIS Capstone Consulting Project – 3 hrs
- MIS Electives OR Courses approved by the Department Chair – 12 hrs

Required Courses for a Concentration in Cybersecurity

The concentration in cybersecurity prepares graduates to manage the security of networks and information systems. Students gain experience with conducting technical and socially-engineered penetration tests. In this concentration, students perform security assessments for local business clients in order to identify security risks and provide recommended steps for remediation.

- CS 141: Introduction to Python Programming – 3 hrs
- MIS 272: Business Analytics Software and Applications – 3 hrs
- MIS 373: Applied Networking Theory – 3 hrs
- MIS 375: Business Systems Analysis and Design – 3 hrs
- MIS 379: Information Systems Security – 3 hrs
- MIS 483: Advanced Ethical Hacking – 3 hrs

Choose (9) hours from the following:

- CIS 230: Introduction to Computer Forensics – 3 hrs
- CIS 330: Advanced Computer Forensics – 3 hrs
- CIS 415: Applied Cryptography – 3 hrs
- CIS 435: Computer Networks and System Security – 3 hrs
- CIS 495: Software and Web Applications Security – 3 hrs
- Course approved by the Department Chair – 3 hrs

Required Courses for a Concentration in Business Analytics

The concentration in business analytics prepares graduates for positions in which professionals help businesses make critical data-driven decisions. This includes the ability to collect, distribute and share data throughout an organization, apply text and visual analytical techniques and implement unique hardware and software.

- CS 141: Introduction to Python Programming – 3 hrs
- QM 263: Quantitative Analysis II – 3 hrs
- MIS 272: Business Analytics Software and Applications I – 3 hrs
- MIS 374: Database Management and Administration – 3 hrs
- MIS 375: Business Systems Analysis and Design – 3 hrs
- MIS 471: Business Analytics Software and Applications II – 3 hrs
- MIS 473: Data Visualization for Business Analytics – 3 hrs
- MIS 490: Capstone Project for Business Analytics – 3 hrs

Choose (3) hours from the following:

- QM 326: Business Forecasting – 3 hrs.
- COM 326: Digital Analytics (3 hrs)
- CS 360: Fundamentals of Data Science (3 hrs)

- ATG448: Computer Assisted Audit Techniques – 3 hrs.
- Course approved by the Department Chair – 3 hrs

Business Analytics Major

Business analytics is a multi-faceted field that has evolved due to the development of technology associated with the creation and collection of large data sets. Not only is the volume of data increasing but the velocity of data analysis happens in real time and the variety of data has exploded including both structured (e.g. quantitative data) and unstructured (e.g. text and social media) data sets. Organizations have become much more data driven. For many firms, data is their business. The BA major teaches students how to manage this vital resource.

The BA major will prepare students for a variety of data analytics positions within a plethora of organizations. Typical graduates' first jobs are positioned as business analysts, database analysts, data analysts or data architects. Graduates of the program can expect interesting and challenging job opportunities in a dynamic field.

The BA major differs from the MIS concentration in business analytics in that it has a deeper focus on quantitative methodologies across a variety of fields such as the decision sciences and economics. The major offers students the opportunity to explore data science by requiring the development of programming languages for analytics and providing opportunities to explore data science fundamentals. Yet it differs from data science in that the emphasis is on learning and using the off-the-shelf tools of analytics to solve problems in a business context.

Requirements

To major in Business Analytics, a student must earn a minimum of 27 semester hours credit in courses with the following requirements:

Required Courses for a Business Analytics Major:

- CS 141: Introduction to Python – 3 hrs
- MIS 272: Business Analytics Software and Applications I – 3 hrs
- ECO 319: Econometrics – 3 hrs.
- QM 364: Decision Support Systems – 3 hrs.
- MIS 374: Database Management and Administration – 3 hrs
- MIS 471: Business Software and Applications II – 3 hrs
- MIS 473: Data Visualization for Business – 3 hrs
- MIS 490: Capstone for Business Analytics – 3 hrs
- And choose one of the following:
 - ML 356: Human Capital in Organizations – 3 hrs
 - QM 326: Business Forecasting – 3 hrs.
 - CS 360: Fundamentals of Data Science – 3 hrs

Cybersecurity Major

Cybersecurity is a diverse field that focuses on maximizing the confidentiality, integrity, and availability of data and systems, while simultaneously minimizing risks to individuals and organizations. Cybersecurity has become a critical occupation due to rapid technology development and the exponential growth in data generated by an increasingly connected society. The cybersecurity major provides a foundation in business and teaches students how to identify and mitigate threats to ensure that organizations are protected from cyber-attacks. Students are also exposed to various ethical issues related to emerging technology, such as privacy and anonymity.

The cybersecurity major prepares students for a variety of cybersecurity positions across all industries. Typical graduates' first jobs are positioned as cybersecurity specialist, information security analyst, information technology auditor, systems administrator, and junior penetration tester. Graduates of the program can expect interesting and challenging job opportunities in a dynamic field.

The cybersecurity major differs from the MIS concentration in cybersecurity in that it has a deeper focus on developing technical knowledge, skills, and abilities in specialties like digital forensics and cryptography. The major also allows students to explore career opportunities by highlighting the wide range of roles within the cybersecurity field, such as networking, penetration testing, and security awareness training.

Requirements

To major in Cybersecurity, a student must earn a minimum of 30 semester hours credit in courses with the following requirements:

Required Courses for a Cybersecurity Major:

- CS 141: Introduction to Python – 3 hrs
- CIS 230: Introduction to Computer Forensics – 3 hrs.
- CIS 330: Advanced Computer Forensics – 3 hrs
- CIS 415: Applied Cryptography – 3 hrs.
- MIS 272: Business Analytics Software and Applications I – 3 hrs
- MIS 373: Applied Networking – 3 hrs.
- MIS 374: Database Management and Administration – 3 hrs
- MIS 375: Business Systems Analysis & Design – 3 hrs.
- MIS 379: Information Systems Security – 3 hrs.
- MIS 483: Advanced Ethical Hacking – 3 hrs.

Students must also complete the Foster College's business core.

Business Law Minor

The Business Law Minor provides students with understanding of some of the social, ethical, political, and cultural foundations of law and how law impacts almost every business decision. Students will obtain critical analytical skills needed in their careers and/or to excel in law school and will become better prepared to identify and manage potential legal problems in the practice of their profession or career.

The minor is open to all majors and is comprised of 15 semester hours of study structured as follows. Students whose major is from the Foster College of Business must have at least 12 hours in courses that are unique from those used to fulfill their major requirements.

1. Social, Ethical, Political, and Cultural Foundations of Law(3 hours)

Select one course from the following:

- AAS 200: Introduction to African American Studies – 3 hrs.
- ECO 310: Labor Problems – 3 hrs.
- ECO 362: Economics and Law – 3 hrs.
- HIS 300: The United States Since 1945 – 3 hrs.
- HIS 304: Women in American History – 3 hrs.
- HIS 307: Early American Republic – 3 hrs.
- HIS 315: U.S. Social Movements – 3 hrs.
- HIS 316: African American History Since 1877 – 3 hrs.
- PHL 203: Logic – 3 hrs.
- PHL 347: Ethics – 3 hrs.
- PLS 105: Introduction to American Government – 3 hrs.
- PLW 101: Introduction to the Legal Profession – 3 hrs.
- SOC 212: Sociology of Diversity – 3 hrs.
- WGS 200: Introduction to Women's Studies – 3 hrs.

1. Business Law Foundations(3 hours)

Required:

- BLW 342: Legal Environment of Business – 3 hrs.

III. Business Law Applications (9 hours)

a. Select **at least 6 hours** up to a **maximum of 9 hours** from the following:

- BLW 289: Topics in Business law – 1–3 hrs.
- BLW 345: Law of Business – 3 hrs.
- BLW 347: Law and the Entrepreneur – 3 hrs.
- BLW 355: Labor-Management Relations – 3 hrs.
- BLW 389: Topics in Business law – 1–3 hrs.
- BLW 446: Employment Law – 3 hrs.
- BLW 360: Business and Intellectual Property – 3 hrs.
- BLW 489: Topics in Business Law – 1–3 hrs.
- BLW 498: Independent Studies – 1–3 hrs.

b. Students **who have at least 6 hours and less than 9 hours from category A** may take the remaining hours from the following:

- ATG 477: Federal Taxes – 3 hrs.
- ATG 526: Fraud Examination – 3 hrs.
- CIS 580: Digital Society and Computer Law – 3 hrs.
- COM 330: Communication Law and Ethics – 3 hrs.
- CON 380: Construction Contracts – 2 hrs.

- CON 394: Construction Labor and Unions – 3 hrs.
- I M 350: Intellectual Property Law and New Media – 3 hrs.
- NUR 510: Legal Issues in Nursing – 2 hrs.
- PLS 459: Constitutional Law – 3 hrs.
- PLS 460: Constitutional Law – 3 hrs.
- PLW 300: Pre-Law Internship – 1–6 hrs.

MIS Minors: Management Information Systems, Cybersecurity, and Business Analytics

To qualify for more than one MIS minor, no fewer than 9 s.h. of courses required for any of the desired minors must be unique to that minor and not used to satisfy the requirements of the other minors.

Business Analytics Minor

Many professional disciplines require analytics knowledge. The purpose of the business analytics major is prepare students to gather, cleanse and analyze data for decision making. There are many new and important features associated with modern business analytics: (1) dealing with large and messy data sets, (2) figuring out how to distribute and share the data throughout an organization, (3) mining the data and exploring non-obvious relationships, (4) text and visual analytical techniques and (5) many new hardware and software platforms (tools). Organizations from all sectors of society are looking to leverage data as never before. Therefore, an ever increasing demand for trained professionals in the fields of organizational analytics is occurring. The minor is open to all majors across campus. The minor requires 15 hours.

Required courses

- MIS 173: Introduction to Business Analytics – 3 hrs.
- MIS 272: Business Analytics Software and Applications I – 3 hrs.
- MIS 374: Database Management and Administration – 3 hrs.
- MIS 471: Business Analytics Software and Applications II – 3 hrs.
- MIS 473: Business Analytics Software and Applications III – 3 hrs.

Cybersecurity Minor

A minor in cybersecurity will offer students with majors or interests in security the option of adding significant knowledge, skills, and abilities in information security. The purpose of the minor is to prepare students to deal with threats to computers and information. The minor prepares students to manage the security of networks and information systems. Students gain experience with conducting technical and socially-engineered penetration tests. In this minor, students perform security assessments for local business clients to identify security risks and provide recommended steps for remediation. The minor is open to all majors across campus. The minor requires 15 hours.

Required courses

- MIS 173: Introduction to Business Analytics – 3 hrs.
- MIS 373: Applied Networking – 3 hrs.
- MIS 379: Information Systems Security – 3 hrs.
- MIS 483: Advanced Ethical Hacking – 3 hrs.

Elective course (choose one from the following)

- CIS 230: Introduction to Computer Forensics – 3 hrs.
- CIS 415: Applied Cryptography – 3 hrs.
- CIS 435: Computer Networks and System Security – 3 hrs.
- CIS 495: Software and Web Applications Security – 3 hrs.
- Course approved by the Department Chair – 3 hrs.

Management Information Systems Minor

A minor in management information systems will provide an opportunity for students to enhance their knowledge and credentials in the use and development of computer software and/or hardware. The minor will provide students with an opportunity to be employed in the IS field, give them the skills that will make them the ideal liaison between IS professionals and experts in other functional areas of an organization, and the technological base to become valuable “power users” of essential software applications, such as spreadsheets,

databases, and e-commerce tools. The minor will allow the student to develop focused expertise in one of the distinct fields that comprise the breadth of the information systems professional. The minor is open to all majors across campus.

The minor requires 15 hours.

Required courses

- MIS 173: Introduction to Business Analytics – 3 hrs.
- MIS 272: Business Analytics Software and Applications I – 3 hrs.

Elective Courses (choose three from the following)

- MIS 373: Business Data Communications – 3 hrs.
- MIS 374: Database Management and Administration – 3 hrs.
- MIS 375: Business Systems Analysis and Design – 3 hrs.
- MIS 378: HCI and Usability Testing – 3 hrs.
- MIS 379: Information Systems Security – 3 hrs.
- MIS 389: Advanced Topics in Management Information Systems – 3 hrs.
- MIS 471: Business Analytics Software and Applications II – 3 hrs.
- MIS 473: Visual Analytics for Business – 3 hrs.
- MIS 478: MIS Capstone Consulting Project – 3 hrs.
- MIS 483: Advanced Ethical Hacking – 3 hrs.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Entrepreneurship, Technology and Law Courses



Entrepreneurship, Technology and Law Courses

MIS 173 – Introduction to Business Analytics (3 hours)

Develop spreadsheet applications for analyzing and solving problems. Learn how to gather, store, organize, secure and disseminate data with spreadsheets and databases. Learn how to convert data into information that is beneficial to supporting business decisions.

MIS 272 – Business Analytics Software and Applications I (3 hours)

Students will learn commonly used data analysis tools and techniques. They will learn how to use and apply software that allows business professionals to gather, store, access, and analyze data to aid in decision making. The course will teach students how to discover and communicate information from data through the use of basic, intermediate, and advanced functions and tools in commonly used spreadsheet and database software. Each student will learn about the visual representation of data, optimization techniques, queries, pivot tables, reporting tools, data storage, and more. Prerequisite: MIS 173 or consent of department chair

MIS 279 – Personal Security and Privacy (3 hours)

Gives students an understanding of how contemporary technology impacts personal security, privacy, and liberty. Studies threat modeling, proper account practices, data collection methods, and vulnerabilities in digital and physical environments. Application of security measures and privacy enhancing technologies to address various use cases.

MIS 289 – Topics in Management Information Systems (1-3 hours)

Topics of special interest in management information systems, which may vary each time the course is offered. Topic and prerequisite stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours credit. Prerequisite:

MIS 373 – Applied Networking (3 hours)

Gives students an understanding of basic network design concepts and an opportunity to apply them in a business context. Studies the functionality, performance and management of multiple network designs. Application of the theories, design and technologies utilized in modern business data communications networks. Prerequisite: 42 hours

MIS 374 – Database Management and Administration (3 hours)

Introduces the fundamental concepts of database analysis, design, and implementation with emphasis on the relational model. Topics include SQL, data modeling, data normalization, tables, queries, data mining, security, database administration, and backup/recovery. Prerequisite: MIS 272 and 42 hours

MIS 375 – Business Systems Analysis and Design (3 hours)

Core Curr. WI

Information systems in business applications. Emphasis on relationship of information systems planning to overall business goals, policies, plans, management style, and industry condition; analysis, design, and implementation of information systems. Overview of future trends in data management. Prerequisite: MIS 272 and junior standing.

MIS 379 – Information Systems Security (3 hours)

An introduction to the various technical and administrative aspects of information security and assurance. Provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. Prerequisite: Junior standing.

MIS 389 – Advanced Topics in Management Information System (1-3 hours)

Advanced topics of special interest in management information systems, which may vary each time the course is offered. Topic and prerequisite stated in current schedule of classes. May be repeated under different topics for a maximum of six hours credit. Prerequisite:

MIS 471 – Business Analytics Software and Applications II (3 hours)

Explores data analysis and statistical methods as well as best practices for continuous iterative investigation of past business performance to gain insights and drive business planning. Exposes the students to several aspects of Business Analytics. Investigates data analytics fundamentals, data cleansing and transformation, and supervised/unsupervised data mining techniques for tasks like targeted mailing campaigns, customer segmentation, customer churn, fraud detection and market basket analysis. Prerequisite: QM 262 or MTH 111 or MTH 325

MIS 473 – Data Visualization for Business Analytics (3 hours)

Visual illustration of how to better understand data, present clear evidence of findings to an intended audience, and tell appealing stories through data graphics. The topics covered include but are not limited to: design principles, multivariate displays, geospatial displays, dashboards, interactive and animated displays. Some knowledge of basic programming (in any language) will be helpful, but not required. We will use several tools to refine our data and create, edit, alter, and display their visualizations. Prerequisite: MIS 272

MIS 478 – MIS Capstone Consulting Project (3 hours)

Students provide consulting to clients for projects, such as information systems development, the evaluation and/or implementation of new technology and other technology related business needs. Application of concepts and skills of project management. Prerequisite: MIS 375.

MIS 479 – Topics in Management Information Systems (3 hours)

Topics of special interest which may vary each time course is offered. Topic and prerequisite stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours credit. Prerequisite: stated in current schedule of classes

MIS 483 – Advanced Ethical Hacking (3 hours)**Core Curr. EL**

Provides students with hands-on experience with all phases of a security assessment for a live client. Students are responsible for planning the assessment, executing assigned tasks, and reporting results. Prerequisite: MIS 373 or CIS 430, and MIS 379 or CIS 435, or permission of Instructor

MIS 490 – Capstone Project for Business Analytics (3 hours)

Applies the concepts and skills learned by Business Analytics undergraduate students. Students are required to work on a team with a business client on an analytics project. Prerequisite: MIS 471 and MIS 473

MIS 499 – Independent Studies in Management Information Systems (1-3 hours)

Studies undertaken by academically qualified students under the guidance of a faculty member, with the approval of the chair of the Department of Entrepreneurship, Technology, and Law. May be repeated under different topics for a maximum of six hours credit. Prerequisite: Stated in current schedule of classes

MIS 571 – Business Analytics Software and Applications II (3 hours)

Explores data analysis and statistical methods as well as best practices for continuous iterative investigation of past business performance to gain insights and drive business planning. Exposes the students to several aspects of business analytics. Investigates data analytics fundamentals, data cleansing and transformation, and supervised/unsupervised data mining techniques for tasks like targeted mailing campaigns, customer segmentation, customer churn, fraud detection and market basket analysis. Prerequisite: A statistics course and consent of the department chair. May not register for MIS 571 if credit earned for MIS 471

MIS 572 – Information Systems Management (2 hours)

Knowledge and application of information-related resources from a management perspective: identifying information needs, strategic uses of information systems, emerging information technologies, legal issues in information technology, managing information resources effectively. Prerequisite: Foster College of Business Graduate Student or Consent of Associate Dean.

MIS 573 – Data Visualization for Business Analytics (3 hours)

Visual illustration of how to better understand data, present clear evidence of findings to an intended audience, and tell appealing stories through data graphics. The topics covered include but are not limited to: design principles, multivariate displays, geospatial displays, dashboards, interactive and animated displays. Some knowledge of basic programming (in any language) will be helpful, but not required. We will use several tools to refine our data and create, edit, alter, and display their visualizations. Cross-listed with MIS

473. The graduate level course will have additional requirements beyond those of the undergraduate course. Prerequisite: May not register for MIS 573 if credit earned for MIS 473.

MIS 590 – Capstone Project for Business Analytics (3 hours)

Applies the concepts and skills learned by data science and analytics graduate students. Students are required to work on a team with a business client on an analytics project. Prerequisite: Consent of the Department Chair

MIS 658 – Topics in Management Information Systems (1-6 hours)

Topics of special interest, which may vary each time the course is offered. May be repeated under different topics for a maximum of six (6) hours credit. Topic stated in current Schedule of Classes. Prerequisite: Stated in current Schedule of Classes

MIS 660 – Readings in Management Information Systems (1-6 hours)

Individual readings in Management Information Systems for qualified students, under the guidance of a member of the faculty. Repeatable to a maximum of 6 credit hours. Prerequisite: Advancement to candidacy; consent of instructor and director of graduate programs

ENT 280 – Entrepreneurial Creativity (3 hours)

Toolkit to think more innovatively. Students will gain knowledge of various theories of creativity and innovation and will learn how to rebuild cognitive models. By the end of the semester, students will develop at least one marketable business opportunity.

ENT 281 – The Entrepreneurial Career (1 hour)

This course is designed to give students a feel for an entrepreneurial career. The course will consist of entrepreneurs and investors as guest speakers, case studies, and opportunity recognition theory and activities. By the end of the course, students should have an understanding of the benefits and risks of being an entrepreneur and how entrepreneurs recognize opportunities

ENT 289 – Topics in Entrepreneurship (1-3 hours)

Topics of special interest in entrepreneurship, which may vary each time the course is offered. Topic and prerequisite stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours credit. Prerequisite:

ENT 381 – Entrepreneurship for Non-Business Students (3 hours)

This course is designed for students throughout the Bradley campus, except for those majoring in business. Whether your major is the arts, engineering, education, or science, the focus will be on how to launch a new venture enterprise. Students may have a serious interest in starting a business or only want to explore the world of entrepreneurship. The course will answer the question, "Would creating my own enterprise be for me?" Subjects include finding an opportunity, determining if there would be satisfied customers, the use of a business plan, obtaining financing/resources, and deciding on the next steps to take. Students will develop an idea for starting a new venture. Prerequisite: Junior Standing, Not open to Business Majors, Cannot earn credit if taken ENT 382.

ENT 382 – Entrepreneurship Startups (3 hours)

Activities involved in starting, financing, growing, and harvesting a new business venture. Entrepreneurs and their behavior, analysis of opportunities, obtaining capital, and venture strategies. Prerequisite: ATG 157; 42 credit hours and a declared entrepreneurship first major or junior standing for other majors.

ENT 383 – Managing Entrepreneurial Growth (3 hours)

Students will gain a better understanding of the challenges of growing an entrepreneurial business. The course will focus on adapting growth strategies, marketing, cash management and personnel in changing competitive environments. Prerequisite: M L 350 and junior standing.

ENT 384 – Entrepreneurial Finance (3 hours)

Planning and strategies involved in starting or expanding a business. Emphasis on capitalization, record keeping, liquidity management, fixed asset management, financial analysis, expansion strategies, establishing firm value, and exiting the firm. Cross-listed with FIN 384. Prerequisite: ENT 382 or FIN 322.

ENT 385 – Technology Entrepreneurship (3 hours)

This course focuses on fostering the analytical and conceptual skills required to develop and test the feasibility of technology-based product-focused business concepts. The course will expose the student to issues that a product-focused company would face when attempting to launch a new venture. Prerequisite: Junior Standing

ENT 386 – Social Entrepreneurship (3 hours)

This course is designed to give students some of the tools and knowledge necessary for understanding, launching and managing a social venture (not for profit or for profit). Social entrepreneurship combines the passion of a social mission with the techniques of the discipline of business. The social entrepreneur applies practical solutions to societal problems. The result may be a new product, new service, or new approach to a social problem. Prerequisite: Junior Standing

ENT 387 – Family Business (3 hours)

Family-controlled businesses are characterized by challenges that threaten their continuity and distinct core competencies that can result in unique competitive advantages. The course will explore and analyze family business continuity challenges and best

management, family, and governance practices for leading family-owned businesses. Since the focus is on pragmatic, action-oriented, management, governance, and family/business leadership skills, the course will be taught primarily through live and written cases, discussions, lectures, and a study/consultation experience with a family business. Prerequisite: 56 hours

ENT 389 – Advanced Topics in Entrepreneurship (1-3 hours)

Advanced topics of special interest in entrepreneurship, which may vary each time the course is offered. Topic and prerequisite stated in current schedule of classes. May be repeated under different topics for a maximum of six hours credit. Prerequisite:

ENT 482 – The Entrepreneurial Experience (3 hours)

This entrepreneurship course is for students who have one or more ideas for starting a business (or nonprofit). The idea could be a retail shop or a biotech product, whatever the students decide. The course is heavily focused on actually creating an enterprise, ideally up to selling products or services. It is also possible to work on an existing venture concept and contribute to its actual development. This “hands on” course will enable students to launch ventures after the course concludes, with mentoring and assistance from the Turner Center. Prerequisite: ENT 382 or ENT 381 or consent of instructor.

ENT 488 – Internship in Entrepreneurship (1-3 hours)

Supervised experience with an approved new or emerging firm or with an agency providing assistance to emerging high-technology firms. Application of entrepreneurship skills. Written application required (available from internship director). May be repeated for a maximum of 3 hours. Prerequisite: junior standing; entrepreneurship major; 2.5 overall GPA; at least one entrepreneurship-related course

ENT 499 – Independent Study in Entrepreneurship (1-3 hours)

Studies undertaken by academically qualified students under the guidance of a faculty member, with the approval of the chair of the Department of Entrepreneurship, Technology, and Law. May be repeated up to 6 hours. Prerequisite: Junior standing and stated in the Schedule of Classes.

ENT 660 – Additional Readings in Entrepreneurship (1-6 hours)

Individual readings for qualified students, under the guidance of a member of the faculty. 1-3 hours, may be repeated up to 6 hours under different titles/topics. Prerequisite: Advancement to candidacy; consent of instructor and director of graduate programs.

ENT 682 – Entrepreneurship (3 hours)

This course is for MBA students who wish to explore launching a venture of their own or immersing themselves in another actual venture. Beyond the readings, a variety of exercises, live cases and other learning opportunities will enable participants to partially customize the course content to fit their needs and interests. Several specialists and entrepreneurs will serve as distinguished guest entrepreneurs for certain sessions. This is an applied, experiential course that allows for the application of knowledge from other MBA courses. A primary focus will be on conducting a venture feasibility or other project.

ENT 689 – Topics in Entrepreneurship (1-6 hours)

Conceptual treatment of topics important to entrepreneurship. Topics stated in current Schedule of Classes. 1-3 hours, may be repeated up to 6 hours under different titles/topics. Prerequisite: Stated in current Schedule of Classes.

BLW 289 – Topics in Business Law (1-3 hours)

Topics of special interest in business law, which may vary each time the course is offered. Topic and prerequisite stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours credit. Prerequisite:

BLW 342 – Legal Environment of Business (3 hours)

Core Curr. SB

Introduction to the fundamentals of law as it relates to business including the social, equitable, and ethical concerns. The influence of the government regulation of business including procedure, managing disputes, constitutional law, contracts, torts, international business, business organizations, labor, agency, environmental concerns, and consumer law. Emphasis on analytical legal reasoning and the case method. Prerequisite: junior standing

BLW 345 – Law of Business (3 hours)

Core Curr. WI

Principles of the law of contracts, sales and the commercial code, commercial paper, agency, business organizations, and bankruptcy. Prerequisite: BLW 342

BLW 347 – Law and the Entrepreneur (3 hours)

Introduces students to legal requirements of forming a business and how to anticipate legal concerns and risks during the life of the business. Covers legal issues, such as intellectual property, contracts, entity formation, and venture capital funding. Prerequisite: junior standing

BLW 355 – Labor-Management Relations (3 hours)

Collective bargaining as a social innovation in labor-management relations. Current public policy, major substantive issues in management and union policies, and tactics in collective bargaining and dispute settlement. Case studies. Prerequisite: Junior standing; M L 350 or consent of ETL department chair

BLW 360 – Business & Intellectual Property (3 hours)

Introduction to the different types of intellectual property a business may acquire and the legal principles surrounding the protection of the intellectual property. Prerequisite: Junior standing

BLW 389 – Advanced Topics in Business Law (1-3 hours)

Advanced topics of special interest in business law, which may vary each time the course is offered. Topic and prerequisite stated in current schedule of classes. May be repeated under different topics for a maximum of six hours credit. Prerequisite:

BLW 446 – Employment Law (3 hours)

Legal issues surrounding employment, including the employment relationship, equal opportunity laws, discrimination, personnel handbooks, testing, workers' compensation, federal wage and hour law, OSHA, ERISA, and federal labor law. Prerequisite: BLW 342

BLW 499 – Independent Studies in Business Law (1-3 hours)

Studies undertaken by academically qualified students under the guidance of a faculty member, with the approval of the chair of the Department of Entrepreneurship, Technology, and Law. Repeatable to 6 s.h. Prerequisite: Junior standing.

BLW 540 – Legal Environment for Managers (3 hours)

Analysis of the basic principles of business law while focusing on global information technologies using the case study method. Topics will include an understanding of the legal system, ethics, cybertorts, cybercrimes, information privacy issues, intellectual property, and contracts. Prerequisite: Foster College of Business Graduate Student or consent of Associate Dean.

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International Business Program



International Business Program

All programs offered by the Foster College of Business, Bradley University, are accredited by the AACSB International: The Association to Advance Collegiate Schools of Business.

Faculty: Faculty: Iyer (Director), Foley.

The international business major is interdisciplinary, integrating international studies and foreign languages with business. Supplementing the academic program are opportunities for participating in internships with international companies, study abroad, and internationally oriented business outreach.

The objective of the international business curriculum is to provide opportunities for students to gain competence in various aspects of global business operations. In addition, a broad training incorporating international studies and foreign language will make the student better prepared to assume managerial positions with business enterprises. Most international business majors will seek employment with companies engaged in international business activities, such as exporters and multinational corporations. Other potential employers include international business intermediaries (banks, trading companies, research and consulting firms, transportation agencies, port authorities, and so on), international economic institutions, and state and federal agencies.

The need for a separate curriculum in international business is reinforced by growing internationalization and globalization of American business and interdependency of world economies. Today, businesses find themselves in intense competition with foreign companies here at home. More direct involvement in international business comes in the form of global sourcing activities, exporting, licensing and technology transfer, and foreign direct investment. A variety of small and large companies in the manufacturing, service, and agricultural sectors currently participate in international business.

Students may study international business at Bradley University in three ways. First, students may major in international business leading to an undergraduate baccalaureate degree. Others may pursue international business in addition to another major outside the Foster College of Business. Still others may take as electives one or more courses in international business.

Graduation Requirements

International Business Major Requirements

In addition to the University and Foster College of Business requirements, students enrolled in the international business major must fulfill a minimum of 54 credit hours meeting the following requirements:

World Language – 12 hrs.

- For French, German, or Spanish: 12 hours at 200 level or above, in the same language.
- For Portuguese, Russian, Hindi, or Mandarin: 12 hours at the 100 level or above, in the same language.

International Studies/Political Science – 6 hrs.

IS 103 or PLS 208, 104 Introduction to International Studies – 6 hrs.

Area Studies* – 6 hrs.

- Africa: IS 340, 440, 448
- Asia: IS 182, 385
- East Asia: HIS 207, IB 204, IS 285, 318, 381
- Europe: IS 330, 331
- Globalization: IS 410, 475
- Latin America: HIS 125, IS 322, 323
- Middle East: HIS 206, IS 363
- Russia/CIS: HIS 208, IS 353, 355, 359
- South & Southeast Asia: IS 373

** An IS course used to satisfy the BCC World Cultures or Global Perspectives requirement may be counted toward the Area Studies requirement in International Business. Courses fulfilling the Area Studies requirement, other than those listed above, must be approved by the director of the International Business program.*

International Business – 15 hrs.

- IB 206 Introduction to International Business – 3 hrs. (required for all International Business majors)
- IB 402 Global Trade Management – 3 hrs.
- IB 323 International Financial Management – 3 hrs.
- IB 446 Global Marketing Management – 3 hrs.
- A Second Major or Minor in Business – minimum 12 hrs.

Complete a minor or second major in the FCB with a minimum of 12 unique credit hours.

Study Abroad – 3 hrs.

In addition to the above requirements, each international business major is required to earn at least three semester hours (or the equivalent) of college credit while enrolled in one or more approved study abroad programs.

Other Requirements

1. All International Business (IB) majors need to complete IB 402 before they can enroll in IB 446. IB 402 is a pre-requisite to IB 446.
2. All IB majors need to take IB 446 in the senior year of their program of study.
3. All IB majors need to take BUS 400 (section 9) in their final semester after completion of IB 446.

Typical Course Sequence

For a four-year course plan for each major in the Foster College of Business, go to: <http://www.bradley.edu/academic/colleges/fcba/>.

Study Abroad And Co-Op Opportunities

International business majors are strongly encouraged to participate in at least one study abroad experience. The university offers ongoing study abroad opportunities described elsewhere in this catalog. For opportunities relating to participation in other overseas study programs, students should inquire with the university's director of study abroad.

The business Cooperative Education/Internship opportunity is also described elsewhere in this catalog. Opportunities may become available for international business majors to obtain their practical experience in a position related to international business.

students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u. Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

International Business Courses



International Business Courses

I B 101 – International Intellectual and Cultural Events (1 hour)

Introduction to international events, other cultures, and the globalized nature of business environments. Presentations from various international groups on campus. Participation in international cultural events in the community. Pass/Fail.

I B 204 – Business in Chinese Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Overview of sociocultural, religious, historical, economic, and political contexts as these impact ways that business is conducted in China. Examination of the blend of traditional value systems, Communist ideology, and global modernization as influences on contemporary commercial practices in and with China. In-country visits to observe cultural sites and business activities. Prerequisite: ECO 100 or ECO 221 (or equivalent); sophomore standing.

I B 205 – Business in Indian Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Overview of sociocultural, religious, historical, economic, and political contexts as these impact ways that business is conducted in India. Examination of the blend of traditional value systems and global modernization as influences on contemporary commercial practices in and with India. In-country visits to observe cultural sites and business activities. Prerequisite: ECO 100 or ECO 221 (or equivalent); sophomore standing

I B 206 – Introduction to International Business (3 hours)

Core Curr. GP GS WI

Contemporary international business patterns; emphasis on how international is different from domestic. Management of strategic international activities for an exporting firm or a multinational corporation. How international business is affected by countries' social systems; the interface among nations, states, and firms conducting foreign business. Alternative ways that international business may evolve. Prerequisite: Sophomore Standing or approval of Director of I B program

I B 323 – International Financial Management (3 hours)

Financial characteristics of international business. International exchange, liquidity, markets, investments, and banking, in context of historical development, environmental characteristics, economic factors, political systems, and legal constraints. Emphasis on exchange rate exposure management. Cross listed as FIN 323. Prerequisite: ATG 158; ECO 222; junior/senior standing.

I B 391 – International Trade (3 hours)

Core Curr. GP GS

Welfare implications of international trade; balance of payments; equilibrium and disequilibrium; external and domestic policy effects on

the balance of payments and welfare; international trade and financial cooperation among nations. Cross listed as ECO 391.
Prerequisite: ECO 100 or 221; ECO 222; junior standing.

I B 400 – Topics in International Business (1-3 hours)

Topics of special interest which may vary each time course is offered. Topic and prerequisites stated in current Schedule of Classes. Repeatable for a maximum of 6 hours credit under different topics. Prerequisite: junior standing; consent of instructor.

I B 402 – Global Trade Management and Analysis (3 hours)

Overview of trade management issues, procedures, requirements, and strategies. Focus on global trade management, implementation of international marketing plans, effective global supply chains, and trade finance. Examination of influencing factors including cultural awareness, compliance with government regulations, use of technology, resources, and documentation. Cross-listed with ECO 519 and I B 502. Prerequisite: I B 206 and junior standing; or 42 credit hours and declared International Business first major or approval of Director of I B program.

I B 446 – Global Marketing Management (3 hours)

Core Curr. EL

Covers the development of strategic and tactical marketing decisions in a global marketplace. Market potential analysis; alternative entry and expansion strategies; standardization versus adaption of product and promotion strategies; pricing, distribution, and sourcing strategies in global operations are discussed. Elements of an integrated global marketing in diverse national and regional economic, legal-political and cultural settings; multinational business organization and control issues. Prerequisite: IB 302 or approval of the Director of the IB program. Open to International Business majors only.

I B 498 – Independent Study in International Business (1-3 hours)

May be repeated for a maximum of 3 semester hours. Prerequisite: junior/senior standing and approval of international business coordinator.

I B 502 – Global Trade Management and Analysis (3 hours)

Overview of trade management issues, procedures, requirements, and strategies. Focus on global trade management, implementation of international marketing plans, effective global supply chains, and trade finance. Examination of influencing factors including cultural awareness, compliance with government regulations, use of technology, resources, and documentation. Cross-listed with I B 402. The graduate level course will have additional requirements beyond those of the undergraduate course. Prerequisite: I B 206 or consent of the Department Chair

I B 656 – International Business Administration (3 hours)

Impact of economic, cultural, legal/political, institutional, and competitive issues on the management of international and global business operations. Adjustment of strategic and tactical entry mode, marketing, production, human resources, and financial decisions to macroenvironmental constraints in selected world regions and markets. Case studies and reports. Prerequisite: M L 620 or MTG 624 or consent of instructor; consent of director of graduate programs.

I B 658 – Topics in International Business (1-3 hours)

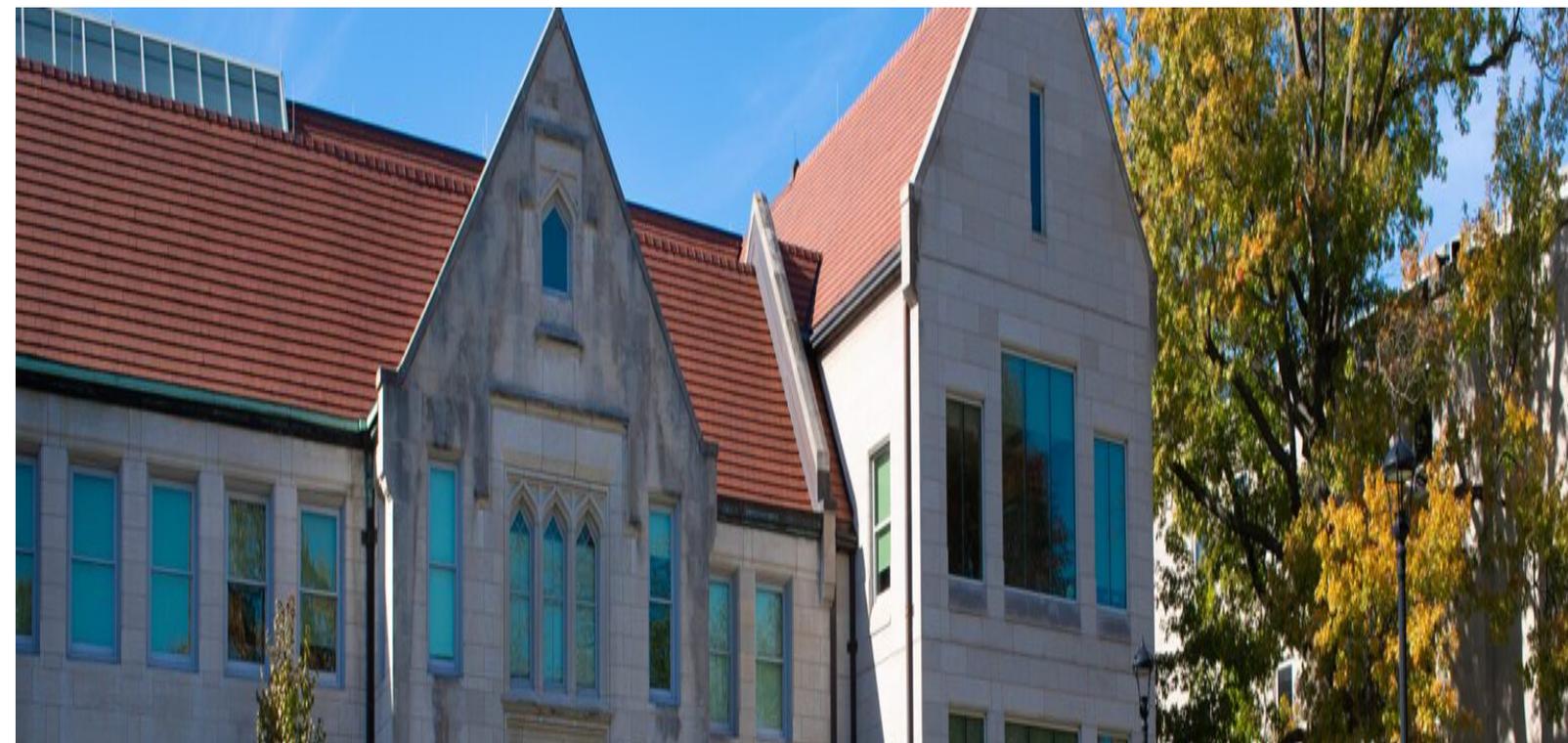
Topics of special interest which may vary each time the course is offered. Topic stated in current Schedule of Classes.

I B 660 – Readings in International Business (1-3 hours)

Individual readings for qualified students, under the guidance of a member of the faculty. Repeatable to a maximum of 3 credit hours. Prerequisite: consent of instructor and director of graduate programs.

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Management and Leadership



Management and Leadership

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FACULTY Professors Fink, Weinzimmer; Associate Professor Brown (chair), Esken; Instructor Walker

The Management and Leadership Department curricula provide students with the educational experiences of reasoning, problem solving, teamwork, and decision making so that they will be qualified to accept responsible positions in business and the public sector.

Specific departmental objectives include the following: (1) To give students the historical perspective necessary to understand the evolution of business in a global, social, political, economic, and technological environment; (2) To excite students about new ideas and knowledge; (3) To help students develop understanding and skill in the practice of management; (4) To provide students with a basic understanding of major management disciplines, including human resource management, operations management, and strategic management; (5) To develop well-informed individuals who understand their ethical and social responsibilities in business situations; (6) To enable students to understand the operation of our business and economic systems; and (7) To develop the ability to think clearly, analyze carefully, and express thoughts and conclusions logically.

Students majoring in Management and Leadership may elect a concentration in human resource management. The department also offers a minor in management.

Management and Leadership Major

The Management and Leadership major provides a solid foundation in the skills and concepts necessary to meet the complex and challenging tasks of management. The program concentrates on developing the decision-making, problem identification, problem-solving, and interpersonal skills essential for combining the organization's various resources to promote organizational effectiveness.

Students in the Management and Leadership major are prepared for management positions in both industry and not-for-profit settings. In larger organizations, graduates typically obtain entry-level management positions. Further, the major provides the background necessary to later advance to middle and upper-level management positions. In smaller firms, graduates may expect to enter middle or upper-level management positions. They may also find roles in consulting, or other advisory capacities. Students who are uncertain as to their career goals will find that the Management and Leadership major provides excellent preparation in business for a wide range of job opportunities. Additionally, students are well prepared for graduate-level business (MBA, DBA, PhD) or public administration (MPA) programs, law school, and other graduate school programs.

Major Requirements

Required Courses – 15 hours

- M L 353: Operations Management in Organizations – 3 hrs.*
- M L 356: Human Capital in Organizations – 3 hrs.
- M L 357: Leading Organizations – 3 hrs.
- M L 358: Managerial Decision Making – 3 hrs.
- PSY 101: Principles of Psychology – 3 hrs.

*Course fulfills the FCB core quantitative skill building course.

Students may choose from a broad array of courses to satisfy their elective requirements, or they may choose the human resource concentration.

Elective courses – 12 hrs.

At least 9 of 12 hours must be M L prefix. Remaining hours can be selected from the following:

- ATG 268 – Business Ethics – 3 hrs.
- BLW 345 – Law of Business – 3 hrs.
- BLW 355 – Labor Management Relations – 3 hrs.
- BLW 446 – Employment Law – 3 hrs.
- ENT 280 – Entrepreneurial Creativity – 3 hrs.
- ENT 382 – Entrepreneurship Startups – 3 hrs.
- ENT 383 – Managing Entrepreneurial Growth – 3 hrs.
- ENT 385 – Technology Entrepreneurship – 3 hrs.
- ENT 386 – Social Entrepreneurship – 3 hrs.
- MIS 272 – Business Analytics and Software Applications I – 3 hrs.
- MIS 375 – Business Systems Analysis and Design – 3 hrs.
- Other M L courses

Students must also complete Foster College's business core.

Concentration in Human Resource Management

- M L 356 Human Capital in Organizations
- M L 357 Leading Organizations
- M L 358 Managerial Decision Making
- BLW 446 Employment Law
- M L 456 Compensation Management
- M L 457 Advanced Human Capital Management

Two of the following:

- ECO 310 Labor Problems
- PSY 321 Industrial and Organizational Psychology
- BLW 355 Labor-Management Relations
- PSY 411 Tests and Measurement
- M L 415 Diversity in the Workplace
- M L 420 Performance Management

Students must also complete Foster College's business core.

Typical Course Sequence

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Typical Course Sequence

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Management and leadership majors must satisfactorily complete at least 15 hours of BLW, ENT, MIS, or M L-prefixed courses at Bradley University. Students desiring concentrations should declare their intentions as early as possible and should consult with their advisor to ensure that the correct courses are taken. Students should also note that some courses are offered only once each year.

Management Minor

The minor in Management provides students with essential background, understanding, knowledge, and skill in the practice of management. The minor in management aims to complement the focus area of their respective majors and, importantly, enhance personal career plans. The minor is comprised of 15 semester hours of study. The 15-hour minor includes required management foundations (9 hours) and selected management electives (6 hours). The requirements for the minor are outlined below.

Required Management Foundations

- M L 350: Managing for Results in Organizations – 3 hrs.
- M L 356: Human Capital in Organizations – 3 hrs.
- M L 357: Leading Organizations – 3 hrs.

6 hours of M L Elective courses:

Courses must be selected from M L prefix courses.

Students who desire to minor in Management must be approved by the chair of the Management and Leadership Department prior to enrolling in the program. The chair must also approve recording the completion of the minor on the transcript. Transfer policies for minors are the same as those for Foster College of Business majors. Prior approval of transfer credit must be secured from the chair of the Management and Leadership Department.

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Management and Leadership Courses



Management and Leadership Courses

M L 300 – Environments of Organizations (3 hours)

Prepares students to be productive managers by increasing their understanding of the organization context. Provides an overview of the environments in which firms operate. Gives students a fundamental understanding of the various industries in which firms function and the key issues within those environments that affect the practice of management (including adapting to global environments, sustainability, and ethics) providing students with the conceptual frameworks and tools that will enable them to analyze and understand the managerial context. Students discuss and perform analysis and assessment of the environments of organizations. Prerequisite: Junior Standing.

M L 350 – Managing for Results in Organizations (3 hours)

Management functions, including planning, organizing, staffing/human resource management, leading/interpersonal influence and controlling in both domestic and international spheres. Emphasis on professionalism and team dynamics including diversity, problem solving, decision making, conflict management, and communication. Prerequisite: Junior standing or 42 credit hours and Foster College of Business major or consent of department chair.

M L 353 – Operations Management in Organizations (3 hours)

Survey of issues and methods related to designing, implementing, and controlling the production and delivery of goods and services. Topics include waiting line management, forecasting, project management, JIT and lean operations, supply chain management, Six Sigma quality management, and strategic importance of operations management. Prerequisite: Q M 262; M L 350

M L 354 – Maximizing Effectiveness in Organizations (3 hours)

Organizational effectiveness theories and techniques. Analysis and data gathering tools including employee survey research, process mapping, organizational culture assessment, and systems thinking. Action planning and implementation topics including organizational adaptability, leadership coaching, and organizational change management. Introduction to consultative skills. Prerequisite: M L 350, PSY 101

M L 356 – Human Capital in Organizations (3 hours)

A survey course considering the strategic management of firm's human capital in the context of the human resource management function. Covers the legal, strategic, and regulatory facets of human resource management along with the topics of staffing, training, compensation management, and labor relations. Experiential exercises, case studies, and class presentations will be used to illustrate the effective and efficient management of a firm's human capital through human resource management. Prerequisite: M L 350

M L 357 – Leading Organizations (3 hours)

Theory and practice of organizational leadership skills. Exposure to major leadership theories and advanced interpersonal techniques. Transformational Leadership, Servant Leadership, Authentic Leadership, building self-awareness, motivating and empowering followers, and communicating with influence. Applied projects and in-class experiences. Prerequisite: M L 350; junior/senior standing

M L 358 – Managerial Decision Making (3 hours)

Descriptive and prescriptive approaches; formal and informal methods. Emphasis on subjective judgments and choices. Prerequisite: Junior standing.

M L 394 – Supply Chain Tools and Techniques (3 hours)

Prepares students for work as supply chain professionals by giving them familiarity with the dominant terminology, tools, and approaches used in supply chain management. Cross-listed with MTG 394. Prerequisite: MTG 315, M L 353

M L 406 – International Management (3 hours)

Managers increasingly have to interact, negotiate and compromise with people from contrasting cultures. The potential for management frustration, costly misunderstandings and even business failures increases significantly when dealing with people whose values, beliefs, customs and first language are different. However, when understood and successfully managed, differences in culture can lead to innovative business practices and sustainable sources of competitive advantage. Prerequisite:

M L 415 – Diversity in the Workplace (3 hours)

As managers, as members of the workforce, and as human beings, all of us are being called to invest in diversity in ways that enable us to overcome its challenges and reap its benefits. In this introductory course, we will consider how understanding cultural differences and managing diversity is essential to healthy and profitable workplaces. We will explore diversity definitions and perspectives, laws, organizational structures, and management activities as they relate to characteristics such as gender, race, age, religion, sexual orientation, and disability. Students will also examine their own identities and perspectives through class discussion, readings, and exercises. Prerequisite: Junior/Senior Standing

M L 420 – Performance Management (3 hours)

This course focuses on performance management in organizations with the goal that students will achieve a comprehensive understanding of organizational activities that are directly and peripherally related to performance management. Students will examine performance management activities from the perspectives of both a manager and an employee. Key performance management activities covered include defining performance, measuring performance, providing performance feedback, conducting a formal performance review meeting, and developing employees. Prerequisite: M L 350; junior/senior standing

M L 452 – Strategic Management in Organizations (2 hours)**Core Curr. MI**

Integrative capstone includes the strategic-planning process, environmental analysis, developing strategy, strategic decision making, and strategy execution. Concurrent enrollment with BUS 400 required. Prerequisite: FIN 322; M L 350; MTG 315; senior standing. Corequisite: BUS 400

M L 456 – Compensation Management (3 hours)

Advanced course considering the strategic management of a firm's human capital through the human resource management function of compensation management. Compensation management topics of internal alignment, external competitiveness, pay for performance, benefits management, and pay system administration will be considered. Includes an integrative simulation exercise to illustrate the effective and efficient management of a firm's human capital through compensation management. Prerequisite: M L 356

M L 457 – Advanced Human Capital Management (3 hours)

Advanced consideration of the management of firm's human capital in the context of activities associated with the human resources function. The course will emphasize the strategic, theoretical, technical, and legal aspects of staffing, training, and compensation management. Experiential exercises, case studies, and class presentations will be used to develop an advanced understanding of the use of human resource management to effectively and efficiently manage a firm's human capital. Prerequisite: M L 356

M L 459 – Topics in Management (3 hours)

Topics of special interest which may vary each time course is offered. Topic and prerequisite stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours credit.

M L 497 – Research in Organizations (1-3 hours)

Participation in academic research by academically qualified students under the guidance of a faculty member, with the approval of the chair of the Department of Management and Leadership. Prerequisite: Junior/Senior standing. Management and Leadership majors only.

M L 498 – Independent Studies (1-3 hours)

Studies undertaken by academically qualified students under the guidance of a faculty member, with the approval of the chair of the Department of Management and Leadership. Management and Leadership majors only. Prerequisite: Junior/senior standing

M L 499 – Independent Studies (1-3 hours)

Studies undertaken by academically qualified students under the guidance of a faculty member, with the approval of the chair of the Department of Business Management and Administration. Management and Leadership majors only. Prerequisite: Junior/senior standing.

M L 515 – Diversity in the Workplace (3 hours)

As managers, as members of the workforce, and as human beings, all of us are being called to invest in diversity in ways that enable us to overcome its challenges and reap its benefits. In this introductory course, we will consider how understanding cultural differences and managing diversity is essential to healthy and profitable workplaces. We will explore diversity definitions and perspectives, laws, organizational structures, and management activities as they relate to characteristics such as gender, race, age, religion, sexual orientation, and disability. Students will also examine their own identities and perspectives through class discussion, readings, and exercises. Not open to students who have taken ML 415. Prerequisite: Graduate student in the Foster College of Business or approval of Associate Dean. Not open to students with credit in ML 415.

M L 520 – Management Theory (3 hours)

Planning, organizing, directing, coordinating, and controlling operations through managerial decision making. Emerging issues and trends; integration of principles and concepts with contemporary concerns. Prerequisite: Foster College of Business Graduate Student or Consent of Associate Dean.

M L 553 – Operations Management (2 hours)

Survey of issues and decision-making techniques related to the operations of an organization. Quality management, project management, inventory management, waiting line analysis, production scheduling, job design, and facility layout. Cannot be used to satisfy MBA elective or concentration requirements. Prerequisite: Consent of graduate program director.

M L 615 – Applied Leadership (3 hours)

Foundations of interpersonal behavior emphasizing the development and application of interpersonal skills critical for leadership success. Increase self-awareness and self-understanding through reflection, discussion, skill building, assessment instrument results and coaching. Prerequisite:

M L 628 – Business Policy and Strategy Formulation (3 hours)

Strategies in response to conditions such as competition and future development. Must be taken in last semester of program.

M L 630 – Management in Healthcare Organizations (3 hours)

Interdisciplinary approach to understanding management in healthcare organizations. Emphasis on the complex roles of healthcare workers and the behavioral processes of leadership, communication, motivation, group dynamics, conflict, change, organizational development. The class also considers diversity, social responsibility, and ethics. Prerequisite: Graduate standing; As specified in the Schedule of Classes

M L 653 – Operations Management (3 hours)

Foundational knowledge and deeper understanding of the operations function. A broad managerial perspective emphasizes the strategic impact of the operations decisions and the interfaces between operations and the other functional areas of the organization. Operation functions in both service and manufacturing contexts will be examined, as well as investigating how operations provides sustainable competitive advantage along the dimensions of cost, quality, delivery, flexibility, and innovation. Prerequisite: Foster College of Business Graduate Student or Consent of Associate Dean

M L 657 – Executive Development (3 hours)

Theory and research of development stages of executive careers. The impact of the organization on the executive personality; forces influencing the development of executive skills and abilities; studies of antecedents of executive role performance; and the role of training programs in executive development.

M L 658 – Topics in Business Administration (3 hours)

Topics of special interest, which may vary each time the course is offered. Repeatable to a maximum of 6 credit hours. Topic stated in current Schedule of Classes.

M L 659 – Topics in Management (3 hours)

Management-related topics presented in modules or seminars. Topics may vary each time the course is offered. Topic stated in current Schedule of Classes. Repeatable to a maximum of 6 credit hours.

M L 660 – Readings in Management & Leadership (1-3 hours)

Individual readings for qualified students, under the guidance of a member of the faculty. Repeatable to a maximum of 3 credit hours. Prerequisite: advancement to candidacy; consent of instructor and director of graduate programs.

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Marketing



Marketing

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FACULTY Professors Iyer (chair), Muncy, O'Brien; Assistant Professor Nezami; Instructors Eskridge, Rottier

Marketing is the backbone of the free enterprise system where individual firms compete to satisfy the demands for goods and services of consumers, businesses, and government. Marketing managers discover the needs and desires of its customers and adapt market offerings to fulfill customer needs, wants, and desires. This process requires planning, research and analysis in areas such as product, pricing, promotion, and distribution.

The Curriculum In General

The Department of Marketing offers a flexible professional program with a major in marketing that also allows the pursuit of a specific curriculum path designed to prepare the individual for entry into a marketing career area. This thorough background in general marketing techniques and the opportunity to pursue a marketing specialization are further enhanced by provision of a variety of opportunities to receive practical business and marketing experience. Through courses such as MTG 304, 341, 381, and 490 as well as a required College course, M L 452, the student can gain valuable experience in marketing research, advertising, marketing strategy, and sales. This form of learning can give more meaning to the academic work and help to develop a greater appreciation for the value of marketing. Marketing majors may choose from concentrations in global supply chain management and social media marketing. Non-marketing majors may earn minors in marketing, professional selling, or social media marketing.

Marketing Major

Requirements

To major in marketing, a student must earn a minimum of 24 semester hours credit in marketing courses with the following requirements:

1. Required courses:
 - MTG 205 Marketing Presentations – 1.5 hrs.
 - MTG 315 Principles of Marketing – 3 hrs.
 - MTG 341 Marketing Research I – 3 hrs.
 - MTG 490 Managerial Marketing – 3 hrs.

- Marketing Electives – 10.5 hrs.
- 2. Students may count a maximum of 3 credit hours of 100-200 level marketing courses toward the 24 semester hours in marketing.
- 3. Students must obtain a minimum grade average of “C” in their marketing courses, as well as complete the university and college requirements. Students will also be required to take, in residence, a minimum of 9 semester hours of marketing courses beyond MTG 315

Concentration in Global Supply Chain Management

The Concentration in Global Supply Chain Management prepares graduates to address the growing influence of the supply chain on the success of businesses and institutions. For students who complete the Concentration in Global Supply Chain Management, all classes listed below (including IB 402 and IME 385) will be considered marketing hours that count toward fulfilling the required 24 hours of marketing credit.

- MTG 388 Global Supply Chain Management – 3 hrs.
- IME 385 Introduction to Logistics Engineering – 3 hrs. *or* MTG 402 Logistics Tools and Techniques – 3 hrs.
- MTG 394 Supply Chain Tools and Techniques – 3 hrs.
- I B 402 Global Trade Management – 3 hrs.
- MTG 304 Professional Selling *or* MTG 420 Business Marketing – 3 hrs.

15 hours

Concentration in Social Media Marketing

The concentration in social media marketing prepares graduates to address the growing influence of social media on the marketing programs of businesses, institutions, and governments. The concentration requires 12 hours of specific coursework within the 13.5 elective hours of the marketing major.

- MTG 350 Consumer Behavior – 3 hrs.
- MTG 381 Integrated Marketing Communications – 3 hrs.
- MTG 391 Social Media Marketing – 3 hrs.
- One 3-hour course from the following list that represents potential domains for the application of social media:
 - MTG 304 Professional Selling
 - MTG 393 Retailing
 - MTG 405 Strategic Advertising Cases
 - MTG 420 Business Marketing

12 hours

Career Paths

The curriculum flexibility and diversity within the marketing program allow the individual to specialize in a particular marketing area. The marketing specialization areas shown below illustrate potential choices for students interested in a given specialty within marketing. Regardless of electives chosen, each student must satisfy the marketing major requirements outlined in the previous section.

Advertising Specialization

Suggested Marketing Electives

- MTG 304 Professional Selling
- MTG 350 Consumer Behavior
- MTG 381 Integrated Marketing Communications
- MTG 391 Social Media Marketing
- MTG 405 Strategic Advertising Cases

Other Suggested Courses

- ART 305 Editorial Design
- COM 300 or 325

Marketing Research Specialization

Suggested Marketing Electives

- MTG 350 Consumer Behavior
- MTG 360 Product and Price Strategy
- MTG 406 Marketing Analytics

- MTG 407 Customer Analytics
- MTG 441 Marketing Research II
- MTG 492 Independent Study or Research in Marketing

Other Suggested Courses

- An additional advanced writing course beyond the 300-level university requirement; ENG 305 Technical Writing or ENG 306 Business Communication is encouraged.
- MIS 374 Database Management and Administration or QM 326 Business Forecasting

Marketing Management Specialization

Suggested Marketing Electives

- MTG 346 International Marketing
- MTG 350 Consumer Behavior
- MTG 360 Product and Price Strategy
- MTG 388 Global Supply Chain Management

Other Suggested Courses

- ECO 332, 333, or 335
- PSY 321 Industrial and Organizational Psychology

Retailing Specialization

Suggested Marketing Electives

- MTG 304 Professional Selling
- MTG 350 Consumer Behavior
- MTG 360 Product and Price Strategy
- MTG 388 Global Supply Chain Management
- MTG 393 Retailing

Other Suggested Courses

- FCS 336 The History of Fashion
- M L 357 Leading Organizations or ENT 382 Entrepreneurship

Industrial Marketing/Sales Management Specialization

Suggested Marketing Courses:

- MTG 304 Professional Selling
- MTG 346 International Marketing
- MTG 360 Product and Price Strategy
- MTG 388 Global Supply Chain Management
- MTG 492 Independent Study or Research in Marketing

Other Suggested Courses:

- COM 292 Organizational Communication or COM 305 The Persuasive Process
- PSY 354 Social Psychology or PSY 321 Industrial and Organizational Psychology
- SOC 100 The Sociological Perspective
- M L 356 Human Capital in Organizations or M L 357 Leading Organizations

Typical Course Sequence

For a four-year course plan for each major in the Foster College of Business, go to: <http://www.bradley.edu/academic/colleges/fcba/>.

Minors In Marketing

Fifteen hours of course work are required for the minors.

Transfer policies for minors are the same as those for Foster College of Business majors. Grades of "D" in business courses will not be accepted as transfer hours in the Foster College of Business, but may be counted by the university. Prior approval of transfer credit must be secured from the chair of the Department of Marketing. A minimum cumulative GPA of 2.00 must be earned in all courses taken at Bradley and in the minor.

Marketing minors whose major is also from the Foster College of must have at least 12 hours in courses that are unique from those used to fulfill their major requirement.

The marketing minors are not open to marketing majors. A student may not be awarded more than one of the three minors offered by the Department of Marketing.

I. Marketing Minor

While marketing majors have a variety of in-depth exposures to this important and productive field, other students at Bradley may benefit from marketing courses as well. The marketing minor enhances other programs of study and provides career flexibility. Students with a minor in marketing will:

- Benefit from enhanced employment opportunities;
- Develop an understanding of the marketing and customer issues applicable to all firms; and
- Learn communication skills that will facilitate cross-functional relationships with marketing personnel.

Marketing Minor Requirements

- ECO 100 Introduction to Economics or ECO 221 Principles of Microeconomics 3 hrs.
- MTG 315 Principles of Marketing 3 hrs.
- Marketing Electives (numbered 300 or above) 9 hrs.

15 hours

II. Minor in Social Media Marketing

The Social Media Marketing Minor prepares students for addressing a critical area of concern to retailers, sports marketers, non-profit marketers, and other entities that wish to create a community around their market offerings. Organizations across a broad array of market sectors are heavily engaged in social media marketing and foresee continued expansion of those activities.

Specific objectives:

- Build a foundation in consumer behavior that allows students to understand the mechanisms that may be influenced through social media (e.g., social identity, product perceptions, consumer motivation, attitude formation).
- Develop an understanding of the basic principles underlying consumer information processing.
- Develop a framework for understanding firm decisions regarding goals and objectives for marketing programs and the implications for the use of social media.
- Be able to support the integration of social media into the marketing mix decisions of the firm (e.g., customer communication, community-building, generation of product enhancement ideas, customer feedback).

Minor in Social Media Marketing Requirements

- MTG 315 Principles of Marketing – 3 hrs.
- MTG 350 Consumer Behavior – 3 hrs.
- MTG 381 Integrated Marketing Communications – 3 hrs.
- MTG 391 Social Media Marketing – 3 hrs.
- One the following 3-hour courses, which represent potential domains for the application of social media:
 - MTG 304 Professional Selling
 - MTG 393 Retailing
 - MTG 405 Strategic Advertising Cases
 - MTG 420 Business Marketing

15 hours

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and graduation requirements for particular degree programs.

Marketing Courses



Marketing Courses

MTG 150 – Marketing in A Dynamic World (1.5 hours)

Introduction to various marketing careers as they relate to key issues in marketing; new product development, advertising, customer service, marketing research, public relations, distribution/logistics, professional selling and retail management. An emphasis is placed on experimental learning and the development of presentational, team building, and other marketing-related skills. Prerequisite: Freshmen or sophomore standing only; or consent of department chair. Not open to students with previous or concurrent enrollment in MTG 315.

MTG 205 – Marketing Presentations (1.5 hours)

Conducting background research, developing an effective marketing presentation, exposure to presentation software packages, and making oral marketing presentations; sales presentations, background information on specific companies, competitive analysis, target market presentations, presentation of a marketing plan. Prerequisite: COM 103; marketing majors only; sophomore or junior standing only; or consent of department chair.

MTG 304 – Professional Selling (3 hours)

Core Curr. EL

Selling-buying process. Selling strategies from the perspective of a professional customer problem-solving approach. Practical exposure to selling concepts, problems, and techniques in a variety of selling situations. Prerequisite: 42 credit hours

MTG 315 – Principles of Marketing (3 hours)

Elements of a comprehensive marketing plan and their interrelationships. Determination of product, pricing, promotion, and channel strategy: analysis, planning, and control of marketing strategy in a socially and ethically responsible manner. Emphasis on improving decision making in a dynamic external environment. Prerequisite: Junior standing or 42 credit hours and Marketing major

MTG 330 – Financial Services Marketing (3 hours)

Examination of the increasing use of marketing techniques in the financial services industry and the changing environment of financial services. Course is structured around the core marketing principles of buyer behavior, segmentation, product development, distribution, pricing, and promotion, as well as topics such as relationship marketing, customer loyalty, and technological developments. Designed for students with an interest in banking, insurance, securities, and other financial services industries. Cross-listed with FIN 330. Prerequisite: FIN 322, MTG 315.

MTG 341 – Marketing Research I (3 hours)

Core Curr. EL

Systematic gathering, recording, and analysis of data related to marketing of goods and services. Choice of research design, methods of data collection, survey sampling, analysis and interpretation of data, and preparing the research report. Prerequisite: Marketing major, QM 262, MTG 315; or consent of department chair.

MTG 346 – International Marketing (3 hours)**Core Curr. WI**

Marketing decisions, strategies, and operations of companies in international business. Elements of an integrated global marketing program. Foreign market potential analysis; alternative entry and expansion strategies; standardization vs. adaptation of product and promotion strategies; pricing, distribution, and sourcing strategies in global operations. Prerequisite: MTG 315. A student may not receive credit for both MTG 346 and I B 407 and 408.

MTG 350 – Consumer Behavior (3 hours)

Behavioral science concepts applicable to the understanding of consumer decision making: personality, perception, and group and cultural influences. How these concepts can be used to develop more effective marketing strategies. Prerequisite: MTG 315.

MTG 360 – Product and Price Strategy (3 hours)

Managerial aspects of pricing and product policies and strategies. Methods used and factors considered in developing and updating product line and pricing decisions in industrial and consumer products. Pricing and product line objectives, product planning and evaluation, establishing product line distribution, environmental factors affecting product and pricing strategies, and quantitative aspects of product line and pricing decisions. Prerequisite: QM 262, MTG 315.

MTG 381 – Integrated Marketing Communications (3 hours)

Introduction to advertising and promotions management from an integrated marketing communications perspective. Promotional techniques: advertising, sales promotion, direct marketing, publicity/public relations, personal selling, point-of-purchase communications. Techniques explored through the context of planning, developing, and implementing comprehensive promotional campaigns. Regulatory, social, and economic factors that influence the firm's promotional activities. Prerequisite: MTG 315.

MTG 384 – Sales Management (3 hours)

Analysis of sales management and decisions made by the sales force manager. Structure and organization of the sales force; nature of the sales job; selling in marketing theory; selection of sales personnel; sales training program; problems in compensation, supervision, and stimulation of sales personnel; analysis of territories and customers; sales forecasting and quotas; ethical problems in sales management; evaluating sales performance. Prerequisite: MTG 304 or MTG 315.

MTG 388 – Global Supply Chain Management (3 hours)

Examines the theories and practices used to plan, organize, and control exchange relationships in a global context. The approach will go beyond viewing exchange relationships from a strictly physical sense (movement of goods and services) to focus on the interaction between trading partners and how firms are using channel strategies to gain a competitive advantage. Prerequisite: MTG 315

MTG 391 – Social Media Marketing (3 hours)**Core Curr. EL**

Explores the game changing nature of social media and its impact on traditional marketing activities. Social media allows customers to interact with each other and the brands that they use on a daily basis in new ways. These advances/changes/disruptions may have profound influences on all marketing activities from product development through promotion. Course includes review of word-of-mouth-marketing and study of tools for shaping marketing activities surrounding emerging media (e.g., social networking sites, wikis, multimedia sharing sites, blogs, and virtual worlds). Prerequisite: MTG 350 and MTG 381

MTG 393 – Retailing (3 hours)

Retailing from the management perspective. Emphasis on retail policies and organization, operation of buying and selling functions, merchandise control, store systems, personnel management, retail accounting, and expense control. Prerequisite: MTG 315.

MTG 394 – Supply Chain Tools and Techniques (3 hours)

Prepares students for work as supply chain professionals by giving them familiarity with the dominant terminology, tools, and approaches used in supply chain management. Cross-listed with M L 394. Prerequisite: MTG 315; M L 353

MTG 400 – Topics in Marketing (1-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated, for up to 6 hours credit in nonredundant topics. Prerequisite: MTG 315, junior standing, and consent of department chair.

MTG 402 – Logistics Tools and Techniques (3 hours)

Introduce students to a variety of logistics topics, terms, principles and tools and their practical application in the workplace. Cross-listed with MTG 502 Prerequisite: MTG 315

MTG 404 – Advanced Professional Selling (3 hours)

Advanced study of professional selling techniques focusing upon specific knowledge areas and skills that contribute to competitive advantage, long-term customer relations, and customer satisfaction. Emphasis is placed upon students developing functional sales experiences, both individually and in group settings. Prerequisite: MTG 304.

MTG 405 – Strategic Advertising Cases (3 hours)

In-depth, strategic perspective on advertising management. Students will learn how to manage, facilitate, and direct the advertising

function. A special emphasis will be placed on developing advertising strategies. The case method will be used with real-world situations. Prerequisite: MTG 315.

MTG 406 – Marketing Analytics (3 hours)

Students will learn concepts and will work hands-on with data and software tools for making decisions regarding segmentation and targeting, positioning, new product and service design, and the elements of the marketing mix. Through the course, students will learn to take advantage of the massive amounts of data available in most organizations, using that data to make better-informed decisions, and to create compelling evidence to persuade other executives to support those decisions. Cross-listed with MTG 506 Prerequisite: MTG 315 and Q M 262

MTG 407 – Customer Analytics (3 hours)

Covers various marketing analytics methods as simple as descriptive statistics and visualization, as well as more advanced predictive modeling, prescriptive, and newly emerging artificial intelligence (AI) and cognitive analytics. The course will be taught from a managerial perspective emphasizing the need for managers to understand customer analytics to reduce risk in decision making. Cross-listed with MTG 507. Prerequisite: MTG 315 and Q M 262

MTG 420 – Business Marketing (3 hours)

Comprehensive examination of nature, structure, and distinguishing characteristics of marketing to and between organizations. Unique aspects of organizational decision-making and buying from the seller's perspective. Exploration of requirements to manage strategy development, interfirm relationships, e-commerce, and innovation processes in firms marketing to organizations. Prerequisite: MTG 315 or consent of department chair.

MTG 441 – Marketing Research II (3 hours)

Students consult an area business on marketing research projects addressing the firm's problem areas. Emphasis on practical use of concepts and tools presented in MTG 341. Prerequisite: MTG 341.

MTG 490 – Managerial Marketing (3 hours)

Systems and information needs of marketing management. Emphasis on integration of tools of information systems with knowledge of marketing in formulating and solving marketing problems. Impact of marketing decisions on key performance measures illustrated by cases, marketing models, and simulation. Prerequisite: MTG 315, 341; senior standing.

MTG 492 – Independent Study Or Research in Marketing (1-3 hours)

Studies or research undertaken by well-qualified, advanced students under the guidance of a faculty member. Prerequisite: consent of department chair.

MTG 493 – Experiential Learning in Professional Sales (1-3 hours)

Advanced marketing or sales student experience in the field of professional selling. Both practical and academic components are included. The practical component will often take the form of an in-depth study of a sales-related topic, an experience in sales with a company, a research project, a sales simulation, or a blend of these or other elements that will be tailored to each individual student's needs. Repeatable up to 3 hours. Prerequisite: Permission of department chair; MTG 304.

MTG 502 – Logistics Tools and Techniques (3 hours)

Introduce students to a variety of logistics topics, terms, principles, tools and their practical application in the workplace. Cross-listed with MTG 402. The graduate level course will have additional requirements beyond those of the undergraduate course. Prerequisite: Consent of Department Chair

MTG 506 – Marketing Analytics (3 hours)

Students will learn concepts and will work hands-on with data and software tools for making decisions regarding segmentation and targeting, positioning, new product and service design, and the elements of the marketing mix. Through the course, students will learn to take advantage of the massive amounts of data available in most organizations, using that data to make better-informed decisions, and to create compelling evidence to persuade other executives to support those decisions. Cross-listed with MTG 406. The graduate level course will have additional requirements beyond those of the undergraduate course. Prerequisite: Consent of Department Chair

MTG 507 – Customer Analytics (3 hours)

Covers various marketing analytics methods as simple as descriptive statistics and visualization, as well as more advanced predictive modeling, prescriptive, and newly emerging artificial intelligence (AI) and cognitive analytics. The course will be taught from a managerial perspective emphasizing the need for managers to understand customer analytics to reduce risk in decision making. Cross-listed with MTG 407. Prerequisite: Consent of Department Chair

MTG 624 – Marketing Decision Making (3 hours)

Marketing management problems, policies, and solutions. Case studies of marketing problems, research, and applications of marketing techniques to business problems.

MTG 640 – Obtaining, Analyzing, and Applying Marketing Information (3 hours)

Gathering, understanding, and using marketing information, data base marketing, qualitative research, electronic research, forecasting, and computer software data analysis packages.

MTG 644 – Professional Selling & Sales Management (3 hours)

Students will study professional selling from the perspective of both the salesperson and the sales manager through readings, class discussion, presentations, and role plays. As a result, students will become familiar with and practiced in the professional sales process as well as further develop their understanding of several universal management functions.

MTG 658 – Topics in Marketing (3 hours)

Topics of special interest which may vary each time the course is offered. Topic stated in current Schedule of Classes.

MTG 660 – Readings in Marketing (1-3 hours)

Individual readings for qualified students, under the guidance of a member of the faculty. Repeatable to a maximum of 3 credit hours. Prerequisite: consent of instructor and director of graduate programs.

MTG 688 – Supply Chain Management (3 hours)

Supply chain management consists of all stages involved in directly or indirectly fulfilling customer requests. This course will examine all aspects of the supply chain i.e., interactions between manufacturers, suppliers, transportation agents, retailers, and customers. Special emphasis is placed on managing flows of information, products, and funds between organizations and throughout the open system.

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Slane College of Communications and Fine Arts



Slane College of Communications and Fine Arts

Mission

The Slane College of Communications and Fine Arts aspires to offer outstanding regional, national, and international programs in art and design, communication, interactive media, music, and theatre arts. The College is committed to:

- a humane, equitable, and intellectually stimulating environment for faculty and students;
- dynamic academic programs that prepare students and faculty for opportunities in the new century;
- cultural diversity among students and faculty;
- creative diversity in academic and cocurricular programs;
- innovative collaborative initiatives with colleagues throughout the world;
- collaboration of students and faculty on projects in research and creative production;
- international study and scholarship;
- the technology to support College programs; and
- external interactions that provide professional development and career opportunities for faculty and students.

Academic Programs

The programs of the Slane College of Communications and Fine Arts are unified by their respect for imagination and the creativity that enables its communication; an understanding of the relationships among talent, skill, and practice; and a commitment to the exploration of interdisciplinary and collaborations among the disciplines of our college and the university. At the same time we recognize the great strength in the diversity of our disciplines—from the personal to the global dimensions of modern communication and to the infinite variety of artistic expression.

The College offers two principal types of degrees. Professional degrees include the Bachelor of Fine Arts and the Bachelor of Music, which require one-half to two-thirds of the course credit to be in the major discipline. These intensive programs are considered preparation for direct entrance to professional employment or graduate study. Liberal studies programs are the Bachelor of Arts and the Bachelor of Science degrees, which require one-third to one-half of the total course credit toward the degree to be in the major. The "Graduation Requirements" section below describes the distinctions between the B.A. and B.S. degrees. These programs give the student a substantial focus in the major with firm grounding in basic skills and a broad university education.

Cocurricular Activities

Academic programs in the College are enhanced by cocurricular activities that provide important performance and publication

experience for student majors and for nonmajors with avocational interests in the arts and communication. Music ensembles and recitals, an extensive gallery exhibition program, theatre productions, preprofessional media organizations, and the national champion Bradley speech team serve as laboratory experiences in which the work of the classroom is applied and presented to the public. The Bradley University Hollywood semester offers students in all majors the opportunity for an entertainment industry study-away semester in Los Angeles, CA.

Faculty

The faculty members of the College are dedicated to quality teaching enhanced by mentoring and to scholarly research and creative production reinforced by collaboration with colleagues and students. Faculty members are active professionals in their disciplines who are dedicated to the precept that students in the College must blend academic classroom experiences with creative opportunities in performance, the laboratory, or the studio.

Facilities

Each department in the College has an excellent, dedicated facility that supports educational, creative, and scholarly activities. The Department of Art and Design is housed in the Heuser Art Center, a well-equipped building with superb classrooms, studios, and gallery. The Department of Music is housed in Constance Hall and Dingeldine Music Center, which includes the beautiful Eleanore Sikes Peters Recital Hall. The Hartmann Center for the Performing Arts houses the Department of Theatre Arts and includes the main-stage Meyer Jacobs Theatre, Blythe O'Sullivan Studio Theatre, scenery facility, a costume shop in Duryea, and a gallery. The InterMedia Center, housed in the Duryea Parking Deck, is a teaching and research facility used to advance the integration of technology, visualization, and interactivity. The Caterpillar Global Communications Center houses the Department of Communication, including the Charley Steiner School of Sports Communication, the Department of Interactive Media, and the College offices. It features state-of-the-art audio, video, computer, and worldwide communication technology.

Accreditation

The program in art is accredited by the National Association of Schools of Art and Design (NASAD). The program in music is accredited by the National Association of Schools of Music (NASM). The program in theatre arts is accredited by the National Association of Schools of Theatre (NAST).

Admission Requirements

The admission requirements for the College are as follows:

1. The University general admissions requirements, as indicated elsewhere in this catalog.
2. Specific admission requirements for each program, as given in the individual departmental sections.

Transfer Requirements

- Transfer students who are candidates for a degree from this College must earn at least nine hours in the major field at Bradley.
- Courses for a major in the College which are transferred to Bradley University from another institution with a grade of "D" will not be accepted by the College of Communications and Fine Arts. As a result, the student may need more than 124 hours to graduate.

Graduation Requirements

To complete a degree in the Slane College of Communications and Fine Arts, a student must satisfy the University and College requirements as well as the specific major requirements.

University Requirements

All incoming freshmen entering Bradley University beginning Fall 2017 must meet the Bradley Core Curriculum (BCC) requirements, as outlined in the All-University Degree Requirements section of this catalog. BCC requirements emphasize eight "Areas of Inquiry" that will more deeply engage the student in the process of intellectual growth. The student chooses from a list of approved courses.

Slane College students entering prior to Fall 2016 should refer to the General Education Requirements as articulated in their Undergraduate Catalog year.

Bachelor Of Arts

All candidates for the Bachelor of Arts degree must complete three semesters of college-level foreign language study or its equivalent.

Bachelor Of Science

In order to receive the Bachelor of Science degree, students must successfully complete at least 15 hours of courses selected from mathematics, computer science, and the natural sciences.

Other University Requirements

1. A minimum of 124 semester hours
2. 40 junior-senior semester hours (courses numbered 300 or above)
3. 30 earned residence hours
4. A minimum cumulative grade point average of 2.00 based upon courses taken at Bradley University.
5. 24 of the last 30 semester hours must be earned in residence at Bradley.
6. It is the student's responsibility to satisfy all University academic, financial, and administrative requirements and procedures as outlined in the catalog.
7. Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation.
8. A change in major may mean meeting new requirements in force at the time of the change as a condition for acceptance into that major. Students whose work has been interrupted for one or more semesters may be held to requirements in effect at the time of their re-enrollment.

College Requirements

1. The required courses and grade point average in the major are stated in the individual departmental sections of this catalog.
2. Approval for off-campus or correspondence study: Students electing to take courses at another accredited institution to apply toward graduation requirements assume the responsibility for the transferability of the credit. Before transfer credit can be posted to the transcript, permission must be obtained from the appropriate department chair and the dean of the College. The student is also responsible for requesting an official transcript be sent to the Registrar's Office once the course is completed.
3. As in any academic program, revisions are being made continually; students should consult the department chair or advisor about current program requirements.
4. All Slane College of Communications and Fine Arts students are required to have a laptop computer to complete their coursework.

Teacher Certification

To be eligible to teach in the public schools, a student must obtain a certificate. Teacher certification programs at Bradley University are approved by the Illinois State Board of Education. Students seeking certification should be certain to have an advisor in the department of the major as well as in teacher education. While a student ordinarily may graduate and be certified under the University catalog requirements in effect at the time the student becomes a teacher education candidate, the Illinois State Board of Education may mandate changes in standards of approved teacher education programs. This may require students to modify their original degree programs to be eligible for certification upon completion of graduation requirements. Students should refer to the section of this catalog containing information about Department of Teacher Education requirements.

Cooperative Education/Internship Program

The College participates with employers in an optional Cooperative Education/Internship Program. Students either alternate periods of full-time study with full-time employment or have part-time employment while attending classes.

Global Scholars Program

Students enrolled in the Slane College of Communications and Fine Arts have the unique opportunity to earn the designation Global Scholar-International Option in recognition of achievement in global studies. The Global Scholar-International Option may be earned in conjunction with a degree in Art and Design, Communication, Interactive Media, Music, and Theatre Arts. Requirements for program participation will not require additional financial expense and will not add to total credits necessary for graduation. The Global Scholar-International Option provides:

Recognition:

- Formal recognition by the dean of the college and citation and graduation cord at the Slane College of Communications and Fine Arts awards ceremony.
- Global Scholars recognition on your degree audit and notation on your official university transcript.

Requirements

- **Courses:** Students enrolled in Global Scholars under the BCC should select one course in each of the following areas: Fine Arts (FA), Global Perspectives (GP) World Cultures, Global Perspectives (GP) Global Systems (GS) and Humanities (HU). Courses taken during a semester study abroad may also be accepted for specific areas with approval by the Director of the Global Scholars program
- **Language:** complete at least one semester of foreign language. Language may be taken in conjunction with a study abroad program.
- **Seminars:** complete two one-semester-hour Global Scholar seminars offered by faculty proficient in a variety of international topics. Seminars are offered each semester.
- **International Study Abroad:** participate in an approved international study experience selected from ensemble travel, international internships, or Bradley International Study Abroad programs.

Hollywood Semester

The Bradley University Hollywood Semester is an off-campus program designed to provide qualified Bradley students the unique opportunity to explore the entertainment industry through a semester of study in Los Angeles, California. Professional experiences are created through a combination of industry-related internships, academic courses, extra-curricular lectures, and entertainment industry experiences. Students earn a full semester of upper-level credit. Bradley financial aid is applicable to the program costs. The program is open to all Bradley students in all majors.

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CFA Courses



CFA Courses

CFA 100 – Intellectual and Cultural Events (1 hour)

Attendance at a variety of intellectual and cultural events approved by the University's Intellectual and Cultural Activities Committee. Up to two hours of credit can be earned.

CFA 101 – Arts and Ideas Seminar (1 hour)

Seminar on selected intellectual and artistic topics which may vary each time the course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic. Maximum of three hours credit may be earned.

CFA 221 – Media Aesthetics (3 hours)

Exploration of fundamental media aesthetic concepts including the interrelated nature of light and color, space (area, depth, volume), time/motion, and sound used to tell stories in various media applications. Emphasis on critical analysis, and application of media aesthetic concepts applied to film, television, gaming, and/or social media.

CFA 250 – Film History (3 hours)

Core Curr. HU

Overview of the historical development of cinema from the 19th century to the contemporary period. Study of significant technological, industrial, aesthetic, and cultural developments in motion picture history. Specific time periods rotate by section.

CFA 300 – CFA International Option Seminar (1 hour)

Seminar topics of special interest relevant to enhancement of study abroad and integration of International Option certificate program. Topics may vary each time course is offered. May be repeated under different topics for a total of 2 semester hours. Topic and prerequisites stated in current Schedule of Classes.

CFA 301 – Cooperative Education/Internship in Communications And Fine Arts (0-6 hours)

Core Curr. EL

Appropriately supervised cooperative education or internship experience in communications and fine arts. May be repeated for a maximum of 6 hours credit. Maximum 6 hours of Co-op or internship credit allowed toward graduation hours. Pass/fail. Prerequisite:

CFA 320 – Film Theory and Criticism (3 hours)

Core Curr. WI

Surveys major theoretical approaches to film studies, including formalism, realism, psychoanalysis, genre theory, auteur theory, and audience and spectatorship. Designed to apply these scholarly lenses to both historical and contemporary films. Prerequisite: THE 141 or CFA 250

CFA 321 – Topics in Film Genre (3-6 hours)

Core Curr. WI

Examines historical, cultural, industrial, and mythological dimensions of film genre, with a varying focus on one particular genre. Enhances understanding of genre formulae, conventions, and iconography. Topics rotate. May be repeated twice under a different topic selection. Prerequisite: THE 141 or CFA 250

CFA 350 – How Hollywood Works (3 hours)

How Hollywood Works offers a background examination of the entertainment industry. The course focuses on the professional operation and process used to create the preliminary background for a storyline, to develop a pitch for a movie/television show/video game, steps to acquire a green light for production, financing and budgeting a media project, protocol, post-production aspects, and advertising for distribution. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California

CFA 353 – Video Game Design (3 hours)

Application of video game development processes and techniques. Emphasis on industry-standard practices towards the development of a fully realized game. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California.

CFA 354 – Hollywood Semester Internship (3 hours)**Core Curr. EL**

Appropriately supervised internship experience in Los Angeles, CA. The Hollywood Semester course will follow the registration and reflective learning requirements used by existing courses in Bradley's Cooperative Education and Internship program. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California.

CFA 355 – Topics in Entertainment (3 hours)

Topics of special interest in the entertainment field that may vary each time the course is offered. May be repeated one time under a different topic for a total of 6 hours. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California.

CFA 356 – Entertainment Public Relations (3 hours)

Entertainment PR covers the differences between entertainment-oriented public relations versus a more traditional form of public relations. The class examines the techniques and knowledge needed by an entertainment publicist to brand and manage the message for industry clients including: talent, celebrities, venues, hospitality, gaming properties, athletes, non-profits, networks, movies, and television shows. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California.

CFA 358 – Visual Storytelling: How Hollywood Communicates (3 hours)

Visual Storytelling covers the entertainment industry's step-by-step process for video and film production. The course is divided into 5 distinct phases of production with an ongoing class project of a narrative music video. This course discusses video concepts and industry processes, as well as production tools and techniques. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester.

CFA 359 – Masters of Hollywood (3 hours)

Masters of Hollywood is a master course offering a series of interactive lectures taught by entertainment industry guest experts. Each two week guest session will consist of three hours of teaching for two consecutive weeks. Industry guests will offer an instructional lecture for one three hour session. The second week is an interactivity assignment based on the topic area and supervised by the guest lecturer. The Masters of Hollywood course is designed to engage students in a hands-on learning experience with a variety of focused topics. Topics and speakers may vary each semester. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California

CFA 360 – Hollywood Semester Boot Camp (1 hour)

The six-week mandatory course is designed to provide advance preparation to students who plan to attend the Bradley University Hollywood Semester in Los Angeles. The students will gain enhanced experience in the development of resumes and cover letters, interviewing skills, assimilation into the Los Angeles culture, and tips to enhance their semester experience. This is a Satisfactory/Unsatisfactory course. Prerequisite:

CFA 361 – Media in Entertainment (3 hours)**Core Curr. WI**

A survey of the mass media, production and public relations industries involved with the entertainment industry. The course focuses on entry-level jobs and career paths and the responsibilities and skills necessary for success in the industry. Students explore the multiple areas of the conglomerated mass media and its impact on society. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California.

CFA 362 – Hollywood's Greatest Cinematic Genres (3 hours)**Core Curr. WI**

Surveys cinematic genres throughout Hollywood history. Emphasis is placed on the ability to identify specific genres based on tropes, characters, themes, plots and audio-visual elements. Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California

CFA 365 – Los Angeles Expedition (2 hours)

Exploration of Los Angeles and its entertainment and media industry through a series of guest lectures, site visits and tours.

Prerequisite: Students must be enrolled in the Bradley University Hollywood Semester in Los Angeles, California.

CFA 371 – Contemporary Music Business in Australia (3 hours)

Students develop knowledge of the contemporary recorded music industry in Australia and explore how it intersects and functions with the closely associated Australian live music industry and Australian music publishing industry as well as in the context of global music markets. The course prepares students for working in the volatile and highly competitive contemporary music industry. Prerequisite: Open to students enrolled in the Global Academic Ventures (GAV) Internship and Study Semester in Asia Pacific (ISSAP) semester abroad program or approval of the Associate Dean in the Slane College of Communications and Fine Arts.

CFA 372 – Entertainment Industry-Asia Pacific (3 hours)

Students gain a competitive advantage in, and nuanced understanding of, the entertainment industries in the Asia-Pacific region through exploration history of the industry, the economics of the entertainment industry, and examining the diverse geographic area that encompasses different cultural values, arts practices, and entertainment industries. Prerequisite: Must be enrolled in the Global Academic Ventures Program or approval from the Associate Dean in the Slane College of Communications and Fine Arts.

CFA 421 – Art & the Creative Imagination (3 hours)**Gen. Ed. FA**

Examination of various artistic renderings of unified or similar ideas, objects, and events. Comparison and contrast of the creative imagination and processes used in the making of useful and fine arts, time and space arts, and literary and performing arts.

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Fine Arts Minor



Fine Arts Minor

The College offers a minor in fine arts that includes courses in the appreciation, history, and practice of the arts. The minor is intended for students with an interest in the fine arts who would benefit from an approach encompassing art, music, and theatre. Students will find the minor a way to discover – or rediscover – the importance of the arts in society and in their personal lives.

Course Requirements:

1. Appreciation of the Arts – 6 hours

Select two of the following courses in addition to the Bradley Core Curriculum (BCC) fine arts requirement.

- ART 131 Art Appreciation – 3 hrs.
- MUS 109 Music Appreciation- 3 hrs.
- THE 131 Introduction to Theatre – 3 hrs.
- THE 141 Film Appreciation – 3 hrs.
- PHL 350 Art in Human Experience – 3 hrs.
- WLF 351 Cinema Francais – 3 hrs.
- WLG 352 Deutsches Kino – 3 hrs.
- WLT 151 French Cinema – 3 hrs.

2. History and Practice of the Arts – 9 hours

- History (limit 2 courses selected from the following):
 - ART 140, 142, 243, 245, 332, 340, 350, 360, 375, 390 – 3 hrs.
 - MUS 203, 235, 236, 335, 336 – 3 hrs.
 - THE 336, 337, or 338 – 3 hrs.
- Practice of the Arts (minimum 3 hours)

Select in consultation with advisor for fine arts minor from studio arts courses, music performance courses, and theatre performance and production courses.

3. CFA 421 Art and the Creative Imagination – 3 hours

4. CFA 301 Internship – 3 hours

Total Hours Required for Minor: 21

Other Requirements:

1. Courses taken to satisfy the fine arts BCC requirement or requirements in a student's major or other minor may not apply to this minor.
 2. Six semester hours must be at the 300 level or above.
 3. Courses are to be selected in consultation with the Slane College of Communication and Fine Arts Associate Dean, the fine arts minor advisor.
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Art and Design



Art and Design

FACULTY Professors Brammeier, Carlson, Gillespie, Stolz (Chair), Will; Assistant Professors Metzger, Chae

Accreditation

The Department of Art and Design is accredited by the National Association of Schools of Art and Design (NASAD).

Mission

The Department of Art and Design faculty and students endeavor to maintain an attitude and an environment in which the pursuit of a degree is a commitment to a way of life that embodies creative thought processes, the production of objects of art, and visual communication. The curriculum and the faculty who teach are focused on nurturing the fine arts in a wide variety of visual art media. Students are encouraged to dedicate themselves to academic excellence while working with skilled artistry and employing visual literacy, within an atmosphere of creative freedom. Through a balanced and consistent student/instructor relationship, coupled with both traditional and advanced technology, the faculty assist students in realizing their goals as aspiring professional artists and designers.

Degrees Offered

Undergraduate studio and teacher preparation degrees offered by the Department of Art and Design are the B.F.A., B.A., and the B.S. The B.A. is offered in undergraduate art history studies. The department also offers both the M.A. and M.F.A. degrees in studio art (please refer to the Graduate Catalog for information on admission and general requirements for these).

Admission Requirements

1. Admission to a program of study in the Department of Art and Design begins with meeting the application requirements as provided by Bradley University for general admission.
2. Students are initially accepted into the Department of Art and Design as art majors on the Bachelor of Arts or Bachelor of Science degree pathways.
3. All freshmen are required to submit a digital portfolio for review at the end of their first year to progress onto the BFA pathway (or remain BA/BS) in their chosen areas of emphasis.
4. All of the required 100 level art and design foundation core courses must be completed before a candidate may be accepted onto the BFA program.

5. Acceptance to the BFA is also conditional on a required GPA of 3.0 in art at the end of the first year spring semester.
6. Students who wish to transfer from other institutions must submit a portfolio for admission to the Department of Art and Design. Continuing on the BFA, BA, or BS degree pathways is on a case by case basis, dependent on quality of their transfer portfolio, and outstanding course requirements/transfer equivalencies. Please contact the Office of Undergraduate Admissions for information regarding content, submission dates, format, and mailing address. Students from other departments within Bradley University are required to have an initial advising session with the Chairperson. All students must have an overall minimum grade point average of 2.5.

Studios

Studios are sometimes open to students for extended periods of time when not occupied by classes. Policies and procedures for studios are established by the studio professor and are posted in the studio.

Non-Art Majors

Interested non-art majors may also take studio courses offered by the Department of Art and Design, subject to prerequisites and availability. Please contact the chair.

Major Requirements

General Requirements:

1. Art majors must complete the studio and art history foundation core requirements in sequence before proceeding on to advanced course work. The foundation core prerequisites, 100- and 200-level courses, must also be taken in sequence before advancing to higher-level course work. The Department of Art and Design enforces prerequisites throughout the program.
2. The foundation core courses and sequence for Art and Design majors are listed in the degree requirement descriptions below. Art and Design majors must follow the recommended prerequisite sequence in order to thoroughly prepare for advanced and upper-division course work. The curriculum for art majors contains 25 hours of foundation core courses—19 hours of studio courses and 6 hours of art history courses. This material for undergraduate art majors, BFA, BA, BS options, is specified in the catalog. Students who do not follow proper prerequisites jeopardize their progress in the curriculum and will be dropped from courses if prerequisites are not met.
3. All students on the BFA degree path are required to participate in a senior thesis exhibition. All students participating in this exhibition must have successfully completed ART 421 during the semester of their senior exhibition.
4. The department reserves the right to retain some student work for the University permanent collection. Films produced by the department are retained by the University at the discretion of the instructor.

Bachelor of Fine Arts Degree with a Major in Studio Art

Bachelor of Arts Degree or Bachelor of Science Degree with a Major in Studio Art

Studio Concentrations

Bachelor of Arts Degree with a Major in Art History

Art Education Major

Minors in Studio Art and Art History

Bachelor Of Fine Arts Degree (B.F.A.) With A Major In Studio Art

Foundation Core Requirements and Sequence:

- **First Semester:** ART 101/ART 105/ART 140/ART 220/IM 113
- **Second Semester:** ART 102/ART 106/ART 142/ART 221
- **Third Semester:** ART 230
Plus art history and additional studio area concentration courses
- **Fourth Semester:** Art history and additional studio area concentration and elective courses

Art History (minimum 15 hour)

Art History Core (6 hours)

- ART 140 Survey of Art History I – 3 hrs.
- ART 142 Survey of Art History II – 3 hrs.

Elective Courses in Art History* (9 hours)

*In place of an art history elective, students with a photography concentration are required to take ART 390 History of Photography and students with a graphic design concentration are required to take ART 332, History of Graphic Design.

Studio (minimum 60 hours)

Studio Core (19 hours)

- ART 101 Drawing I – 3 hrs.
- ART 102 Drawing II – 3 hrs.
- ART 105 Two-Dimensional Design – 3 hrs.
- ART 106 Three-Dimensional Design – 3 hrs.
- ART 220/221 Professional Lecture Series- 1 hr.
- ART 230 Life Drawing – 3 hrs.
- IM 113 Introduction to Multimedia – 3 hrs.

Area of Concentration (18 hours)

Six studio courses in one of the following areas of concentration: drawing, graphic design**, painting, photography**, sculpture (see below for further information on areas of concentration).

Required Studio Electives (24/21 hours)

Five courses from any areas other than the student's concentration, including at least one from the 2-D areas and at least one from the 3-D areas. Plus, three additional courses from areas that are related to a student's concentration.

**Because the photography and graphic design concentrations require 21 hours of studio courses, instead of 18, the number of studio electives for the BFA in those two concentrations is reduced by 3 hours.*

Professional Orientation/Seminar Courses (3 hours)

- ART 421 B.F.A. Seminar – 3 hr.

Total Hours Required for Major: 79

Bachelor Of Arts Degree (B.A.) Or Bachelor Of Science Degree (B.S.) With A Major In Studio Art

Foundation Core Requirements and Sequence:

- **First Semester:** ART 101/ART 105/ART 140/ART 220/IM 113
- **Second Semester:** ART 102/ART 106/ART 142/ART 221
- **Third Semester:** ART 230
Plus art history and additional studio area concentration and elective courses
- **Fourth Semester:** ART 230 (if not taken in previous semester)
Art history and additional studio area concentration and elective courses

Art History (12 hours)

Art History Core (6 hours)

- ART 140 Survey of Art History I – 3 hrs.
- ART 142 Survey of Art History II – 3 hrs.

Elective courses in art history* (6 hours)

*Students with a photography concentration are required to take ART 390 History of Photography in place of an art history elective. Because 21 hours of studio are required in the photography concentration (instead of 18), the number of free studio electives is

reduced by 3 hrs.

Studio (46 hours)

Studio Core (19 hours)

- ART 101 Drawing I – 3 hrs.
- ART 102 Drawing II – 3 hrs.
- ART 105 Two-Dimensional Design – 3 hrs.
- ART 106 Three-Dimensional Design – 3 hrs.
- ART 220/221 Professional Lecture Series- 1 hr.
- ART 230 Life Drawing – 3 hrs.
- IM 113 Introduction to Multimedia – 3 hrs.

Area of Concentration (18 hours)

Six courses in one of the following areas of concentration: drawing, graphic design, painting, photography*, sculpture (see below for further information on areas of concentration).

Studio Electives (9 hours)

Courses from areas other than the student's concentration area, including at least one from the 2-D areas and at least one from the 3-D areas.

Total Hours Required for Major: 58

Areas of Concentration – 18 hrs.* (select courses in consultation with advisors)

*Students taking the BFA pathway in graphic design must take the additional ART 496 BFA Design Senior Project, for a total of 21 hours.

**Students taking the BFA/BA or BS pathway in photography must take each of the listed photography courses for a total of 21 hours.

Drawing Concentration

- ART 203 Drawing Studio I – 3 hrs.
- ART 204 Drawing Studio II – 3 hrs.
- ART 303 Intermediate Drawing I – 3-6 hrs.
- ART 304 Intermediate Drawing II – 3-6 hrs.
- ART 403 Advanced Drawing I – 3-6 hrs.
- ART 404 Advanced Drawing II – 3-6 hrs.

Graphic Design Concentration (*BFA 21 hrs. BA/BS 18 hrs)

- ART 205 Typographic Design – 3 hrs.
- IM 260 User Interface Design and Development – 3 hrs.
- ART 305 Editorial Design – 3 hrs.
- ART 306 Designing for a Brand Experience – 3 hrs.
- ART 405 Graphic Information Systems – 3 hrs.
- ART 406 Graphic Design Portfolio – 3 hrs.
- ART 496 BFA Design Senior Project – 3 hrs.

Painting Concentration

- ART 209 Beginning Painting I – 3 hrs.
- ART 210 Beginning Painting II – 3 hrs.
- ART 309 Intermediate Painting I – 3-6 hrs.
- ART 310 Intermediate Painting II – 3-6 hrs.
- ART 409 Advanced Painting I – 3-6 hrs.
- ART 410 Advanced Painting II – 3-6 hrs.

Photography Concentration (21 hrs)**

- ART 225 Basic Black and White Photography – 3 hrs.

- ART 228 Basic Digital Photographic Imaging – 3 hrs.
- ART 324 Photographic Concepts – 3 hrs.
- ART 326 Manipulated Image – 3-6 hrs.
- ART 327 Studio Lighting and Illustration Photography – 3 hrs.
- ART 426 Photographic Portfolio – 3-6 hrs.
- ART 427 Advanced Photographic Digital Imaging – 3-6 hrs.

Sculpture Concentration

- ART 213 Beginning Sculpture I – 3 hrs.
- ART 214 Beginning Sculpture II – 3 hrs.
- ART 313 Intermediate Sculpture I – 3-6 hrs.
- ART 314 Intermediate Sculpture II – 3-6 hrs.
- ART 413 Advanced Sculpture I – 3-6 hrs.
- ART 414 Advanced Sculpture II – 3-6 hrs.

Bachelor Of Arts Degree (B.A.) With A Major In Art History

The art history major is intended to provide a thorough and broad background as a basis for concentrated study and research. Although one foreign language is required to meet the University requirements for the B.A. degree, those intending to go on to graduate art history study are advised to become proficient in a second foreign language.

Art History (30 hours)

Art History Core (6 hours)

- ART 140 Survey of Art History I – 3 hrs.
- ART 142 Survey of Art History II – 3 hrs.

Elective courses in Art History (18 hours)

- ART 380 Special Topics in Art History
- ART 490 Seminar in Art History

Studio Core (13 hours)

- ART 101 Drawing I – 3 hrs.
- ART 102 Drawing II – 3 hrs.
- ART 105 Two-Dimensional Design – 3 hrs.
- ART 106 Three-Dimensional Design – 3 hrs.
- Art 220/221 Professional Lecture Series – 1 hr.

Total Hours Required for Major: 43

Art Education Major

Teacher Certification

Teaching in the public schools requires a certificate issued by the State of Illinois. Art education majors desiring to teach art at the elementary or secondary level must complete the same requirements as those for a BA or BS degree with a major in studio art, as well as professional education requirements. (Consult the Teacher Education section of this catalog.) The State of Illinois requires content area competency tests for certification. Students will be assigned advisors in art and in the Department of Teacher Education. Regular consultation with both advisors is extremely important. NOTE: This degree requires more than 124 semester hours to complete. It is also possible to earn a BFA degree with teacher certification. However, both options will require more than four years of study.

Minor Requirements

The Department of Art and Design offers a minor in studio art with two options and a minor in art history.

Minor in Studio Art

The art minor is designed for students who would like to have a program for their own personal growth or enjoyment, or for an adjunct

to other major interests such as interactive media, business, publicity, broadcasting, advertising, philosophy, literature, or areas of the sciences, engineering and other courses of study where creativity, problem solving, and relationships between materials, skills, and content are of major concern. The studio art minor has two possible directions: two dimensional or three dimensional. Each requires 21 hours for completion. It is highly encouraged that students wanting to pursue a studio art minor with a more specific direction (e.g. Graphic Design), should take as many 200 and 300 level courses within that area of emphasis as possible.

Option I – Two Dimensional

- ART 101 Drawing I or ART 102 Drawing II – 3 hrs.
- ART 105 Two-Dimensional Design – 3 hrs.
- ART 140 Survey of Art History I, or ART 142 Survey of Art History II – 3 hrs.
- Studio concentration in drawing, graphic design, painting, photography
- One 200-level course – 3 hrs.
- One 300-level course) – 3 hrs.
- Electives in art and design (**must be approved by minor advisor**) – 3 hrs.

Total Hours Required for Minor: 18

Option II – Three Dimensional

- ART 101 Drawing I, or ART 102 Drawing II – 3 hrs.
- ART 106 Three-Dimensional Design – 3 hrs.
- ART 140 Survey of Art History I, or ART 142 Survey of Art History II – 3 hrs.
- Studio concentration in sculpture
- One 200-level course – 3 hrs.
- One 300-level course) – 3 hrs.
- Electives in art and design (**must be approved by minor advisor**) – 3 hrs.

Total Hours Required for Minor: 18

Minor in Art History

- ART 140 Survey of Art History I – 3 hrs.
- ART 142 Survey of Art History II – 3 hrs.
- ART 243 Non-Western Art, or ART 245 American Art – 3 hrs.
- Electives in art history – 9 hrs.

Total Hours Required for Minor: 18

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Art and Design Courses



Art and Design Courses

ART 101 – Drawing I (3 hours)

Fundamental concepts and techniques in drawing, using a variety of media and tools. Develop skills based on drawing from observation and invention.

ART 102 – Drawing II (3 hours)

Second part of a year-long course on developing fundamental concepts and techniques in drawing using a variety of media and tools. Developing objective and subjective use of imagery. Introduction to the human figure. Prerequisite: ART 101 or consent of Art Department chair.

ART 105 – Two-Dimensional Design (3 hours)

A studio course exploring the fundamentals of the formal systems and basic elements of visual organization through two-dimensional design principles and theories using a variety of media.

ART 106 – Three-Dimensional Design (3 hours)

A studio course exploring the fundamentals of the formal systems and basic elements of visual organization through three-dimensional design principles and theories using a variety of media. Prerequisite: ART 105 or consent of Art Department chair.

ART 107 – Introduction to Studio Art (3 hours)

Gen. Ed. FA

Core Curr. FA

Two- and three-dimensional visual arts including drawing, painting, photography, printmaking, and sculpture. Designed to enhance the student's understanding of art mediums and their cultural significance. Prerequisite: Open for non-Art majors only.

ART 109 – Photographic Appreciation (Online) (3 hours)

Core Curr. FA

Fundamentals of photographic processes, the history of the medium, as well as basic image manipulation and critique methods. An emphasis on the development of visual literacy skills necessary for analyzing and critiquing our image-saturated culture. Prerequisite: Open for non-Art majors only.

ART 131 – Art Appreciation (3 hours)

Gen. Ed. FA

Core Curr. FA,WI

Visual art: its significance today and in history. Designed to enhance the student's understanding and enjoyment of painting, sculpture, and architecture. Prerequisite: Non-art major.

ART 140 – Survey of Art History I (3 hours)**Core Curr. WI**

Western and non-Western art from 4000 B.C. to 1400 A.D.: Ancient, Classic, and Medieval.

ART 142 – Survey of Art History II (3 hours)**Core Curr. WI**

Western art from 1400 A.D. to present: Renaissance, Baroque and Rococo, 19th and 20th century art.

ART 201 – Introduction to Ceramics (3 hours)

An introduction to the fabrication of ceramic objects and the mechanical functions of the ceramic studio including clay mixing, hand building, throwing, glazing and kiln firing with a focus on stoneware.

ART 202 – High & Low Fire Ceramics (3 hours)

Technical and design concepts for the forming, glazing, and firing of ceramics with a focus on the aesthetic development of high and low fire ceramics.

ART 203 – Drawing Studio I (3 hours)

Visual perception and analysis through drawing in development of direct observation with various subject areas of interest, i.e., still-life, landscape, human figure, non-objective, and abstraction. Traditional drawing media, methods of instrumentation, exploration of composition, and conceptual strategies are included. Prerequisite: Art 101, 102, 105, 106, 140, 142, or consent of Art Department chair.

ART 204 – Drawing Studio II (3 hours)

Visual perception and analysis through drawing in variety of techniques involving line, area, and ground. Figure, still-life, and landscape drawing from direct observation and from imagination. Prerequisite: Art 101, 102, 105, 106, 140, 142, 203, or consent of Art Department chair.

ART 205 – Typographic Design (3 hours)

The study of typographic communication and the principles of design composition through hand-rendered and digital forms. Prerequisite: ART 105 or consent of Art department chair, except User Experience Design majors, who, in place of Art 105, must have IM 150 and IM 161 completed, or consent of Department chair

ART 206 – Graphic Design Methods and Processes (3 hours)

Exploration of the creative thought process, leading to innovative and original solutions to visual communication problems. Concepts are developed using a variety of media ranging from hand-rendering to digital production. Emphasis is placed on creative thinking and professional presentation through all stages. Prerequisite: ART 205, IM 113, or consent of Art Department Chair.

ART 209 – Beginning Painting I (3 hours)

Basic painting techniques with traditional and non-traditional media, i.e., oil, acrylic, collage, and mixed media with emphasis on studio problems in composition, representation, design, color and concept. Prerequisite: Art 101, 102, 105, 106, 140, 142 or consent of Art Department chair.

ART 210 – Beginning Painting II (3 hours)

Development of techniques in traditional and non-traditional painting media. Exploration and experimentation using painting problems in still life, the human figure, abstraction, landscape, and non-objective composition. Emphasis on critical analysis and aesthetic awareness. Prerequisite: ART 209 or consent of Art Department chair.

ART 211 – Relief Printmaking (3 hours)

Relief printing from wood and linoleum blocks. Basic cutting and printing techniques, including black and white, color reduction and multi-block color editioning. Students provide paper, wood, linoleum, brayers, and cutting tools. Prerequisite: Art 101, 102, 105, 106, 140, 142, or consent of Art Department chair.

ART 212 – Intaglio Printmaking (3 hours)

Etching and engraving on zinc and copper plates for printings in the intaglio method. Introduction to methods including drypoint, line etch, aquatint, and softground techniques. Black and white printing with a multi-plate, color edition as final project. Students provide paper, metal plates, burnishers, scrapers, burins, and drawing needles. Prerequisite: ART 211 or consent of Art Department chair.

ART 213 – Beginning Sculpture I (3 hours)

Introduction to sculpture including 3-d design principles, aesthetics, and basic techniques of additive and reductive manipulation of materials. Processes include carving and welding, cutting and joining and various materials-steel, stone, and/or wood. Prerequisite: Art 101, 102, 105, 106, 140, 142, or consent of Art Department chair.

ART 214 – Beginning Sculpture II (3 hours)

Introduction to sculpture including 3-d design principles, aesthetics, and basic techniques of casting including pattern making, modeling in wax, clay, and transfer of the image to bronze and aluminum. Processes will involve cope and drag casting, transfer mold making and investment mold making, pouring molten non-ferrous metals, and finishing cast metal works through chasing and other surface

cleanup, patination and sealing. Prerequisite: Art 101, 102, 105, 106, 140, and 142; or consent of Art Department chair.

ART 220 – Professional Lecture Series/Studio Visits I (0.5 hours)

Visiting lectures with studio discussions, seminars, and demonstrations from professionals with national and international reputations in the fine and applied arts, art history, criticism, and philosophy. May be repeated to a maximum of 1 semester hour.

ART 221 – Professional Lecture Series/Studio Visits II (0.5 hours)

Visiting lectures with studio discussions, seminars, and demonstrations from professionals with national and international reputations in the fine and applied arts, art history, criticism, and philosophy. May be repeated to a maximum of 1 semester hour.

ART 225 – Basic Black and White Photography (3 hours)

Camera types, controls, and exposures; selection of sensitized materials; camera handling. Darkroom techniques: processing, proofing, adjusting, printing, presentation of work. Students supply film, paper, and a manually adjustable single lens reflex (SLR) camera.

ART 227 – Basic Graphic Design (3 hours)

For individuals who do not have formal training in graphic design but are interested in learning how to create visually appealing and effective designs. This course is ideal for individuals who may be involved in creating graphics for personal or professional projects, such as presentations, social media posts, or marketing materials. Design Fundamentals: Students will learn about the basic principles of design, including layout, color theory, typography, and visual hierarchy. * A laptop is required for this course. For non-art majors only.

ART 228 – Basic Digital Photographic Imaging (3 hours)

Introduction to basic digital image creation. Familiarization with processing, enhancement, manipulation, compositing, and asset management. Aesthetic, ethical, and technical implications of digital photographic imaging. Emphasis on creative image-making. Items required: DSLR camera, laptop computer, storage media for camera and computer.

ART 230 – Life Drawing (3 hours)

Drawing the figure from observation; learning anatomy to describe the dynamic qualities of the human form employing basic drawing elements, methods, and materials. Prerequisite: ART 101, 102, or consent of Art Department chair.

ART 233 – Introduction to Comics Art – Technical Skills and Visual Storytelling (3 hours)

This class introduces comics and sequential storytelling. We will cover the basic materials and techniques of comics art/cartooning using traditional media. This class also includes an introduction to composition and layout as well as the various genres of comics.

ART 245 – American Art (3 hours)

Survey of art in U.S. from Colonial period to present. Prerequisite: ART 140, 142, or consent of Art Department chair.

ART 300 – Advanced Studio Topics (1-3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of nine hours credit. Prerequisite: Junior standing and consent of instructor. See current Schedule of Classes.

ART 300 – Advanced Studio Topics (1-3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of nine hours credit. Prerequisite: Junior standing and consent of instructor. See current Schedule of Classes.

ART 301 – Ceramics Production (3-6 hours)

The production and design of functional ceramics. Repeatable up to 6 semester hours. Prerequisite: ART 202, 230 or consent of Art Department chair.

ART 302 – Advanced Ceramics (3-6 hours)

Kiln design, glaze formulation, and individual aesthetic development of techniques and concepts. May be repeated up to 6 hours. Prerequisite: ART 301 or consent of Art Department chair.

ART 303 – Intermediate Drawing I (3-6 hours)

In-depth exploration of drawing processes, concepts, media and supports with projects designed to increase visual awareness and personal experience with subject matter and drawing content. Repeatable up to 6 semester hours. Prerequisite: ART 204, 230, or consent of Art Department chair.

ART 304 – Intermediate Drawing II (3-6 hours)

Study of drawing processes, building and refining individual concepts with emphasis on contemporary approaches to pictorial design and composition. Repeatable up to 6 semester hours. Prerequisite: ART 303 or consent of Art Department chair.

ART 305 – Editorial Design (3 hours)

The creation, layout, and design of multi-page documents such as magazines, brochures, business-to-business direct mail, and catalogs, with emphasis on modular and scalable systems for both the printed and digital environment. Prerequisite: ART 205 and I M 260, or consent of Department Chair.

ART 306 – Designing for a Brand Experience (3 hours)**Core Curr. EL**

Identifying specific target audiences and designing brand experiences around them using traditional and social media environments. Including the design and implementation of visual identity systems, packaging, point of purchase, and promotional materials.

Prerequisite: ART 305 or consent of Art Department chair.

ART 309 – Intermediate Painting I (3-6 hours)

Exploration of subject matter useful toward personal development and artistic growth. Emphasis on the study of painting media, critical analysis, aesthetic awareness, and creative expression. Repeatable up to 6 semester hours. Prerequisite: ART 210, 230, IM 113, or consent of Art Department chair.

ART 310 – Intermediate Painting II (3-6 hours)

Independent work in painting emphasizing aesthetic research and concentrated studio production. Emphasis on the study of painting media, creative expression, critical analysis, and aesthetic awareness. Repeatable up to 6 semester hours. Prerequisite: ART 309 or consent of Art Department chair.

ART 311 – Basic Lithography (3-6 hours)

Lithographic printmaking from limestone and ball-grained aluminum matrices. Basic drawing and printing techniques for color and black and white editions. Students provide paper, metal plates, lithographic crayons. Repeatable up to 6 semester hours. Prerequisite: ART 220, 230, ART 211 or 212, or consent of Art Department chair.

ART 312 – Intermediate Printmaking (3-6 hours)

Exploration of technical and creative concepts in preparation for advanced printmaking coursework; emphasis on content-oriented imagery and discussion. Introduction to collagraphy, monotypes, photographic and digital techniques, and registration for printing with multiple techniques. Repeatable up to 6 semester hours. Prerequisite: ART 230. At least two courses from ART 211, 212, and 311, or consent of Art Department chair.

ART 313 – Intermediate Sculpture I (3-6 hours)

Intermediate sculpture with emphasis on refinement of the processes of casting, mold making, welding, cutting, joining, and the creation of sculpture in a variety of materials. Design principles, aesthetic considerations, and techniques of working are reviewed with application of principles and materials most appropriate for the development of individual student work. Repeatable up to 6 semester hours. Prerequisite: ART 213 or ART 214 or consent of the department chair

ART 314 – Intermediate Sculpture II (3-6 hours)

Intermediate sculpture with emphasis on the refinement of sculptural concepts and the processes of casting, mold making, welding, cutting, joining, and the creation of sculpture in a variety of materials with continuing emphasis on the development of individual student work. Repeatable up to 6 semester hours. Prerequisite: ART 313 or consent of Art Department chair.

ART 315 – Rapid Prototyping (3 hours)

Explorations into 3-D modeling using software, scanning, and rapid prototyping. May be repeated up to a total of 6 hrs.

ART 316 – Independent Study in Studio Arts (1-3 hours)

Independent study in studio arts. Repeatable for a total of 6 hours credit. Prerequisite: Junior standing; consent of instructor, and Art Department chair.

ART 317 – Color: Perception and Practice (3 hours)**Core Curr. EL**

Perception, relationships, and interaction of color. Studio experience leads from a visual realization of color relationships to an awareness of the interdependence of color with form and placement. Prerequisite: ART 101, 102, 105, 106, 140, 142, or consent of Art Department chair.

ART 320 – Introduction to Letterpress and Book Arts (3 hours)

An exploration of the mechanics and aesthetics of letterpress printing and artist's books, with emphasis on the relationship between content, structure and materials and meaning. Students create original content for letterpress employing a variety of historical and contemporary printing techniques while exploring traditional and nontraditional bookbinding methods and structures. Prerequisite: Art 101, 102, 105, 106, 140, 142, 230, IM 113, or consent of Art Department chair.

ART 323 – Art and The Environment (3 hours)

An introduction to the history of land and environmental art through readings, research, lectures, and making. Students will be asked to consider contemporary environmental issues as the content of their work as well as the effects of art-making on the environment. Course projects will include individual and collaborative art-making in non-traditional exhibition spaces and with non-traditional materials.

ART 324 – Photographic Concepts (3 hours)

The study of major photographic genres including landscape, portrait, street photography and still life. Students will analyze these

genres through theoretical writings, the study of historical and contemporary image-makers, and their own personal studio practice.
Prerequisite: Art 225 and 228

ART 326 – Manipulated Image (3-6 hours)

Manipulative photographic printing. Imagery developed by varying cameras, films, papers, and chemicals. Introduction to toners, hand-coloring, camera construction and modification. Repeatable up to six semester hours. Prerequisite: Art 225 and 228; or consent of Art Department chair

ART 327 – Studio Lighting and Illustration Photography (3 hours)

Aesthetics and techniques of studio lighting as used by photographers in illustration, advertising, and fine art photography. Use of special equipment; fashion, and still-life image-making. Prerequisite: Art 225 and 228; or consent of Art Department chair

ART 332 – History of Graphic Design (3 hours)

History of typography, graphic communication, and design. Cause and effect analysis involving cultural forces and design as well as the exploration of major historical movements leading to the emergence of contemporary design. Prerequisite: ART 140, 142, or consent of Art Department Chair

ART 333 – Digital Painting (3 hours)

The art of creating digital artworks using various digital tools and software. The fundamentals of digital painting, including understanding different brushes, layers, and blending modes. Various techniques and methods to create stunning digital paintings, such as color theory, composition, and lighting. Hands-on practice and assignments to refine skills and develop a unique style. Digital sketching and digital drawing, allowing students to have a comprehensive understanding of digital art. Also preparing files for print and web publishing. Appropriate for all skill levels of traditional art. Equips students with the necessary skills and knowledge to excel in the world of digital painting.

ART 335 – Medieval Art (3 hours)

A study of Early Christian, Byzantine, Romanesque and Gothic Art. Prerequisite: ART 140, 142, or consent of Art Department chair.

ART 340 – Renaissance Art (3 hours)

Art of Europe from ca. 1400 to 1600: Early, High, and Late Renaissance periods; Mannerism. Prerequisite: ART 140, 142, or consent of Art Department chair.

ART 343 – Advanced Storytelling and Production for Comics (3 hours)

This class builds on the foundation laid by ART233. It focuses less on tools, and more on advanced storytelling concepts, both visual and textual, and production. The creative work in this class will be mostly prompt-based, but there will be more self-directed work on multi-page projects. There will be one collaborative project. Students can choose project-to-project whether to work in ink or digitally. Students will also spend some time honing their draftsmanship to expand their ability to communicate through gesture, expression, and environment. We will also take a look at InDesign for lettering. Prerequisite: ART 233

ART 365 – Interactive Media Publishing Platforms (3 hours)

A studio course exploring creative strategies and techniques associated with online publishing platforms. Students will install, configure, and customize a web-based content management system. Additional topics will include: search engine optimization, information architecture, content modeling, social networking, media preparation, and customization of site themes. Cross-listed as IM 365. Prerequisite: IM 110 and Animation, Game Design, or Interaction Design major; IM 113 and ART 205; or consent of Department Chair.

ART 375 – 20th Century Art (3 hours)

A study of the major movements in 20th-century art. Prerequisite: ART 140, 142, junior or senior, or consent of Art Department chair.

ART 380 – Topics: Specified (3 hours)

Core Curr. WI

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: ART 140, 142, junior standing, or consent of Art Department chair. May be repeated under different topics to a maximum of 12 hours. Emphasis on individual research.

ART 390 – History of Photography (3 hours)

An overview of the history of photography from its invention in 1839 through the modern period of the 20th century. This course will explore the evolution of photography as an art form. Prerequisite: ART 140, 142, or consent of Art Department chair.

ART 401 – Ceramic Portfolio Design Studio (3-6 hours)

Portfolio development, studio design and equipment as they relate to the individual artist. Repeatable up to 6 semester hours. Prerequisite: ART 302, or consent of Art Department chair.

ART 402 – Ceramic Sculpture (3-6 hours)

Design concepts and production techniques as they apply to ceramics sculpture. Repeatable up to 6 semester hours. Prerequisite: ART 302, or consent of Art Department chair.

ART 403 – Advanced Drawing I (3-6 hours)

Advanced projects in drawing with emphasis on refinement of concepts and materials leading to an independent body of work. Repeatable up to 6 semester hours. Prerequisite: ART 304 or consent of Art Department chair.

ART 404 – Advanced Drawing II (3-6 hours)

Emphasis on individual growth and development of a body of work reflecting clear understanding of drawing concepts, and mastery of skills and materials. Repeatable up to 6 semester hours. Prerequisite: ART 304 or consent of Art Department chair.

ART 405 – Graphic Information Systems (3 hours)

Exploration of standard and experimental methods for conveying information for business, government, and entertainment including quantitative, qualitative, spatial analysis and application. Prerequisite: ART 306 or consent of Art Department chair.

ART 406 – Graphic Design Portfolio (3 hours)**Core Curr. EL**

The capstone course for the graphic design program, involving organizing and producing an effective professional design portfolio along with sharpening professional presentation and interviewing skills. Students create a print and digital portfolio, resume package, and other promotional materials. The process of developing the portfolio may include reworking previous projects or developing new material. Prerequisite: ART 405, or consent of the Art Department Chair

ART 409 – Advanced Painting I (3-6 hours)

Thematic development of a body of work in painting with special emphasis on the refinement and exploration of personal concept and content. Repeatable up to 6 semester hours. Prerequisite: ART 310 or consent of Art Department chair.

ART 410 – Advanced Painting II (3-6 hours)**Core Curr. EL**

Special projects in painting which may include competitions, exhibitions, installations, commissions, and portfolio development. Repeatable up to 6 semester hours. Prerequisite: ART 310 or consent of Art Department chair.

ART 411 – Advanced Printmaking Studio (3-6 hours)

Advanced printmaking concepts and techniques in preparation for exhibitions, application to graduate programs, and other professional pursuits. Emphasis on ideas and finishing skills required for the production of a professional portfolio. Repeatable up to 6 semester hours. Prerequisite: ART 311, 312 or consent of Art Department chair.

ART 412 – Advanced Printmaking Studio (3-6 hours)

Advanced printmaking concepts and techniques in preparation for exhibitions, application to graduate programs, and other professional pursuits. Emphasis on ideas and finishing skills required for the production of a professional portfolio. Repeatable up to 6 semester hours. Prerequisite: ART 311, 312 or consent of Art Department chair.

ART 413 – Advanced Sculpture I (3-6 hours)

Thematic development of a body of work in sculpture with special emphasis on topics of portfolio and the refinement and exploration of materials and methods. Repeatable up to 6 semester hours. Prerequisite: ART 314 or consent of Art Department chair.

ART 414 – Advanced Sculpture II (3-6 hours)

Special projects in sculpture which may include works for competitions, specific sites, scale, materials and/or portfolio development. Repeatable up to 6 semester hours. Prerequisite: ART 314 or consent of Art Department chair.

ART 416 – Independent Study in Studio Arts (1-6 hours)

Independent study in studio arts. May be repeated in more than one area of art, for a total of 6 hours of credit. Prerequisite: Declared art major; senior standing; consent of Art Department chair.

ART 417 – Independent Study in Art History (3 hours)

Program of directed readings: analysis, synthesis, and interpretation of materials. Research paper required. May be repeated in more than one area of art history, for a total of 6 credit hours. Prerequisite: Art history major; senior standing; consent of instructor, and Art Department chair.

ART 421 – BFA Seminar II (3 hours)**Core Curr. EL**

Professional orientation and career preparation through concentrated studio production, creative media research, critique analysis, on-site visitation of artists' studios, formulation of artist thesis statement, resume and portfolio preparation, exhibition design management, culminating B.F.A. exhibition. Prerequisite: BFA candidacy; senior standing.

ART 426 – Photographic Portfolio (3-6 hours)**Core Curr. EL**

Preparation of photographic portfolio for the fine arts or for publication photography. Research into successful photographers' works; selection; development of personal aesthetic. Archival and professional presentation of the prints or other media.

ART 427 – Advanced Photographic Digital Imaging (3-6 hours)

A studio course focusing on the cutting edge of fine art digital photography, from shooting to image editing and printing. Color calibration, advanced digital imaging techniques, output options, substrate choices, and design concepts are discussed in depth. Using the students' own images to create individual portfolios, students learn how to produce high-quality digital input and output.

Prerequisite: Art 225, Art 228, Art 327 or consent of Art Department chair

ART 490 – Art Seminar (3 hours)**Core Curr. WI**

Art history and theory seminar. May be repeated under different topics for a maximum of twelve credit hours. Cross-listed under ART 590. Prerequisite: Senior art or art history major.

ART 494 – Visual Art Expedition (1-3 hours)

Students travel to observe or engage in artistic production making use of the resources of the particular location. Advanced study and/or experiences in art and design. May be repeated up to 9 hrs. Topics, destinations, and prerequisites stated in current Schedule of Classes.

ART 496 – BFA Design Senior Project (3-6 hours)

Senior BFA students in graphic design, working closely with an instructor, select and execute a visual communication project; researching and defining the scope, documenting the process of problem-solving, and placing the project in an appropriate historical and theoretical context. Prerequisite: ART 305, ART 306, declared graphic design concentration, BFA candidacy, senior standing, and consent of instructor.

ART 500 – Advanced Studio (3-6 hours)

Advanced work in printmaking, drawing, photography, ceramics, sculpture, interdisciplinary studio or painting. Repeatable to a maximum of 6 hours. Prerequisite: Graduate standing or completion of corresponding senior level course.

ART 590 – Art Seminar (3 hours)

Art history and theory seminar. May be repeated under different topics for a maximum of twelve credit hours. Cross-listed under 490. Prerequisite: Graduate standing or qualified undergraduate art history major.

ART 600 – Photography Studio (1-6 hours)

Development of advanced technical, aesthetic and conceptual concerns through experimentation within the photographic media relating to appropriate historical and contemporary references. Repeatable to a maximum of 33 hours. Prerequisite: Graduate Standing

ART 605 – Critique Seminar (1 hour)

Critique seminar, repeatable to a maximum of six hours. Prerequisite: Graduate standing.

ART 610 – Drawing Studio (1-6 hours)

Analytical and conceptual evaluation of individual style and content emphasizing technical, creative, and digital competencies on a professional level. Repeatable to a maximum of 33 hours. Prerequisite: Graduate Standing

ART 620 – Printmaking Studio (1-6 hours)

Technical and conceptual development with intaglio, relief, and planographic printing. Etching, engraving, wood, paper, and plastic relief printing, serigraphy and lithography. Repeatable to a maximum of 33 hours. Prerequisite: Graduate Standing

ART 630 – Ceramics Studio (1-6 hours)

Techniques and material used in stoneware earthenware and porcelain production. Emphasis on creative development and technical competence. Repeatable to a maximum of 33 hours. Prerequisite: Graduate Standing

ART 640 – Sculpture Studio (1-6 hours)

Technical and conceptual information about wood and stone carving and construction, welding and metal fabrication, foundry practice, emphasizing individual development. Repeatable to a maximum of 33 hours. Prerequisite: Graduate Standing

ART 650 – Pedagogy (3 hours)

Focus of this course is the teaching practice of artistic concepts, foundations of art and subject matter of technical, historical and conceptual content in art curricula. Students will be exposed to the many issues of conveying ideas, and motivating students to make the educational experience meaningful. Practical issues of : teaching philosophy, resources, syllabi creation, assessment and course planning will be part of the discussion. Prerequisite: Graduate Standing

ART 660 – Interdisciplinary Studio (1-6 hours)

Advanced work in more than one concentration. May include two- or three-dimensional media; may incorporate installation work, performance, construction, and creative expression with interrelated forms of fine arts and design. Repeatable to maximum of 9 hours. Prerequisite: Graduate Standing

ART 660 – Interdisciplinary Studio (1-6 hours)

Advanced work in more than one concentration. May include two- or three-dimensional media; may incorporate installation work,

performance, construction, and creative expression with interrelated forms of fine arts and design. Repeatable to maximum of 9 hours. Prerequisite: Graduate Standing

ART 660 – Interdisciplinary Studio (1-6 hours)

Advanced work in more than one concentration. May include two- or three-dimensional media; may incorporate installation work, performance, construction, and creative expression with interrelated forms of fine arts and design. Repeatable to maximum of 9 hours. Prerequisite: Graduate Standing

ART 670 – Painting Studio (1-6 hours)

Advanced painting in the medium and direction of the student's choice. Emphasis on creative development and technical competence. Repeatable to a maximum of 33 hours. Prerequisite: Graduate Standing

ART 680 – Special Problems (1-6 hours)

Problems in area of students interest as advised by instructor. Repeatable to a maximum of 18 hours. Prerequisite: Graduate Standing

ART 689 – Design Research and Collaboration (3 hours)

A design problem that responds to social, economic, and environmental concerns created in consultation and collaboration with a corporation, institution, or government agency under the supervision of the faculty. Repeatable to a maximum of 9 hours. Prerequisite: Graduate Standing

ART 690 – Seminar (3 hours)

Research and presentation of art topics ranging from history to contemporary concerns of the artist, to interdisciplinary courses consisting of an organized sequence of guest speakers. May be repeated under different topics to a maximum accumulated credit of 18 hours.

ART 694 – Visual Communications and Design Studio (1-6 hours)

Working with hypothetical environments and data, focuses on design development, problem-solving skills, visualization and invention. Concept, exploration emphasized while developing a personal creative vision and understanding of current graphic design practices and technology. Repeatable to a maximum of 33 hours. Prerequisite: Graduate Standing

ART 695 – Theory and Criticism (3-6 hours)

Research, discussion and presentation on topics in fine arts and design, including contemporary trends, philosophies, literature and history. Repeatable to a maximum of 6 semester hours Prerequisite: Graduate Standing

ART 696 – Advanced Digital Design (3-6 hours)

Advanced work in applied software for web design, animation, rapid prototyping, interactive design and experience design. Repeatable to 9 semester hours. Prerequisite: Graduate Standing

ART 697 – Design Management (3-6 hours)

Development phases of real-world project execution, including: research, problem definition, planning, cost and budget analysis, organization, and presentation of information for business, public institutions, government and the entertainment industry. Repeatable to 9 hours. Prerequisite: Graduate Standing

ART 698 – Thesis Exhibition (0-3 hours)

At the beginning of their second semester, studio art M.A. candidates must submit a proposal that defines their evolving work. Full time M.A. candidates register for Art 698 for the third semester. At this time candidates present thesis exhibitions for review by the graduate faculty and other invited participants. A written comprehensive exam also supplements the exhibition. Upon successful completion of all academic and exhibition requirements, students may be invited to continue toward completion of the M.F.A. requirements. Prerequisite: Candidacy for M.A.

ART 699 – Thesis Exhibition M.F.A. (0-3 hours)

At the beginning of the second semester, M.F.A. candidates submit a proposal that defines their evolving thesis work. During the last semester of their final year, all M.F.A. candidates will be registered for Art 699 and will present thesis exhibitions for review by graduate faculty and other invited guests. A written comprehensive exam done in consultation with the student's graduate committee supplements the exhibition. Prerequisite: M.A. and candidacy for M.F.A.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Communication



Communication

FACULTY Professors: Adams (Chair), Gullifor, Dickhaus, Gabor, Banning, Netzley; Associate Professors: Horn; Assistant Professors: Guo, Marsh; Instructors in Residence: Eilola, Lennie, Sandoval.

Mission

Programs in the Department of Communication integrate academic study of communication with professional education in advertising & public relations, journalism, organizational communication, sports communication, and media production. We encourage collaboration among faculty, students, external partners, and the community. We embrace and support the democratic principles of a free, open, and diverse society. Our mission is to educate students to think, act, and communicate effectively, ethically, critically, and creatively in the global environment to enrich their personal and professional lives.

Admission Requirements

1. Bradley students transferring into the department must have a 2.25 grade point average for at least 12 hours of course work in order to declare a major and/or minor in the Department of Communication.
2. Students transferring from other institutions must have a 2.25 overall grade point average to be admitted to a major and/or minor in the department. External transfer students not having a 2.25 overall grade point average must earn a 2.25 at Bradley for at least 12 hours of course work before declaring a major and/or minor in the department. Courses taken at other institutions must be evaluated by the Admissions Office and then by the department's advisor for transfer students.
3. Internal and external transfer students may need at least one extra semester to complete graduation requirements because of prerequisites and core course requirements in the major and/or minors.
4. Current Bradley University students and external transfer students who meet departmental admission requirements and who wish to change to or add a communication major must first meet with the department chair for an initial academic advisement session. Applications may be processed at any time except during the following periods:
 - Seven workdays prior to the beginning of the semester to the end of the drop/add period as defined in the academic calendar in the Schedule of Classes.
 - Seven workdays prior to the beginning of early registration to the end of the early registration period as defined in the academic calendar in the Schedule of Classes.

General Requirements:

1. Students must earn a C or better in every core course.

2. Students may not enroll in communication courses for which a core course is a prerequisite unless they have earned a C or better in the core course.
3. For graduation, all department majors must have a grade point average of 2.25 for all courses taken in the major and/or minor (including courses outside the department required for the major).
4. Department majors and/or minors may not apply a course to more than one requirement .
5. Both the Organizational Communication Minor and Journalism minor are open to department majors.

Major Requirements

Course Requirements:

Must complete requirements for the core and one major.

Core Requirements

- COM 101 Survey of Communication – 3 hrs.
- COM 300 Communication Theory – 3 hrs.
- COM 417 Issues and Perspectives in Communications – 3 hrs.

Total Core Hours Required – 9 hrs.

Majors: Advertising, Journalism, Organizational Communication, Public Relations, Sports Communication, Media Production.

Advertising & Public Relations Major

COM Core Courses – 9 hrs.

- COM 101: Survey of Communications – 3 hrs
- COM 300: Communication Theory – 3 hrs
- COM 417: Issues and Perspectives in Communication – 3 hrs

Advertising & Public Relations: Core Courses – 24 hrs

- COM 201 Journalistic Writing – 3 hrs
- COM 219 Public Relations – 3 hrs
- COM 220 Advertising as Communication – 3 hrs
- COM 320 Advertising Creative Strategy – 3 hrs
- COM 322 Media Planning – 3 hrs
- COM 325 Advertising Design and Production – 3 hrs
- COM 327 Public Relations Writing – 3 hrs
- COM 400 Communications Research – 3 hrs

Advertising & Public Relations: Capstone (choose one)

- COM 480 Public Relations: Case Studies & Campaigns – 3 hrs
- COM 481 Advertising Campaigns – 3 hrs

Advertising & Public Relations: Electives (choose two)

- COM 318 Health Communication – 3 hrs
- COM 326 Digital Analytics – 3 hrs
- COM 360 Digital Journalism – 3 hrs
- COM 383 Desktop Publishing – 3 hrs
- COM 388 Social Media Communication – 3 hrs
- COM 391 Topics in Communication – 3 hrs
- COM 437 Advertising in a Global Environment – 3 hrs
- COM 438 Public Relations in a Global Environment – 3 hrs
- COM 447 Issues and Ethics in Advertising (WI) – 3 hrs
- COM 480 Public Relations: Case Studies & Campaigns – 3 hrs
- COM 481 Advertising Campaigns – 3 hrs
- COM 491 Topics in Communication – 3 hrs
- COM 494 Communication Expedition – 3 hrs
- COM 495 Communication Internship – 3 hrs

Total Hours Required for Major: 42

Journalism Major

Major Requirements (18 hrs.)

- COM 201 Journalistic Writing – 3 hrs.
- COM 215 Basic Reporting – 3 hrs.
- COM 225 Visual Storytelling – 3 hrs.
- COM 330 Communication Law and Ethics – 3 hrs.
- COM 360 Digital Journalism – 3 hrs.
- COM 425 Advanced Reporting – 3 hrs.

Electives (12 hrs.)

One course (3 hrs.) from:

- COM 315 Intercultural Communication Theory – 3 hrs.
- COM 386 Media, Race, and Gender – 3 hrs.
- COM 415 Global Media Systems – 3 hrs.

Three courses (9 hrs.) from:

- ART 228 Basic Digital Photography – 3 hrs.
- COM 204 Audio Production – 3 hrs.
- COM 307 News Feature Writing – 3 hrs.
- COM 310 Broadcast News Reporting and Writing – 3 hrs.
- COM 314 Introduction to Video: Studio Production – 3 hrs.
- COM 323 Newspaper Editing and Design 3
- COM 335 Introduction to Video: Field Production – 3 hrs.
- COM 340 Magazine Production – 3 hrs.
- COM 345 Photojournalism and Documentary Photography – 3 hrs.
- COM 365 Digital Photography – 3 hrs.
- COM 414 Advanced Video – Studio Production – 3 hrs.
- COM 435 Advanced Video – Field Production – 3 hrs.
- COM 494 Communication Expedition – 1–3 hrs.
- COM 495 Communication Internship – 1–3 hrs.

Total Hours Required for Major: 39

Organizational Communication Major

Core Requirements (9 hrs.)

- COM 101 Survey of Communication – 3 hrs.
- COM 300 Communication Theory (WI) – 3 hrs.
- COM 417 Issues & Perspectives in Communication (WI) – 3 hrs.

Required Courses (18 hrs.)

- COM 201 Journalistic Writing – 3 hrs.
- COM 219 Public Relations – 3 hrs.
- COM 292 Organizational Communication – 3 hrs.
- COM 392 Case Studies in Organizational Communication – 3 hrs.
- COM 393 Small Group Communication – 3 hrs.
- COM 400 Communications Research – 3 hrs.

Elective Courses (Choose 9 hrs.)

- COM 318 Health Communication – 3 hrs.
- COM 326 Digital Analytics – 3 hrs.
- COM 327 Public Relations Writing – 3 hrs.
- COM 384 Organizational Accidents – 3 hrs.
- COM 387 Strategic Communication in Organizational Contexts – 3 hrs.
- COM 388 Social Media Communication – 3 hrs.
- COM 394 Communication and Conflict Management – 3 hrs.
- COM 395 Interviewing Communication: Process and Strategy – 3 hrs.

- COM 397 Virtual Teams, Communication and Collaboration – 3 hrs.
- COM 416 Researching Communication and Organizational Culture – 3 hrs.

Communication Courses (Choose 3 hrs.)

- COM 305 The Persuasive Process – 3 hrs.
- COM 315 Intercultural Communication Theory – 3 hrs.
- COM 430 Media Management – 3 hrs.
- COM 495 Communication Internship – 3 hrs.

Total Hours Required for Major: 39

Sports Communication Major

Required Courses (24 hrs.)

- IM 113 Introduction to Multimedia – 3 hrs.
- COM 160 Sports, Media, and Society – 3 hrs.
- COM 201 Journalistic Writing – 3 hrs.
- COM 265 Ethical Issues in Sports Communication – 3 hrs.
- COM 360 Digital Journalism – 3 hrs.
- COM 370 Global Perspectives on Sport – 3 hrs.
- COM 400 Communications Research – 3 hrs.
- COM 460 Sports Promotion and Publicity – 3 hrs.

Required Non-Communication Course (3 hrs.)

- Choose one of the following:
 - ATG 101 Survey of Accounting – 3 hrs.
 - ATG 157 Accounting Principles-Financial – 3 hrs.
 - MTH 111 Elementary Statistics – 3 hrs.

Required Electives (6 hrs.)

Students should select 6 hours from this list of electives, with at least 3 hours from the junior/senior level:

- COM 215 Basic Reporting – 3 hrs.
- COM 219 Public Relations – 3 hrs.
- COM 220 Advertising as Communication – 3 hrs.
- COM 260 Sports Writing and Announcing – 3 hrs.
- COM 292 Organizational Communication – 3 hrs.
- COM 310 Broadcast News Reporting and Writing – 3 hrs.
- COM 335 Introduction to Video: Field Production – 3 hrs.
- COM 415 Global Media Systems – 3 hrs.
- COM 420 Media Sales – 3 hrs.
- COM 430 Media Management – 3 hrs.
- COM 491 Topics in Communication* 1–3
- COM 494 Communication Expedition* 1–3
- COM 495 Communication Internship 1–3

* Must be sports related. Requires approval of department chair. No more than three hours from COM 491, 494, and 495 combined may count toward the major.

Total Hours Required for Major: 33

Media Production Major

Required Courses (9 hrs.)

- COM 101 Survey of Communication – 3 hrs.
- COM 300 Communication Theory – 3 hrs.
- COM 417 Issues and Perspectives in Communication – 3 hrs.

Major Requirements (24 hrs.)

- COM 112 Introduction to Media Production – 3 hrs.

- COM 201 Journalistic Writing – 3 hrs.
- COM 203 Media Industries – 3 hrs.
- COM 204 Audio Production – 3 hrs.
- COM 314 Studio Production – 3 hrs.
- COM 335 Field Production – 3 hrs.
- COM 409 Screenwriting – 3 hrs.
- COM 445 Short Film Production – 3 hrs.

Three Electives (9 hrs.)

“Production” Electives (select two)

- COM 308 Podcasting & Audio Storytelling – 3 hrs.
- COM 375 Documentary Production – 3 hrs.
- COM 414 Advanced Studio Production – 3 hrs.
- COM 435 Advanced Field Production – 3 hrs.
- COM 475 Immersive Media Production – 3 hrs.
- COM 495 Communication Internship – 3 hrs.

“Studies” Electives (select one)

- CFA 221 Media Aesthetics – 3 hrs.
- CFA 250 Film History – 3 hrs.
- COM 330 Communication Law & Ethics – 3 hrs.
- COM 350 Streaming – 3 hrs.
- COM 450 Media Distribution & Promotion – 3 hrs.

Total Hours Required for Major: 42

Minor Requirements

The Department of Communication offers a minor in Journalism, Organizational Communication, and a minor in Advertising and Public Relations. All minors are *open to department majors*.

Organizational Communication

The minor offers a relevant set of skills, knowledge, and abilities such as group and organizational communication, conflict resolution, consulting, and interviewing skills. The OC minor enhances other programs of study and provides career flexibility. Students with a minor in organizational communication will develop an understanding of organizational communication issues applicable to all types of organizations.

A minimum cumulative GPA of 2.25 must be earned in the minor. Department majors and/or minors may not apply a course to more than one requirement (e.g., if students pursue a Journalism major and an Organizational Communication minor, they cannot take COM 292 to complete both the elective requirement in JN and the basic requirement in OC).

Required Courses (9 hours)

- COM 292 Organizational Communication – 3 hrs.
- COM 392 Case Studies in Organizational Communication – 3 hrs.
- COM 393 Small Group Communication – 3 hrs.

Elective Courses (choose 9 hours)

- COM 305 The Persuasive Process – 3 hrs.
- COM 315 Intercultural Communications Theory – 3 hrs.
- COM 318 Health Communication – 3 hrs.
- COM 326 Digital Analytics – 3 hrs.
- COM 327 Public Relations Writing – 3 hrs.
- COM 384 Organizational Accidents – 3 hrs.
- COM 388 Social Media Communication – 3 hrs.
- COM 394 Communication and Conflict Management – 3 hrs.
- COM 395 Interviewing Communication: Process and Strategy – 3 hrs.
- COM 397 Virtual Team, Communication and Collaboration – 3 hrs.
- COM 416 Researching Organizational Cultures – 3 hrs.

Total Hours Required for Minor: 18

Journalism

The minor allows students to develop journalistic skills — writing, editing, sourcing, interviewing, etc. — while learning the necessary technical capabilities, the history and ethics of the field, the legal underpinnings, the social responsibility of journalists, and a broader understanding of the news media industry and its practices.

Students will find these skills applicable in a variety of careers, whether they intend to pursue a news media or communications job, graduate or legal study, or any pursuit requiring strong writing skills, knowledge of public affairs, and critical thinking.

A minimum cumulative GPA of 2.25 must be earned in the minor. Department majors and/or minors may not apply a major or minor elective course to more than one requirement.

Required Courses (12 hours)

COM 201 Journalistic Writing – 3 hrs.

COM 215 Basic Reporting – 3 hrs.

COM 225 Visual Storytelling – 3 hrs.

COM 425 Advanced Reporting – 3 hrs.

Electives (choose 6 hours)

COM 204 Audio Production – 3 hrs.

COM 307 Feature Writing – 3 hrs.

COM 310 Broadcast News Reporting and Writing – 3 hrs.

COM 314 Intro to Video – Studio Production – 3 hrs.

COM 323 Newspaper Editing and Design – 3 hrs.

COM 330 Comm Law and Ethics – 3 hrs.

COM 335 Intro to Video – Field Production – 3 hrs.

COM 340 Magazine Production – 3 hrs.

COM 345 Photojournalism and Documentary Photography – 3 hrs.

COM 360 Digital Journalism – 3 hrs.

Total hours: 18

Advertising and Public Relations

Required Courses (15 hours)

- *COM 219: Public Relations – 3 hrs.
- *COM 220: Advertising as Communication – 3 hrs.
- COM 320: Advertising Creative Strategy – 3 hrs.
- COM 322: Media Planning – 3 hrs.
- COM 327: Public Relations Writing – 3 hrs.

*Although COM 101 and COM 201 are required prerequisites for COM 219 and COM 220, advertising and public relations minors are exempt from needing to fulfill these prerequisites.

Elective Courses (choose one) – 3 hrs.

- COM 318: Health Communication – 3 hrs.
- COM 325: Advertising Design and Production – 3 hrs.

- COM 326: Digital Analytics – 3 hrs.
- COM 383: Desktop Publishing – 3 hrs.
- COM 388: Social Media Communication – 3 hrs.
- COM 437: Advertising in a Global Environment – 3 hrs.
- COM 438: Public Relations in a Global Environment – 3 hrs.
- COM 447: Issues and Ethics in Advertising (WI) – 3 hrs.

Total Hours: 18 hrs

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Communication Courses



Communication Courses

COM 101 – Survey of Communication (3 hours)

Provides an overview of the nature, functions, and responsibilities of the communication industries in a global environment with an orientation toward the Department of Communications current disciplines.

COM 103 – The Oral Communication Process (3 hours)

Gen. Ed. SP

Core Curr. CM OC

Theories and skills of oral communication. Emphasis on basic principles of thought, content, organization, style, delivery, and the interaction of communication and culture.

COM 104 – Honors Public Performance (3 hours)

Theories and skills of oral communication with an emphasis on maximum communication competency. Principles of thought, content, organization, style, delivery, and audience will be thoroughly and creatively examined. Course is for Honors students only.

COM 112 – Introduction to Media Production (3 hours)

Survey of concepts, skills, and tools of audio and video production. Emphasis on foundational modes of storytelling using mobile devices.

COM 160 – Sports, Media and Society (3 hours)

The social, political, economic, historical, and ethical significance of the intersection of sports, media, and society. Prerequisite: COM 101

COM 201 – Journalistic Writing (3 hours)

Basic writing: selecting, organizing, and structuring information for print and broadcast journalism. Prerequisite: COM 101; ENG 101.

COM 202 – Basic Advertising Writing (3 hours)

Principles and practice of effective advertising writing. Selecting, organizing, and structuring information for advertising writing. Prerequisite: COM 101; ENG 101.

COM 203 – Media Industries (3 hours)

Core Curr. WI

Overview of media industries: radio, television, and related emergent technologies. Local, regional, national, and international networks, and programming services. Broadcast and broadband distribution; roles of government, advertisers, agencies, and audiences. Prerequisite: COM 101

COM 204 – Audio Production (3 hours)

Study and practice in the operation of basic audio production equipment. Production techniques and critique. Prerequisite: COM 101, 112, 201; or consent of instructor.

COM 209 – Forensics (1 hour)

Research and performance laboratory for students who participate in intercollegiate and community speech activities. Repeatable to a maximum of 6 credit hours. Prerequisite: COM 103; consent of Forensics Director.

COM 215 – Basic Reporting (3 hours)

Practice in news gathering, beat reporting, interviewing, and writing basic news stories. Prerequisite: COM 101, 201; ENG 101

COM 219 – Public Relations (3 hours)

Nature, practices, ethics, and problems of public relations. Prerequisite: COM 101 and COM 201; or Advertising-Public Relations Minor

COM 220 – Advertising As Communication (3 hours)

Introduction to the foundations, nature, and practice of advertising; commercial aspects of communications. Ethical, legal and social responsibility aspects of advertising. Prerequisite: COM 101 and COM 201; or Advertising-Public Relations Minor

COM 225 – Visual Storytelling (3 hours)

Practice in visual storytelling using video, audio, still photography, and other means of conveying information to create a journalistic report in a documentary style for multiple publishing platforms. Prerequisite: COM 101, COM 201.

COM 260 – Sports Writing and Announcing (3 hours)

The skills of writing and announcing for the electronic media. Prerequisite: COM 101, ENG 101, IM 113; and COM 201 or COM 202

COM 265 – Ethical Issues in Sports Communication (3 hours)

Com 265 is a course than analyzes the ethical issues that are prevalent in sports today. Prerequisite: COM 101 and COM 160

COM 292 – Organizational Communication (3 hours)

Introduction to organizational communication including perspectives on organizing, the nature of communication within organizations, organizational culture, enhancing communication competence, innovation, technology, and organizational change, and contemporary issues. Prerequisite: COM 103.

COM 300 – Communication Theory (3 hours)**Core Curr. WI**

Theories and variables of human communication in the interpersonal, group, organizational, intercultural, mediated, and global systems. Prerequisite: COM 101; minimum of 45 credit hours.

COM 303 – Rhetorical Perspectives in Organizational Communication (3 hours)

Rhetoric is the strategic use of symbols to generate meanings. Studying rhetoric examines how people are coordinated via discourses thereby producing critical interpretations of how, when, and why discourses are effective and persuasive. Organizational rhetoric is the strategic use of symbols to influence the thoughts, feelings, and behaviors of audiences important to the operation of organizations. The course focuses on rhetorical perspectives in five typical and recurring organizational contexts: identity rhetoric, issues rhetoric, risk rhetoric, crisis rhetoric, and rhetoric for internal audiences. We will emphasize the ethical dimensions of organizational communication during the strategic use of discourse. Prerequisite: COM 103; junior/senior standing; COM 292 or consent of instructor

COM 305 – The Persuasive Process (3 hours)**Core Curr. WI,EL**

How persuasive communication influences human behavior. Emphasis on recent theories of persuasion and experimental research. Creating persuasive messages and evaluating persuasive attempts. Prerequisite: COM 103 or consent of instructor.

COM 307 – News Feature Writing (3 hours)

Writing local news features and special feature stories for Sunday supplements, magazine sections, and magazines. Prerequisite: COM 101, 201, 215; ENG 101.

COM 308 – Podcasting & Audio Storytelling (3 hours)**Core Curr. MI**

Examines podcasting formats, genres, and industry conditions in preparation for the creation and distribution of audio stories. Prerequisite: Junior standing or consent of instructor

COM 310 – Broadcast News Writing and Reporting (3 hours)

Focus on producing, writing, reporting, and critiquing broadcast news. On-air performance including in-studio and live breaking news. Prerequisite: COM 101, 201, 215; ENG 101.

COM 314 – Studio Production (3 hours)

Television production techniques, theories, and fundamental skills as applied to multi-camera live studio production. Prerequisite: COM

101, 112, 201, 204; or consent of instructor.

COM 315 – Intercultural Communication Theory (3 hours)

Gen. Ed. CD

Core Curr. GP WC,MI

Communication across diverse cultures. Intercultural communication theory, skills, and concepts. Developing specific communication skills to facilitate effective communication in intercultural settings. Prerequisite: COM 103; junior standing.

COM 318 – Health Communication (3 hours)

This survey course provides a broad overview of the field of health communication research, theory, and practice. With a focus on both organizational structures within the healthcare landscape and the role of mass media in defining health and wellness, this course offers various contexts to analyze health communication. Throughout the course students will evaluate existing health communication initiatives with a culminating experience of designing their own strategic campaign. Both physical and mental health will be discussed during the semester. Prerequisite: Junior standing or consent of instructor

COM 320 – Advertising Creative Strategy (3 hours)

Formulation and techniques of creative strategy. Copywriting for print and electronic media. Prerequisite: COM 220

COM 322 – Advertising Media Planning (3 hours)

Development of media plans and schedules to deliver advertising messages to target markets in media audiences. Advertising media vehicles evaluated in terms of creative requirements, audience characteristics, and cost efficiency. Prerequisite: COM 220

COM 323 – Newspaper Editing and Design (3 hours)

Extensive practice in copy editing and headline writing for newspapers with an emphasis on grammar, style, and accuracy. Introduction to the principles of newspaper design. Prerequisite: COM 101, 201, 215; ENG 101.

COM 325 – Advertising Design and Production (3 hours)

Application of advertising principles and techniques in the design and preparation of ads for newspapers, posters, magazines, sales brochures, and direct marketing. Prerequisite: COM 320

COM 326 – Digital Analytics (3 hours)

Core Curr. EL

The course offers concepts, tools, tutorials, and case studies that communication professionals need to extract and analyze different types of social media data, including text, actions, and search engines. Prerequisite: Junior standing or consent of instructor.

COM 327 – Public Relations Writing (3 hours)

Promotional writing for publicity and public relations; practice preparing product, personnel, and organizational news releases. Special needs of various media. Prerequisite: COM 219

COM 330 – Communication Law and Ethics (3 hours)

Core Curr. WI,EL

Laws covering all the media; libel, privacy, copyright, and intellectual property; federal and state laws; unique broadcast and Internet regulations; nexus between the legal and the ethical in the practice of journalism.

COM 335 – Field Production (3 hours)

Use of portable cameras, lighting, and audio equipment as it relates to field production techniques. Post-production editing for news, feature, and general media production. Aesthetics, visualization, and societal impact of the medium. Prerequisite: COM 101, 112, 201, 204 or consent of instructor.

COM 345 – Photojournalism and Documentary Photography (3 hours)

Technical, aesthetic, and ethical concerns of the photojournalist and documentarian. Photographs for newspapers, magazines, and interactive media. The photographic essay. Pictorial coverage of events. Prerequisite: ART 225; IM 113; or consent of instructor.

COM 350 – Streaming (3 hours)

Surveys issues related to streaming technology, specific streaming portals, and the social, cultural, industry, and economic developments catalyzed by streaming. Focus on streaming video and music portals as well as video-oriented social platforms. Prerequisite: COM 101, 203; consent of instructor

COM 360 – Digital Journalism (3 hours)

Core Curr. EL

Designed to help students effectively use cutting-edge interactive technologies employed in online journalism and to understand their applications. Prerequisite: COM 101, ENG 101; and COM 201 or COM 202.

COM 370 – Global Perspectives in Sports Communication (3 hours)

Examines theoretical perspectives on sport in a global environment. Critical analysis of sports communication in relation to cultural identities, nationalism, international relations, economics, and politics. Prerequisite: COM101, COM160, junior standing

COM 375 – Documentary Production (3 hours)

Contemporary practices in documentary production techniques including on-location field camera work, lighting, audio, and post-production editing with an emphasis on visual storytelling. Prerequisite: COM 101, 112, 201, 204, 335; consent of instructor

COM 383 – Desktop Publishing (3 hours)

Desktop publishing. Lecture, discussion, and preparation of public relations portfolio using various software.

COM 384 – Organizational Accidents (3 hours)**Core Curr. MI,SB**

Course introduces concepts such as high-reliability, organizational accidents and organizational culture as they intersect with issues of safety, risk management, latent and active failures in firefighting, medicine, energy and airline industry. Prerequisite: Junior standing or consent of instructor.

COM 386 – Media, Race, & Gender (3 hours)**Gen. Ed. CD****Core Curr. WI**

An examination of the historical and current media portrayal and involvement of women and ethnic minorities indigenous to America, with special emphasis on the growth and development of minority media and media systems. Prerequisite: Junior standing.

COM 387 – Strategic Communication in Organizational Contexts (3 hours)

Focus is on strategic communication and communication competence in interpersonal, team, and organizational contexts. Designed to enhance strategic message competence and communication skill in managing relationships, exerting influence and leadership, managing conflict, managing personal, team, and organizational identity, managing conflict, managing organizational change and so forth. Prerequisite: COM 103; COM 292, or consent of instructor.

COM 388 – Social Media Communication (3 hours)

Provides knowledge, critical thinking ability and skills needed to meet the personal, professional, and cultural challenges posed by social-mediated communication. Prerequisite: Communication 103

COM 391 – Topics in Communication (1-3 hours)**Core Curr. WI**

Topics of special interest which may vary each time course is offered. May be repeated under different topics. Prerequisite: Junior standing.

COM 392 – Case Studies in Organizational Communication (3 hours)**Core Curr. EL**

Problems and issues in organizational communication are analyzed through case histories, exercises, and projects. Prerequisite: COM 103, 292.

COM 393 – Small Group Communication (3 hours)

Examines theory and research in small group communication in the context of the organization. Prerequisite: COM 103, 292; or consent of instructor.

COM 394 – Communication and Conflict Management (3 hours)**Core Curr. SB**

Furnishes learners with an understanding of the nature, purpose, and function of conflict and communication rules and strategies for managing and resolving conflict. Prerequisite: COM 103.

COM 395 – Interviewing Communication: Process and Strategy (3 hours)

The purpose, structure, focus, and techniques employed in effective interviewing. Furnishes knowledge and skills necessary for enhancing effectiveness in several types of interviewing contexts, including employment interviews, journalistic interviews, appraisal interviews, and counseling/medical interviews. Prerequisite: COM 103, 292; or consent of instructor.

COM 396 – Communication and Organizational Change (3 hours)

Examines the use of communication technology in organizations and the range of factors which foster the need for organizational change. Furnishes an understanding of how to analyze and diagnose organizational problems and situations and identify and evaluate communication-relevant change management strategies. Prerequisite: COM 103, 292; or consent of instructor.

COM 397 – Virtual Team, Communication and Collaboration (3 hours)

Furnishes conceptual understanding of: 1) the nature of human communication and collaboration; 2) collaboration technologies; and 3) rules and strategies for using technology to enhance team and organizational effectiveness. Prerequisite: COM 103, 292; or consent of instructor.

COM 398 – Communication Training and Development (3 hours)

Theory and practice of training for developing the human resources in the organization. Topics include adult learning theory and

research, methods of assessing communication training needs and learning styles, design of effective communication training, presentation skills, and evaluation methods. Prerequisite: COM 103.

COM 399 – Communication in Computer-Mediated Environments (3 hours)

Nature, function, and process of communication in diverse computer-mediated environments. Enhances learners' ability to communicate competently in technologically complex computer-mediated environments.

COM 400 – Communications Research (3 hours)

Research procedures commonly used in communications research, including qualitative and quantitative methods. Emphasis on sampling data collection and analysis. Not open to students with credit in COM 440. Prerequisite: COM 101, 300; minimum of 45 credit hours.

COM 409 – Screenwriting (3 hours)

Core Curr. WI

Exploration of the screenwriting process from concept to outline to completed short film or episodic/series script. Emphasis on character development, three-act structure, and conflict exploration. Prerequisite: Junior Standing; or consent of instructor. Cross-listed with ENG 409

COM 414 – Advanced Studio Production (3 hours)

Production of the student-produced weekly news program, BUTV News. Coordination of a live multi-camera newscast with in-studio interviews and live on-location reporting. Multi-camera live music performance production. Prerequisite: COM 101, 112, 201, 204 and 314

COM 415 – Global Media Systems (3 hours)

Study of mass media systems throughout the world: their history, development, theories of control, international news agencies, and new technologies. Prerequisite: COM 101; senior standing or consent of instructor.

COM 416 – Researching Communication in Organizational Culture (3 hours)

Core Curr. WI,EL

Introduces students to the use of qualitative methods of data collection aimed at understanding the relationship between organizational culture and communication. Methods include interviewing, field observations, and analysis of organizational websites and documents. Prerequisite: COM 103, COM 292, and junior status; or consent of instructor

COM 417 – Issues and Perspectives in Communication (3 hours)

Core Curr. WI

Analysis and discussion of communication issues, ethics, and perspectives. Prerequisite: COM 101, 300; senior standing.

COM 420 – Media Sales (3 hours)

The economics, strategies, and techniques involved in media sales. Prerequisite: COM 203 and junior standing

COM 425 – Advanced Reporting (3 hours)

Intensive practice in multiplatform coverage of urban affairs; introduction to methods of investigative reporting. Focus on the social and political context of the news. Prerequisite: COM 101, 201, 215, 225; ENG 101.

COM 430 – Media Management (3 hours)

Theory and operation of media organizations including management and administrative issues. Cost and revenue analysis, budgeting, and personnel management. Prerequisite: COM 203; senior standing or consent of instructor.

COM 435 – Advanced Field Production (3 hours)

Advanced use of cameras, lighting, and audio equipment in the field. Advanced post-production and editing techniques. News and feature production for BUTV News. Prerequisite: COM 101, 112, 201, 204, and 335.

COM 437 – Advertising in A Global Environment (3 hours)

Comparative analysis of interaction among advertising, cultures, and economic, legal, and political systems. Designing and developing appropriate advertising strategies for diverse cultural markets. Prerequisite: COM 220

COM 438 – Public Relations in A Global Environment (3 hours)

Public relations theory and practice in conjunction with cultural, geographic, and historic components of international practice of the profession. International media-public relations exchange and international public relations. Prerequisite: COM 219

COM 445 – Short Film Production (3 hours)

Contemporary practices in short film production techniques, including on-location field camera work, lighting, audio, and post-production editing with an emphasis on visual storytelling. Prerequisite: COM 101, 112, 201, 204, 335, and 409.

COM 447 – Issues and Ethics in Advertising (3 hours)

Core Curr. WI

Students will explore current issues in advertising with special emphasis on present advertising industry development, advertising laws,

advertising literature, special interest research, ethical issues, and problem-solving techniques. Prerequisite: Senior standing.

COM 450 – Media Distribution and Promotion (3 hours)

Examines distribution processes for film and television, including theatrical, broadcast, basic and premium cable, video, video-on-demand, subscription video-on-demand, free ad-supported television, and over-the-top. Explores the relationship between distribution and promotion among Hollywood studios, independents, and global entities. Prerequisite: COM 101, 203; junior standing; or consent of instructor.

COM 460 – Sports Promotion and Publicity (3 hours)

Basic principles involved in communicating activities of professional and non-professional sports organizations and institutions to their target audiences. Examination of sports-related corporate social responsibility and community relations initiatives in local, national, and international settings. Prerequisite: COM 101, ENG 101, IM 113, COM 160, COM 360; and COM 201 or COM 202.

COM 480 – Public Relations: Case Studies and Campaigns (3 hours)

Core Curr. EL

The capstone course in the PR sequence. Theory and strategy are stressed through studies of classic PR case programs and development of PR campaigns for actual businesses and organizations. A final campaign requires research, writing, production, application and analysis skills. Prerequisite: COM 327, COM 400, and senior standing

COM 480 – Public Relations: Case Studies and Campaigns (3 hours)

Core Curr. EL

The capstone course in the PR sequence. Theory and strategy are stressed through studies of classic PR case programs and development of PR campaigns for actual businesses and organizations. A final campaign requires research, writing, production, application and analysis skills. Prerequisite: COM 327, COM 400, and senior standing

COM 480 – Public Relations: Case Studies and Campaigns (3 hours)

Core Curr. EL

The capstone course in the PR sequence. Theory and strategy are stressed through studies of classic PR case programs and development of PR campaigns for actual businesses and organizations. A final campaign requires research, writing, production, application and analysis skills. Prerequisite: COM 327, COM 400, and senior standing

COM 481 – Advertising Campaigns (3 hours)

Core Curr. EL

The capstone course in the advertising sequence. Basic principles and applications of advertising campaign planning, preparation, and presentation taught in a problem-solving mode. Prerequisite: COM 325, COM 400, and senior standing

COM 490 – Independent Study (1-3 hours)

Individual creative research into various problems and aspects of the mass media. Requires application (available in Department Chair's office). May be repeated for a total of six hours. Prerequisite: junior standing and consent of instructor.

COM 491 – Topics in Communication (1-3 hours)

Topics of special interest which may vary each time course is offered. May be repeated under different topics. Prerequisite: senior standing.

COM 492 – Seminar in Communication (1-3 hours)

Core Curr. EL

Advanced study and/or work in performance, production, historical, critical, and theoretical aspects of communication. May be repeated under different topics, for a total of three semester hours. Prerequisite: Junior standing.

COM 494 – Communication Expedition (1-3 hours)

Students travel to observe professional communication and/or to engage in creative production making use of the resources of the particular location. Advanced study and/or experiences in communication settings. May be repeated under different topics for a maximum of 9 hours credit. Topics, destination, and prerequisites stated in current Schedule of Classes.

COM 495 – Communication Internship (1-3 hours)

Supervised experience at media outlets, companies, or organizations utilizing communication involving all phases of media operations. Application required (available from Intern Director). May be repeated once if in a different experience. Only 3 hours count toward major where applicable. Prerequisite: junior standing; 2.5 overall GPA, 2.75 major/minor GPA; completion of required courses in concentration (required courses listed on internship application form).

COM 501 – Media Theory (3 hours)

A survey of the principles and practices of contemporary media with an emphasis on how media messages and technologies influence attitudes, beliefs, and behaviors of individuals, groups, and institutions.

COM 502 – Research methods (4 hours)

Analysis and application of common research techniques used for studying media audiences. Emphasis on research design, sampling,

analysis, and reporting results. Prerequisite: Graduate standing and consent of department chair.

COM 503 – Communication and Culture (3 hours)

Exploration of the ways culture and identity influence the sending and interpretation of messages. Emphasis on microaggressions, ethnocentricity, prejudice, stereotypes, and ethics. Prerequisite: Graduate standing and consent of Department Chair.

COM 505 – Applied Project (4 hours)

This project is designed to show evidence that a student is absorbing what they are being taught over the course of study and can apply and examine that knowledge using a specific idea or topic. Prerequisite: Graduate standing and consent of department chair.

COM 601 – Sports, Culture, and Society (3 hours)

Introduces the core components of sports communication industries and analyzes the relationships and economies between professional sport contexts. Prerequisite: Graduate standing and consent of Department Chair.

COM 602 – Ethical and legal issues in sports communication (4 hours)

Emphasizes the ethical and legal issues that affect sports communication. Will include case studies of ethical and legal compliance and violation. Prerequisite: Graduate standing and consent of department chair.

COM 603 – The Stories of Sport (3 hours)

Introduces the role and importance of storytelling in sports contexts with the goal to identify strategic ways to use stories in sports publicity and promotion. Prerequisite: Graduate standing and consent of Department Chair.

COM 604 – Seminar in E-Sports (3 hours)

Offers an overview of E-Sports industries, including the benefits, inclusiveness, and structure of E-Sports organizations and competitions. Prerequisite: Graduate standing and consent of Department Chair.

COM 605 – Contemporary Issues in Sports Communication (3 hours)

Designed to explore current issues associated with sports communication. Topics include sports regulation, gambling, and politics. Prerequisite: Graduate standing and consent of Department Chair.

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General Studies Major in Communications and Fine Arts



General Studies Major in Communications and Fine Arts

Faculty: *Associate Dean, Slane College of Communications and Fine Arts, (Chair) and faculty representing the Department of Art, Communication, Interactive Media, Music and Theatre Arts.*

The General Studies Major in Communications and Fine Arts is an interdisciplinary degree program that provides students the opportunity to design a course of study based upon personal preference and career goals while meeting Bradley University's graduation requirements for a B.A. or B.S. degree. A General Studies Major in CFA holds the same value as all Bradley University degrees.

The curriculum for the General Studies Major in Communications and Fine Arts encourages free and creative thought, critical analysis, and exposes the student to a variety of social and scientific issues that are the basis for a well-rounded education. The knowledge gained through a firm grounding in the arts prepares the student for many different highly competitive job fields, and teaches skills applicable in every area of life. This general studies major assists students in demonstrating an awareness of the role that communication and fine arts play when combined with other unique courses of studies thus developing a creative and emerging career focus.

Students declare the general studies major in the Slane College of Communications and Fine Arts. The core of the General Studies Major in CFA is an area in communication or fine arts combined with two or more academic programs outside of the college that are incorporated into an individualized major. Students declaring a General Studies Major in CFA develop a coherent proposal for their specialized major. This proposal is prepared with the advice of an academic advisor. The detailed prospectus identifies career goals and objectives, and details how the interdisciplinary plan of study supports the proposed major

Students without definite academic plans should register in academic exploration rather than in the General Studies Major in Communications and Fine Arts Major.

Major Requirements

The Associate Dean and a committee of faculty in the Slane College of Communications and Fine Arts must approval all General Studies Major in CFA proposals and serve as academic advisors. Students must consult with the Associate Dean of the Slane College of Communications and Fine Arts in all phases of the major through graduation. Students must complete all Bradley University requirements for a B.A. or B.S. degree. The self-designed major must not duplicate existing majors at Bradley University.

Approved self-designed majors in the General Studies Major in CFA require a course of study consisting of minimum of 48 hours with at least 50 percent of the courses based in CFA. An internship or experiential-learning opportunity is a required component of the major.

Students write a proposal for a General Studies Major in CFA that clarifies specific intellectual ideals and goals for an academic plan,

indicates a proposed list of courses, and demonstrates that the program does not duplicate existing majors at Bradley University. The program assists students in demonstrating an awareness of the intricate role of communications or fine arts when combined with other unique courses of studies. The proposed program should specify the departments collaborating with the major and include a list of the courses from each of those departments. Transferred courses can be used. Proposals meeting the requirements are not guaranteed acceptance, but will be reviewed by the program committee.

Examples of possible careers:

- Museum Educator
- Communication Designs
- Art Therapist
- Fashion Communication
- Sports Recreation
- Public Relations and Event Planning
- Sports Sales

Application

Students should submit the following application to the Slane College of Communications and Fine Arts Dean's Office:

1. An official record of their past and present courses.
2. A written statement of their intellectual ideals and career goals.
3. A detailed plan of the courses from the academic catalog the student plans to take as part of the General Studies Major.
4. A rationale explaining how these courses facilitate the proposed course of study and the achievement of the student's ideals and goals.

Eligibility: Students are eligible for the program if they are at least second-semester freshmen with a minimum of 15 earned hours from Bradley University and have a grade point average of 2.25 or higher.

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Interactive Media



Interactive Media

FACULTY Associate Professor Cavanah (Chair); Assistant Professors Dines, Ford, Wiley; Assistant Professor in Residence Lynn; Instructors in Residence Abbott, Abzug, Fernandes, Gore, Hazlip, Marlow.

The Interactive Media program offers majors in:

- Animation
- Game Art
- Game Design
- Interactive Media
- User Experience Design

Minors in Game Design and User Experience Design are also available. The Game Design minor is open only to Animation, Game Art, User Experience Design, Computer Science, Computer Information Systems, and Music for Video Games majors. The User Experience Design minor is open only to Animation, Game Art, Game Design, and Interactive Media Majors.

Mission

Bradley University's Interactive Media Program prepares its learners to be critical thinkers in a continually evolving field that requires interdisciplinary, theoretical, and application knowledge in the design, development, and production of interactive media.

The Department of Interactive Media at Bradley University maintains a strong focus on creative and conceptual problem solving in the authoring of material for aspiring new-media professionals within a sound theoretical framework. Students will learn the importance of content research and project planning while becoming familiar with aesthetic conventions and the production environment within each of the component media types. Interactive Media majors incorporate the various media items into stand-alone projects with authoring tools designed for the Internet and modern media devices.

Admission Requirements

1. Bradley students transferring into the program must have a 2.25 grade point average for at least 12 hours of coursework in order to declare a major in the Department of Interactive Media.
2. Students transferring from other institutions must have a 2.25 overall grade point average on a 4.0 scale to be admitted to one of the department's majors. External transfer students not having a 2.25 overall grade point average must earn a 2.25 at Bradley for at least 12 hours of coursework before declaring one of the department's majors.
3. Courses taken at other institutions must be evaluated by the Admissions Office and then by the department chair. Due to the fast

pace at which technology changes, Interactive Media courses considered for required or elective transfer credit must have been completed within four years from the proposed admission date for the student.

4. Current Bradley students and external transfer students who meet program admission requirements and who wish to change to or add an Interactive Media major must first meet with an advisor or the department chair for an initial academic advisement session and orientation to the department.
5. Students who wish to apply courses taken at other institutions to a major's requirements must submit a portfolio and complete a technology-based assessment so that the Department of Interactive Media can determine proper course placement. Please contact the Department of Interactive Media for details.
6. Internal and external transfer students may need at least one extra semester to complete graduation requirements because of prerequisites and core course requirements in the major. Students choosing to switch between majors may also need at least one extra semester to complete graduation requirements.
7. Due to the strong technology component of this major, all students are required to meet current department hardware and software requirements. These requirements help ensure that majors are immersed in current technologies and become fluent in standards required to be successful in Interactive Media.
8. Students choose one major within the department. Students may not major in more than one major within the department.

Graduation Requirements

1. Students majoring in Animation, Game Art, Game Design, Interactive Media, or User Experience Design must have a grade point average of 2.50 for all required courses that are used to fulfill the major's requirement. Students must also earn a C or better in each course necessary to fulfill the requirements of the major. Both requirements include courses required for the concentration and courses outside the Department that are required for the major.
2. Students may not enroll in Interactive Media courses for which a required course is a prerequisite unless they have earned a C or better in the required course.
3. The Department reserves the right to retain some student work for the University permanent collection. Works produced by the Department are retained by the Department at the discretion of the instructor.

Majors

The Department of Interactive Media offers five majors:

- Animation
- Game Art
- Game Design
- Interactive Media
- User Experience Design

Animation Major

Students must earn a grade of C or better in each required course for graduation as an Animation Major. Students must also have a 2.50 GPA (cumulative) in all required courses.

Major Requirements (total 59 hrs.)

Required courses – 53 hrs.

- ART 101 Drawing I – 3 hrs.
- ART 102 Drawing II – 3 hrs.
- IM 140 Storytelling for Animation – 3 hrs.
- IM 141 Principles of Animation – 3 hrs.
- IM 150 Foundations of Interactive Design – 3 hrs.
- IM 162 Introduction to Scripting for Animators – 3 hrs.
- IM 226 Interactive Media Practicum I – 4 hrs.
- IM 240 Two-Dimensional Animation I **or** IM 347 Experimental Animation- 3 hrs.
- IM 241 Two-Dimensional Animation II – 3 hrs.
- IM 243 History of Animation – 3 hrs.
- IM 340 Three-Dimensional Animation I – 3 hrs.
- IM 341 Three-Dimensional Animation II **or** IM 345 Two-Dimensional Rigging for Animation – 3 hrs.
- IM 349 Pre-Production for Animation – 3 hrs.
- IM 426 Interactive Media Practicum II – 4 hrs.
- IM 440 Animation Capstone I – 3 hrs.
- IM 441 Animation Capstone II – 6 hrs.

History & Theory Requirements (Choose 2) – 6 hrs

- IM 191 Appreciating Comics – 3 hrs.
- IM 355 New Media Theory – 3 hrs.
- IM 380 Critical Game Studies – 3 hrs.
- IM 450 Critical Issues in Interactive Media – 3 hrs.
- CFA 250 Film History – 3 hrs.
- CFA 320 Film Theory and Criticism – 3 hrs.
- CIS 300 Computers & Society – 3 hrs.
- COM 101 Survey of Communications – 3 hrs.
- COM 300 Communication Theory -3 hrs.
- COM 386 Media Race & Gender – 3 hrs.
- COM 393 Small Group Communication – 3 hrs.
- HIS 352 Introduction to Digital Humanities – 3 hrs.

Game Art Major

In addition to their coursework for the major, Game Art majors are highly recommended to obtain a minor in Studio Art. This could Be Option 1 (Two Dimensional) or Option II (Three Dimensional) within the Studio Art Minor.

A grade of “C” or better is required in each of these courses for graduation as a Game Art Major. Students must also have a 2.50 GPA (cumulative) in all courses that are used to fulfill the major’s requirements.

Major Requirements (total 59 hrs)

Required Courses (53 hours)

- IM 110 Introduction to Game Development **or** IM 140 Introduction to Animation – 3 hrs.
- ART 101 Drawing 1 – 3 hrs.
- ART 102 Drawing 2 – 3 hrs.
- IM 130 Game Art Fundamentals – 3 hrs.
- IM 150 Fundamentals of Interactive Design – 3 hrs.
- IM 226 Practicum – 4 hrs.
- IM 230 Game Art Development – 3 hrs.
- IM 233 2D for Game Art – 3 hrs.
- IM 235 Environment Art – 3 hrs.
- IM 289 Game Production I – 3 hrs.
- IM 333 Character Art – 3 hrs.
- IM 335 Advanced Game Art – 3 hrs.
- IM 389 Game Production II – 3 hrs.
- IM 426 Practicum – 4 hrs.
- IM 459 Game Capstone Project I – 3 hrs.
- IM 489 Game Capstone Project II – 6 hrs.

History & Theory Requirements (Choose 2) – 6 hours

- IM 191 Appreciating Comics – 3 hrs.
- IM 243 History of Animation – 3 hrs.
- IM 344 Environmental Storytelling – 3 hrs.
- IM 355 New Media Theory – 3 hrs.
- IM 380 Critical Game Studies – 3 hrs.
- IM 450 Critical Issues in Interactive Media – 3 hrs.
- CFA 250 Film History – 3
- CFA 320 Film Theory & Criticism – 3 hrs
- CIS 300 Computers & Society – 3 hrs.
- COM 101 Survey of Communications – 3 hrs
- COM 300 Communication Theory
- COM 386 Media Race & Gender – 3 hrs
- COM 393 Small Group Communication – 3 hrs
- HIS 352 Introduction to Digital Humanities – 3 hrs

Game Design Major

A grade of “C” or better is required in each of the courses for graduation as a Game Design Major. Students must also have a 2.50 GPA (cumulative) in all courses that are used to fulfill the major’s requirements.

Major Requirements (total 53 hours)

Required Courses: 47 hours

- IM 110 Introduction to Game Development – 3 hrs.
- IM 150 Fundamentals of Interactive Design – 3 hrs.
- IM 160 Introduction to Game Scripting – 3 hrs.
- IM 180 Survey of Games – 3 hrs.
- IM 226 Practicum – 4 hrs.
- IM 288 Game Design I – 3 hrs.
- IM 289 Game Production I – 3 hrs.
- IM 380 Critical Game Studies – 3 hrs.
- IM 388 Game Design II – 3 hrs.
- IM 389 Game Production II – 3 hrs.
- IM 426 Practicum – 4 hrs.
- IM 459 Game Capstone Project I – 3 hrs.
- IM 488 Prototyping for Capstone – 3 hrs.
- IM 489 Game Capstone Project II – 6 hrs.

History & Theory Requirements (Choose 2): 6 hours

- IM 191 Appreciating Comics – 3 hrs.
- IM 243 History of Animation – 3 hrs.
- IM 344 Environmental Storytelling – 3 hrs.
- IM 355 New Media Theory – 3 hrs.
- IM 450 Critical Issues in Interactive Media – 3 hrs.
- CFA 250 Film History – 3 hrs.
- CFA 320 Film Theory & Criticism – 3 hrs.
- CIS 300 Computers & Society – 3 hrs.
- COM 101 Survey of Communications – 3 hrs.
- COM 300 Communication Theory – 3 hrs.
- COM 386 Media Race & Gender – 3 hrs.
- COM 393 Small Group Communication – 3 hrs.
- HIS 352 Introduction to Digital Humanities – 3 hrs.

Interactive Media Major

A grade of “C” or better is required in each of these courses for graduation as an Interactive Media Major. Students must also have a 2.50 GPA (cumulative) in all courses that are used to fulfill the major’s requirements. The Interactive Media major requires 41 total hours. 17 hours of Core Requirements, 9 hours of History and Theory Requirements, and 15 hours of Interactive Media elective hours.

Major Requirements (total 41 hours)

Core Requirements – 17 hours

- IM 150 Fundamentals of Interactive Design – 3 hrs.
- IM 161 Intro to Web Design – 3 hrs.
- IM 226 Interactive Media Practicum I – 4 hrs.
- IM 426 Interactive Media Practicum II – 4 hrs.

History & Theory, Requirements (choose 3) – 9 hours

- IM 191 Appreciating Comics – 3 hrs.
- IM 243 History of Animation – 3 hrs.
- IM 355 Interactive Media Theories, Concepts, and Practices – 3 hrs.
- IM 380 Critical Game Studies – 3 hrs.
- IM 450 Critical Issues in Interactive Media – 3 hrs.
- ART 332 History of Graphic Design – 3 hrs.
- CFA 250 Film History – 3 hrs.
- CFA 320 Film Theory & Criticism – 3 hrs.

- CIS 300 Computers & Society – 3 hrs.
- COM 101 Survey of Communications – 3 hrs.
- COM 300 Communication Theory – 3 hrs.
- COM 386 Media Race & Gender – 3 hrs.
- COM 393 Small Group Communication – 3 hrs.
- HIS 352 Introduction to Digital Humanities – 3 hrs.

Interactive Media Electives (choose 5) – 15 hours

- Any Interactive Media Course
- Any course from the History, Theory, & Critical Issues list of classes
- ART 205 Typographic Design – 3 hrs.
- ART 206 Graphic Design Methods and Processes – 3 hrs.
- ART 228 Basic Digital Photographic Imaging – 3 hrs.
- ART 332 Graphic Design History – 3 hrs.
- CS 100 Introduction to Programming Concepts and Languages – 3 hrs.
- CS 101 Introduction to Programming – 4 hrs.
- CS 102 Data Structures – 3 hrs.

User Experience Design Major

Students must earn a C or better in each required course for graduation as an User Experience Design major. Students must also have a 2.50 GPA (cumulative) in all required courses.

Major Requirements (total 53 hours)

Required Courses: 47 hours

- IM 150 – Fundamentals of Interactive Design (3)
- IM 161 – Intro to Web Design (3)
- IM 226 – Interactive Media Practicum I (4)
- IM 426 – Interactive Media Practicum II (4)
- ART 205 – Typographic Design (3)
- IM 260 – User Experience Design (3)
- IM 261 – User Research & Usability (3)
- IM 360 – Advanced Interaction Design (3)
- IM 361 – Advanced User Experience Design (3)
- IM 363 – Topics in User Experience (3)
- IM 366 – Advanced Web Design (3)
- IM 460 – User Experience Design Capstone 1 (3)
- IM 461 – User Experience Design Capstone 2 (6)
- PSY 101 – Principles of Psychology (3)

History & Theory Requirements (choose 2) – 6 hours

- IM 191 Appreciating Comics – 3 hrs.
- IM 243 History of Animation – 3 hrs.
- IM 344 Environmental Storytelling – 3 hrs.
- IM 355 New Media Theory – 3 hrs.
- IM 380 Critical Game Studies – 3 hrs.
- IM 450 Critical Issues in Interactive Media – 3 hrs.
- CFA 250 Film History – 3
- CFA 320 Film Theory & Criticism – 3 hrs
- CIS 300 Computers & Society – 3 hrs.
- COM 101 Survey of Communications – 3 hrs
- COM 300 Communication Theory – 3 hrs
- COM 386 Media Race & Gender – 3 hrs
- COM 393 Small Group Communication – 3 hrs
- HIS 352 Introduction to Digital Humanities – 3 hrs

Minors

The Department of Interactive Media offer a minor in Game Design and a minor in User Experience Design. The Game Design minor is

open only to Animation, Game Art, User Experience Design, Computer Science, Computer Information Systems, and Music for Video Games majors. The User Experience Design minor is open only to Animation, Game Art, Game Design, and Interactive Media Majors.

Admission Requirements

1. Bradley students transferring into the program must have a 2.25 grade point average for at least 12 hours of coursework in order to declare a minor in Game Design.
2. Students transferring from other institutions must have a 2.25 overall grade point average on a 4.0 scale to be admitted to a minor in Game Design, or User Experience Design. External transfer students not having a 2.25 overall grade point average must earn a 2.25 GPA at Bradley for at least 12 hours of coursework before declaring a minor in Game Design or User Experience Design.
3. Courses taken at other institutions must be evaluated by the Admissions Office and then by the department chair. Due to the fast pace at which technology changes, Interactive Media courses considered for required or elective transfer credit for these minors must have been completed within four years from the proposed admission date for the student.
4. Students who wish to transfer from other institutions must submit a portfolio and complete a technology based assessment so that the Department of Interactive Media can determine proper course placement. Please contact the Department of Interactive Media for details.
5. Internal and external transfer students may need at least one extra semester to complete graduation requirements because of prerequisites and core course requirements in the minor.

Minor Requirements

1. Students minoring in Game Design or User Experience Design must have a grade point average of 2.50 for all required courses taken in the minor. Students must also earn a C or better in every required course within the minor. Both requirements include courses required for the concentration and courses outside the Department that are required for the minor.
2. Students minoring in Game Design or User Experience Design may not enroll in Interactive Media courses for which a required course is a prerequisite unless they have earned a C or better in the required course.
3. Students minoring in both Game Design and User Experience Design may not apply the same coursework to both minors, with the exception of IM 113 and IM 285.

Game Design Minor

The Game Design minor teaches the design, storytelling, and production foundations of game development. The minor focuses on the game development processes and tools used in industry. Methods taught entail concept development, story narrative, and production of game audio and video.

Minor Requirements (total 18 hours)

Required Courses (12 hours)

- IM 110 Introduction to Game Development or IM 111 Intro to Game Dev for Non Majors (Determined by the minor advisor based on the needs of the student) – 3 hrs.
- IM 180 Survey of Games – 3 hrs.
- IM 288 Game Design I – 3 hrs.
- IM 289 Game Production – 3 hrs.

Elective Courses (6 hours)

Pick two of the following courses (6 hours)

- IM 380 Critical Issues in Games – 3 hrs.
- IM 388 Game Design II - 3 hrs.
- IM 389 Game Production II – 3 hrs.
- IM 488 Prototyping for Capstone – 3 hrs.

User Experience Design Minor

The User Experience Design minor teaches the fundamental art and science of design to ensure systems meet users' needs and goals, including the importance of physical and emotional reactions in the process. The minor focuses on the user experience processes and tools used in industry. Methods include how to develop user-and-human-centered designs.

Minor Requirements (total 15 hours)

Required Courses (15 hours)

- IM 161 Intro to Web Design – 3 hrs.
 - IM 260 User Interface Design and Development – 3 hrs.
 - IM 261 User Research and Usability – 3 hrs.
 - IM 363 Concepts in User Experience – 3 hrs.
 - IM 366 Advanced Web Design – 3 hrs.
-

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Interactive Media Courses



Interactive Media Courses

I M 101 – User Experience Design Orientation (1 hour)

Provides an overview of the functions, responsibilities, design thinking, and culture of the User Experience Design discipline.
Prerequisite: User Experience Design major; or consent of Department Chair.

I M 110 – Introduction to Game Development (3 hours)

Core Curr. QR

An introduction to the process of game development with an emphasis on iterative design. Prerequisite: Interactive Media Major or consent of Department chair.

I M 111 – Intro to Game Development for Non Majors (3 hours)

An introduction to the process of game development with emphasis on iterative design and scripting basics.

I M 113 – Introduction to Interactive Media (3 hours)

Tools and aesthetics of media production: word processing, photography, audio production, videography. Visual literacy. The desktop computer interface. Desktop publishing, presentation software, multimedia documents. Internet navigation and page production. Credit by examination available.

I M 120 – Concepting and Storytelling for Interactive Media (3 hours)

Process of narrative structure development. Writing, pre-visualization, presentation, and production of animation, game design, and user interface projects. Prerequisite: Interactive Media Major or consent of Department Chair.

I M 130 – Game Art Fundamentals (3 hours)

This course is an introduction to the foundational concepts, tools, and techniques needed to create artwork for video games. Topics include: 3D modeling, Digital Sculpting, creating textures and materials, and how to present digital artwork. Prerequisite: Game Art major; or permission from Department Chairperson

I M 140 – Storytelling for Animation (3 hours)

Process of narrative structures development, storyboarding techniques, and the digital tools and applications necessary for the creation of animation. Writings, pre-visualization, presentation, and pre-production for many different types of media. Prerequisite: Animation major, User Experience Design major, or consent of Department chair

I M 141 – Principles of Animation (3 hours)

Introduction to the twelve principles and techniques of animation. Projects will vary from hand-made to computer-computer made forms. Prerequisite: Animation major, User Experience Design major, or consent of Department chair

I M 150 – Fundamentals of Interactive Design (3 hours)

Principles of design for digital devices. Emphasis is on user interfaces and experiences. Prerequisite: Animation, Game Art, Game Design, Interactive Media, or User Experience Design major; Game Design minor; or consent of Department Chair.

I M 160 – Introduction to Scripting for Games (3 hours)

Introduction to scripting languages and their application in creating games. Prerequisite: Game Design Major; or consent of Department Chair

I M 161 – Intro to Web Design (3 hours)

Front-end development techniques and practices for website user interfaces and experiences. The course will be taught through lectures, demonstrations, and exercises using applications and scripting languages. Prerequisite: User Experience major or minor; or consent of Department Chair

I M 162 – Intro to Scripting for Animators (3 hours)**Core Curr. QR**

Introduction to the use of various scripting languages in different animation software environments. Prerequisite: Animation Major, I M 141, I M 150; or consent of Department chair.

I M 180 – Survey of Games (3 hours)

This course establishes a baseline for game discourse through lectures on play histories, genres, and mechanics, and by direct engagement with a number of types of games including tabletop and video games. Prerequisite: Game Design major; or consent of Department Chair.

I M 191 – Comics Appreciation (3 hours)**Core Curr. MI**

This course investigates the history of comics, their formal characteristics, and their contributions as vital expressions of humanity and culture. Prerequisite:

I M 226 – Interactive Media Practicum I (0-1 hours)

Presentations by faculty, alumni, and other professionals in the field allow students to make connections serving their academic and professional pursuits. Students will also engage in additional career development activities including portfolio creation, resume authoring, career research, networking, and engagement in public festivals and presentations of their works. Repeatable for up to a maximum of 8 credit hours. Crosslisted with I M 426. Prerequisite: Freshman/Sophomore Status, Animation major or Game Art major or Game Design major or Interactive Media major, or User Experience Design major; or consent of Department Chair.

I M 230 – Game Art Development (3 hours)

Building on the foundational skills developed in IM 130 Game Art Fundamentals, this course is an exploration into more advanced concepts, tools, and techniques needed to create optimized and visually appealing artwork for video games. Topics include: asset creation for game engines, art workflows and pipelines, art styles in games, and asset optimization. Prerequisite: Game Art major, IM 130; or consent of Department Chair

I M 233 – 2D for Game Art (3 hours)

This course is an introduction to the foundational concepts, tools, and techniques needed to create 2D artwork for video games. Topics include: digital painting for concept art, 2D asset creation for game engines, sprite design and animation, and matte painting. Prerequisite: Game Art major, Art 102, IM 130, IM 150; or consent of the Department Chair.

I M 235 – Environment Art (3 hours)

Expanding on skills developed in IM 230 Game Art Development, this course will be an artistic and technical exploration in the requirements necessary for designing and developing environments for real-time engines. Topics include: concepting for environments, Modular kit construction, kitbashing, photogrammetry, procedural texturing, environment VFX and terrain generation. Prerequisite: IM 230, IM 233; or consent of the Department Chair.

I M 238 – Anatomy for Digital Artists (3 hours)

This course is an introduction to the concepts, tools, and techniques needed to sculpt human anatomy in a digital environment. Topics include: Digital Sculpting in ZBrush, Human anatomy, and creating dynamic poses. Prerequisite: I M 110 or I M 140, ART 101; or consent of Department chair.

I M 240 – Two-Dimensional Animation I (3 hours)

Art and techniques of hand-drawn animation. Immersion in a variety of techniques exploring founding principles of animation, storytelling, drawing, and design. Prerequisite: Animation Major, I M 341 or I M 345; or consent of Department Chair.

I M 241 – Two-Dimensional Animation II (3 hours)

Art and techniques of computer-based 2D animation, motion graphics, and compositing. Study of various digital animation techniques using multiple applications. Prerequisite: Animation Major, I M 141 and I M 150; or consent of Department Chair.

I M 243 – History of Animation (3 hours)

Study of the historical, cultural, economic, political, and social forces that helped shape the evolution of animation as an art form. Written and oral discussions focused on the attitudes and influences of race, gender, technology, culture, and the conflict between art and industry. Prerequisite: Animation Major; or consent of I M Department Chair.

I M 260 – User Interface Design & Development (3 hours)

Fundamental principles and practices of user interface design and data visualization. Emphasis on the design of 2D graphical user interfaces and the development of applications that use them. Prerequisite: User Experience Design major or minor, IM 161; or consent of the Department Chair.

I M 261 – User Research & Usability (3 hours)

Core Curr. WI

Introduction to user-centered design based upon usability research and testing. Topics include defining audiences, heuristic evaluations, and effective reporting. Prerequisite: User Experience Design major or minor, IM 260; or consent of the Department Chair.

I M 285 – Introduction to Video for Interactive Media (3 hours)

Fundamental principles and practices of professional video cameras, microphones, and lights for multimedia production. Interviewing procedures plus aesthetics and visuals. Non-linear editing. Prerequisite: IM 110 or IM 113, sophomore standing; or consent of Department Chair.

I M 288 – Game Design I (3 hours)

Core Curr. WI

Gameplay, storytelling, challenges, interface and information design, and world interaction. Construction of experiences, including rule design, play mechanics, game balancing, social game interaction, and the integration of interactive media. Playtesting and game design documentation. Prerequisite: Game Design Major, IM 180; or Game Design Minor, IM 113, IM 150; or consent of Department Chair.

I M 289 – Game Production I (3 hours)

Interactive game production using advanced development tools. Game production lifecycle and workflow pipeline. Group dynamics and communication skills. Integration and Design and development documentation. Prerequisite: Game Design Major, I M 160, IM 288; or Game Production Minor, IM 113, CS 101, CS 102; or consent of Department Chair.

I M 330 – Game Art for Non-Majors (3 hours)

This course provides insight into the process of creating game art for non-game art majors. Topics include digital painting for concept art, asset creation for game engines, art workflows/ pipelines, and how to present digital artwork. Prerequisite: Junior standing; Animation, Game Design, Interactive Media, or User Experience Design Major or consent of Department Chair

I M 333 – Character Art (3 hours)

Expanding on skills developed in IM230 Game Art Development, this course will be an artistic and technical exploration in the requirements necessary for designing and developing characters for real-time engines. Topics include: concepting for character art, sculpting anatomy, character rigging and animation, and character VFX. Prerequisite: IM 235; or consent of the Department Chair.

I M 335 – Advanced Game Art (3 hours)

This course will explore a variety of the latest tools and techniques relevant to game art, also, there will be a focus on digital portfolio and reel development. Topics include: advanced tools and techniques in game art, Portfolio development, communication skills, industry networking opportunities, business cards, cover letters, and resumes. Prerequisite: Game Art major, IM 235, IM 333; or consent of the Department Chair.

I M 340 – Three-Dimensional Animation I (3 hours)

Fundamental principles of three-dimensional computer animation and modeling. Creation of basic models using polygonal modeling, texturing, lighting, and rendering for various animation projects. Prerequisite: Animation Major, I M 162, I M 241; or consent of Department chair

I M 341 – Three-Dimensional Animation II (3 hours)

Further explorations of the art and techniques of 3D computer animation. Emphasis on traditional principles of animation in addition to camera manipulation, rigging, and character animation core mechanics including walk cycles, expressions, and lip sync. Prerequisite: Animation Major, I M 340; or consent of Department chair

I M 344 – Environmental Storytelling (3 hours)

Core Curr. EL

This course covers the basics of environmental storytelling, visual narrative, creation of a cohesive world, intuitive player communication, emotional level design, and immersive player education as well as identification of and analysis of the same in existing media.

I M 345 – Two-Dimensional Rigging for Animation (3 hours)

Advanced study of rigging for two-dimensional animation using a variety of techniques and software packages. Prerequisite: Animation

major, IM 340; or consent of Department chair

I M 347 – Experimental Animation (3 hours)

Animation projects made from an artistic point of view. Students will engage in wide variety of techniques and mediums to make movie images which may be narrative or non-narrative. Prerequisite: IM 341 or IM 345; or consent of Department chair

I M 349 – Pre-Production for Animation (3 hours)

Initial planning for the production of an animated short film including storyboarding, concept art, script development, color scripts, research, and development. Prerequisite: IM 341 or IM 345; or consent of Department chair

I M 355 – Interactive Media Theories, Concepts, and Practices (3 hours)

Core Curr. WI

Examines scholarly concepts, theories, and practices about human communication, mass media, and computational digital technologies. Develops conceptual foundations derived from the cultural and commercial dimensions of media histories, technological innovation, professional practice, and contemporary/everyday phenomena. Provides increased and improved technical vocabularies and develops students' critical examinations of taken-for-granted media phenomena. Posits informed speculations concerning the future of media with particular attention to the roles of citizens, consumers, and producers. Applies intensive writing skills combining reading, study, and discussion with analysis and thinking via diverse written assignments. Prerequisite: IM 110, IM 120 and 36 earned credit hours; or consent of Department Chair.

I M 360 – Advanced Interaction Design (3 hours)

Advanced and experimental interaction design strategies as applied to web & mobile/responsive application development. Prerequisite: IM 110, IM 160, IM 120, IM 150, IM 260, IM 261, PSY 205 or MTH 111 or equiv; or consent of Department chair.

I M 361 – Advanced User Experience Design (3 hours)

Studio course focused on further developing core skills of UX design, information and visual/communications design, and advanced wireframing techniques. Prerequisite: User Experience Design major, IM 261; or consent of the Department Chair.

I M 363 – Topics in User Experience (3 hours)

Focuses on the innovative and pioneering tools, techniques, and methodologies used in designing user experiences. This course teaches the best practices and principles of human/computer interaction. Prerequisite: User Experience major, I M 110, I M 120, I M 150, I M 161, I M 260 or consent of Department Chair.

I M 365 – Web Design (3 hours)

A studio course exploring typography and visual layout principles of interactive website design. Survey of theory, history, and methods of web design solutions. Discussion of transitional strategies in response to developing technologies. Cross-listed as ART 365. Prerequisite: IM 113, ART 105, ART 205; or consent of instructor.

I M 366 – Advanced Web Design (3 hours)

Development techniques and practices for websites and mobile application user interfaces and experiences. The course will be taught through lectures, demonstrations, and exercises using applications and scripting languages. Prerequisite: User Experience Design major or minor, IM 361; or consent of the Department Chair.

I M 380 – Critical Game Studies (3 hours)

Criticism, analysis, and history of electronic and non-electronic games. Articulation of game aesthetics. History of computers and digital games and toys, construction and critique of significant and influential games, and game criticism and journalism. Prerequisite: ENG101, IM 180, Game Design Major; or consent of Department Chair.

I M 388 – Game Design II (3 hours)

Advanced game design with an emphasis on prototyping for video games. Prerequisite: Junior standing. Game Design Major, IM 288, IM 289; or Game Design Minor, IM 288; or consent of Department chair.

I M 389 – Game Production II (3 hours)

Application of Interactive game production techniques. Emphasis on refining and developing art, sound, and game mechanics as well as marketing and game release. Prerequisite: Game Design major, IM 388; or Game Art major, IM 235; or Game Production Minor, IM 289; or consent of Department chair.

I M 426 – Interactive Media Practicum II (0-1 hours)

Course is repeatable for up to a maximum of 8 credit hours. Crosslisted with I M 226. Prerequisite: Animation, Game Art, Game Design, Interactive Media, or User Experience Design major; Game Design, Game Production, or User Experience Design Minor; or consent of Department Chair.

I M 440 – Animation Capstone I (3 hours)

Core Curr. EL

Advanced pre-production techniques used in the creation of an original animated short. Narrative structure development, research, concepting, time management, and technique development. Prerequisite: Animation Major, I M 347 or I M 240; or consent from

department chair.

I M 441 – Animation Capstone II (6 hours)

Core Curr. EL

Advanced production processes and techniques for creating an original animated short. Prerequisite: Animation Major, I M 440; or consent of Department chair

I M 450 – Critical Issues in Interactive Media (3 hours)

Core Curr. WI

Topics course, with varying subjects, examining contemporary issues and problems in new media theory and the interactive media environment. Current topic/title in current schedule of classes. May be repeated three times under different topics. Prerequisite: Junior standing and Animation, Game Art, Game Design, Interactive Media, or User Experience Design major; or consent of the Department Chair.

I M 452 – Computer Game Modification (3 hours)

Software development and programming aspects of computer games, game engine modification, and virtual reality simulations, including event loops, execution threads, collision detection, multi-threading, performance analysis, multi-user games and networking. Cross-listed with IM 552, CIS 452, CIS 552. Prerequisite: junior standing, CS 101, CS 102, CS 140; or consent of instructor.

I M 455 – Computer Graphics (3 hours)

Introduction to the theory and implementation of computer graphics with 2D and 3D applications in computer gaming, including 2D and 3D graphic primitives and objects, OpenGL, geometric transformations, image synthesis, rendering and lighting, and virtual environments. Cross-listed with IM 555, CIS 455, CIS 555. Prerequisite: junior standing; CS 101, CS 102, CS 140; or consent of instructor.

I M 456 – Game Engine Programming (3 hours)

Advanced techniques and technologies for programming computer game engines, multi-user games, virtual environments, and virtual reality simulations. Cross listed with IM 556, CIS 456, CIS 556. Prerequisite: junior standing, CIS 452, CIS 455; or consent of instructor.

I M 458 – Sound Design (3 hours)

Theoretical and practical sound design. Music composition, field sound recording, studio tracking, aesthetic analysis of music, electronic sound generation. Digital game technologies, 3D sound processing and generative audio structures. Mixing in non-linear environments and final mastering. Cross-listed with IM558, CIS458, CIS558. Prerequisite: Junior standing; Animation, Game Art, Game Design, Interactive Media, or User Experience Design Major; or consent of Department Chair

I M 459 – Game Capstone Project I (3 hours)

Core Curr. MI,EL

Game development within multi-disciplinary teams. Project work includes advanced game design, software development, art asset creation, and game production concepts. Cross-listed with IM 559, CIS 459, CIS 559. Prerequisite: I M 389, Game Design or Game Art major or Game Design minor or Game Production minor; or completion of all other coursework in computer game technology minor or concentration; or consent of Department Chair

I M 460 – User Experience Design Capstone 1 (3 hours)

Core Curr. EL

Research and exploration of traditional and non-traditional human-computer interaction. Students study, plan, design, and produce applications that seek out new or refine current trends in interactivity. Prerequisite: User Experience Design major, IM 366; or consent of the Department Chair.

I M 461 – User Experience Design Capstone 2 (6 hours)

Core Curr. EL

The second in a two-part User Experience Design capstone course where students build, test, and release the interactive designed in User Experience Design Capstone 1. Agile methodologies and a tight feedback loop will be used to ensure a user-centered experience. Students will present their work in the Interactive Media showcase. Prerequisite: User Experience Design major, IM 460; or consent of the Department Chair.

I M 488 – Prototyping for Capstone (3 hours)

Concepting and prototyping of games that might be fully realized in IM 459 Computer Game Capstone Project and IM 489 Advanced Game Capstone. Prerequisite: Game Design major, IM 389; or consent of the Department Chair.

I M 489 – Game Capstone Project II (6 hours)

Core Curr. EL

A continuation of the project began in IM 459 Game Capstone Project I with an emphasis on the production and post-production phases of game development. Prerequisite: IM 459, Game Design major or Game Art major or Game Production Minor; or consent of Department Chair.

I M 490 – Independent Study (3 hours)

Individual scholarly research or advanced creative production investigating aspects of interactive media. May be repeated under different topics for a maximum of six hours. Requires application available from department chair or faculty. Prerequisite: Junior standing and consent of department chair and faculty member.

I M 491 – Special Topics in Interactive Media (1-4 hours)

Topics of special interest which may vary each time course is offered. May be repeated under different topics. Topic and prerequisites stated in current Schedule of Classes. Prerequisite: Sophomore standing, 9 hours of Interactive Media courses.

I M 499 – Exhibit Production (0-3 hours)

Core Curr. EL

This course covers the development of interactive projects for exhibition as well as the preparation and execution of exhibition events. Prerequisite: Permission of instructor or department chair.

I M 526 – Practicum (0-2 hours)

Presentations by faculty, alumni, and other professionals in the field. Repeatable to a maximum of 2 credits. Prerequisite: Graduate standing in the Game Design & Development program

I M 580 – Game Seminar (0-6 hours)

An exploration of issues and contemporary critical approaches to games through study and discussion. Topics might include feminism, semiotics, cultural criticism, and poststructuralism. Repeatable to a maximum of 6 credits. Prerequisite: Graduate standing in the Game Design & Development program

I M 588 – Game Prototyping & Pre-Production (3-6 hours)

Brainstorming, concepting and prototyping of core gameplay concepts followed by a proof of concept stage fleshing out the core gameplay. Repeatable to a maximum of 12 credits. Prerequisite: Graduate standing in the Game Design & Development program

I M 589 – Game Production (3-6 hours)

Game development within a multidisciplinary team. Project work includes advanced game design, scope control and reduction, software development, art asset creation, and game production concepts. Repeatable to a maximum of 12 credits. Prerequisite: Graduate standing in the Game Design & Development program

I M 590 – Game Post-Production (3-6 hours)

Post production development and publication within a multidisciplinary team. Project work includes final asset integration, testing best practices, change management and final publication. Repeatable to a maximum of 12 credits. Prerequisite: Graduate standing in the Game Design & Development program

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Interdisciplinary Film Studies Minor



Interdisciplinary Film Studies Minor

Interdisciplinary Film Studies Minor

The Film Studies minor is an interdisciplinary field of study which enables students to develop critical and comparative analytical skills while learning the social significance of film throughout history and across borders. Students will gain an understanding of film aesthetics, history, genre, and theoretical approaches in film studies as well as have the opportunity to participate in creative practices related to the filmmaking process.

Course Requirements

Core Requirements (9 credits)

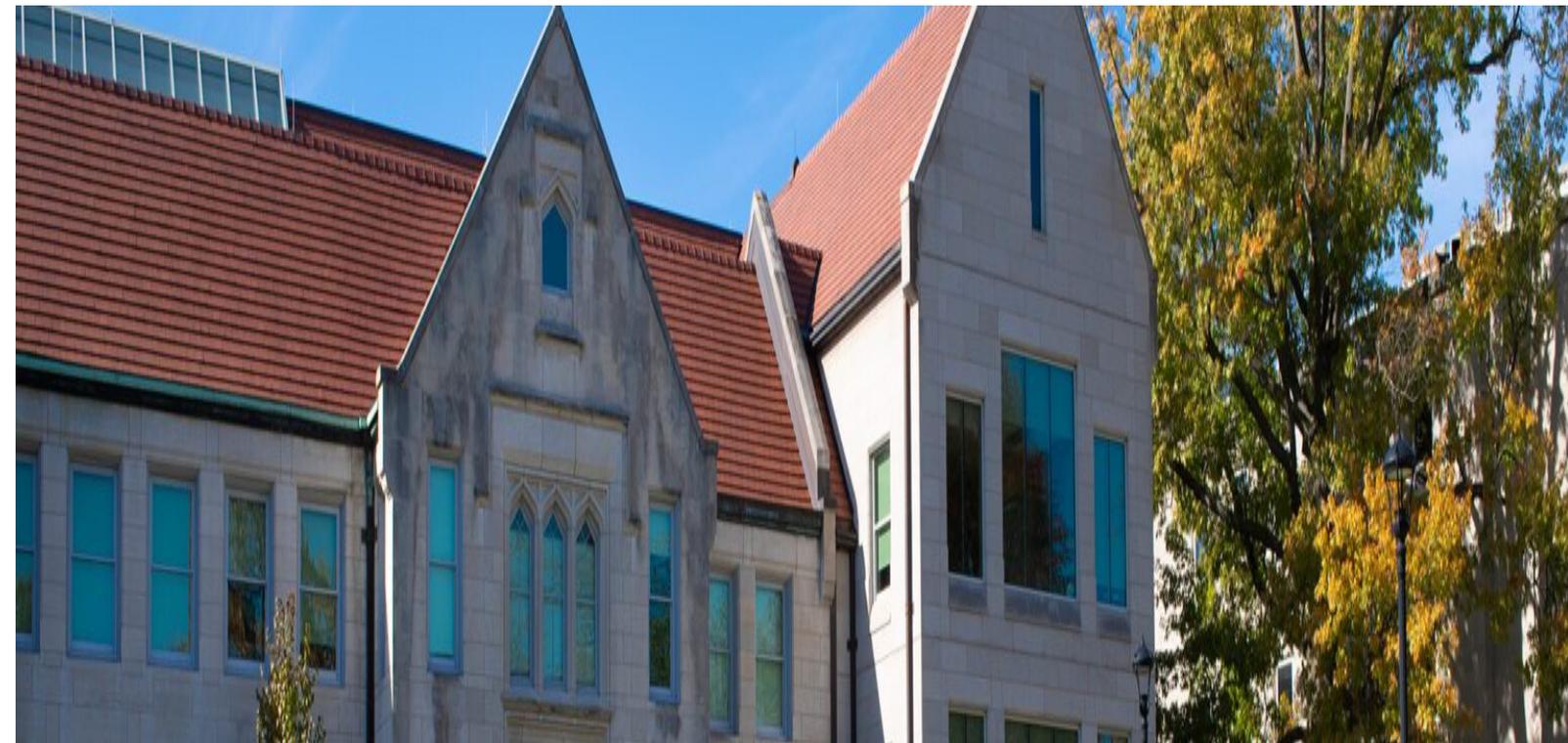
- THE 141 Film Appreciation – 3 hrs.
- CFA 250 Film History – 3 hrs.
- CFA 320 Film Theory and Criticism – 3 hrs.

Electives (9 credits, select 3 courses)

- WLT 151 French Cinema – 3 hrs.
- WLT 152 German Cinema – 3 hrs.
- HIS 210 History of European Film – 3 hrs.
- CFA 221 Media Aesthetics – 3 hrs.
- COM 225 Visual Storytelling – 3 hrs.
- IM 285 Introduction to Video for Interactive Media – 3 hrs.
- CFA 321 Film Genre Topics (may be repeated 2 times with unique topics) – 3-6 hrs.
- COM 445 Nonlinear Production – 3 hrs.
- ENG 409/COM 409 Advanced Screenwriting Workshop – 3 hrs.
- WLF 351 Cinema Francais – 3 hrs.
- WLG 352 Deutsches Kino – 3 hrs.
- WLS 401 Hispanic Cinema – 3 hrs.

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Music



Music

FACULTY Professors Dzapo, Kelly (Chair); Associate Professors Boulton and Lambrecht; Assistant Professor De Zwaan; Assistant Professor in Residence Grise; Research Assistant Professor Henry Liebenow; Instructor in Residence (Associate Chair) Anderson, Meuth.

Accreditation

Bradley University is an accredited institutional member of the National Association of Schools of Music (NASM).

Mission

Music at Bradley has a double mission:

1. To prepare music students for successful careers as teachers or administrators in music; as professional performers; as composers; or as professionals in music related fields such as music business.
2. To prepare both professional and general students who are not music majors for lifelong pleasure in music.

Music Degrees Offered (Requires Music Performance Proficiency)

- Bachelor of Music in Performance, Music Education, and Composition
- Bachelor of Arts in Music, Music Business, and Music for Video Games
- Bachelor of Science in Music, Music Business, and Music for Video Games

Other Degrees Offered (Requires No Music Performance Proficiency)

- Bachelor of Arts in Music and Entertainment Industry
- Bachelor of Science in Music and Entertainment Industry

General Degree Requirements

Applied Music

Teacher Licensure

The department also offers a Music Minor.

Admission Requirements – Music

Admission to all undergraduate degree programs in music requires:

1. A minimum of four years experience in orchestra, band, chorus or private lessons.
2. A successful music audition. (Contact the chair of the Department of Music for an audition appointment.)

Admission Requirements – Music and Entertainment Industry

1. Admission to the Music and Entertainment Industry program does not require a music audition.
2. Bradley students transferring into the department must have a 2.5 grade point average for at least 12 hours of course work in order to declare a major and/or minor in the Music and Entertainment Industry.
3. Students transferring from other institutions must have a 2.5 overall grade point average to be admitted to a major and/or minor in the department. External transfer students not having a 2.5 overall grade point average must earn a 2.5 at Bradley for at least 12 hours of course work before declaring a major and/or minor in Music and Entertainment Industry. Courses taken at other institutions must be evaluated by the Admissions Office and then by the department's advisor for transfer students.

Degree Requirements

Music Degree Requirements:

1. All full-time music majors and minors must successfully complete Recital Lab (MUS 001) each semester of residence. Each student is expected to perform on this lab at least once a semester or as determined by the applied music teacher.
2. All full-time music majors must participate in an assigned concert band, choir, or orchestra. String players may audition and perform with the Peoria Symphony Orchestra or the Knox-Galesburg Symphony but must continue to perform in the Bradley Symphony Orchestra.
3. All music majors should declare a major instrument or voice by the end of the fourth semester. A music minor must declare at the time of audition.
4. All music students must maintain a cumulative G.P.A. of 2.5 in music courses during the first two years in order to achieve advanced standing. Junior-senior credit in the major applied area can be earned only after a student has achieved advanced standing. Music majors with additional majors may not be allowed to apply these courses as junior/senior hours. Students should consult with their advisor(s).
5. A "sophomore review" will be held during the spring semester of each student's sophomore year. At the beginning of the spring semester, each sophomore music major will be scheduled for a meeting with his or her advisor, the department chair, and other faculty members as required (e.g., private instructor, ensemble coach) for a review of the student's progress up to that time. The purpose of the review is to address any deficiencies that might impede the student's continued progress in his or her chosen field. Students will also have an opportunity to pose questions relevant to their academic programs at Bradley and their intended goals.

Music and Entertainment Industry (MEI) Degree Requirements:

1. All MEI students must maintain a cumulative G.P.A. of 2.5 in music courses during the first two years in order to achieve advanced standing.
2. A "sophomore review" will be held during the fall semester of each student's sophomore year. At the beginning of the fall semester, each sophomore MEI major will be scheduled for a meeting with his or her advisor, the department chair, and other faculty members as required for a review of the student's progress up to that time. The purpose of the review is to address any deficiencies that might impede the student's continued progress in his or her chosen field.
3. Students will also have an opportunity to pose questions relevant to their academic programs at Bradley and their intended goals.
4. For graduation, all MEI majors must have a grade point average of 2.25 for all courses taken in the major (including courses outside the department required for the major).
5. MEI majors may apply a course to more than one major or minor if the corresponding department is in agreement.
6. MEI majors are encouraged to double major in a supporting academic field.

Proficiency Examinations

1. Proficiency examinations are available in the following areas: theory (up to 4 credits), ear-training and sight-singing, history and literature, and applied music (limited to 2 semesters of credit).
2. Students should consult with the department chair for further information regarding proficiency examinations.

Bachelor Of Arts Degree Or Bachelor Of Science Degree With A Major In Music

- Applied Music (min. of 4 semesters) – 8 hrs.
- Ensemble (each semester) – 8 hrs.
- MUS 001 Recital Lab (each semester) – 0 hrs.
- MUS 161 Music Theory I – 2 hrs.
- MUS 162 Music Theory II – 2 hrs.
- MUS 163 Elementary Ear-Training and Sight-singing – 1 hr.
- MUS 164 Elementary Ear-Training and Sight-singing – 1 hr.
- MUS 165 Keyboard Skills-Class Piano – 2 hrs.
- MUS 166 Keyboard Skills-Class Piano – 2 hrs.
- Two of the following:
 - MUS 380 Western Music to 1750 – 3 hrs.
 - MUS 381 Western Music 1750-Present – 3 hrs.
 - MUS 382 Music and World Cultures – 3 hrs.
 - MUS 383 History of American Music – 3 hrs.
- Music Electives 9 hrs.

Total Hours Required for Major 41

Bachelor Of Music Degree

BM students must complete the core requirements along with those for one of the majors.

Core Requirements

- MUS 001 Recital Lab (each semester) – 0 hrs.
- MUS 002 Senior Recital – 0 hrs.
- MUS 141/341, 142/342, 143/343, 144/344, or 146/346 (ensemble each semester) – 8 hrs.
- MUS 161 Music Theory I – 2 hrs.
- MUS 162 Music Theory II – 2 hrs.
- MUS 163 Elementary Ear-Training and Sight-singing – 1 hr.
- MUS 164 Elementary Ear-Training and Sight-singing – 1 hr.
- MUS 165 Keyboard Skills-Class Piano – 2 hrs.
- MUS 166 Keyboard Skills-Class Piano – 2 hrs.
- MUS 261 Music Theory III – 2 hrs.
- MUS 262 Music Theory IV – 2 hrs.
- MUS 263 Advanced Ear-Training and Sight-singing – 1 hr.
- MUS 264 Advanced Ear-Training and Sight-singing – 1 hr.
- MUS 265 Advanced Keyboard Skills-Class Piano – 2 hrs.
- MUS 266 Advanced Keyboard Skills-Class Piano – 2 hrs.
- MUS 305 Counterpoint or MUS 319 Composition or MUS 405 Theories of Atonal Music – 2–3 hrs.
- MED 321 Conducting I – 2 hrs.
- MUS 380 Western Music to 1750 – 3 hrs.
- MUS 381 Western Music 1750-Present – 3 hrs.
- Choose one of the following:
 - MUS 382 Music and World Cultures – 3 hrs.
 - MUS 383 History of American Music – 3 hrs.

Total Core Hours Required: 41-42

Performance Major

Performance majors must complete the requirements for one of the following concentrations:

Piano Concentration

- APL 189/389 Applied Music Piano (max. 4 hrs./sem.) – 20 hrs.
- MUS 003 Half Junior Recital – 0 hrs.
- MUS 327 Accompanying or MUS 328 Accompanying (4 semesters) – 4 hrs.
- MUS 331 Piano Pedagogy – 2 hrs.
- MUS 433 Piano Literature – 2 hrs.

Total Hours Required for Concentration: 28

Total Hours Required for Major: 72

Piano Accompanying Concentration

- APL 189/389 Applied Music Piano (max. 4 hrs./sem.) – 16 hrs.
- Applied Music/accompanying techniques – 16 hrs.
- MUS 125 Foreign Language Diction – 2 hrs.
- MUS 421 Advanced Choral Conducting – 1 hr.
- MUS 422 Advanced Instrumental Conducting – 1 hr.
- MUS 480 Vocal Literature – 2 hrs.
- MUS 491 Independent Study (Instrumental Music Literature) – 2 hrs.

Additional Requirements:

- Foreign language (French) – 7 hrs.
- Accompany two half recitals in junior year with a singer and an instrumentalist (solo recital may substitute for either one).
- Accompany two full recitals in senior year with a singer and an instrumentalist.

Total Hours Required for Concentration: 47

Total Hours Required for Major: 91

Voice Concentration

- APL 197/397 Applied Music Voice (max. 4 hrs./sem.) – 20 hrs.
- MUS 003 Junior Recital – 0 hrs.
- MUS 125 Foreign Language Diction – 2 hrs.
- MUS 375 Opera Workshop – 2 hrs.
- MUS 470 Vocal Pedagogy – 2 hrs.
- MUS 480 Vocal Literature – 2 hrs.

Additional requirements:

- Foreign language (French) – 16 hrs.

Total Hours Required for Concentration: 44

Total Hours Required for Major: 88

Orchestral/Band Instruments Concentration

- Applied Music (max. 4 hrs./sem.) – 20 hrs.
- MUS 003 Junior Recital – 0 hrs.
- MUS 471 Instrumental Pedagogy and Literature – 2 hrs.

Total Hours Required for Concentration: 22

Total Hours Required for Major: 66

Composition Major

- Applied Music – 20 hrs.
- APL 180/380 Applied Music Composition – 8 hrs.
- MUS 305 Counterpoint or MUS 319 Composition (one taken in core) – 2 hrs.
- MUS 401 Orchestration – 2 hrs.
- MUS 405 Theories of Atonal Music – 3 hrs.

Total Hours Required for Concentration: 35

Total Hours Required for Major: 79

Music Education Major

Music education majors must complete the requirements for one of the following concentrations:

Instrumental Concentration

- Applied Music (7 semesters minimum) – 14 hrs.
- MED 101 Introduction to Music Education – 1 hr.
- MUS 115 Voice Class – 1 hr.
- MED 155 Brass Techniques – 2 hrs.
- MED 251 String Techniques – 2 hrs.
- MED 257 Percussion Techniques – 2 hrs.
- MED 301 Alternative Ensemble Techniques – 1 hr.
- MED 322 Conducting II – 2 hrs.
- MED 354 Woodwind Techniques – 2 hrs.
- MUS 323 Marching Band Techniques – 1 hr.
- MUS 401 Orchestration – 2 hrs.

Total Hours Required for Concentration: 30

Total Hours Required for Major: 73

Piano Concentration

- APL 189/389 Applied Music Piano (min. 7 semesters) – 14 hrs.
- MED 101 Introduction to Music Education – 1 hr.
- MED 155 Brass Techniques – 2 hrs.
- MED 251 String Techniques – 2 hrs.
- MED 257 Percussion Techniques – 2 hrs.
- MED 301 Alternative Ensemble Techniques – 1 hr.
- MED 322 Conducting II – 2 hrs.
- MUS 327 Accompanying, or MUS 328 Accompanying (4 semesters) – 4 hrs.
- MUS 331 Piano Pedagogy – 2 hrs.
- MUS 354 Woodwind Techniques – 2 hrs.
- MUS 433 Piano Literature – 2 hrs.

Total Hours Required for Concentration: 34

Total Hours Required for Major: 78

Vocal Concentration

- APL 197/397 Applied Music Voice (min. 7 semesters) – 14 hrs.
- MED 101 Introduction to Music Education – 1 hr.
- MUS 125 Foreign Language Diction – 2 hrs.
- MED 155 Brass Techniques – 2 hrs.
- MED 251 String Techniques – 2 hrs.
- MED 257 Percussion Techniques – 2 hrs.
- MED 301 Alternative Ensemble Techniques – 1 hr.
- MED 322 Conducting II – 2 hrs.
- MED 354 Woodwind Techniques – 2 hrs.
- MUS 375 Opera Workshop – 1 hr.
- MUS 470 Vocal Pedagogy – 2 hrs.
- MUS 480 Vocal Literature – 2 hrs.

Total Hours Required for Concentration: 33

Total Hours Required for Major: 76

Teacher Licensure

Teacher Licensure

The music education program leads to a K-12 special license that authorizes the holder to teach all aspects of music in grades K-12. Music students desiring to teach in the public schools must complete the BM degree with a major in music education and the

requirements. Students will be assigned an advisor in music and in the Department of Teacher Education. Regular consultation with both advisors is extremely important.

Professional Education Requirements:

- ETE 115 Schools and Schooling in American Society – 3 hrs.
- ETE 116 Introductory Field Experience – 1 hr.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 219 Human Development from Birth to Young Adulthood and Effective Teaching Field Experience – 1 hr.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families and Communities – 3 hrs.
- ETE 301 Novice Teaching Experience in Music Classrooms K-8 – 1 hr.
- ETE 302 Novice Teaching Experience in High School Music – 1 hr.
- ETE 310 Teacher Performance Assessment – 1 hr.
- ETE 345 Guiding Learners: Creating Safe, Inclusive Learning Environments – 3 hrs.
- ETE 351 Music Methods Grades K-8 for Music Majors – 3 hrs.
- ETE 352 High School Music Methods for Music Majors – 3 hrs.
- ETE 368 Content Area Reading for All Students – 2 hrs.
- ETE 493 Student Teaching in K-12 Music – 12 hrs.

Total Required Education Hours for Degree: 38

To meet the requirements of the Teacher Education, MTH 111 must be completed.

Bachelor Of Arts Or Bachelor Of Science Degree With A Major In Music (Music Business)

- Applied Music (min. of 4 semesters) – 8 hrs.
- Ensemble (Each semester) – 8 hrs.
- MUS 001 Recital lab (Each semester) – 0 hrs.
- MUS 161 Music Theory I – 2 hrs.
- MUS 162 Music Theory II – 2 hrs.
- MUS 163 Elementary Ear-training and Sight Singing – 1 hr.
- MUS 164 Elementary Ear-training and Sight Singing – 1 hr.
- MUS 165 Keyboard Skills – 2 hrs.
- MUS 166 Keyboard Skills – 2 hrs.
- Two of the following:
 - MUS 380 Western Music to 1750 – 3 hrs.
 - MUS 381 Western Music 1750-Present – 3 hrs.
 - MUS 382 Music and World Cultures – 3 hrs.
 - MUS 383 History of American Music – 3 hrs.
- MUS 101 Intro to Music Business – 3 hrs.
- MUS 120 Music Industry Seminar (1) – 4 hrs.
- MUS 303 Music Products Industry – 3 hrs.
- MUS 304 Music Licensing and Contracts – 3 hrs.
- MUS 307 Music Agency and Fine Arts Administration – 3 hrs.
- MUS 320 Advanced Music Industry Seminar (1) – 2 hrs.
- CFA 301 Cooperative Education/Internship **OR** CFA 354 Hollywood Semester Internship – 2 hrs.
- ATG 157 Accounting Principles – 3 hrs.
- M L 350 Managing in Organizations – 3 hrs.
- MTG 315 Principles of Marketing – 3 hrs.
- FIN 322 Business Finance – 3 hrs.
- ECO 100: Economics and Contemporary Issues **OR** ECO 221: Principles of Microeconomics – 3 hrs.
- MTG 304 Professional Selling – 3 hrs.

Total Hours Required: 70

Courses in the Music Business major may not be used to satisfy the requirements for a minor in the Foster College of Business.

Bachelor Of Arts Or Bachelor Of Science Degree With A Major In Music And Entertainment Industry

- IM 113 Introduction to Interactive Media – 3 hrs.
- COM 101 Survey of Communication – 3 hrs.
- COM 112 Introduction to Media Production – 3 hrs.
- COM 201 Journalistic Writing – 3 hrs.
- COM 204 Audio Production – 3 hrs.
- COM 314 Introduction to Video: Studio Production – 3 hrs. **OR** COM 335 Introduction to Video: Field Production – 3 hrs.
- MUS 101 Introduction to Music Business – 3 hrs.
- MUS 120 Music Industry Seminar (1) – 4 hrs.
- MUS 201 Moguls in Music – 3 hrs.
- MUS 204 Music Promotions Practicum (1) – 2 hrs.
- MUS 303 Music Products Industry – 3 hrs.
- MUS 304 Music Licensing and Contracts – 3 hrs.
- MUS 307 Agency and Fine Arts Administration – 3 hrs.
- MUS 312 Music in Media – 3 hrs.
- MUS 320 Advanced Music Industry Seminar (1) – 2 hrs.
- CFA 301 Cooperative Education/Internship in Communications and Fine Arts **OR** CFA 354 Hollywood Semester Internship 2-6 hrs.
- *Choose one of the following:*
 - ECO 100 Introduction to Economics – 3 hrs.
 - ECO 221 Principles of Microeconomics – 3 hrs.
- ATG 157 Accounting Principles-Financial – 3 hrs.
- ML 350 Managing for Results in Organizations – 3 hrs.
- FIN 322 Business Finance – 3 hrs.
- MTG 304 Professional Selling – 3 hrs.
- MTG 315 Principles of Marketing – 3 hrs.

Total Hours Required: 64

Bachelor Of Arts Or Bachelor Of Science Degree With A Major In Music for Video Games

- APL 180 Applied Composition Lessons – 8 hrs.
- APL 380 Applied Composition Lessons – 8 hrs.
- MUS 102 The Music Business for Performing & Composing Professionals- 3 hrs.
- MUS 109 Music Appreciation – 3 hrs.
- MUS 161 Music Theory I – 2 hrs.
- MUS 162 Music Theory II – 2 hrs.
- MUS 163 Ear Training/Sight Singing I – 1 hr.
- MUS 164 Ear Training/Sight Singing II – 1 hr.
- MUS 171 Survey of Game Music – 2 hrs.
- MUS 172 Music and Sound for Games – 2 hrs.
- MUS 250 – Music Technology – 3 hrs.
- MUS 312 Music in Media – 3 hrs.
- MUS 360 Introduction to Recording Arts and Sciences – 3 hrs.
- MUS 371 Music and Sound for Video Game Projects – 6 hrs.
- MUS 401 – Orchestration – 2 hrs.
- IM 458 Sound Design – 3 hrs.
- Choose one of the following
 - IM 243 History of Animation – 3 hrs.
 - IM 380 Critical Game Theories – 3 hrs.
 - CFA 250 Film History – 3 hrs.
 - CFA 320 Film Theory and Criticism – 3 hrs.
 - CFA 321 Topics in Film Genre – 3 hrs.

Total hours required: 55

Minor Requirements

Music Minor

- Applied Music (4 semesters) – 4 hrs.

- MUS 001 Recital Lab (4 semesters) 0
- MUS 109 Music Appreciation – 3 hrs.
- MUS 141/341, 142/342, 143/343, 144/344, or 146/346 – 4 hrs.
- MUS 161 Music Theory I – 2 hrs.
- MUS 162 Music Theory II – 2 hrs.
- MUS 163 Elementary Ear Training and Sight-singing – 1 hr.
- MUS 164 Elementary Ear Training and Sight-singing – 1 hr.
- MUS 165 Keyboard Skills – 2 hrs.
- MUS 166 Keyboard Skills – 2 hrs.
- Choose one from this list:
 - MUS 380 Western Music to 1750 – 3 hrs.
 - MUS 381 Western Music 1750 – Present – 3 hrs.
 - MUS 382 Music and World Cultures – 3 hrs.
 - MUS 383 History of American Music – 3 hrs.

Total Music Hours Required for Minor: 24

Minor in Music Industry – 18 credit hours

Required Classes:

- MUS 101 Introduction to Music Business OR MUS 102 The Music Business for Performers/Composers – 3 hrs.
- MUS 201 Moguls in Music – 3 hrs.
- MUS 307 Music Agency & Fine Arts Administration – 3 hrs.
- MUS 120 Music Industry Seminar (3×1) – 3 hrs.

12 hours

Pick Any Two Classes:

- Music 303 Music Products Industry – 3 hrs.
- MUS 304 Music Licensing and Contracts – 3 hrs.
- MUS 312 Music in Media – 3 hrs.
- MUS 360 Introduction to Recording Arts & Sciences – 3 hrs.
- MUS 361 Advanced Audio Engineering – 3 hrs.
- CFA 355 California Rock History (Hollywood Semester) – 3 hrs.
- CFA 358 Visual Storytelling (Hollywood Semester) – 3 hrs.

6 hours

Total hours required for Minor – 18 hours

Minor in Jazz Studies – 19 credit hours

Required Classes:

- MUS 161 – Music Theory I – 2 hrs.
- MUS 162 – Music Theory II – 2 hrs.
- MUS 271 – Jazz Improvisation I – 2 hrs.
- MUS 272 – Jazz Improvisation II – 2 hrs.
- MUS 273 – Jazz Arranging – 2 hrs.
- MUS 383 – History of American Music – 3 hrs.
- Choose from (Courses can be repeated to meet the 6 credit hour requirement):
 - MUS 146/346 – Jazz Ensemble/Groove Project – 1 hr.
 - MUS 348 – Resonant Fusion – 1 hr.
 - MUS 349 – Hilltop Combo – 1 hr.
 - Six semesters total – 6 hrs.

Total hours required for Minor – 19 hours

Applied Music

1. Private lessons offered by the Department of Music are open to all University students but enrollment is limited to available staffing. As a result, priority for enrollment is given on the following basis: (1) music majors, (2) music minors, (3) other full-time University students, (4) other part-time University students.

2. Beginners normally enroll in class instruction instead of private lessons.
 3. Students wishing to enroll in private lessons must see a full-time faculty member in the respective area in order to be assigned an instructor.
 4. An additional fee is charged for private lessons, which includes the use of a practice room.
 5. Students enrolled for applied music are expected to practice a minimum of one hour a day for each hour of credit being received.
 6. A jury exam at the end of the semester is required for all music majors, music minors, and other students enrolled for 2 hours or more of credit.
 7. Private lessons are not given during final examination periods.
 8. Individual lessons missed during the semester will not be made up unless satisfactory notice is given to the instructor at least one day before the absence.
 9. Private lessons are 30 minutes or 1 hour per week based upon the student's enrollment objective:
 - o BA/BS in music
 - o 1 hr. credit 1/2 hr. lesson
 - o 2 hrs. credit 1 hr. lesson
 - o BM in performance (4 hrs. credit) 1 hr. lesson
 - o BM in music education (2 hrs. credit) 1 hr. lesson
 - o BM in composition (2 hrs. credit) 1 hr. lesson
 - o Non-music major (1 hr. credit) 1/2 hr. lesson
 10. Applied Music course numbers:
 - o APL 177, 377 Bassoon
 - o APL 178, 378 Cello
 - o APL 179, 379 Clarinet
 - o APL 180, 380 Composition
 - o APL 181, 381 Euphonium
 - o APL 182, 382 Flute, Piccolo
 - o APL 183, 383 Guitar
 - o APL 185, 385 Horn
 - o APL 186, 386 Oboe
 - o APL 187, 387 Organ
 - o APL 188, 388 Percussion
 - o APL 189, 389 Piano
 - o APL 190, 390 Saxophone
 - o APL 191, 391 String Bass
 - o APL 192, 392 Trombone
 - o APL 193, 393 Trumpet
 - o APL 194, 394 Tuba
 - o APL 195, 395 Viola
 - o APL 196, 396 Violin
 - o APL 197, 397 Voice
 - o APL 198, 398 Instrument
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This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Music and Music Education Courses



Music and Music Education Courses

MED 101 – Introduction to Music Education (1 hour)

This introductory music education course will provide an overview of music programs in the public schools and roles of professional music educators. The class will include reading, observation, teaching, experiential learning using technology, and discussion of contemporary trends and practices. Prerequisite: Music Education major or consent of instructor

MED 155 – Brass Technique, Materials and Methods (2 hours)

Brass instruments; emphasis on teaching methods and literature.

MED 251 – String Technique, Materials and Methods (2 hours)

Methods of teaching strings; participation in group performance on all string instruments.

MED 257 – Percussion Technique, Materials and Methods (2 hours)

Playing and teaching all percussion instruments used in school bands and orchestras.

MED 301 – Alternative Ensemble Techniques (1 hour)

The objective of this course is to gain knowledge about alternative ensembles and music making in the school setting. The focus of the course will be on the pedagogy and teaching strategies used in modern music teaching trends outside of the traditional choir, band, and orchestra setting. At the end of this course, each student should be able to verbalize the values and benefits of the various ensembles and music courses learned about, demonstrate basic techniques on the variety of instruments used therein, and have pedagogical strategies and resources for teaching in each of the various musical areas, both in the classroom and/or as part of an after school program. Prerequisite: MUS 161, 162, 163, 164, 165, and 166

MED 321 – Conducting I (2 hours)

Technique of the baton; gestures and learning independence of hands. Short score reading and rehearsal. Conducting the class in short exercises. Prerequisite: junior standing in music.

MED 322 – Conducting II (2 hours)

Continuation of MED 321: conducting problems and rehearsal techniques for instrumental and choral groups. Conducting the band and chorus. Full score reading. Prerequisite: MED 321 or consent of instructor; junior standing.

MED 354 – Woodwind Technique, Materials and Methods (2 hours)

Study of clarinet, flute, and oboe; emphasis on teaching techniques and literature.

MUS 1 – Recital Laboratory (0 hours)

Opportunity to perform and to listen critically, under faculty guidance. Discussion of topics of interest to music majors. Attendance

required of all music students. Majors must perform at least once each semester, at teacher's discretion, and attend 10 concerts each semester. Grade based on concert and workshop attendance.

MUS 101 – Introduction to Music Business (3 hours)

Core Curr. MI

Survey of the music business industry: music publishing, the recording industry, copyright law, performance rights, music products retailing, and arts management.

MUS 102 – The Music Business for Performing & Composing Professionals (3 hours)

This survey course is designed to transition music performance and composition majors into the professional music industry. Students will be exposed to a wide variety of career options and practices, but with a particular emphasis towards marketing creative music compositions and performing in the professional world. Prerequisite: Open to Music Majors or by consent of the instructor

MUS 109 – Music Appreciation (3 hours)

Gen. Ed. FA

Core Curr. FA

Detailed study of elements of music, and music notation; general survey of music and composers. How music expresses and communicates feelings and ideas: listening to compositions from various periods. Performance by faculty artists in class, and outside listening experiences. Satisfies fine arts general education requirement. Prerequisite: Non-music majors only.

MUS 115 – Voice Class (1 hour)

Voice instruction for instrumental Music Education majors. Prerequisite: Music major or consent of instructor.

MUS 120 – Music Industry Seminar (0-1 hours)

This course gives students the opportunity to explore all facets of career paths in the music industry. Students will learn through guest lecturers, industry discussions, video content, field trips, and interacting with current professionals in the music industry. Prerequisite: MUB or MEI majors only

MUS 125 – Foreign Language Diction for Singers (2 hours)

International Phonetic Association symbols for Italian, German, and French songs. Rules of pronunciation; special emphasis on vocal demands.

MUS 140 – Piano Class for Adult Beginners (1 hour)

Elementary piano for non-music majors.

MUS 141 – Orchestra (1 hour)

Participation in Bradley Symphony Orchestra, Peoria Symphony Orchestra, or Knox-Galesburg Symphony. One hour credit for each ensemble. Two sections may be taken each semester; may be repeated for a maximum of 16 hours credit. Open to all students by audition. Separate auditions required for each orchestra.

MUS 142 – University Bands (1 hour)

Participation in the Bradley Symphonic Winds and/or Bradley Symphonic Band. Concerts on and off campus. Two sections may be repeated for a maximum of 16 hours credit. Open to all students by audition.

MUS 143 – Bradley Community Chorus (1 hour)

Presents two major choral works with orchestra each year. Open to all students by audition.

MUS 144 – Bradley Chorale (1 hour)

Study and performance of choral music from all periods of music history: accompanied and unaccompanied works. Concerts on and off campus. Open to all students by audition.

MUS 146 – Jazz Ensemble/Groove Project (1 hour)

Bradley Jazz Ensemble and Groove Project. Study and performance of jazz from all eras. Concerts on and off campus. May be repeated for a maximum of 16 credit hours. Open to all students by audition.

MUS 161 – Music Theory I (2 hours)

Basic properties and notation of tone: diatonic scale systems; intervals; melodic organization; homophonic and contrapuntal two- and three-voice combinations. Prerequisite: Music major, music minor, Jazz Studies minor, or consent of instructor.

MUS 162 – Music Theory II (2 hours)

Continuation of MUS 161: chord structures, decorative pitches, harmonic successions, four-voice combinations, inversions, seventh chords, secondary dominants, and modulations. Prerequisite: MUS 161 or consent of instructor

MUS 163 – Elementary Ear-Training and Sightsinging (1 hour)

Aural theory; intervals, triads, and inversions; rhythmic, melodic, and harmonic dictation. Prerequisite: Music major, music minor, or consent of instructor.

MUS 164 – Elementary Ear-Training and Sightsinging (1 hour)

Aural theory; intervals, triads, and inversions; rhythmic, melodic, and harmonic dictation. Prerequisite: MUS 163 or consent of instructor.

MUS 165 – Keyboard Skills-Class Piano (2 hours)

Development of keyboard facility: scales, improvisation, sight reading, transposing, and performance of elementary piano literature. Development of music-reading facility: theoretical aspects of music such as scales, functional harmony, and intervals. Self-paced. Prerequisite: Music major, music minor, or consent of instructor.

MUS 166 – Keyboard Skills-Class Piano (2 hours)

Development of keyboard facility: scales, improvisation, sight reading, transposing, and performance of elementary piano literature. Development of music-reading facility: theoretical aspects of music such as scales, functional harmony, and intervals. Self-paced. Prerequisite: MUS 165 or consent of instructor.

MUS 171 – Survey of Game Music (2 hours)

Video game music has evolved over three decades from simple blips and bleeps into a genre of its own. This genre has been influenced by the technological limitations of its roots, and also by numerous crossovers from popular music, electronic music, film soundtracks, and anime. This class will tour the history of video game music and the programmers and musicians who made it what it is. We will take time to appreciate some of the most significant technological and artistic accomplishments while understanding the reasoning behind it towards creating better user experiences.

MUS 172 – Music and Sound for Games (2 hours)

Combined studio and lecture course that will focus on the creation, selection, editing, processing, and integration of sound and music (post-production) into video and animations. Music composition, Foley, Voice Over Recording (ADR and Voice Acting), digital audio techniques and MIDI control will be studied. Students will have the opportunity to work in groups to realize original creations.

MUS 2 – Senior Recital (0 hours)**Core Curr. EL**

Required for B.M. and B.M.E. May be given in first or second semester of senior year.

MUS 201 – Moguls in Music (3 hours)

Moguls In Music will exam the careers of the most influential and notorious business icons of popular music. Students will learn the path to success of the true music entrepreneur through historical research and first hand accounts.

MUS 204 – Music Promotions Practicum (1 hour)

Music Promotions Practicum is designed to give students the opportunity to develop promotional and networking skills in the music industry within the campus environment. Each student will be assigned a semester-long project with a University ensemble or music organization, with the goal of creating promotional materials for their assigned group. May be repeated up to a maximum of 2 credit hours. Prerequisite: Music and Entertainment Industry major or consent of instructor.

MUS 235 – Music in Its Historical Perspective I (3 hours)

Music and its development in Western civilization: to 1600. Emphasis on acquaintance with and analysis of representative musical works and style, and on understanding of musical concepts in historical context. Prerequisite: music major or consent of instructor.

MUS 236 – Music in Its Historical Perspective II (3 hours)

Music and its development: Baroque through Classical. Emphasis on acquaintance with and analysis of representative musical works and style, and on understanding of musical concepts in historical context. Prerequisite: music major or consent of instructor.

MUS 250 – Introduction to Music Technology (3 hours)

Practical investigation of the uses of contemporary technology for music creation and sound manipulation, with an emphasis on digital tools and techniques. Using the Digital Audio Workstation as a backdrop, students explore digital synthesis, signal processing, and general design and control of sound for electronic music.

MUS 261 – Music Theory III (2 hours)

Continuation of MUS 162 emphasizing contrapuntal techniques: imitation, the invention, contrapuntal devices, the fugue. Further study of seventh chords and formal structures. Prerequisite: MUS 161, 162; or consent of instructor.

MUS 262 – Music Theory IV (2 hours)

Continuation of MUS 261: formal structures; further study of chord structures including ninth, eleventh, thirteenth, and augmented sixth chords; chromatic harmony; enriched tonal resource; impressionistic techniques. Prerequisite: MUS 261 or consent of instructor.

MUS 263 – Advanced Ear-Training and Sightsinging (1 hour)

Continuation of MUS 163, 164: aural recognition of various types of seventh and ninth chords; melodic and harmonic dictation, including chromatically altered chords and modulation. Prerequisite: MUS 163, 164; or consent of instructor.

MUS 264 – Advanced Ear-Training and Sightsinging (1 hour)

Continuation of MUS 163, 164: aural recognition of various types of seventh and ninth chords; melodic and harmonic dictation,

including chromatically altered chords and modulation. Prerequisite: MUS 163, 164; or consent of instructor.

MUS 265 – Advanced Keyboard Skills-Class Piano (2 hours)

Continuation of MUS 165, 166, including sightreading and additional chord progressions. Prerequisite: MUS 166 or consent of instructor; MUS 265 or consent of instructor required for MUS 266.

MUS 266 – Advanced Keyboard Skills-Class Piano (2 hours)

Continuation of MUS 165, 166, including sightreading and additional chord progressions. Prerequisite: MUS 166 or consent of instructor; MUS 265 or consent of instructor required for MUS 266.

MUS 271 – Jazz Improvisation 1 (2 hours)

Theoretical principles in jazz and their application to the ultimate goal of highly developed improvised performances. Prerequisite: MUS 161 and MUS 162

MUS 272 – Jazz Improvisation 2 (2 hours)

Advanced theoretical principles in jazz and their application to the ultimate goal of a highly developed improvised performances. Prerequisite: MUS 271

MUS 273 – Jazz Arranging (2 hours)

In this course, students learn chord voicings, voice leading, and standard harmonic progressions, which are the core components of jazz arranging. Projects include arrangements for jazz combo and big band. Prerequisite: MUS 161 and MUS 162

MUS 3 – Junior Recital (0 hours)

Core Curr. EL

Public performance guided by applied music faculty. Required for the Bachelor of Music degree in Performance. May be given in first or second semester of junior year. Prerequisite:

MUS 303 – Music Products Industry (3 hours)

This course analyzes the various categories of the music products industry and their structure, financing, and market penetration. Additionally, students learn how to balance inventory through financial analysis and pricing models. Prerequisite: MUS 101 or MUS 102

MUS 304 – Music Licensing and Contracts (3 hours)

Students learn to understand the legal documents that affect royalty calculations for the use of musical intellectual property, including sound recordings, publishing, and other general licensing. Prerequisite: MUS 101 or MUS 102

MUS 305 – Counterpoint (2 hours)

Contrapuntal practices of the 18th century. Prerequisite: MUS 261 and 263, or equivalent.

MUS 307 – Music Agency and Fine Arts Administration (3 hours)

This course studies the roles of agents, promoters, and arts administrators in both the private and non-profit sector. Prerequisite: MUS 101 or MUS 102

MUS 309 – Ensemble (1 hour)

Repertoire for small ensembles (vocal or instrumental), including Collegium Musicum. Workshop recitals.

MUS 312 – Music in Media (3 hours)

Music in Media will explore the diverse and creative ways that music is integrated into our cultural landscapes, addressing music in film, television, gaming, branding, and advertising through research and introductions to distinguished leaders in the field, past and present.

MUS 319 – Composition (2 hours)

Compositions in smaller forms for voice, piano, and instruments in various combinations. Prerequisite: MUS 262 or consent of instructor.

MUS 320 – Advanced Music Industry Seminar (0-1 hours)

This course gives students the continued opportunity to explore all facets of career paths in the music industry. Enrolled students must have junior or senior standing and will assist with the organization and topics explored in the MUS 120 Seminar Course by networking with industry professionals and bringing forth topics for discussion. Periodically, students will be asked to facilitate the topic of discussion for the MUS 120 Seminar. Prerequisite: MUB or MEI students only. Junior standing.

MUS 323 – Marching Band Techniques (1 hour)

Techniques in organization, training, and performance of marching bands in public schools and colleges. Five hours observation in public schools. Prerequisite: Junior standing in music or consent of instructor.

MUS 327 – Accompanying (1 hour)

Vocal and instrumental accompanying, for piano and organ students. Requires minimum of 3 hours per week studio accompanying, and accompanying in recital workshops for these students. Prerequisite: Consent of instructor.

MUS 328 – Accompanying (1 hour)

Vocal and instrumental accompanying, for piano and organ students. Requires minimum of 3 hours per week studio accompanying, and accompanying in recital workshops for these students. Prerequisite: Consent of instructor.

MUS 331 – Piano Pedagogy (2 hours)

Principles and methods of teaching piano: lectures, demonstrations, and observations. Prerequisite: Consent of instructor.

MUS 335 – Music in Its Historical Perspective III (3 hours)**Core Curr. WI**

Music and its development: 19th century (MUS 335) and 20th century (MUS 336). Emphasis on acquaintance with and analysis of representative musical works and style, and an understanding of musical concepts in historical context. Prerequisite: music major or consent of instructor.

MUS 336 – Music in Its Historical Perspective IV (3 hours)

Music and its development: 19th century (MUS 335) and 20th century (MUS 336). Emphasis on acquaintance with and analysis of representative musical works and style, and an understanding of musical concepts in historical context. Prerequisite: Music major or consent of instructor.

MUS 340 – Rock/Pop Ensemble (1 hour)

This performing ensemble will introduce students to the skills required to create a successful rock/pop band. This includes creation of set lists, creation of successful, polished performances, sound and lighting, booking gigs, promoting performances, and using social media. These groups will be available by audition, and multiple sections will be offered. May be repeated for a maximum of 8 credit hours.

MUS 341 – Orchestra (1 hour)

Participation in the Bradley Symphony Orchestra, Peoria Symphony Orchestra, or Knox-Galesburg Symphony. One hour credit for each ensemble. Two sections may be taken each semester; may be repeated for a maximum of 16 credit hours. Open to all students by audition. Separate auditions required for each orchestra.

MUS 342 – University Bands (1 hour)

Participation in the Bradley Symphonic Winds and/or Bradley Symphonic Band. Concerts on and off campus. Two sections may be repeated for a maximum of 16 hours credit. Open to all students by audition.

MUS 343 – Bradley Community Chorus (1 hour)

Presents two major choral works with orchestra each year. Open to all students by audition.

MUS 344 – Bradley Chorale (1 hour)

Study and performance of choral music from all periods of music history: accompanied and unaccompanied works. Concerts on and off campus. Open to all students by audition.

MUS 345 – Cantus (1 hour)

Study and performance of choral music for treble voices. Concerts on and off campus. Open to all students by audition.

MUS 346 – Jazz Ensemble/Groove Project (1 hour)

Bradley Jazz Ensemble and Groove Project. Study and performance of jazz from all eras. Concerts on and off campus. May be repeated for a maximum of 16 credit hours. Open to all students by audition. Prerequisite: Four semesters of enrollment in MUS 146.

MUS 347 – Basketball Band (1 hour)

The Bradley Basketball band supports all men's and women's basketball games by providing music that gives a home court advantage to our teams.

MUS 348 – Resonant Fusion (1 hour)

Resonant Fusion is a commercial vocal ensemble that is dedicated to learning to perform in contemporary styles, including Jazz, Rock, Pop, Latin, and Ethnic Music. The group performs twice each semester on the Bradley campus, as well as several off-campus performances each year. May be repeated for a maximum of 8 credit hours.

MUS 349 – Hilltop Combo (1 hour)

The Hilltop Combo teaches students to become familiar with and proficient at the skills necessary to function successfully in a small jazz group, including improvisation, communication with other members of the ensemble, and performance etiquette. The group performs a campus concert each semester and several off-campus performances during the school year. May be repeated for a maximum of 8 credit hours.

MUS 350 – Digital Sound and Computer Music (3 hours)

Continuation of MUS 250. Practical exploration of computational sound and music through the lenses of Digital Audio Workstations and audio programming. Students expand their understanding of digital techniques via sampling, advanced signal processing, and algorithmic approaches to sound manipulation and modulation. Prerequisite: MUS 250 or consent of instructor

MUS 360 – Introduction to Recording Arts and Sciences (3 hours)

Designed for students who have an interest in making a career in the music industry, private industry audio/visual departments, and medium to large church and religious organizations or for performance majors interested in increasing their knowledge about live recording environments. The focus will be on understanding the basic concepts of operating professional audio equipment and how to professionally interact with the various parties involved in a recording project.

MUS 361 – Advanced Audio Engineering (3 hours)

The advanced audio engineering course is geared towards the individual who wants to make a career in the record industry, private industry audio/visual departments, and medium to large church and religious organizations or live performance industry. Prerequisite: MUS 360

MUS 371 – Music and Sound for Screen Projects (2 hours)

This course will place students in a collaborative position to compose music and sound design for projects emerging from courses that include I M 389 Game Production II, I 459 Computer Game Capstone Project, and I M 489 Advanced Game Capstone. Students will have one hour of class instruction with music faculty and one hour of collaborative work with project teams in the I M courses. May be repeated up to a maximum of 6 credit hours. Prerequisite: MUS 171, MUS 172

MUS 375 – Opera Workshop (1 hour)

Operatic literature, style, stage department, and presentation of scenes. May be repeated for a maximum of 4 credit hours. Prerequisite: Vocal music concentration or consent of instructor.

MUS 380 – Western Music to 1750 (3 hours)**Core Curr. WI**

This course traces music and its development in Western civilization up to the year 1750. It emphasizes acquaintance with and analysis of representative musical works and style, as well as understanding musical concepts in historical context. Prerequisite: Music major or consent of instructor;

MUS 381 – Western Music 1750-Present (3 hours)**Core Curr. WI**

This course traces music and its development in Western civilization from 1750 to present. It emphasizes acquaintance with and analysis of representative musical works and style, as well as understanding musical concepts in historical context. Prerequisite: Music major or consent of instructor;

MUS 382 – Music and World Culture (3 hours)**Core Curr. GP WC**

This course is a survey of non-Western musical cultures, including ethnic origins of folk and traditional music in America. There is required listening as part of this course. Music and World Culture is primarily a lecture course, which includes reading, listening, a group research project, and making music. Prerequisite: Music Major or consent of Instructor

MUS 383 – History of American Music (3 hours)

This course is an overview of American Music from the 1700s to the current day, focusing on genres such as American popular music, swing, jazz, blues, etc. This class will examine key figures in the creation and development of these genres alongside with the critical events in American that inspired the music making. Students will develop critical thinking skills and writing skills in their analysis of certain music figures, the genres examined, and events in American history. Prerequisite: Music Major or Consent of Instructor

MUS 401 – Orchestration (2 hours)

Symphonic scoring and scoring for school bands and choruses. Prerequisite: MUS 261, 262, and senior standing.

MUS 405 – Theories of Atonal Music (3 hours)

Introduction to analytical and compositional techniques of atonal music, with emphasis on pitch-class set theory. Prerequisite: MUS 262 or consent of instructor.

MUS 421 – Advanced Choral Conducting (1 hour)

Continuation of Conducting II. Emphasis on full score reading and practical experience conducting the chorus or chorale. Prerequisite: MED 322.

MUS 422 – Advanced Instrumental Conducting (1 hour)

Continuation of Conducting I. Emphasis on full score reading and practical experience conducting the band or orchestra. Prerequisite: MED 321.

MUS 433 – Piano Literature (2 hours)

Survey of piano compositions: Baroque period into the 20th century. Performance, discussion, and analysis.

MUS 470 – Vocal Pedagogy (2 hours)

Introduction to the anatomy and physiology of the vocal mechanism in relation to the art of singing in theory and practice. Includes

laboratory teaching experience. Prerequisite: vocal music major with junior standing or consent of instructor.

MUS 471 – Instrumental Pedagogy and Literature (2 hours)

This course is designed for senior Music Performance majors (Band/Orchestral Instruments concentration) to increase their knowledge of repertoire and pedagogy. Students will develop skills and methods for teaching students of various levels and will complete assignments to help expand their knowledge of solo, chamber, and orchestral repertoire. Prerequisite: Senior standing and consent of instructor

MUS 480 – Vocal Literature (2 hours)

Song literature for the solo voice; poetry and settings beginning with English lutenist airs. Monody, arias, and cantatas of the Baroque and Classic periods; songs of contemporary composers. Prerequisite: MUS 335, 336; or consent of instructor.

MUS 491 – Independent Study in Music (1-3 hours)

Directed independent study in a selected area of music or music education; weekly meetings with the instructor. May be repeated for a maximum of 6 hours credit. Prerequisite: senior standing or consent of instructor.

MUS 492 – Topics in Music (1-3 hours)

Topics of special interest which may vary each time course is offered. May be repeated under different topics to a maximum of 9 hours. Topic and prerequisites stated in current Schedule of Classes.

APL 177 – Bassoon (1-4 hours)

Bassoon

APL 178 – Cello (1-4 hours)

Cello

APL 179 – Clarinet (1-4 hours)

Clarinet

APL 180 – Composition (1-4 hours)

Composition

APL 181 – Euphonium (1-4 hours)

Euphonium

APL 182 – Flute (1-4 hours)

Flute

APL 183 – Guitar (1-4 hours)

Guitar

APL 185 – Horn (1-4 hours)

Horn

APL 186 – Oboe (1-4 hours)

Oboe

APL 188 – Percussion (1-4 hours)

Percussion

APL 189 – Piano (1-4 hours)

Piano

APL 190 – Saxophone (1-4 hours)

Saxophone

APL 191 – String Bass (1-4 hours)

String Bass

APL 192 – Trombone (1-4 hours)

Trombone

APL 193 – Trumpet (1-4 hours)

Trumpet

APL 194 – Tuba (1-4 hours)

Tuba

APL 195 – Viola (1-4 hours)

Viola

APL 196 – Violin (1-4 hours)

Violin

APL 197 – Voice (1-4 hours)

Voice

APL 198 – Instrument (1-4 hours)

Instrument

APL 377 – Bassoon (1-4 hours)

Bassoon

APL 378 – Cello (1-4 hours)

Cello

APL 379 – Clarinet (1-4 hours)

Clarinet

APL 380 – Composition (1-4 hours)

Composition

APL 381 – Euphonium (1-4 hours)

Euphonium

APL 382 – Flute (1-4 hours)

Flute

APL 383 – Guitar (1-4 hours)

Guitar

APL 385 – Horn (1-4 hours)

Horn

APL 386 – Oboe (1-4 hours)

Oboe

APL 388 – Percussion (1-4 hours)

Percussion

APL 389 – Piano (1-4 hours)

Piano

APL 390 – Saxophone (1-4 hours)

Saxophone

APL 391 – String Bass (1-4 hours)

String Bass

APL 392 – Trombone (1-4 hours)

Trombone

APL 393 – Trumpet (1-4 hours)

Trumpet

APL 394 – Tuba (1-4 hours)

Tuba

APL 395 – Viola (1-4 hours)

Viola

APL 396 – Violin (1-4 hours)

Violin

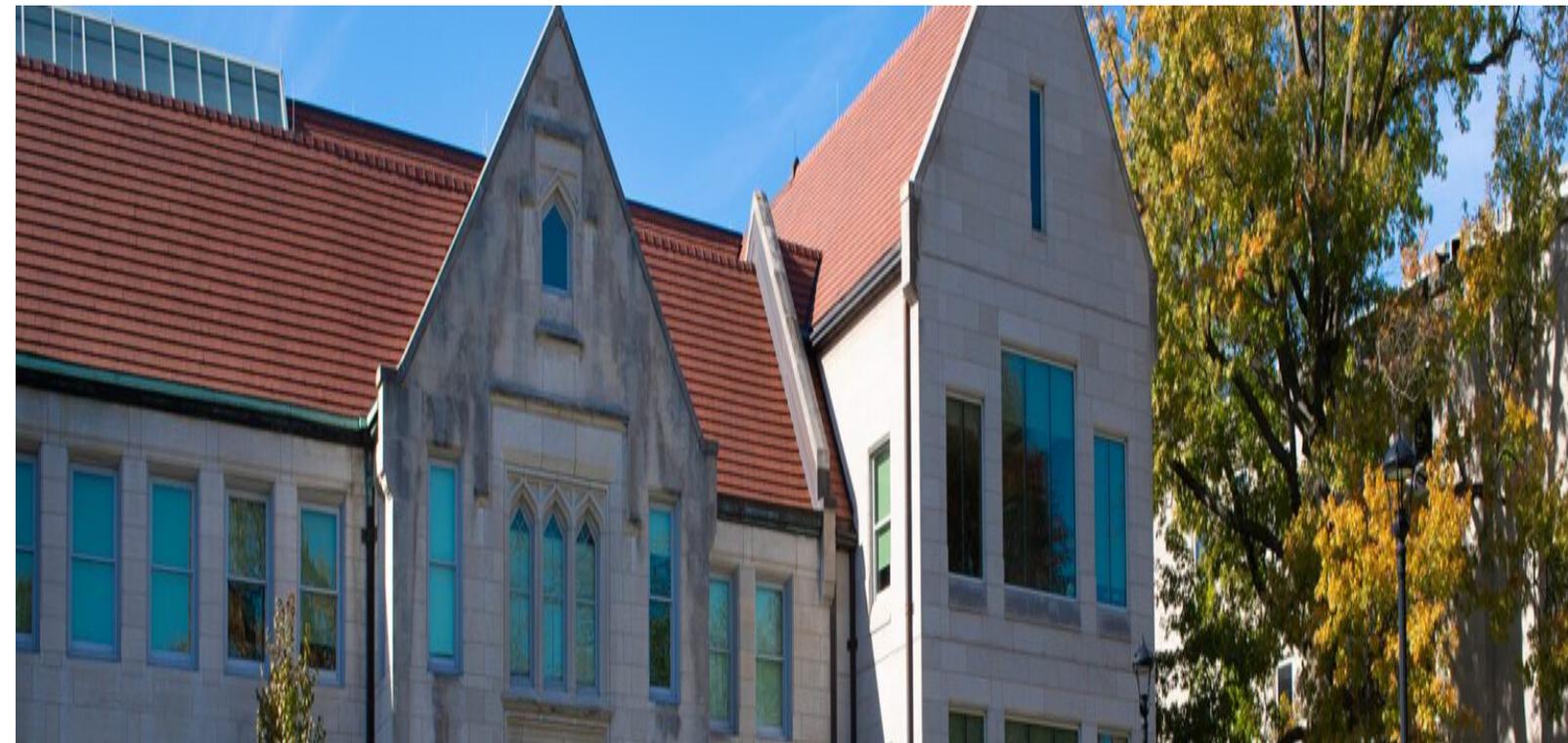
APL 397 – Voice (1-4 hours)

APL 398 – Instrument (1-4 hours)

Instrument

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Theatre Arts



Theatre Arts

FACULTY Associate Professors Lowell, Matisa, Miller, Stern; Artist-in-Residence Kanoff (chair).

Mission

The mission of the Department of Theatre Arts is to teach and promote the intellectual foundations and creative processes of the theatre; to train aspiring theatre artists in a range of performance and production disciplines; and to provide a comprehensive educational experience in a deeply nurturing, student-centered environment.

Through our major and minor programs, production seasons, excursion programs, and extra-curricular organizations, we offer students the opportunity to take ownership of their education; to pursue their passion and deepen their craft; and to learn, risk, and thrive in a dynamic, intimate creative home. The Department of Theatre Arts fosters academic achievement, collaborative intensity, exacting communication, creative authenticity, and personal integrity. We believe that these goals serve a diverse range of career possibilities, both in the arts and beyond.

We offer our students exceptional opportunities to interact with leading theatre professionals; we challenge our students to take a leadership role in the collaborative process, and we invite our students to join an artistic home that unites students, faculty, staff, and generations of engaged, successful alumni.

Admission Requirements

Admission to the Bachelor of Arts or Bachelor of Science degree program in Theatre Arts requires successful admission to Bradley University. Students are admitted as Theatre Arts majors and may choose to add a concentration in Performance or Production. Admission to the concentrations is provisional and requires an audition (for performers) or the presentation of a design/theatre technology portfolio or completion of an interview (for students interested in production). Students in the concentrations will be required to demonstrate basic talents and the potential to grow as theatre artists, as well as the commitment and discipline essential for successful completion of their studies. The concentration audition/interview is recommended after acceptance to the University or during the first year of study.

For more information, contact the department chairperson.

The department also offers a minor in theatre arts.

Major Requirements

In addition to university and college requirements, theatre arts majors must earn a C or better in every required course for the major and maintain a 2.5 grade point average in all theatre courses. Students may not enroll in a theatre arts course for which a required course is a prerequisite unless they have earned a C or better in the required course.

Bachelor Of Arts Or Bachelor Of Science Degree With A Major In Theatre Arts

All majors must complete the following requirements. Completion of a concentration in Performance or Production is optional.

- THE 115 Fundamentals of Acting – 3 hrs.
- THE 121 Contemporary Theatre Practice – 3 hrs.
- THE 123 Script Analysis for the Theatre – 3 hrs.
- THE 125 Stagecraft – 3 hrs.
- THE 226 Fundamentals of Design – 3 hrs. or THE 230 Costume Construction – 3 hrs.
- THE 316 Fundamentals of Directing – 3 hrs. or THE 318 Stage Management – 3 hrs.
- THE 410 Senior Seminar/Capstone Project – 3 hrs.
- THE 439 Global Encounters – 3 hrs.
- Practicum – 3 hrs. (Each Practicum is a production assignment earning .5 hours.)

Theatre History (choose two) – 6 hrs.

- THE 336 History of Theatre and Drama I – 3 hrs.
- THE 337 History of Theatre and Drama II – 3 hrs.
- THE 338 History of Theatre and Drama III – 3 hrs.

Total Hours: 33

Performance Concentration (All of the above Theatre Arts courses, plus the following:)

Audition required.

- THE 201 The Actor's Instrument I* – 3 hrs.
- THE 215 Intermediate Acting – 3 hrs.
- THE 311 Professional Development Seminar, Performance – 3 hrs.
- THE 315 Advanced Acting – 3 hrs.
- THE 401 Acting for the Camera – 3 hrs.
- THE 415 Acting: Genres – 3 hrs.

Elective Course from performance-oriented courses (advisor approval) – 3 hrs.

Total Hours: 54

Production Concentration (All of the above Theatre Arts courses, plus the following:)

(Portfolio review/interview required)

- THE 229 CADD for Theatre – 3 hrs.
- THE 310 Professional Development Seminar Production – 3 hrs.

Theatre Technology Elective Courses (choose two) – 6 hrs.

- THE 225 Advanced Stagecraft – 3 hrs.
- THE 227 Make-Up for the Stage – 3 hrs.
- THE 318 Stage Management – 3 hrs.
- THE 325 Properties Design and Construction – 3 hrs.
- THE 328 Special Materials for Scene and Costume Design – 3 hrs.
- THE 494 Theatre Arts Expedition – 3 hrs.
- THE 498 Explorations in Theatre Arts – 3 hrs.

Design Elective Courses (choose two) – 6 hrs.

- THE 326 Stage Lighting – 3 hrs.
- THE 327 Sound Design – 3 hrs.
- THE 329 Scenic Design – 3 hrs.
- THE 330 Costume Design – 3 hrs.

One additional elective course from the Theatre Technology or Design courses (advisor approval) – 3 hrs.

Total Hours: 54

Theatre Arts Minor

The Department of Theatre Arts offers a minor with the following requirements:

- THE 115 Fundamentals of Acting – 3 hrs.
- THE 121 Contemporary Theatre Practice (introductory course for Theatre Arts majors and minors) or THE Introduction to Theatre- 3 hrs.
- THE 123 Script Analysis- 3 hrs.
- THE 125 Stagecraft – 3 hrs. **or** THE 230 Costume Construction – 3 hrs.
- THE 336, 337, **or** 338 History of Theatre and Drama – 3 hrs.
- One additional THE course at the 200, 300, or 400 level – 3 hrs.
- Practicum – 2 hrs. (*Each practicum is a production assignments earning .5 hours.*)

Total hours required for the minor: 20

Minor in Musical Theatre

Required Classes:

- THE 207 Theatre Practicum – .5 hr.
- THE 208 Theatre Practicum – .5 hr.
- THE 115 Fundamentals of Acting – 3 hrs.
- THE 339 History of American Musical Theatre – 3 hrs.
- THE 314 Acting the Song – 3 hrs.
- MUS 140 Piano for Adult Beginners – 1 hr.
- MUS 161 Music Theory I – 2 hrs.
- MUS 163 Elementary Ear Training/Sight Singing – 2 hrs.
- APL 397 Applied Voice Lessons – 3 hrs.
- MUS 309 Resonant Fusion (Contemporary Music Ensemble) – 2 hrs.

Total hours required for minor: 20 hours

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Theatre Courses



Theatre Courses

THE 107 – Practicum (0.5 hours)

Core Curr. EL

Variety of theatre assignments and performance responsibility working on productions. Prerequisite:

THE 108 – Practicum (0.5 hours)

Core Curr. EL

Variety of theatre assignments and performance responsibility working on productions.

THE 115 – Fundamentals of Acting (3 hours)

An introduction to the theories, principles, and practices of acting for the stage.

THE 121 – Contemporary Theatre Practice (3 hours)

An introduction to the trends and issues in today's theatre with an emphasis on the process of creating collaborative art and building a shared vocabulary and personal aesthetic.

THE 125 – Stagecraft (3 hours)

An introduction to the principles and practices of scenic construction, safety, painting, and lighting. Explores types and utilization of scenery for theatre. Practical application through projects and work in the University Theatre.

THE 131 – Introduction to Theatre (3 hours)

Gen. Ed. FA

Core Curr. FA

Encouraging audience appreciation of the theatre through attending area theatre activities, discussions, and supplementary readings.

THE 141 – Film Appreciation (3 hours)

Gen. Ed. FA

Core Curr. FA

Encouraging audience appreciation of film art by surveying film history, genres, and technique through lecture, discussion, supplemental reading, and the viewing of domestic and foreign films.

THE 201 – The Actor's Instrument I (3 hours)

Techniques for developing a unified practice in voice and movement for rehearsal and performance on stage. Basic anatomy the voice and body, especially as they relate to breath, support, and alignment. Working from a "neutral state" individually and in groups, recognizing and correcting inefficient behaviors, learning the International Phonetic alphabet, and foundational work with poetic texts and period movement. Prerequisite: THE 115, THE 121, and acceptance in the Performance Concentration or consent of instructor and

department chair.

THE 207 – Practicum (0.5 hours)

Continuation of THE 107, THE 108. Prerequisite: THE 107 or THE 108 or consent of instructor and department chair.

THE 208 – Practicum (0.5 hours)

Continuation of THE 107, THE 108. Prerequisite: THE 107 or THE 108 or consent of instructor and department chair.

THE 215 – Intermediate Acting (3 hours)

Continuation of THE 115 focusing on the development of the actor's technique through script analysis, exercises, and scene study. Prerequisite: THE 115, THE 121, THE 123, and acceptance in the Performance Concentration or consent of instructor and department chair.

THE 223 – Script Analysis for the Theatre (3 hours)

Fundamentals of directing the play: script analysis, event and action, casting, rehearsal and staging, working with actors and designers.

THE 225 – Advanced Stagecraft (3 hours)

A continuation of THE 125. Advanced principles and practices of scenic construction, safety, painting, and technical direction. Practical application through projects and work in the University Theatre. Prerequisite: THE 226 and acceptance into the Production Concentration or consent of instructor and department chair.

THE 226 – Fundamentals of Design (3 hours)

Principles, practices, and concepts of scenic, lighting, costume, and sound design, as well as theatre graphics skills. Prerequisite: THE 121, THE 125, THE 123, or acceptance into the Production Concentration or consent of instructor and department chair.

THE 227 – Make-Up for the Stage (3 hours)

Instruction and practical experience with make-up for the stage: types, application methods, and design techniques.

THE 229 – Cadd for Theatre (3 hours)

Instruction and practical experience with computer aided drafting and design (CADD) for use in theatre production: software, hardware, application methods, and rendering techniques. Prerequisite: THE 226 and acceptance into the Production Concentration or consent of instructor and department chair.

THE 230 – Costume Construction (3 hours)

An introduction to the principles and practices of costume construction, including safety, cutting, stitching, and draping. Explores types and utilization of costuming for theatre. Practical application through projects and work in the University Theatre.

THE 301 – The Actor's Instrument II (3 hours)

A continuation of the principles and techniques introduced in THE 201, The Actor's Instrument I. Prerequisite: THE 115; THE 121; THE 201; THE 215 and acceptance in the Performance Concentration or consent of instructor and department chair.

THE 303 – Stage Combat (3 hours)

A performance course focused on the concepts and techniques utilized in the advanced stage movement skill of stage combat with emphasis on hand-to-hand and Elizabethan rapier styles. Prerequisite: THE 115 or consent of instructor and department chair.

THE 305 – Dialects for Actors (3 hours)

Students learn to listen to and vocally produce regional and international dialects of English with emphasis on cultural context and technique for both prepared texts and improvisational work. Prerequisite: THE 201

THE 307 – Practicum (0.5 hours)

Core Curr. EL

Continuation of THE 207, THE 208. Prerequisite: THE 207 or THE 208 or consent of instructor and department chair.

THE 308 – Practicum (0.5 hours)

Core Curr. EL

Continuation of THE 207, THE 208. Prerequisite: THE 207 or THE 208 or consent of instructor and department chair.

THE 310 – Professional Development Seminar, Production (3 hours)

A preparatory course exploring opportunities for graduate school, internships, and employment in the performing arts with a concentration on production, design, and technology. Prerequisite: THE 115, THE 121, THE 123, THE 226, or consent of instructor and department chair

THE 311 – Professional Development Seminar, Performance (3 hours)

A preparatory course exploring opportunities for graduate school, internships, and employment in the performing arts with a concentration on performance. Prerequisite: THE 115, THE 121, THE 123, or consent of instructor and department chair

THE 314 – Acting The Song (3 hours)

The purpose of this course is to apply essential acting and musical skills to the interpretation and performance of songs from the musical theatre. The course builds upon foundations established in the THE 115 Fundamentals of Acting course, as well as in Applied Music Lessons, and Ear Training/Sight Singing classes. Students will integrate relaxation, personalization, and focus on the Other, to bring presence, urgency, specificity, and deeper emotional expressiveness to their work on songs. They also will learn to select and prepare appropriate audition material, present research through analysis of character, script, and lyrics, and to assess their work and the work of others in clear, constructive terms. Prerequisite: THE 115; THE 121 or THE 131; MUS 164; APL 197

THE 315 – Advanced Acting (3 hours)

Continuation of THE 215. Further development of the acting process focusing on various theatrical genres. Prerequisite: THE 201 or THE 301; THE 215; and acceptance into the Performance Concentration or consent of instructor and department chair.

THE 316 – Fundamentals of Directing (3 hours)

Fundamentals of directing the play: script and character analysis, event and action, casting, staging, working with designers and actors. Prerequisite: THE 115, THE 121, THE 123, or consent of instructor and department chair.

THE 318 – Stage Management (3 hours)

An introduction to the essential principles, practices, and skills of the stage manager in pre-production, rehearsal, technical rehearsals, and performance. Topics include production planning and communication; running auditions; meeting and rehearsal scheduling; script breakdowns; preparation of accurate reports; collaboration with directors, designers, performers and technicians; managing stage crews; preparation of prompt scripts, show-calling; performance assessment; safety regulations and procedures. Prerequisite: THE 115, THE 125, or permission of the instructor and department chairperson.

THE 325 – Properties Design and Construction (3 hours)

The work of a props master including construction and maintenance of stage properties as well as collaboration and communication. The students will execute the properties for the semester's departmental production. Prerequisite: THE 125

THE 326 – Stage Lighting (3 hours)

Instruction and experience with stage lighting techniques and design concepts. Basic electricity, instrument optics, color application, and stage lighting theory provide background for creative design and lighting control. Prerequisite: THE 226 and acceptance into the Production Concentration or consent of instructor and department chair.

THE 327 – Sound Design (3 hours)

Instruction and experience with sound design and reinforcement techniques. Basic sound technology, editing, microphone, speaker, and amplification techniques taught through lecture and demonstration. Prerequisite: THE 226 or consent of department chair.

THE 328 – Special Materials for Scene and Costume Design (3 hours)

New products and different uses of old or existing materials for stage settings, properties, costumes, and make-up. Prerequisite: THE 225, THE 230 or consent of instructor and department chair.

THE 329 – Scenic Design (3 hours)

Principles and practices of scenic design used to develop particular styles, skills, and techniques in designing a variety of dramatic settings. Prerequisite: THE 226 and acceptance into the Production Concentration or consent of instructor and department chair.

THE 330 – Costume Design (3 hours)

Principles and practices of costume design used to develop particular styles, skills, and techniques in designing for a variety of dramatic texts. Prerequisite: THE 226 and acceptance into the Production Concentration or consent of instructor and department chair.

THE 335 – Theatre for Children and Creative Dramatics (3 hours)

Theatre produced for the young audience or by children: appropriate literature, production techniques, and techniques of creative dramatics.

THE 336 – History of Theatre & Drama I (3 hours)

Core Curr. WI

The origins of theatrical and dramatic impulses in ancient cultures as well as the history of theatre and drama in the classical and medieval periods. Prerequisite: THE 121 and THE 123 or consent of instructor and department chair..

THE 337 – History of Theatre and Drama II (3 hours)

Core Curr. WI

Theatre history and drama in the Renaissance, Restoration, Neoclassical, and Romantic periods (late 16th, 17th, 18th and early 19th centuries). Prerequisite: THE 336 or consent of instructor and department chair.

THE 338 – History of Theatre & Drama III (3 hours)

Core Curr. WI

Modern and contemporary theatre and drama beginning with realism and naturalism in the late 19th century up to the present day. Prerequisite: THE 337 or consent of instructor and department chair.

THE 339 – History of the American Musical Theatre (3 hours)**Core Curr. MI**

History of the American Musical as a theatrical form from its beginnings through the Golden Age to contemporary theatre with attention to movements and subgenres of the form

THE 401 – Acting for the Camera (3 hours)

Students will learn and apply the differences between performing for the stage and performing on screen. Applicable technical and audio-visual language of screen acting is learned in a studio environment. Prerequisite: THE 115, THE 215

THE 407 – Practicum (0.5 hours)

Continuation of THE 307, THE 308. Prerequisite: THE 307 or THE 308 or consent of instructor and department chair.

THE 408 – Practicum (0.5 hours)

Continuation of THE 307, THE 308. Prerequisite: THE 307 or THE 308 or consent of instructor and department chair.

THE 410 – Senior Capstone (3 hours)

Special research or performance projects initiated by seniors to demonstrate integrated learning and theatre expertise. Problems and methods in various areas of theatre study. Prerequisite: Consent of department chair

THE 415 – Acting: Period Styles (3 hours)

Continuation of THE 315. Further development of the acting process focusing on Shakespeare and period styles. Prerequisite: THE 201, THE 301, THE 315, THE 336, and acceptance into the Performance Concentration or consent of instructor and department chair.

THE 416 – Practice in Directing (1-3 hours)

Practical application of directing concepts and skills: planning, rehearsal, and performance for laboratory theatre production. May be repeated for up to 15 hours. Prerequisite: THE 316 and consent of instructor and department chair

THE 439 – Global Encounters in Theatre (3 hours)**Core Curr. GP WC**

Exploration of historical and contemporary non-Western theatre traditions and dramatic literature. Prerequisite: THE 336, or consent of instructor and department chair.

THE 494 – Theatre Arts Expedition (1-3 hours)

Students travel to observe and/or to engage in creative production making use of the resources of the particular location. Advanced study and/or experiences in theatre settings. May be repeated up to 9 hours. Topics, destinations, and prerequisites stated in current Schedule of Classes.

THE 498 – Explorations in Theatre Arts (1-3 hours)

Advanced work in performance and production. May be repeated up to a maximum of 15 semester hours. Topics listed in current Schedule of Classes. Prerequisite: Consent of department chair.

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College of Education and Health Sciences



College of Education and Health Sciences

Kathy Shapley

Interim Dean

Jana Hunzicker

Associate Dean for Academic Affairs

Deborah Erickson

Associate Dean for Distance Education

Rachel Vollmer

Associate Dean for Student Success

Cara Burritt

Assistant Dean for Finance and Administration

Vision

Lead teaching excellence, innovation, collaboration, and scholarship in an ever-changing society on a national level.

Mission

Prepare ethical, effective leaders and life-long learners within the human service professions to promote the well-being of all humanity.

Core Values

The following core values are the philosophical underpinnings of the College's mission and vision. These values and their inherent actions are integral to the College's overall functioning.

- Development of Leadership
- Commitment to Collaboration
- Promotion of Innovation
- Commitment to Excellence
- Commitment to and Celebration of Diversity and Inclusion

- Promotion of Well-Being

Majors

The College offers 25 undergraduate major programs:

- Apparel Production and Merchandising
- Art Education
- Child Life Science
- Early Childhood Education*
- Elementary Education*
- Family and Consumer Sciences Education
- French Education
- High School Education – Biology
- High School Education – Chemistry
- High School Education – English
- High School Education – History/Social Studies
- High School Education – Mathematics
- High School Education – Physics
- Hospitality Management
- Kinesiology and Health Science
- Middle School Education – English Language Arts*
- Middle School Education – Mathematics*
- Middle School Education – Science*
- Middle School Education – Social Science
- Music Education
- Nursing
- Nutrition and Dietetics
- Public Health Education
- Spanish Education
- Special Education (Learning Behavior Specialist 1)*

* w/ESL Endorsement

Minors

The College offers 3 undergraduate minor programs:

- Family and Consumer Sciences
- Health
- Leadership Studies

In addition to its undergraduate major and minor programs of study, the College of Education and Health Sciences offers a variety of graduate degree programs and certificates. Please see Bradley University's Graduate Catalog for a complete listing.

First-Year Seminar

All majors within the College of Education and Health Sciences are encouraged to participate in the College's first-year seminar, a 1 semester hour course titled EHS 101: Big Questions in Education and Health Science. EHS 101 is a multidisciplinary, inquiry-based seminar on topics related to education and/or health science, which may vary each time the course is offered. Any EHS major with fewer than 24 credit hours is eligible to enroll in the course. The course may be repeated under different topics for a maximum of 2 credit hours.

Global Scholars Program

In the fields of education and health sciences, awareness of global developments and cross-cultural competencies are crucial for respecting and learning from people of other cultures, whether they are patients, students, clients, or colleagues.

The Global Scholars Program (GSP) is designed to prepare professionals for this international state of affairs. The GSP credential can be earned by any student in the College of Education and Health Sciences regardless of major. In addition to enriching the college experience, designation as a Global Scholar helps Bradley graduates stand out in job searches.

When planned early in the college experience, completion of the GSP entails neither additional expense nor additional time to graduate.

Global Scholars will...

- demonstrate increased awareness of and appreciation for cultural, ethnic, and disciplinary backgrounds.
- identify and analyze crucial factors in developing global and cross-cultural communication and attending to issues of diversity in one's chosen profession.
- demonstrate greater awareness of global perspectives in communication, collaboration, diversity, and professional networking.
- collaborate and communicate effectively with colleagues and other professionals within one's own and other cultures.
- demonstrate aspects of international culture and human behavior.

Global Scholars Program Requirements

Bradley Global Scholars complete 17 to 20 semester hours at Bradley University and participate in international/global campus activities, service activities, and internationally focused seminars.

- **World Language**

One to three semester hours approved by the departmental Global Scholar Advisor (e.g., one semester in world language, proficiency equivalency, or an immersion course when studying abroad).

- **Bradley Core Curriculum**

Nine semester hours of Bradley Core Curriculum courses focused on international, human values orientation approved by the departmental Global Scholar Advisor from approved department lists.

- **Departmental International/Multicultural Course**

One three – semester hour course within the student's major.

- ETE 280
- FCS 271, FCS 300, FCS 402, FCS 438, FCS 510
- HS 338
- NUR 433, NUR 533

- **Study Abroad**

Minimum of 4 semester hours earned through a Study Abroad experience.

- **EHS 300 Professionalism Across Cultures**

One-semester hour course taught by an interdisciplinary team of College Faculty.

- **International/Globally Focused Campus Activities**

Minimum of 20 clock hours of activity approved by the departmental Global Scholar Advisor, five of which are service related.

- **Focused Seminars**

Participation in 2 or more internationally focused seminars sponsored by departments or college faculty.

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EHS Courses



EHS Courses

EHS 101 – Big Questions in Education & Health Science (1 hour)

Multidisciplinary, inquiry-based seminar on topics related to education and/or health science, which may vary each time course is offered. Topics stated in current schedule of classes. May be repeated under different topics for a maximum of 2 credit hours.

Prerequisite: EHS major with less than 24 credit hours

EHS 120 – The University Experience (1 hour)

Assists new students to adjust to the university environment, through gaining or developing an appreciation for higher education and the value of a Bradley University education. Pass/Fail.

EHS 300 – Professionalism Across Cultures (1-3 hours)

Awareness, acceptance, and appreciation of diversity, whether resulting from cultural, disciplinary, linguistic, or geographical differences. Emphasis on the professionals' roles of communicating effectively with colleagues across disciplines and cultures.

EHS 301 – Cooperative Education Or Internship in EHS (0-9 hours)

Core Curr. EL

Cooperative education or internship experience. May be repeated to a combined total of 9 credit hours. Pass/Fail. Prerequisite: Sophomore standing in the College of Education and Health Sciences, 2.0 Bradley overall grade point average and EHS cumulative grade point average, consent of EHS Co-op and Internship coordinator and Co-op and Internship faculty advisor.

EHS 305 – Study Abroad Seminar (1 hour)

Study of the cultural and historical contexts of study abroad site. Prerequisite: registration for study abroad interim session.

EHS 309 – Experiential Learning in Leadership (0 hours)

Core Curr. EL

EHS 309 or Experiential Learning in Leadership offers students the opportunity to engage in the exploration and development of leadership through study and practice. This course is open to students who are student organization leaders (as approved), are members of Fellows or the Braves L.E.A.D. certificate program.

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and graduation requirements for particular degree programs.

Communication Sciences and Disorders



Communication Sciences and Disorders

BACHELOR OF SCIENCE IN SPEECH, LANGUAGE AND HEARING SCIENCES

The Department of Communication Sciences and Disorders offers a Bachelor of Science in Speech, Language and Hearing Sciences. The program is designed to prepare students to pursue a graduate degree in speech-language pathology, audiology or related field. In addition, the undergraduate degree prepares students to work as a speech language pathology assistant.

Program Mission

The Speech, Language and Hearing Sciences (SLHS) Program is committed to providing students with a comprehensive education in human communication and in the prevention, assessment, and treatment of communication disorders across the lifespan. The program provides undergraduate students with comprehensive pre-professional academic, observation, and clinical experiences required for entrance into a graduate program in speech-language pathology, audiology, or related field.

Graduation Requirements

The Speech, Language and Hearing Sciences Bachelor of Science degree requires 120 credit hours.

36 hours of Bradley Core Curriculum

- 9 hours of communication
- 21 hours of FA, GP/WC/GS, HU, NS, SB, MI, QR
- 6 hours of BCC elective courses

9 hours of math/science beyond BCC QR and NS to meet BS degree requirement of 15 hours of math/science

21 hours of elective courses to fulfill the 120-hour degree requirement (a student may choose to pursue a minor).

45 hours of major coursework

- CSD 200 Introduction to Communication Sciences and Disorders – 3hrs
- CSD 201 Phonetics – 3hrs
- CSD 202 Cultural and Linguistic Diversity in Language Development – 3hrs
- CSD 203 Anatomy and Physiology of the Speech & Hearing Mechanism – 3hrs
- CSD 300 Speech and Hearing Science – 3hrs
- CSD 301 Audiology – 3hrs

- CSD 302 Aural Rehabilitation – 3hrs
- CSD 303 Evidence Based Intervention – 3hrs
- CSD 304 Language Disorders – 3hrs
- CSD 305 Articulation and Phonology – 3hrs
- CSD 401* Clinical Methods and Procedures: Treatment – 3hrs
- CSD 402* Clinical Methods and Procedures: Diagnostics – 3hrs
- CSD 404 Neuroscience for Communication Disorders – 3hrs
- CSD 405 Introduction to Voice and Fluency Disorders – 3hrs
- CSD 450 Guided Observation – 3hrs

* indicates a writing intensive course

6 hours of Writing Intensive designation- 2 courses (CSD 401 and CSD 402 have that designation)

CSD Required Experiential Learning Courses 6 credit hours

- CSD 451 Clinic I or EHS 301 – 3 hrs
- CSD 452 Clinic II or EHS 301 – 3 hrs

Required supporting course – 3 credit hours

- KHS 362 Essential Clinical Neuroanatomy – 3 hrs

CSD will offer 2 elective courses. These 2 courses are not required for the major but do meet the Experiential Learning Designation. Students who plan to apply to a CSD graduate program will be advised to enroll in these two courses. For those students who do not plan to apply to a CSD graduate program may opt to enroll in EHS 301 to meet the Experiential Learning degree requirement.

If students plan to apply to any CSD graduate program, they must complete the following four courses with a “C” or better. These are not additional courses beyond the 120-hour degree requirement.

4 hours of biological science with a lab (also fulfills BS degree requirement),

4 hours of physical science with a lab (also fulfills BS degree requirement),

3 hours of social science (also fulfills BCC SB requirement)

3 hours of statistics (also fulfills BCC QR requirement)

MINOR IN SPEECH, LANGUAGE AND HEARING SCIENCES

The Department of Communication Sciences and Disorders offers a minor in Speech, Language and Hearing Sciences. This minor will allow any undergraduate student or post-baccalaureate student the opportunity to learn about the fast-growing field of communication disorders. Students who complete the minor requirements will be eligible to apply to most graduate programs in Speech-Language Pathology.

Program Mission

The Speech, Language and Hearing Sciences (SLHS) Program is committed to providing students with a comprehensive education in human communication and in the prevention, assessment, and treatment of communication disorders across the lifespan. The minor program provides undergraduate students with the minimum requirements needed for entrance into most graduate programs in speech-language pathology or audiology.

Graduation Requirements

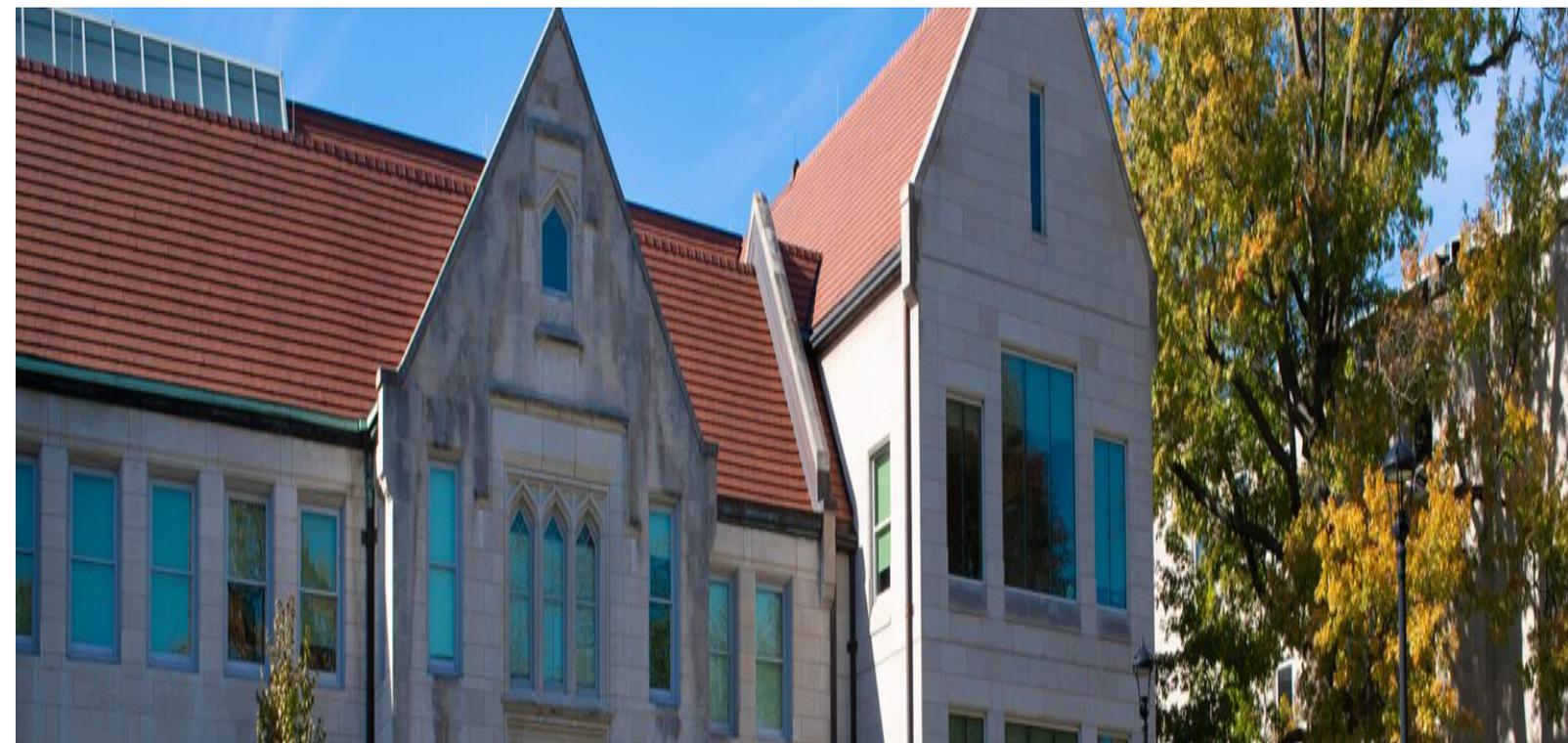
Candidates for minor must complete 21 hours of required courses.

Speech, Language and Hearing Sciences Required Courses (21 hours)

- CSD 201 Phonetics – 3hrs
- CSD 202 Cultural & Linguistic Diversity & Language Development – 3hrs
- CSD 300 Speech and Hearing Science – 3hrs
- CSD 301 Audiology – 3hrs
- CSD 302 Aural Rehabilitation – 3hrs
- CSD 404 Neuroscience for Communication Disorders – 3hrs
- CSD 450 Guided Observation – 3hrs

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Communication Sciences and Disorders Courses



Communication Sciences and Disorders Courses

CSD 200 – Introduction to Communication Sciences and Disorders (3 hours)

An introduction to typical and disordered speech, language, and hearing in children and adults. Ethical standards for the practice of Speech-Language Pathology, information regarding certification, specialty recognition, licensure and professional credentials in Speech-Language Pathology will be presented.

CSD 201 – Phonetics (3 hours)

A study of Articulatory Phonetics of English including the classification system underlying the International Phonetic Association as it relates to the profession of speech language pathology.

CSD 202 – Cultural and Linguistic Diversity in Language Development (3 hours)

This course will cover the complexities of cultural and linguistic differences across speech and language development from infancy to early school-age years. This course will examine the theories and components of the language system (phonology, semantics, syntax, and pragmatics) as it relates to the profession of speech language pathology.

CSD 203 – Anatomy and Physiology of the Speech and Hearing Mechanism (3 hours)

A study of the anatomical and physiological bases of human communication and swallowing, including the support structures of the respiratory, articulatory, phonatory, and swallowing systems, and the identification and function of muscles in these systems.

CSD 300 – Speech and Hearing Science (3 hours)

A study of the physical concepts related to sound and voice, the acoustics of voice production and sound, psychoacoustics, and theories of speech perception and production.

CSD 301 – Audiology (3 hours)

A study of basic anatomy and physiology of the human auditory system, fundamental hearing science, and methods and techniques of hearing measurement and interpretation for the assessment, diagnosis, evaluation, and rehabilitation of hearing disorders.

CSD 302 – Aural Rehabilitation (3 hours)

A study of the habilitation and rehabilitation techniques for individuals diagnosed with a hearing disorder. Specific areas of interest include hearing evaluation techniques, speech and language development for the hearing impaired, hearing aid amplification, cochlear implants, and central auditory processing. Prerequisite: CSD 301

CSD 303 – Evidence-Based Intervention (3 hours)

A study of evidence-based intervention approaches for instructional planning for children with communication disorders.

CSD 304 – Language Disorders (3 hours)

A study of disorders of language acquisition and usage in children and adolescents, with emphasis upon the nature, assessment, and treatment of such disorders. Prerequisite: CSD 202

CSD 305 – Articulation and Phonology (3 hours)

A study of the etiology, diagnosis and therapeutic management of functional and organically-based articulatory and phonological impairments. Prerequisite: CSD 201

CSD 401 – Clinical Methods and Procedures: Treatment (3 hours)

Core Curr. WI

A study of clinical procedures including goal writing, lesson planning, writing SOAP notes, report writing, progress monitoring, and ethical conduct. Legislative, regulatory, and reimbursement issues that affect the practice of Speech-Language Pathology in educational and medical settings will be presented. Prerequisite: CSD 204, CSD 304

CSD 402 – Clinical Methods and Procedures: Diagnostics (3 hours)

Core Curr. WI

A study of diagnostic methods for the disorders of speech and language. Professional topics such as the HIPAA policies and procedures, ethical standards and conduct, psychometrics, multi-cultural considerations, interviewing, and reporting will be discussed and practiced. Prerequisite: CSD 204, CSD 304

CSD 404 – Neuroscience for Communication Disorders (3 hours)

A study of the foundations of neuroanatomy and neurophysiology relevant to speech, language, cognition and swallowing. Prerequisite: Speech Language and Hearing Sciences majors and minors, or consent of the department chair

CSD 405 – Introduction to Voice and Fluency Disorders (3 hours)

A study of basic theories and principles in the onset, development and maintenance of stuttering and voice disorders in children and adults. Principle factors in prevention, measurement, assessment and management of voice and fluency disorders. Prerequisite: Speech Language and Hearing Sciences majors and minors, or consent of the department chair

CSD 450 – Guided Observation (3 hours)

Guided clinical observations of assessment and intervention of individuals who have communication disorders. In this course, students will increase their understanding of describing and summarizing behaviors relevant to the study of communication disorders. This course also provides the opportunity for observation hours as required by the American Speech-Language-Hearing Association. Prerequisite: Speech Language and Hearing Sciences majors and minors, or consent of the department chair

CSD 451 – Clinic I (3 hours)

Core Curr. EL

A supervised clinical experience in basic intervention procedures for children and/or adults. Discussion will focus on methods of addressing challenging behaviors, enhancing client motivation, and exploring the range of service delivery options for each clinical setting. Students will obtain supervised clinical experience. Prerequisite: Speech Language and Hearing Sciences majors and minors, or consent of the department chair

CSD 452 – Clinic II (3 hours)

Core Curr. EL

A supervised clinical experience in basic intervention procedures for children and/or adults. Discussion will focus on methods of addressing challenging behaviors, enhancing client motivation, and exploring the range of service delivery options for each clinical setting. Students will obtain supervised clinical experience. Prerequisite: Speech Language and Hearing Sciences majors and minors, or consent of the department chair

CSD 501 – Communication Disorders in Infants and Toddlers (3 hours)

This course presents a practical approach to early intervention and preschool special education as it relates to the speech-language pathologist: overview of federal and state regulations and their implementation; review of birth-five development; evaluations and treatment; documentation, service delivery.

CSD 502 – Phonological Disorders (3 hours)

This course presents an analysis of theories of speech sound acquisition and development, and assessment and treatment of articulation and phonological disorders.

CSD 503 – Motor Speech Disorders (3 hours)

This course presents etiology, diagnosis and clinical management of motor speech disorders.

CSD 504 – School Age Language and Literacy Disorders (3 hours)

This course presents characteristics, assessment and intervention of oral and written language disorders in school-age children.

CSD 505 – Aphasia and Related Disorders (3 hours)

This course presents the etiology, prevention of aphasia and related disorders; and the diagnosis, prognosis and treatment approaches.

CSD 506 – Augmentative and Alternative Communication (3 hours)

This course presents an overview of alternative and augmentative approaches, strategies and technology for individuals with severe communication impairments, assessment and intervention.

CSD 507 – Autism (3 hours)

This course presents an overview of the nature of communication and communication disorders in autism spectrum disorders, focusing on characteristics, diagnosis, etiology, and intervention of communication disorders.

CSD 508 – Dysphagia (3 hours)

This course presents an introduction to the clinical and professional practice aspects of swallowing disorders, dysphagia, from the speech-language pathologist's perspective.

CSD 509 – Fluency Disorders (3 hours)

This course presents an overview of assessment, diagnosis, and treatment of fluency disorders.

CSD 510 – Voice Disorders (3 hours)

This course presents an overview of assessment, diagnosis, and treatment of voice disorders.

CSD 511 – Pediatric Feeding Strategies (3 hours)

This course presents an overview of the anatomical and physiological bases of feeding/swallowing in the pediatric population. Strategies for the prevention, assessment, and management of disorders, along with the effects on the family, and the benefits of interdisciplinary treatment will be covered.

CSD 512 – Cognitive Rehabilitation (3 hours)

This course presents an overview of the neurological, cognitive, and communicative changes associated with traumatic brain injury, right hemisphere CVA, normal aging, and the dementias. Emphasis will bear on the nature, symptomatology, assessment, and rehabilitation techniques of these cognitive/linguistic disorders.

CSD 513 – Ethics and Contemporary Professional Issues (3 hours)

This course presents an overview of issues related to employment settings, job exploration/preparation, credentialing, trends in service delivery, ethics, legal considerations, and professional advocacy in the profession of speech-language pathology will be introduced. Content is in accordance with the American Speech-Language-Hearing Association's (ASHA) Scope of Practice, Code of Ethics, Preferred Practice patterns and guidelines for credentialing.

CSD 514 – Counseling in Communication Disorders (3 hours)

This course presents an overview of the principles of working with persons with communication disorders and their families throughout the client's lifespan. This course will provide information regarding counseling theories and techniques, and their direct application to speech-language therapy; as well as an overview of social, emotional, behavioral, and cognitive impairments in children and adults.

CSD 520 – Clinical Practicum I (3 hours)

This course presents clinical strategies focused on assessment procedures, treatment strategies and clinical writing skills. Clock hours will be earned via simulated patients. Prerequisite:

CSD 521 – Clinical Practicum II (3 hours)

This course presents clinical strategies focused on assessment, intervention, documentation and legislation related to working with school-aged children. Clock hours will be earned via simulated patients. Prerequisite:

CSD 522 – Clinical Practicum III (3 hours)

This course presents clinical strategies focused on how to conduct effective assessment and treatment sessions with adults who have a variety of communication disorders. Clock hour will be earned via simulated patients. Prerequisite:

CSD 530 – Clinical Practicum IV (3 hours)

This course consists of supervised practice in community-based sites with children or adults displaying communication problems in one or more of the following areas: speech, language, hearing, and swallowing. Prerequisite: CSD 520, CSD 521, and CSD 522

CSD 531 – Clinical Practicum V (3 hours)

This course consists of supervised practice in community-based sites with children or adults displaying communication problems in one or more of the following areas: speech, language, hearing, and swallowing. Prerequisite: CSD 530

and graduation requirements for particular degree programs.

Education, Counseling, and Leadership



Education, Counseling, and Leadership

Approved by the Illinois State Board of Education (ISBE).

FACULTY Professors Hunzicker, Nugent; Associate Professors Jung, Kuester, Lukowiak, Rios Vega, Wherfel, Yang; Assistant Professors Iacoponi, Lee, Nusser, Urbanc, Waychunas.

The preparation of undergraduates for entry into their respective professions is the primary mission of the department. At Bradley, candidates are expected to become human resource specialists. The College believes that the productive educator must be an educational leader, advocate, and life-long learner. The smaller class size at Bradley, the caring attitude of the faculty, the number and variety of field experiences, and the excellent placement record of education graduates make the College an exceptional place from which to launch a teaching career.

The Department of Education, Counseling, and Leadership offers programs leading to a bachelor's degree and to an Illinois state teaching license. Bachelor's programs involve a wide range of teaching choices including PreK-12 Art Education, Early Childhood Education, Elementary Education, PreK-12 Music Education, Middle School Education (English, Mathematics, Science, and Social Science), High School Education (Biology, Chemistry, English, Family and Consumer Science, History/Social Studies, Mathematics, and Physics), Special Education (LBSI), and PreK-12 World Languages (French and Spanish). In addition, we offer an endorsement program in English as a Second Language (ESL), which is embedded in most of these degree programs. The special education endorsement can be applied to elementary and middle school programs with a few additional courses. Also, early childhood education program has the special education approval embedded in the program.

As a result of classroom instruction and field experiences in education, it is intended that teacher candidates in all of these programs will:

- acquire knowledge and skills to differentiate instruction for students to account for individual differences;
- gain competence in planning and presenting subject matter and evaluating student learning;
- gain competence in structuring learning experiences compatible with student developmental levels;
- acquire the understanding and knowledge to analyze student learning processes;
- gain competence in the skills of classroom structure and organization;
- develop an understanding of their responsibility as professional educators; and
- develop the desire to continue professional growth and study.

Although the programs in education are designed to meet State of Illinois teacher licensure requirements, graduates will find that they are eligible for licensure in a variety of states in addition to Illinois. Currently 52 states and jurisdictions have signed the Interstate Licensure Agreement with Illinois and will issue a comparable entry-level license for elementary, early childhood, middle school, high school, or special education graduates. Candidates must consult with the licensure officer for details. All programs are approved by the

Change of College and Curriculum

Candidates who enter the University in the AEP program or another major may change their major to any of the education programs only if their overall grade point average is a minimum of 2.50. Candidates wishing to enter one of the middle school, high school education or K-12 programs must also have a minimum grade point average of 2.50 in teaching field courses.

Advancement To Degree Candidacy Required

Candidates uncertain about a career in education may take introductory education courses. Admission to upper-level courses requires department advancement to degree candidacy status or special permission of the Chair of the department. During the first and sophomore years, candidates may remain in teacher education courses if their overall grade point average remains above a 2.0 or "C." To be advanced to degree candidacy, however, the grade point averages required are a 2.50 overall and a 2.50 in education courses, with a grade of 2.0 (C) or better for each education course.

In addition, middle school, high school, PreK-12 art, PreK-12 music, and PreK-12 world language majors must also achieve a 2.50 GPA in the courses which comprise the teaching field(s) and a grade of 2.0 (C) or better for each teaching field content course. The courses that make up the concentration or major discipline and any related Bradley Core Curriculum courses will be included in the teaching field GPA. If candidates are to be considered for advancement to candidacy, they must have earned grades of at least 2.0 (C) in ENG 101, COM 103, and any QR course (or equivalents). There are additional requirements for advancement to candidacy beyond these minimum grade point averages, including demonstration of appropriate preprofessional behaviors. Candidates should consult with their advisors regarding these additional requirements.

Ordinarily, candidates apply for candidacy in their sophomore year. At the end of the semester, department faculty evaluate candidates on their academic achievements and professional growth. Continuance in the program is reviewed if at any time after advancement to candidacy a student's overall grade point average falls below 2.50; education grade point average falls below 2.50; for high school education, PreK-12 art, PreK-12 music, PreK-12 world language education, middle school education, the grade point average in the teaching field(s) falls below 2.50; the student fails to demonstrate appropriate preprofessional behaviors; or other circumstances occur which would make a teacher candidate unable to be licensed. Additionally, candidates must provide a satisfactory criminal background check report. Candidates with questions about advancement to degree candidacy and maintenance of candidacy status should see their advisors in the college or the Chair of the department of Education, Counseling, and Leadership.

Student Teaching

Student teaching is an important culminating experience for each education program. It is the policy of the department that all student teaching assignments be in or immediately near Peoria, Illinois. Candidates with questions about student teaching should see the Program Director of Teacher Education. Student teaching must be taken for a pass/fail grade. All other field experiences must be taken for a letter grade.

Core Curriculum, Degree, And Licensure Requirements For Education Candidates

Brief outlines of programs are presented for the benefit of prospective candidates interested in preparing for the teaching profession. Both University degree requirements and Illinois teacher licensure requirements are included. Degree and licensure requirements differ. Programs and class schedules are to be planned each semester in consultation with the student's academic advisor. While a student ordinarily may graduate and be licensed under the University catalog requirements in effect at the time the student becomes a teacher education candidate, the Illinois State Teacher Licensure Board may mandate changes in standards of approved teacher education programs. This may require candidates to modify or add to their original degree programs in order to be eligible for licensure upon completion of graduation requirements. As in any good program, revisions are being made continually; candidates should consult their education advisor about current program requirements.

It is a state requirement that all education courses required by the major must have a grade of C or better. For middle school, high school, and PreK-12 art, music, and world language education, all courses required for the teaching field must have a grade of C or better.

Although candidates are assigned an academic advisor, the ultimate responsibility for meeting the program requirements for graduation is that of the candidate. Candidates are responsible for their programs. A minimum of 120 hours is needed for graduation.

Illinois Licensure Tests Required

Each candidate must pass all applicable licensure tests for their major prior to licensure. The applicable Illinois Content-Area test(s) must be passed prior to student teaching. As with other requirements, the number and type of tests required are subject to changes implemented by the state legislature or the Illinois State Board of Education at any time prior to licensure.

Early Childhood Education Majors with ESL Endorsement (*Birth Through Grade 2*)

The early childhood education program prepares you for the State of Illinois Professional Educator's License in Early Childhood Education, which qualifies you to teach children from birth through second grade. It also includes an English as a Second Language endorsement and Early Childhood Special Education Approval. These additional credentials license you to teach English language learners and pre-K students with special needs. This major earns a Bachelor in Science degree (120 hours). If a student chooses to earn a Bachelor in Arts degree an additional 4 – 12 hours would be incurred.

Required Courses in Addition to Professional Education Courses

- COM 103 – 3 hrs.
- ENG 101 – 3 hrs.
- ENG 300 – 306 – 3 hrs.
- ENG 311 or 312 – 3 hrs.
- ART 131, MUS 109, or THE 131 (2 of the 3) – 6 hrs.
- Any QR – 3 hrs.
- HIS 203 or HIS 204 – 3 hrs.
- PLS 105 – 3 hrs.
- SCI 100, 101, 102, 103 or 104 – 4 hrs.
- ECO 100, 221 or 222 – 3 hrs.

*8 additional hours in science

Free Elective (to arrive at 120 hours minimum)

Professional Education Courses – 76 hrs.

- ETE 100 Technology Applications – 1 hr.
- ETE 107 Conceptualizing Math for Teachers I – 3 hrs.
- ETE 108 Conceptualizing Math for Teachers II – 3 hrs.
- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 116 Field Experience – Introductory Field Experience – 1 hr.
- ETE 120 Early Childhood Professional Roles and Responsibilities – 3 hrs.
- ETE 194 PE for P-6 Classrooms – 1 hr.
- ETE 196 Fine Arts in the P-6 Schools – 2 hrs.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 215 Strategies for Effective Teaching – 3 hrs.
- ETE 234 Language Development – 3 hrs.
- ETE 235 English Language Learners – 3 hrs.
- ETE 236 Assessment of ELL – 3 hrs.
- ETE 237 Practicum for Teaching English Learners – 1 hr.
- ETE 240 Practicum for Teaching English Learners Part 2 – 2 hrs.
- ETE 260 Children's Literature – 3 hrs.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 304 Early Childhood Novice Teaching (Birth-2nd) – 4 hrs.
- ETE 322 Emergent Literacy: Reading and Writing Across the Curriculum – 3 hrs.
- ETE 324 Early Childhood Special Education Methods – 3 hrs.
- ETE 328 Early Childhood Methods – 6 hrs.
- ETE 345 Guiding Learners: Creating Safe Inclusive Learning Environments – 3 hrs.
- ETE 443 Early Childhood Assessment – 3 hrs.
- ETE 497 Student Teaching (Birth-2nd Grade) – 12 hrs.

Please note a minimum of 120 credit hours is required for baccalaureate degree completion.

Note: Early Childhood Education program has the English Language Learner endorsement and the Early Childhood Special Education Approval embedded in the 4-year program.

Elementary Education with ESL Endorsement Majors (Grades 1–6)

The elementary education program prepares you for the State of Illinois Professional Educator's License in Elementary Education, which qualifies you to teach children from first through sixth grade. It also includes an English as a Second Language endorsement that licenses you to teach English language learners. This major earns a Bachelor in Science degree (120 hours). If a student chooses to

earn a Bachelor in Arts degree an additional 4 – 12 hours would be incurred.

Required Courses in Addition to Professional Education Courses

- COM103 – 3 hrs.
- ENG 101 – 3 hrs.
- ENG 300 – 306 – 3 hrs.
- ENG 311 or 312 – 3 hrs.
- ART 131, MUS 109, or THE 131 (2 of the 3) – 6 hrs.
- Any QR – 3 hrs.
- HIS 203 or HIS 204 – 3 hrs.
- PLS 105 – 3 hrs.
- SCI 100, 101, 102, 103 or 104 – 4 hrs.
- ECO 100, 221 or 222 – 3 hrs.

*8 additional hours in science

Free Elective (to arrive at 120 hours minimum)

Professional Education Requirements – 76 hrs.

- ETE 100 Technology Applications -1 hr.
- ETE 107 Conceptualizing Math for Teachers I – 3 hrs.
- ETE 108 Conceptualizing Math for Teachers II – 3 hrs.
- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 116 Field Experience – Introductory Field Experience – 1 hr.
- ETE 194 PE for P-6 Classrooms – 1 hr.
- ETE 196 Fine Arts in the P-6 Schools – 2 hrs.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 215 Strategies for Effective Teaching – 3 hrs.
- ETE 230 Adapting Curriculum to Support Inclusive Environments – 3 hrs.
- ETE 234 Language Development – 3 hrs.
- ETE 235 English Language Learners – 3 hrs.
- ETE 236 Assessment of ELL – 3 hrs.
- ETE 237 Practicum for Teaching English Learners – 1 hr.
- ETE 240 Practicum for Teaching English Learners Part 2 – 2 hrs.
- ETE 260 Children’s Literature – 3 hrs.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 306 Novice Teaching Experience 1-6 – 4 hrs.
- ETE 313 Methods of Teaching Literacy I: Reading, Writing and Language Arts K-2 – 3 hrs.
- ETE 315 Methods of Teaching Literacy II: Reading, Writing and Language Arts 3-8 – 3 hrs.
- ETE 335 Methods of Teaching Social Studies 1-6 – 3 hrs.
- ETE 336 Methods of Teaching Science 1-6 – 3 hrs.
- ETE 339 Methods of Teaching Mathematics 1-6 – 3 hrs.
- ETE 345 Guiding Learners: Creating Safe Inclusive Learning Environments – 3 hrs.
- ETE 498 Student Teaching 1-6 – 12 hrs.

Please note a minimum of 120 credit hours is required for baccalaureate degree completion.

Note: Elementary Education Program has the English Language Learner endorsement embedded.

Special Education Endorsement

For elementary education majors interested in Special Education endorsement, which would enable you to teach and work with students with high and low-incidence disabilities, the following courses are required. These courses may or may not be part of your major or program. If you are interested in adding this endorsement please discuss with your academic advisor.

- PSY 101 Introduction to Psychology – 3 hrs.
- ETE 230 Adapting Curriculum to Support Inclusive Environments – 3 hrs. OR ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 391 Characteristics and Methods for Learners with Developmental Disabilities – 3 hrs.
- ETE 393 Characteristics and Methods for Learners with Emotional and Learning Disabilities – 3 hrs.
- ETE 426 Assessments for Learners with Exceptionalities – 3 hrs.

Middle School Education with ESL Endorsement (Grades 5–8)

The middle school education program prepares you for the State of Illinois Professional Educator's License in Middle School Education, which qualifies you to teach children from fifth grade through eighth grade. It also includes an English as a Second Language endorsement that licenses you to teach English language learners. The degree includes licensure in one or more of four academic areas: English, Mathematics, Science, or Social Science.

- For Mathematics and Science this major earns a Bachelor in Science degree (120 hours). If a student chooses to earn a Bachelor in Arts degree an additional 4 – 12 hours would be incurred.
- For Social Science a student can earn either a Bachelor in Science degree (120 hours) or Bachelor in Arts degree (121 hours).
- For English and Social Science, a student can earn either a Bachelor in Science degree or Bachelor in Arts degree (120 hours).

Professional Education Courses

- ETE 100 Technology Applications – 1 hr.
- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 116 Field Experience – Introductory Field Experience – 1 hr.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 216 Effective Planning and Instruction for Teaching – 3 hrs.
- ETE 227 Development of the Early Adolescent – 3 hrs.
- ETE 228 Strategies for Middle School Instruction – 3 hrs.
- ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 234 Language Development – 3 hrs.
- ETE 235 English Language Learners – 3 hrs.
- ETE 236 Assessment of ELL – 3 hrs.
- ETE 237 Practicum for Teaching English Learners – 1 hrs.
- ETE 240 Practicum for Teaching English Learners Part 2 – 2 hrs.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 307 Novice Teaching Experience in Grades 5-8 – 4 hrs.
- ETE 315 Methods of Teaching Literacy II: Reading, Writing and Language Arts 3-8 – 3 hrs.
- ETE 345 Guiding Learners: Creating Safe Inclusive Learning Environments – 3 hrs.
- ETE 368 Content Area Reading for All Students – 2 hrs.
- ETE 369 Assessing All Students – 2 hrs.
- ETE 491 Student Teaching 5 – 8 – 12 hrs.

English Concentration Courses

- ENG 101 Writing: English Composition – 3 hrs.
- ENG 300-306* Advanced Writing – 3 hrs.
- ENG 180 English Methods: Introduction to English Education – 2 hrs.
- ENG 311 Linguistics: Introduction to Language or ENG 312 Grammar for Teachers – 3 hrs.
- ENG 320 Young Adult: Young Adult Literature – 3 hrs.
- ENC 391: Methods of Teaching Writing – 3 hrs.
- Amer/Brit Lit: ENG 124, 127, 332*, 334*, 336*, 341*, 344*, 358*, 361*, 363*, 364*, 365* – 3 hrs.
- Lit of Diversity: ENG 129, 130, 140, 190, 329*, 330*, 331*, 340*, 381* – 3 hrs.
- Criticism & Interpreting Literature: ENG 233, 235, 237, 239, 270, 370* – 3 hrs.

Mathematics Concentration Courses

- ETE 107 Conceptualizing Math for Teachers I – 3 hrs.
- ETE 108 Conceptualizing Math for Teachers II – 3 hrs.
- ETE 361 Methods Teaching Mathematics Grades 6 – 12 – 3 hrs.
- MTH 111 Elementary Statistics – 3 hrs.
- MTH 115 Brief Calculus with Applications I; or 121 Calculus 1 – 4 hrs.
- MTH 114 Applied Finite Mathematics – 3 hrs.
- MTH 300 Topics for Middle School Math Teachers: Number Theory & Algebra* – 3 hrs.
- MTH 300 Topics for Middle School Math Teachers: Geometry* – 3 hrs.
- Math Elective: MTH 101 or MTH 120 or MTH 116 or MTH 122 – 3 or 4 hrs.

History/Social Studies Concentration Courses

- ETE 363 Methods Teaching Social Science Grades 6 – 12 – 3 hrs.
- ECO 100, ECO 221, OR ECO 222 – 3 hrs.

- HIS 205-208, 314*, 320, 321, 323-327*, 329, 330, 331, 332, 333, 334, 335*, 338, 339, 340, 341, 342, 343, 345, 346*, 375*, 382* – 3 hrs.
- PLS 105 – 3 hrs.
- SOC 100, SOC 300; SOC 311; ANT 305 – 3 hrs.
- PSY 101 – 3 hrs.
- HIS 336 OR HIS 337 – 3 hrs.
- HIS 300 – 308, 309, 310, 311*, 315*, 316*, 317*, 328* – 3 hrs.
- HIS 385 – 3 hrs.

Science Concentration Courses

- ETE 362 Methods Teaching Science Grades 6 – 12 – 3 hrs.
- SCI 10x Science Inquiry I: Motion; Molecules; Energy; Water – 4 hrs.
- SCI 302 Science through Inquiry II: Ecosystems* – 4 hrs.
- PHY 100 Fundamental Physics Concepts OR PHY 107 General Physics I – 4 hrs.
- GES 101 Principles of Earth Science & GES 102 Lab for Principles of Earth Science – 4 hrs.
- GES 300 Oceanography the Human Perspective* – 3 hrs.
- AST 300 Astronomy: Our Glimpse of the Cosmos* – 3 hrs.
- CHM 100 Fund of General Chemistry OR CHM 110 General Chemistry I – 3 hrs.
- BIO 111 The Cell – 3 hrs.

Please note a minimum of 120 credit hours is required for baccalaureate degree completion.

Note: Middle School Education program has the English Language Learner endorsement embedded.

Special Education Endorsement

For middle school education majors interested in the Special Education endorsement, which would enable you to teach and work with students with high and low-incidence disabilities, the following courses are required. These courses may or may not be part of your major or program. If you are interested in adding this endorsement please discuss with your academic advisor.

- PSY 101 Introduction to Psychology – 3 hrs.
- ETE 230 Adapting Curriculum to Support Inclusive Environments – 3 hrs. OR ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 391 Characteristics and Methods for Learners with Developmental Disabilities – 3 hrs.
- ETE 393 Characteristics and Methods for Learners with Emotional and Learning Disabilities – 3 hrs.
- ETE 426 Assessments for Learners with Exceptionalities – 3 hrs.

High School Education (Grades 9-12)

Those students enrolled in a High School Education program of study must select one of the following primary majors in their teaching field, listed below. Within each of these respective teaching areas, students must complete the required Bradley Core Curriculum and subject or content area coursework (as outlined in the catalog under the respective departments, 32 semester hours minimum).

High School (9-12)

- English Language Arts
- Science—Biology
- Science—Chemistry
- Social Science—History and Social Studies

In addition, students also have a secondary major of High School Education (HSE) as part of their 120 semester-hour baccalaureate degree program, which includes completion of the required professional education and field/clinical experiences, as well as the Illinois State Board of Education Test and Portfolio requirements.

Requirements for High School Teaching Licenses

To satisfy the State of Illinois mandates, which add field experiences prior to student teaching for programs leading to licensure, candidates will be required to enroll in pre-student teaching field experience courses.

NOTE: The candidate for the high school teacher's license maintains registration in the college offering the selected subject matter preparation. Usually, the student's academic major will provide the core of the teaching area preparation. However, the State of Illinois may require specific areas of preparation. Candidates must consult their education advisor. Candidates will have an advisor in both their major area of preparation and in the Department of Education, Counseling, and Leadership.

Professional Education Requirements

- ETE 100 Technology Applications – 1 hr.
- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 116 Field Experience: Schools and Schooling in American Society – 1 hr.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 216 Effective Planning and Instruction for Teaching – 3 hrs.
- ETE 219 Human Development from Birth to Young Adulthood and Effective Teaching Field Experience – 1 hr. (Biology, Chemistry, FCS, History/SS, Mathematics, and Physics only)
- ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 308 Novice Teaching Experience in the High School – 4 hrs.
- ETE 345 Guiding Learners: Creating Safe, Inclusive Learning Environments – 3 hrs.
- ETE 368 Content Reading for All Students – 2 hrs.
- ETE 369 Assessing All Students – 2 hrs.
- *One of the following methods courses:*
 - ETE 361 Methods of Teaching Mathematics Grades 6 -12 – 3 hrs.
 - ETE 362 Methods of Teaching Science Grades 6 -12 – 3 hrs.
 - ETE 363 Methods of Teaching History & Social Science Grades 6-12 – 3 hrs.
 - ETE 378 Methods of Teaching Family and Consumer Sciences – 3 hrs.
 - ENG 472 Methods of Teaching Integrated Language Arts – 3 hrs.
- ETE 499 Student Teaching in High School – 12 hrs.

English as a Second Language Endorsement – For programs where the endorsement is not embedded

For those candidates who are interested in English as a Second Language endorsement, which would enable the graduate to teach and work with English Language Learners, the following courses are required. These courses may or may not be part of your major or program. If you are interested in adding this endorsement please discuss with your academic advisor.

- ETE 234 Language Development – 3 hrs.
- ETE 235 Methods of Teaching English Language Learners – 3 hrs.
- ETE 236 Assessment of English Language Learners – 3 hrs.
- ETE 237 Practicum for Teaching English Learners I – 1 hr.
- ETE 240 Practicum for Teaching English Learners Part 2 – 2 hrs.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ENG 311 Introduction to Language **OR** ENG 312 English Grammar – 3 hrs.

Special Education Endorsement

For High school education majors interested in the Special Education endorsement, which would enable you to teach and work with students with high and low-incidence disabilities, the following courses are required. These courses may or may not be part of your major or program. If you are interested in adding this endorsement please discuss with your academic advisor.

- PSY 101 Introduction to Psychology – 3 hrs.
- ETE 230 Adapting Curriculum to Support Inclusive Environments – 3 hrs. **OR** ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 391 Characteristics and Methods for Learners with Developmental Disabilities – 3 hrs.
- ETE 393 Characteristics and Methods for Learners with Emotional and Learning Disabilities – 3 hrs.
- ETE 426 Assessments for Learners with Exceptionalities – 3 hrs.

Special PreK-12 (*Art, Music*)

Art Education (*PreK–12*)

The candidate for the art teacher's license maintains registration in the Slane College of Communications and Fine Arts. The Department of Art will provide the core of the teaching area preparation. Candidates will have an advisor in both the Department of Art and in the Department of Education, Counseling, and Leadership. Candidates should contact their advisors for specific course requirements. Students must complete the required Bradley Core Curriculum and subject or content area coursework (as outlined in the catalog under the respective departments, 32 semester hours minimum).

Professional Education Requirements

- ETE 100 Technology Applications – 1 hr.
- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 116 Field Experience: Schools and Schooling in American Society – 1 hr.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 215 Strategies for Effective Teaching – 3 hrs.
- ETE 219 Human Development from Birth to Young Adulthood and Effective Teaching Field Experience – 1 hr.
- ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 303 Novice Teaching Experience in K-12 classrooms – 3 hrs.
- ETE 310 Teacher Performance Assessment -1 hr.
- ETE 345 Guiding Learners: Creating Safe, Inclusive Learning Environments – 3 hrs.
- ETE 368 Content Reading for All Students – 2 hrs.
- ETE 369 Assessing All Students – 2 hrs.
- ETE 386 Methods of Teaching K–12 Art – 3 hrs.
- ETE 499 Student Teaching in High School – 12 hrs.

Other

For specific coursework in Art, please see the Art Department/Art Education Major section of this catalog.

Music Education (*PreK-12*)

The candidate for the music teacher's license maintains registration in the Slane College of Communications and Fine Arts. The Department of Music will provide the core of the teaching area preparation (see Department of Music). Candidates will have an advisor in both the Department of Music and in the Department of Education, Counseling, and Leadership. Candidates should consult their music advisors for major requirements. Students must complete the required Bradley Core Curriculum and subject or content area coursework (as outlined in the catalog under the respective departments, 32 semester hours minimum).

Professional Education Requirements

- MED 101 Introduction to Music Education
- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 116 Field Experience: Schools and Schooling – 1 hr.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 219 Human Development from Birth to Young Adulthood and Effective Teaching Field Experience – 1 hrs.
- ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families and Communities – 3 hrs.
- ETE 301 Novice Teaching Experience in Music Classrooms K-8 – 1 hr.
- ETE 302 Novice Teaching Experience in High School Music – 1 hr.
- ETE 351 Music Methods Grades K-8 for Music Majors – 3 hrs.
- ETE 352 High School Music Methods for Music Majors – 3 hrs.
- ETE 368 Content Reading for All Students – 2 hrs.
- ETE 493 Student Teaching in K–12 Music Education – 12 hrs.

Other

- For specific coursework in Music, please see the Music Department/Music Education Major section of this catalog.

Learning Behavior Specialist 1 (LBS-1)

The special education [Learning/Behavior Specialist 1] (LBS-1) program prepares you for the State of Illinois Professional Educator's License in Special Education, which qualifies you to teach children with special needs from birth to age 22.

Professional Education Courses

- ETE 100 Technology Applications – 1 hr.
- ETE 107 Conceptualizing Math for Teachers I – 3 hrs.
- ETE 108 Conceptualizing Math for Teachers II – 3 hrs.
- ETE 115 The History of Education in the United States – 3 hrs.

- ETE 116 Field Experience – Introductory Field Experience – 1 hr.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 215 Strategies for Effective Teaching – 3 hrs.
- ETE 230 Adapting Curriculum to Support Inclusive Environments – 3 hrs.
- ETE 234 Language Development – 3 hrs.
- ETE 235 English Language Learners – 3 hrs.
- ETE 237 Practicum for Teaching English Learners or ETE 219 Human Development from Birth to Young Adulthood – 1 hr.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 291 Assistive Technology – 3 hrs.
- ETE 305 Novice Teaching Experience LBS – I – 4 hrs.
- ETE 313 Methods of Teaching Literacy I: Reading, Writing and Language Arts K-2 – 3 hrs.
- ETE 315 Methods of Teaching Literacy II: Reading, Writing and Language Arts 3-8 – 3 hrs.
- ETE 335 Methods of Teaching Social Studies 1-6 – 3 hrs.
- ETE 336 Methods of Teaching Science 1-6 – 3 hrs.
- ETE 339 Methods of Teaching Mathematics 1-6 – 3 hrs.
- ETE 345 Guiding Learners: Creating Safe Inclusive Learning Environments – 3 hrs.
- ETE 391 Characteristics and Methods for Learners with Developmental Disabilities – 3 hrs.
- ETE 393 Characteristics and Methods for Learners with Emotional and Learning Disabilities – 3 hrs.
- ETE 395 High School Special Education – 3 hrs.
- ETE 425 Life Planning for Learners with Exceptionalities – 3 hrs.
- ETE 426 Assessment for Learners with Exceptionalities – 3 hrs.
- ETE 445 Multidisciplinary Collaboration – 3 hrs.
- ETE 496 Student Teaching – 12 hrs.

Early Childhood Special Education Approval

For those LBSI majors who want the ECE Special Education Approval, the following courses may be added to your program:

- ETE 324 Early Childhood Special Education Methods – 3 hrs.
- ETE 443 Early Childhood Assessment – 3 hrs.

World Languages – Spanish Education (PreK-12)

Spanish Education (PreK – 12)

The Spanish education major prepares you for the State of Illinois Professional Educator’s License in Spanish education, which qualifies you to teach world languages in pre-kindergarten through 12th grade classrooms. Students must complete the required Bradley Core Curriculum and subject or content area coursework.

Professional Education Courses

- ETE 100 Technology Applications – 1 hr.
- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 116 Field Experience – Introductory Field Experience – 1 hr.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 215 Strategies for Effective Teaching **OR** ETE 216 Effective Planning and Instruction for Teaching – 3 hrs.
- ETE 219 Human Development and Effective Field Experience – 1 hr.
- ETE 230 Adapting Curriculum to Support Inclusive Environments **OR** ETE 232 Meeting the Needs of All Students within the Disciplines – 2 – 3 hrs.
- ETE 270 Physical Development and Health – 1 hr.
- ETE 235 English Language Learners – 3 hrs.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 303 Novice Teaching in K – 12 Classrooms – 4 hrs.
- ETE 313 Methods of Teaching Literacy I: Reading, Writing and Language Arts K-2 **OR** ETE 315 Methods of Teaching Literacy II: Reading, Writing and Language Arts 3-8 – 3 hrs.
- ETE 345 Guiding Learners: Creating Safe Inclusive Learning Environments – 3 hrs.
- ETE 368 Content Area Reading for All Students – 2 hrs.
- ETE 369 Assessing All Students – 2 hrs.
- ETE 387 – Methods of Teaching PreK-12 World Languages and Cultures – 3 hrs.
- ETE 499 Student Teaching 9 – 12 – 12 hrs.

Spanish Courses

- WLS 303: Composition – 3 hrs.
- WLS 304: Conversation – 3 hrs.

- WLS 315: Intro to Hispanic Literature – 3 hrs.
- Linguistic Course: WLS 320 – 3 hrs.

One Peninsular Literature Course: Choose 1 – 3 hrs.

- *WLS 316: Special Topics
- WLS 340: Spanish Literature I
- WLS 341: Spanish Literature II
- WLS 346: Women's Voices of Spain
- **WLS 347: Images and Texts in the Hispanic World

Latin American Course: Choose 1 – 3 hrs.

- *WLS 316: Special Topics
- WLS 342 (HU or GP): Surveys of Hispanic American Literature I
- WLS 343 (HU or GP): Surveys of Hispanic American Literature II
- WLS 345: Women's Voices of Latin America
- **WLS 347: Images and Texts in the Hispanic World
- WLS 380: Hispanic American Short Story
- WLS 385: Poetry of Latin America
- WLS 425: Contemporary Hispanic American Novels

Civilization Course: Choose 1 – 3 hrs.

- WLS 305: Peru Interim
- WLS 306: Topics in Spanish History and Culture 3 – 9 hours
- WLS 307: Costa Rica Interim
- *WLS 316: Special Topics
- WLS 321 (GP): Peninsular Spanish Civilization and Culture
- WLS 322 (GP): Latin America Civilization and Culture
- WLS 330: Hispanic Cultural History
- WLS 401: Hispanic Cinema: Texts & Contexts
- WLS 410: Life from the Bottom of the World: the Culture of Argentina, Chile, and Uruguay

Two elective courses: 6 hrs.

- WLS 202 (GP): Intermediate Spanish 2
- WLS 222 (GP): Spanish for Heritage Speakers
- WLS 301: Spanish for Health Care Professionals
- *WLS 316: Topics in Hispanic Language and Literature
- WLS 334 (GP): Commercial Spanish
- WLS 403 (WI): Advance Conversation and Composition
- WLS 430: Introduction to Translation
- WLS 490: Topics in Hispanic Language and Literature
- WLS 492: Practicum – 1 – 3 hrs.
- WLS 495: Independent Study – 1 – 3 hrs.

NOTE: The candidate for the World Languages – Spanish Education license maintains registration in the Liberal Arts and Science College. The student's academic major will provide the core of the teaching area preparation. However, the State of Illinois may require specific areas of preparation. Candidates must consult their education advisor. Candidates will have an advisor in both their major area of preparation and in the Department of Education, Counseling, and Leadership.

Education Studies (Non-Teacher Licensure)

The education studies program prepares you for a career in the field of education in settings that do not require a state teaching license. This highly flexible program allows for the inclusion of a minor, or possibly additional major, aligned to your interests and future career goals. Students have great flexibility with this program and will work with their advisor to develop an individualized plan that includes a minimum of 120 hours.

Core Courses – 20-21 hours

- ETE 115 The History of Education in the United States – 3 hrs.
- ETE 210 Human Development from Birth to Young Adulthood – 3 hrs.
- One of the following courses focused on supporting students with exceptional learning needs:
 - ETE 230 Adapting Curriculum to Support Inclusive Environments – 3 hrs.

- ETE 232 Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 324 Early Childhood Special Education Methods – 3 hrs.
- ETE 280 Exploring Diversity: Learners, Families, and Communities – 3 hrs.
- ETE 350 Topics in Teacher Education – 6 hrs.
- ETE 445 Multidisciplinary Collaboration – 3 hrs.

Education Elective Courses – 9 hours

- ETE 100: Technology Applications – 1 hr.
- ETE 107: Conceptualizing Math for Teachers I – 3 hrs.
- ETE 108: Conceptualizing Math for Teachers II – 3 hrs.
- ETE 116: Introductory Field Experience – 1 hr.
- ETE 120: Early Childhood Professional Roles and Responsibilities – 3 hrs.
- ETE 194: Physical Education for P-6 Schools – 1 hr.
- ETE 196: Fine Art in the P-6 Schools – 2 hrs.
- ETE 215: Strategies for Effective Teaching – 3 hrs.
- ETE 216: Effective Planning and Instruction for Teaching – 3 hrs.
- ETE 219: Human Development and Effective Field Experience – 1 hr.
- ETE 234: Language Development – 3 hrs.
- ETE 235: Methods of Teaching English Language Learners – 3 hrs.
- ETE 236: Assessment of English Language Learners – 3 hrs.
- ETE 270: Physical Development and Health – 1 hr.
- ETE 322: Emergent Literacy: Reading and Writing Across the Curriculum – 3 hrs.
- ETE 313: Methods of Literacy I – 3 hrs.
- ETE 315: Methods of Literacy II – 3 hrs.
- ETE 335: Methods of Teaching Social Studies Grades 1-6 – 3 hrs.
- ETE 336: Methods of Teaching Science Grades 1-6 – 3 hrs.
- ETE 339: Methods of Teaching Mathematics Grades 1-6 – 3 hrs.
- ETE 345: Guiding Learners: Creating Safe, Inclusive Learning Environments – 3 hrs.
- ETE 368: Content Reading for All Students – 2 hrs.
- ETE 369: Assessing All Students – 2 hours

*Note: At least one course must be 300-level

Minor/Elective Courses – 48-51 hours

Note: While a minor is encouraged though not required, students can choose electives from all course offerings at Bradley.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Education, Counseling, and Leadership Courses



Education, Counseling, and Leadership Courses

ENC 301 – Planning Employment Strategy (1 hour)

Prepares students for finding internships and full-time employment after graduation. Develops a systematic approach to long-term career planning including occupational research, organizational research, and practice of job-seeking skills. Pass/Fail.

ENC 370 – Human Relations Development-Techniques (2 hours)

Basic literature, research findings, and techniques of the lay and professional helper; effect of the lay helper on human relations.

Prerequisite: PSY 101 (or PSY 104) or ETE 225, or consent of instructor. Corequisite: ENC 375

ENC 375 – Human Relations Development Laboratory (1 hour)

Supplemental practice sessions and exercises in skills of EHC 370. To be taken concurrently with EHC 370 CoRequisite: ENC 370

ENC 510 – Statistical Procedures (3 hours)

Principles and procedures for statistical interpretation of data. Study of measures and control tendency, variability, correlation, and introductory predictive and inferential statistics.

ENC 530 – Loss and Grief Counseling (1 hour)

Offers students the opportunity to understand the beliefs about loss and grief, blockers, and interventions. Students will identify the different types of losses. Loss and grief seem to underlie all life experience, and culture and gender influence how we grieve and mourn. Integration of neurocounseling into the grief process is discussed.

ENC 540 – Human Growth and Development Across the Lifespan (3 hours)

Studies that provide an understanding of the nature and needs of persons at all developmental levels and in multicultural contexts, including common theories, neurobiological behavior, models of resiliency, exceptional abilities, factors that affect normal and abnormal behavior, and wellness over the life span. Experiential activities emphasize personal contact and on-site work with people of different ages and stages of physical and psychological development.

ENC 550 – Independent Study (1-6 hours)

Independent study in a selected area related to educational goals.

ENC 551 – Prevention and Treatment of Substance-Related and Addictive Disorders (3 hours)

Theories and etiology of substance-related and addictive disorders, including strategies for prevention, intervention, and treatment in relation to the individual and the impact on the community.

ENC 584 – Topics in Human Development Counseling (1-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated

under different topics for a maximum of six hours credit.

ENC 585 – Understanding Schools: A Primer for Non-Teachers (2 hours)

Intended for non-teachers seeking state licensure as a school counselor. This course is a combined survey and field observation experience. Students will learn about the structure, organization, and operation of the US educational system, P-12. Using current neuroscience and neurocounseling research on teaching and learning students are introduced to concepts in curriculum and instruction, to include reading methods and reading in the content areas.

ENC 586 – Counseling Diverse Populations (3 hours)

Students are introduced to value systems and diverse groups and the use of theories and models of diversity in establishing effective helping relationships.

ENC 604 – Research Methodology and Applications (3 hours)

Research methods, statistical analysis, needs assessment, and program evaluation utilized in counseling, education, and human service administration. The use of research to inform evidence-based and ethical practice in decision making is emphasized.

ENC 606 – Interpersonal Behavior & Organizational Leadership (3 hours)

Theory and practice related to interpersonal communication, organizational behavior, and leadership are addressed. Students analyze the neuroanatomy of leadership on four levels: self-awareness, self-management, social awareness, and relationship Leadership skills are developed in the context of mentoring, conflict resolution, and work group dynamics.

ENC 607 – Neurocounseling: Bridging Brain and Behavior (3 hours)

This introductory neurocounseling course will teach students how physiology and the brain affect behavior and emotions and thus impact counseling. Concise self-regulation methods and strategies for integration into counseling will be offered.

ENC 608 – Brain-Based Counseling Interventions (3 hours)

Students will become skilled in neurocounseling interventions supported by current research findings. Through experiential activities, discussion, research, and reflections, students will interactively explore interventions designed to support healthy brain plasticity and bridge counseling skills to the brain's physiology and function. Interventions such as mindfulness, meditation, neurotherapy, neurofeedback, and other strategies for self-regulation will be demonstrated, discussed, and practiced.

ENC 611 – Instructional Leadership (3 hours)

Identification of current instructional changes and requirements in PK-12 schools and consideration of leadership and necessary knowledge to create effective school learning communities.

ENC 620 – Professional Counseling Orientation and Ethical Practice (3 hours)

A survey course introducing the counseling profession as the promotion of human development, including an overview of the historical and philosophical development of the field, a survey of relevant skills, client population and settings, and ethical practice. Required of all students preparing to become leaders in the profession of counseling.

ENC 621 – Career and Life Planning Across the Life Span (3 hours)

Basic counseling skills for career planning, exploration, and decision-making across the life span. Theories of career development, assessment in career counseling, career guidance programs for primary, secondary, and higher education, and career issues for special populations are addressed. Opportunity for practical experience in interviewing, assessment, and career information gathering and distribution is provided.

ENC 622 – Counseling: Ethics and the Law (1 hour)

The study of ethical standards of professional organizations and credentialing bodies, and application of ethical and legal considerations in professional counseling. Ethical decision-making and critical thinking are emphasized and practiced.

ENC 623 – Pre-Practicum in Counseling (3 hours)

Instruction, demonstration, practice, and evaluation in basic interviewing and counseling skills. Emphasis on practice and skill development. Prerequisite: ENC 620 or concurrent enrollment.

ENC 624 – Theories and Techniques of Counseling (3 hours)

The study of counseling theories and models that facilitate client conceptualization, selection of appropriate interventions, and development of a personal model of counseling. Prerequisite: ENC 623 or concurrent enrollment or consent of instructor.

ENC 625 – Principles of Group Counseling (3 hours)

Group theory and experiential understanding of group counseling dynamics including group purpose, practices, methods, and group leader facilitation skills for a multicultural society will be taught. Students will receive supervised practice and experience in group counseling as a leader and as a participant. Prerequisite: ENC 623 and 624; or consent of instructor

ENC 630 – Diagnosis and Treatment of Mental Disorders (3 hours)

Etiology, diagnostic process, and nomenclature, clinical and psychopharmacological treatment, referral, and prevention of mental and emotional disorders. Prerequisite: ENC 624.

ENC 631 – Trauma, Crisis and Grief Counseling (3 hours)

Effects of crises, disasters, and other trauma-causing events on persons of all ages: principles of crisis intervention, emergency management systems, psychological first aid, grief and loss, and trauma-informed care.

ENC 632 – Psychopharmacology in Counseling (1 hour)

Basic classifications, indications, and contraindications of commonly prescribed psychopharmacological medications. Prerequisite: ENC 630.

ENC 640 – Clinical Supervision (2 hours)

Offers students the opportunity to better understand the supervisory process. Evidenced-based supervision (EBS), different models of supervision and a common factors approach are emphasized. Integration of neurocounseling into supervision is discussed.

Prerequisite: ENC 623 and ENC 624

ENC 641 – Assessment in Counseling (3 hours)

Individual and group approaches to assessment and evaluation in a multicultural society including historical perspectives, basic concepts of standardized and non-standardized testing, and other assessment techniques. Statistical concepts and social/cultural factors related to assessment and evaluation.

ENC 651 – Clinical Mental Health Counseling (3 hours)

Principles of clinical mental health counseling including prevention, intervention, consultation, and advocacy as well as operation of programs and networks that promote mental health in a multicultural society. Prerequisite: ENC 620 or consent of instructor.

ENC 653 – Professional School Counseling K-8 (2 hours)

Students will learn about the history and development of elementary and middle school counseling programs, including their administration, financing, and accountability. Using current neuroscience and neurocounseling research on teaching and learning, students will be introduced to reading methods; reading in the content areas; cognitive, experiential, and social-emotional learning skills; methods for group and individual counseling; and methods for counseling students with disabilities and students from diverse populations. Prerequisite: ENC 620 or consent of instructor.

ENC 654 – Consultation in the Helping Professions (1 hour)

A conceptual understanding of effective consultation and its relevance to the helping professional. Demonstration of knowledge and skills necessary to deliver effective consultative services in schools and clinical mental health agencies. Prerequisite: ENC 620 and foundational concentration course (ENC 651, 653, or 655) or consent of instructor.

ENC 655 – Professional School Counseling in Secondary Schools (3 hours)

Secondary professional school counseling programs, including administration, finance, and accountability; cognitive and experiential skills. History and development of school counseling; secondary school education and counseling programs (similarities and differences); group and individual counseling; the counselor's role in school testing; career planning and exploration. Practical experiences. Prerequisite: ENC 620 or consent of instructor.

ENC 661 – Intimate Partner Relationships and Family Counseling (3 hours)

Theories and techniques of intimate partner relationships and family counseling. Emphasis is on working with couples (intimate partners), families, and children to promote human development, including the role of the family counselor within the network of school and clinical mental health settings. Prerequisite: ENC 651 or 653 or 655.

ENC 662 – Community Relations (1 hour)

Developing effective community relations through a four-step process involving two-way communication and researching, planning, communicating, and evaluating.

ENC 663 – Counseling and the Dynamics of Aging (1 hour)

The mental health dynamics of aging and its impact on the human service professions. Practical skills of gerontological counseling and their relationship to the concerns of aging.

ENC 669 – Education Law, Advocacy and Leadership (2 hours)

The course reviews all disability categories related to special education services and includes appropriate staffing and instructional methods for students with exceptionalities. Course content provides information on state and federal requirements relative to students where English is not their primary language and the statutory provisions of the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act (ADA). An examination of stakeholders and participants in special education services, identification/evaluation of services, appropriate instructional methods, least restrictive environment, related services, and free and appropriate education.

ENC 670 – Human Resource Management (3 hours)

Survey approaches to supervision and evaluation in K-12 education based upon legislative requirements; examination of the relationship between practices, professional development, and the improvement of instruction; development skills of classroom observation and conferencing; and development of skills in hiring and induction of personnel.

ENC 676 – The School Principalship (3 hours)

Various components, background, and training for an entry-level elementary or secondary school principal. Prerequisite: ENC 673 or consent of instructor.

ENC 677 – Educational Finance (2 hours)

Theory and practice; historical and present sources of revenue and allocation of funds.

ENC 678 – United States Public School Law (3 hours)

Legal aspects of education. Constitutional, statute, and administrative laws related to public and private education.

ENC 681 – Seminar in Educational Administration (0-6 hours)

Special problems, areas, or current issues in student's chosen field within educational administration/supervision. Maximum of three hours may be taken under a single topic.

ENC 690 – Practicum (3 hours)

Supervised application of theory and development of counseling skills with clients representing the ethnic and demographic diversity of the community. Prerequisite: ENC 625; consent of instructor.

ENC 691 – Internship I (1-3 hours)

Comprehensive supervised experience that reflects a professional counselor's work appropriate to the students' designated program area. Prerequisite: ENC 690; consent of instructor

ENC 692 – Internship II (1-6 hours)

Comprehensive supervised experience that reflects a professional counselor's work appropriate to the students' designated program area. Prerequisite: ENC 690; consent of instructor

ENC 699 – Thesis (0-6 hours)

Advanced educational or social science research under the guidance of a departmental faculty member. Student will design, develop, and present the research proposal, then conduct the approved research study consistent with the Committee for Use of Human Subjects in Research (CUHSR) regulations and university ethical guidelines. Minimum of 3.0 and maximum of 6.0 hours may be taken and applied toward Master's degree.

ENC 700 – Independent Study (1-6 hours)

This customized course offers independent study in a selected area commensurate with student academic and/or career goals. Prerequisite: Graduate student standing and consent of department chair

ENC 702 – Current Topics and Issues in Education (1 hour)

This inquiry-based course deeply explores a current topic or issue in P-20 education from a range of perspectives through intentionally-selected readings, class discussions, and written reflections. Special emphasis on analysis, evaluation, synthesis, and application. May be repeated up to a maximum of 5 credit hours. Prerequisite: Graduate student standing and consent of department chair

ENC 703 – Action Research 1: Introduction to Action Research (3 hours)

Introduction to action research and how it can be used to inform practice. Focus on the action research process as an approach to scholarly research, selecting and developing a research topic, ethical considerations in scholarly research, and designing a scholarly research project.

ENC 704 – Action Research 2: Action Research Design and Ethics (3 hours)

Guides students through the processes of scholarly research design and human subject research approval. Focus on research methods; ethical standards for scholarly investigation; developing a theoretical framework; writing a literature review; and writing a research proposal. Prerequisite: ENC 703

ENC 705 – Action Research 3: Data Collection in Action Research (3 hours)

Guides students through the data collection stage of an ongoing scholarly research project. Focus on methods of data collection and analysis; data management; and initial data analysis. Prerequisite: ENC 704, Bradley-approved CUHSR proposal, and IRB approval and/or written permission from research site to conduct research (if applicable).

ENC 706 – Action Research 4: Data Analysis and Reporting in Action Research (3 hours)

Guides students through the data analysis and reporting stages of an ongoing scholarly research project. Focus on methods of data analysis; framing a scholarly discussion; drawing conclusions; and presenting scholarly work. Prerequisite: ENC 705 and approval of department chair.

ENC 707 – Action Research 5: Scholarly Writing and Presentation in Action Research (3 hours)

Guides students through the process of reporting an ongoing scholarly research project using a five-chapter format and reporting scholarly research to various audiences. Focus on standards for scholarly writing; presenting scholarly work; and application of action research findings. Prerequisite: ENC 706 and approval of the department chair.

ENC 708 – Boards and Educational Governance (3 hours)

Examines board policies and working relationships between higher education institutions and the larger community. Focus on standards, accountability, the impact of pressure groups, and leadership and policy development within the framework of the educational institution and the political environment.

ENC 709 – Ethical & Political Foundations of Educational Policy (3 hours)

Critical analysis of higher education policy from social justice perspectives. Focus on application of effective political leadership practices to ensure equity for all students.

ENC 710 – Learning in an Era of Technology (3 hours)

Critical analysis of effective uses of technology in higher education learning environments. Focus on systemic structures to ensure effective, accessible learning for all students.

ENC 711 – National Trends in Assessment, Data Analysis & Accountability (3 hours)

Examines current trends in assessment and effective leadership practices in higher education to ensure accountability and inform continuous improvement.

ENC 717 – Organization and Leadership in Higher Education (3 hours)

Unique missions, traditions, people, and agendas shape the decision-making structure(s) of higher education organizations. The framework of organizational lenses, and leadership are explored, and applied to the multi-varied audiences of the higher education institution.

ENC 718 – The Community College (3 hours)

The community college is essential to the higher education landscape. Community college history, academic and community mission, and economic development capabilities are explored as essential tenants of the greater postsecondary environment.

ENC 719 – Student & Academic Affairs (3 hours)

Systematic inquiry into ethical issues faced by contemporary educational leaders related to student and academic affairs and effective resolution strategies.

ENC 720 – The Contemporary Learner (3 hours)

A study of the latest research and trends surrounding the adult, post-secondary learner. Course explores innovative approaches in education where leaders develop the capacity to engage communities and educators to imagine, build and sustain vibrant learning ecosystems that allow all students to thrive.

ENC 721 – Financial Affairs in Higher Education (3 hours)

Systematic inquiry into political, economic, and social issues faced by contemporary educational leaders related to the financing of higher education.

ENC 722 – Internship 1 (3 hours)

The first of a two-semester internship in higher education administration. Focus on examining and addressing present and future leadership challenges in an authentic educational setting. Prerequisite: ENC 706

ENC 723 – Internship 2 (3 hours)

The second of a two-semester internship in higher education administration. Focus on examining and addressing present and future leadership challenges in an authentic educational setting. Prerequisite: ENC 722

ENC 724 – Scholarly Writing Workshop (1 hour)

This application-based course provides structured writing time, collaborative conferencing, and instructor/peer feedback related to the content, organization, formatting, and scholarship of original drafts of student writing. Special emphasis on strategies for successful completion of degree-related course assignments, including papers, reports, chapters, and proposals. May be repeated up to a maximum of 5 credit hours. Prerequisite: Graduate student standing and consent of department chair

ENC 741 – Applied Educational Media (3 hours)

This course will cover pre-production (assessing need and resources, planning, and preparing), production (development and implementation), and post-production (assessment/evaluating technology and media application for effectiveness in an instructional environment). Understanding how to use technology to increase the likelihood of reaching educational goals is a primary outcome of this course. This course will be performance driven with students being required to create instructional materials. The latest and most relevant ISTE (International Society for Technology in Education) standards will be covered in order to serve as a framework for application. Prerequisite: ENC 708, ENC 709, ENC 710, and ENC 711 or consent of program director

ENC 742 – Instructional Design (3 hours)

This course will cover instructional design (ID) models and theories. Students will complete an entire instructional design sequence on an instructional unit (patterned after a selected ID model). Students will assess needs to identify instructional goals, analyze learners and contexts, conduct instructional analysis, draft performance/learning/instructional objectives, develop instruments for proper

assessment, craft instructional strategy, create and/or select materials for instruction, plan and conduct formative evaluation of instruction, engage in revision of instruction, and design and conduct summative evaluation. Prerequisite: ENC 708, ENC 709, ENC 710, and ENC 711 or consent of program director

ENC 743 – Learning Theory and Instructional Strategies (3 hours)

This course will dive deeply into theories of human learning, motivation, and instruction in order to inform teaching and learning to maximize the likelihood that educational practice will be effective, efficient, and engaging. Students will link theory to practice in order to maximize effective instructional design as well as curriculum development. Many of the course objectives will align to the most recent and/or most relevant AECT (Association of Educational and Communication Technology) Standards. Prerequisite: ENC 708, ENC 709, ENC 710, and ENC 711 or consent of program director

ENC 744 – Digital Learning: Online, Distance, and Distributed Instru Instruction (3 hours)

This course concentrates on the theories informing best practices for online and distributed teaching and learning. Various distance and distributed learning models will be examined and students will have an opportunity to craft lessons and develop curriculum, not just for online learning, but in contexts where technology can enhance or even maximize the learning experience. Students will examine differentiated instruction in online/blended environments and explore best practices for meeting the needs of learners across various contexts and under diverse circumstances in technology-based environments. Prerequisite: ENC 708, ENC 709, ENC 710, and ENC 711 or consent of program director

ENC 745 – Digitally Driven Educational Practice (3 hours)

The world is now mediated by digital technology, and a large percentage of that technology is cloud driven and/or virtual augmentation of reality. Managing educational environments, administering educational opportunities, and assessing educational outcomes are all informed by a web-mediated world where new literacies and new consumer competencies and practices serve to catalyze learner expectations. This class will look at frameworks for assessing, applying and prognosticating technological application for administration of education as well as forecasting for curriculum and instruction evolution and progression. Prerequisite: ENC 708, ENC 709, ENC 710, and ENC 711 or consent of program director

ENC 748 – Advanced Instructional Design (3 hours)

Students will dive deeper into instructional design practices with an emphasis on design informed by technology. Students will also acquire the ability to translate learning theories into educational practice and to evaluate and diagnose problems in various instructional design situations and contexts based on real world challenges. The primary goal of this course is to prepare students for future professional practice through direct participation in the processes of instructional design. Working with a subject matter expert as well as a web-based technology platform will enhance the likelihood the learning goal is attained during the semester. Prerequisite: ENC 742

ENC 749 – Educational Technology Portfolio (3 hours)

This course will be a laboratory for enhancing digital design and development skills resulting in a web-based portfolio worthy project. Students will gain hands-on experiences building real-world and professionally mediated educational technology projects. The intent of this course is twofold: First, the experience gained in this course will enhance student's understanding of instructional design theory and educational technology support by requiring students practice technology-driven instructional design and development. The second intention of this course is to provide each student with a relevant, real-world educational technology artifact. Prerequisite: ENC 748

ETE 100 – Technology Applications (1 hour)

Application of technology concepts and skills to human service professionals. Database construction; linear and nonlinear multimedia projects. Using graphics, text, sound, animation, and other media resources. Prerequisite: Major in an education program or consent of department chair.

ETE 107 – Conceptualizing Math for Teachers I (3 hours)

Core Curr. QR

Development of a deep understanding of concepts, relationships, and algorithms in various areas of mathematics examined. Topics include set theory, variables, patterns and algebraic relationships, equations and systems of equations, graphing; real numbers and operations, properties of number systems, ratios and proportions, percents; measurement systems, measurement relationships. Focus is on problem solving, analysis, representation of concepts, and communicating understanding and reasoning of the mathematical concepts studied. Prerequisite: Major in an education program or permission of department chair.

ETE 108 – Conceptualizing Math for Teachers II (3 hours)

Core Curr. QR

Development of a deep understanding of concepts, relationships, and algorithms in various areas of mathematics examined. Topics include data presentation, computation, and meaning of descriptive measurements; basic combinatorics, probability concepts, probability distributions, expectations; linear, quadratic, exponential, and other functions, geometric constructions, 2-D and 3-D shapes, spatial relationships, geometric reasoning and proof. Focus is on problem solving, analysis, representation of concepts, and communicating understanding and reasoning of the mathematical concepts studied. Prerequisite: Major in an education program or consent of department chair; ETE 107.

ETE 115 – The History of Education in the United States (3 hours)

Gen. Ed. SF**Core Curr. HU,MI**

Surveys the history of American education from the Colonial Era to the present. Treats the changing character of education in the context of broader social and cultural developments. Provides both knowledge of the history of American education and an appreciation of historical perspectives as ways of understanding contemporary education. Examine the evolving historical contexts that served to shape and define American education. Specifically, the course will explore the role of education i.e., policies, purposes, practices, and reform efforts throughout U.S. history, and examine its relationships with the American economic, political, social, and cultural landscape.

ETE 116 – Introductory Field Experience (1 hour)

Exhibit professional and ethical behaviors, engage in a minimum of 25 hrs of directed observations throughout the semester in an academic setting. Besides observing within a classroom, candidates work with a group of children at an appropriate level, depending on the individual areas of licensure. Collaborate with professionals to develop foundational knowledge related to planning for instruction and assessment, a sense of the whole school culture including an awareness of the social and emotional development of children. Introduced to the language of teaching and apply the knowledge in their reflections analyzing the setting. Preparation for Teacher Performance Assessment. Weekly seminar Prerequisite: Major in an education program or consent of department chair; ETE 115 or concurrent enrollment.

ETE 120 – Early Childhood Professional Roles and Responsibilities (3 hours)**Core Curr. WI**

Meeting education needs of children from birth through age eight. Care for the whole child including an awareness of the social and emotional development of children. Career opportunities, roles, and responsibilities. Preparation for Teacher Performance Assessment. This is a Writing Intensive course. Prerequisite: Major in an education program or consent of department chair.

ETE 194 – Physical Education for P-6 Schools (1 hour)

Content and pedagogy for physical education in grades P-6 to meet the needs of diverse learners. Introduction to physical education in the regular classroom. Prerequisite: Major in an education program or consent of Department chair.

ETE 196 – Fine Art in the P-6 Schools (2 hours)

Content and pedagogy for fine art in grades P-6 to meet the needs of diverse learners. Introduction to including art, music, dance, and theatre in the regular classroom using traditional methods and newer technologies. Prerequisite: Major in an education program or consent of Department chair.

ETE 210 – Human Development from Birth to Young Adulthood (3 hours)

Integration of the physical, cognitive, and psychosocial aspects of the development and growth of the individual from conception to adulthood. Study the physiology of learning, the interactive nature of the teaching/learning process, and the need to consider developmental and cultural appropriateness in meeting individual learning needs, with an emphasis on acknowledging and accommodating exceptionality and diversity including an awareness of the social and emotional development of children. Environmental factors affecting development, including cultural, ethnic, socioeconomic, individual, social contexts, and parent-child interaction. Preparation for Teacher Performance Assessment. Prerequisite: Major in an education program or consent of department chair.

ETE 215 – Strategies for Effective Teaching (3 hours)

An in-depth sequence of examining instructional planning and strategies, modes of teaching, and assessment of learning, including an awareness of exceptionality and diversity including an awareness of the social and emotional development of children. Other topics include instructional management, collaboration in curriculum design and delivery and with stakeholders, teacher leadership, decision making, and change processes. Preparation for Teacher Performance Assessment. Prerequisite: ETE 115 or concurrent enrollment; ETE 116 or concurrent enrollment; ETE 210 or concurrent enrollment.

ETE 216 – Effective Planning and Instruction for Teaching (3 hours)

The study of key teaching frameworks with fundamental instructional strategies developed within the construct of planning lesson segments and units of study, including an awareness of exceptionality and diversity, an awareness of the social and emotional development of children. Application of brain research, methods to facilitate higher order, critical and creative thinking, problem solving, and decision-making. Other topics include instructional management, collaboration in curriculum design and delivery and with stakeholders, teacher leadership, decision-making, and the needs of 21st Century middle school students are addressed. Preparation for Teacher Performance Assessment. Prerequisite: ETE 115 or concurrent enrollment; ETE 116 or concurrent enrollment; ETE 210 or concurrent enrollment.

ETE 219 – Human Development and Effective Field Experience (1 hour)

Engage in a minimum of twenty-five hours of directed observations in an appropriate, academic setting, where they teach a small group of students and collaborate with the classroom teacher to implement instructional and assessment plans for one student. Candidates are introduced to the language and dispositions of teaching, apply this knowledge in their reflections analyzing the learning environment, incorporate issues of equity and diversity including an awareness of the social and emotional development of children, and apply the knowledge in the creation on a developmental case study of one student. Weekly seminar. Prerequisite: ETE 115 or concurrent enrollment; ETE 116 or concurrent enrollment; ETE 210 or concurrent enrollment; one of: Music Education Major, ETE 215,

OR ETE 216, or concurrent enrollment in either ETE 215 or ETE 216.

ETE 223 – Gifted Education: Strategies and Practicum (3 hours)

Field experience in gifted education grades K-12; 20 clock hours in Bradley University Gifted and Talented Summer Institute. In addition 16 hours of in-class instruction of materials and strategies unique to gifted learners will be required. Apply the knowledge of gifted education, including issues of equity and diversity. Prerequisite: ETE 210; one of: ETE 215, ETE 216; ETE 222 or concurrent enrollment.

ETE 227 – Development of the Early Adolescent (3 hours)

Core Curr. WI,EL

Required for the Illinois middle school endorsement, surveys the physical, cognitive, and social/emotional development of young adolescents from a cultural perspective, emphasizing implications for effective middle school instruction. Preparation for Teacher Performance Assessment. Prerequisite: ETE 115; ETE 116; ETE 210; major in an education program or consent of department chair.

ETE 228 – Strategies for Middle School (3 hours)

Core Curr. WI,EL

Philosophy, concepts, and procedure related to organizational structure, curriculum, teaching strategies, and assessment in the middle school. Preparation for Teacher Performance Assessment. Prerequisite: ETE 115; ETE 116; ETE 210; one of: ETE 215, ETE 216; major in an education program or consent of department chair.

ETE 230 – Adapting Curriculum to Support Inclusive Environments (3 hours)

Exploration of foundational knowledge of characteristics of individuals with exceptionalities, diversity, populations who are at risk, and English Language Learners. Enhance knowledge and performance of individuals with exceptionalities by developing and adapting curriculum materials that meet individual needs within inclusive environments. Response to Intervention outcomes and appropriate evidence-based strategies that support successful inclusion are discussed. Preparation for Teacher Performance Assessment. This course meets foundation knowledge for LBS I certification. Prerequisite: ETE 115; ETE 116; ETE 210; one of: ETE 215, ETE 216, or concurrent enrollment; or Education Studies major.

ETE 232 – Meeting the Needs of All Students within the Disciplines (2 hours)

ETE 232 provides foundational knowledge of individuals with exceptional learning needs (ELN) with an overview of categories and characteristics. Emphasis is on co-teaching and collaborative alignment of appropriate adaptations, accommodations and modifications to IEPs and 504 plans that support successful inclusion. Preparation for Teacher Performance Assessment. Prerequisite: ETE 115; ETE 116; ETE 210; ETE 219 or concurrent; ETE 215 or concurrent for K-12 ART OR ETE 216 or concurrent for MSE and High School OR ETE 280 or concurrent for K-12 Music; or Education Studies major.

ETE 234 – Language Development (3 hours)

Language acquisition theory and processes, stages of language development, verbal and non-verbal communication. Emphasis on language differences and diversity, including minority groups, language disorders, and English as a second language. Planning opportunities supporting language use in its various forms to enrich further development. Preparation for Teacher Performance Assessment. ETE 234 is one course that meets criteria for the Illinois ECSE Approval. Prerequisite: ETE 115; ETE 116 or concurrent enrollment; ETE 210 or concurrent enrollment.

ETE 235 – Methods of Teaching English Language Learners (3 hours)

Addresses language development and methods for teaching English Language Learners (ELL). Topics include theories of second language acquisition as well as a variety of instructional strategies in the language arts and other content areas. Emphasis will be placed on the social and cultural needs of the ELL and the examination of pre-service teachers' own culture and its impact on their practice. Preparation for Teacher Performance Assessment. There is fieldwork expected for the class. Prerequisite: ETE 115; ETE 116; ETE 210 or concurrent enrollment; either ETE 215 or concurrent enrollment OR ETE 216 or concurrent enrollment

ETE 236 – Assessment of English Language Learners (3 hours)

Covers fundamental basics of testing and assessment of the English Language Learner (ELL), prevalent in today's classrooms. Included are formal and informal assessment strategies; construction and use of teacher-made tests of student learning; interpretation and use of standardized tests, report cards, and grading; reporting procedures; and examination of how to utilize evaluation and assessment to strengthen instruction, differentiate assessment for ELLs, and contribute to positive learner development. There is fieldwork expected for the class. Prerequisite: ETE 235 or concurrent enrollment.

ETE 237 – Practicum for Teaching English Learners I (1 hour)

Candidates engage in a minimum of 40 hours of directed observations and teaching of English Language Learners in an appropriate PK-12 academic setting. Candidates collaborate with the classroom teacher or ESL teacher to plan and implement instruction for small groups and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of language development for English learners. Weekly seminar. Prerequisite: ETE 235 or concurrent enrollment.

ETE 238 – Practicum for Teaching English Learners II (1 hour)

Candidates engage in a minimum of 33 hours of directed observations and teaching of English Language Learners in an appropriate PK-12 academic setting. Candidates collaborate with the classroom teacher or ESL teacher to plan and implement formative assessments and instruction for whole class, small groups and individuals. Candidates complete weekly reflections analyzing the

learning environment of their classroom, specifically addressing issues of language development for English learners. Weekly seminar. Satisfactory/Unsatisfactory Prerequisite: ETE 237, and permission of the department chair

ETE 239 – Practicum for Teaching English Learners III (1 hour)

Candidates engage in a minimum of 34 hours of directed observations and teaching of English Language Learners in an appropriate PK-12 academic setting. Candidates collaborate with the classroom teacher or ESL teacher to plan and implement formative assessments and instruction for whole class, small groups and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of language development for English learners. Weekly seminar. Satisfactory/Unsatisfactory. Prerequisite: ETE 237; ETE 238; and permission of the department chair

ETE 240 – Practicum for Teaching English Learners Part 2 (2 hours)

Candidates engage in a minimum of 60 hours of directed observations and teaching of English Language Learners in an appropriate PK-12 academic setting. Candidates collaborate with the classroom teacher or ESL teacher to plan and implement formative assessments and instruction for whole class, small groups and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of language development for English learners. Weekly seminar. Prerequisite: ETE 237, or permission of the department chair.

ETE 245 – American Sign Language I (3 hours)

General introduction to sign language of the deaf; information regarding the culture of the deaf. Finger spelling and signing skills, which enable signing at a conversational level both receptively (seeing and understanding) and expressively (signing). Available to students from any major throughout the university.

ETE 260 – Children’s Literature (3 hours)

Types, genres, authors, and illustrators of books for children from birth through middle school. Emphasis on literature response activities; planning and assessing a literature-based curriculum. Analysis of current trends, issues, and the impact of children’s literature. Prerequisite: Major in an education program or consent of department chair.

ETE 270 – Physical Development and Health (1 hour)

A variety of health and nutrition topics about which teachers all levels must be knowledgeable. Must document certification in CPR and First Aid, and plan lessons for health instruction as part of the requirements. Topics examine nutrition; communicable diseases; relationship between fitness and systems of the body; principles of personal, interpersonal, and community health; mental health; and safety. Preparation for Teacher Performance Assessment. Prerequisite: Must be enrolled in education program

ETE 280 – Exploring Diversity: Learners, Families, And Communities (3 hours)

Gen. Ed. CD

Core Curr. GP WC

The socialization and enculturation of learners in the context of their families, communities, and cultures. Awareness, acceptance, and appreciation of diversity, whether resulting from cultural or ability differences. Emphasis on the teacher’s role in involving, educating, and communicating with parents as partners in the educational process. Professional advocacy that supports an inclusionary, multicultural, antiracist, democratic, non-sexist, and global curriculum. ETE 280 is one course that meets criteria for the Illinois ECSE Approval. Prerequisite:

ETE 291 – Assistive Technology for Individuals with Special Needs (3 hours)

Addresses the assistive technology (AT) evaluation, selection, and application process for individuals with disabilities in school, the workplace and the community. Emphasis on assessment of the individual, environment, and tasks required of the person prior to evaluation of technologies and adaptations that enable the individual to function as fully as possible in his/her daily lives. Through illustrations and case examples students will obtain knowledge and skills required for the use of AT devices or adaptations and factors to consider in the selection and implementation processes. Preparation for Teacher Performance Assessment. Prerequisite: ETE 115; ETE 116; ETE 210; one of: ETE 215, ETE 216, or concurrent enrollment.

ETE 301 – Novice Teaching Experiences in Music Classrooms K-8 (1 hour)

Core Curr. EL

Engage in a supervised teaching experience in a K-8 school music learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity and social and emotional awareness. Includes Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 345 or concurrent enrollment; concurrent enrollment in ETE 351; concurrent enrollment in ETE 310.

ETE 302 – Novice Teaching Experience in High School Music (1 hour)

Core Curr. EL

Engage in a supervised teaching experience in a high school music learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity, and social and emotional awareness. Includes Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in

the Department of Teacher Education; concurrent enrollment in ETE 352; ETE 345 or concurrent enrollment; ETE 310 or concurrent enrollment.

ETE 303 – Novice Teaching Experience in K-12 Classrooms (4 hours)

Core Curr. EL,WI

Engage in a supervised teaching experience in an elementary, middle, or high school learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity and social and emotional awareness. Includes draft Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 345 or concurrent enrollment; ETE 386 or concurrent enrollment, or consent of department chair.

ETE 304 – Early Childhood Novice Teaching Experience (4 hours)

Core Curr. EL,WI

Engage in supervised teaching experience in a preprimary learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity and social and emotional awareness. Includes draft Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; either ETE 328 or concurrent enrollment or ETE 443 or concurrent enrollment; ETE 345 or concurrent enrollment, or consent of department chair.

ETE 305 – Novice Teaching Experience in a LBSI Setting (4 hours)

Core Curr. EL,WI

Engage in a supervised teaching experience in a special education learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity and social and emotional awareness. Includes draft Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 391 or ETE 393; ETE 345 or concurrent enrollment; or consent of department chair.

ETE 306 – Novice Teaching Experience Grades 1-6 (4 hours)

Core Curr. EL,WI

Engage in a supervised teaching experience in an elementary school learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity, and social and emotional awareness. Includes draft Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 313 or ETE 315; at least two of the following: ETE 313, 315, 335, 336, 339; ETE 345 or concurrent enrollment or permission of department chair.

ETE 307 – Novice Teaching Experience in Grades 5-8 (4 hours)

Core Curr. EL,WI

Engage in a supervised teaching experience in a middle school learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity and social and emotional awareness. Includes draft Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; at least 2 courses in concentration; concurrent enrollment in content-specific methods course appropriate to the student's teaching area (ENG 392, ETE 361, ETE 362, ETE 363); ETE 345 or concurrent enrollment or permission of department chair.

ETE 308 – Novice Teaching Experience in the High School (4 hours)

Core Curr. EL,WI

Engage in a supervised teaching experience in a high school learning environment. Collaborate with the classroom teacher to plan and implement formative assessments and instruction for whole class, small groups, and individuals. Candidates complete weekly reflections analyzing the learning environment of their classroom, specifically addressing issues of equity, diversity and social and emotional awareness. Includes Teacher Performance Assessment. Weekly seminar. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 345 or concurrent enrollment; concurrent enrollment in content-specific methods course appropriate to the student's teaching area (ETE 373, ETE 374, ETE 375, ETE 378, or ENG 472); concurrent with ETE 310, or consent of Department chair.

ETE 310 – Teacher Performance Assessment (1 hour)

Core Curr. WI

Prepares preservice teacher to complete the education teacher performance assessment (edTPA) required for licensure. Gain skills needed to complete a TPA based upon integration of education program objectives and the novice teaching experience. Analyze the context for learning in the classroom, plan a unit of instruction including adaptations for diverse learners, teach the unit while attending to academic language, assess student learning. Make video recording of the unit teaching and collect student work samples. Reflect on

the pedagogical decisions in a formal manner, citing research as justification for the choices. Completed edTPA is evaluated locally and feedback is provided to the candidate. Satisfactory/Unsatisfactory Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; major in an education program or consent of department chair; concurrent enrollment in one of: ETE 301, ETE 302, ETE 303, ETE 304, ETE 305, ETE 306, ETE 307, ETE 308.

ETE 313 – Methods of Literacy I: Reading, Writing and Language Grades 1-2 (3 hours)

Core Curr. EL,WI

Addresses literacy instruction in first and second grade including reading, writing, listening, speaking, viewing, and visually representing, including accommodations of exceptionality and diversity using developmentally and culturally appropriate practices. Key topics examine theories of literacy development, emergent literacy, phonemic awareness, phonics, fluency, writing process, literacy assessment, and planning for individual learners. Classroom applications are included. Five to ten hours in a local classroom are required. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education.

ETE 315 – Methods of Literacy II: Reading, Writing and Language: Grades 3-8 (3 hours)

Addresses total literacy instruction for learners at all levels 3-8: Reading, writing, listening, speaking, viewing, and visually representing. It addresses research-based approaches to literacy instruction for the grade school student, including accommodations of exceptionality and diversity using developmentally and culturally appropriate practices. Key topics: the reading and writing processes, vocabulary and comprehension, literacy assessments, planning for individual learners, integrating the language arts into the content areas and preparing students for the state writing assessment. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education.

ETE 322 – Emergent Literacy: Reading and Writing Across the Curriculum (3 hours)

Processes, themes, and practices that support the development of reading, writing, speaking, listening, and thinking in children from birth through age 8. A continuum of instructional practices, including contextualized application of phonemic, graphemic, morphemic, and syntactical concepts, that facilitate the emergence of literacy. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education.

ETE 324 – Early Childhood Special Education Methods (3 hours)

Providing developmentally and culturally appropriate activities to infants and young children with special needs. History and evolution of early intervention services, teaming, collaboration, service coordination, development of Individualized Family Service Plans and Individualized Educational Plans, adaptation of curriculum, instructional models which promote interaction and independence, inclusionary programs, transitional planning. Preparation for Teacher Performance Assessment. ETE 324 is one course that meets criteria for the Illinois ECSE Approval. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; or Education Studies major.

ETE 328 – Early Childhood Methods (6 hours)

Core Curr. MI

Strategies for teaching language arts, science, mathematics, social studies, art, music, and movement in preprimary and primary grades within an integrated, thematic curriculum. Emphasis on the role of play, learning environments, creative and critical thinking, problem solving, acknowledgment and accommodations of exceptionality and diversity, transitions, horizontal relevance, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education.

ETE 335 – Methods of Teaching Social Studies Grades 1-6 (3 hours)

Content and methods of teaching social studies in grades 1-6, including accommodations of exceptionality and diversity using developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education.

ETE 336 – Methods of Teaching Science Grades 1-6 (3 hours)

Plan, implement, and evaluate a science program for children in grades 1-6. Emphasis on the nature of school science, students' misconceptions, and meaningful science activities, including accommodations of exceptionality and diversity using developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; SCI 10x.

ETE 339 – Methods of Teaching Mathematics Grades 1-6 (3 hours)

Core Curr. WI

Emphasis on teaching strategies, materials, and organizational plans related to the grades 1-6 mathematics curriculum. Work with Common Core Standards in Math as well as National Council of Teachers of Mathematics is integrated throughout the semester. Focus on active involvement of students in the learning process. Future teachers learn about and plan lessons including appropriate teaching strategies, mathematical projects, accommodations of exceptionality and diversity using developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 108 or concurrent enrollment.

ETE 345 – Guiding Learners: Creating Safe, Inclusive Learning Enviro Environments (3 hours)

Emphasis on theories of guidance and learner-centered instruction Response to Intervention (RtI) strategies for positive behavioral supports. Classroom management that is developmentally and culturally appropriate practice to nourish natural curiosity, develop problem-solving skills, acknowledge and accommodate learners with exceptionalities, including diverse cultures, students at risk, and English Language Learners, and develop a sense of community for success of all learners within inclusive environments. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; concurrent with appropriate Novice Teaching course (ETE 301, ETE 302, ETE 303, ETE 304, ETE 305, ETE 306, ETE 307, ETE 308) or permission of department chair.

ETE 350 – Topics in Teacher Education (1-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of 6 hours credit. Prerequisite: consent of instructor and department chair.

ETE 351 – Music Methods Grades K-8 for Music Majors (3 hours)

Methods and materials appropriate for teaching music in grades K-8. Observations in the public schools; planning the K-8 music curriculum; experience teaching lessons in all areas of classroom music. Discussion on accommodations of exceptionality and diversity using developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; concurrent enrollment in ETE 301; ETE 310 or concurrent enrollment.

ETE 352 – High School Music Methods for Music Majors (3 hours)

Methods of teaching music in the high schools; administration of a music department. Instrumental and choral programs, general music, and high school music theory. Emphasis on development of a philosophy of music education. Discussion on accommodations of exceptionality and diversity using developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to candidacy in the Department of Education, Counseling and Leadership. Corequisite: Concurrent enrollment in ETE 302.

ETE 355 – Methods of Teaching Middle School Social Studies (3 hours)

Content and pedagogy of middle school social studies, including history, psychology, and the general social science areas. Designing and implementing social studies instruction and curriculum using a variety of approaches. Emphasis on instructional planning, assessment of student performance, motivational strategies, reading diagnostic techniques, learning environments, creative and critical thinking, problem solving, acknowledgement and accommodations of exceptionality and diversity, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy; ETE 216; ETE 369; concurrent with ETE 307

ETE 356 – Methods of Teaching Middle School Science (3 hours)

How to plan, implement, and evaluate a science program for middle school students. Emphasis on the nature of school science, students' misconceptions, and meaningful science activities. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy; ETE 216; ETE 369; SCI 10X and SCI 30x; concurrent in ETE 307

ETE 357 – Methods of Teaching Middle School Mathematics (3 hours)

Emphasis is placed on teaching strategies, materials, and organizational plans related to the 5-8 mathematics curriculum. Assessment strategies appropriate for middle school mathematics are addressed. Focus is on active involvement of students in the learning process and the use of National Council of Teachers of Mathematics (NCTM) Standards and Common Core State Standards – Mathematics (CCSSM). Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy; ETE 108; ETE 216; ETE 369; concurrent in ETE 307.

ETE 361 – Methods of Teaching Mathematics 6-12 (3 hours)

Core Curr. WI

Emphasis is placed on teaching strategies, materials, and organizational plans related to the 5-8 or 9-12 mathematics curriculum. Assessment strategies appropriate for middle and high school mathematics are addressed. Focus is on active involvement of students in the learning process and the use of National Council of Teachers of Mathematics Standards and Common Core State Standards – Mathematics. Designing and implementing mathematics instruction and curriculum using a variety of approaches, appropriate utilization of mathematical technology, acknowledgment and accommodations of exceptionality and diversity, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy; concurrent enrollment in ETE 307 or ETE 308.

ETE 362 – Methods of Teaching Science 6-12 (3 hours)

Content and pedagogy of middle and high school science. Designing and implementing science instruction and curriculum using a variety of approaches. Emphasis on instructional planning, assessment of student performance, inquiry learning environments, and developing instruction that is responsive to the varied cultural and linguistic backgrounds of 6-12 students. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Education, Counseling, and Leadership; SCI 100, SCI 101, SCI 102, Or SCI 103 or concurrent; concurrent enrollment in ETE 307 or ETE 308.

ETE 363 – Methods of Teaching Social Science Grades 6 – 12 (3 hours)

Content and pedagogy of middle and high school social studies, including history, psychology, and the general social science areas.

Designing and implementing social studies instruction using a variety of approaches. Emphasis on instructional planning, assessment of student performance, motivational strategies, reading diagnostic techniques, learning environments, creative and critical thinking, problem solving, acknowledgement and accommodations of exceptionality and diversity, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy; concurrent enrollment in ETE 307 or ETE 308.

ETE 368 – Content Reading for All Students (2 hours)

Relationship between learning to read and reading to learn; all aspects of literacy as applied to instruction. Primary focus on understanding a wide range of literacies and how to integrate literacy while teaching subjects that include mathematics, social studies, sciences, English, music, art, and family/consumer sciences. Emphasis on helping all readers, including students with English as a second language, students with reading difficulties, and students with special needs. Evaluation of the appropriateness of classroom resources such as textbooks, e-textbooks, lab manuals, course software, and online supplements. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education

ETE 369 – Assessing All Students (2 hours)

For future classroom teachers, instructional assessment, that meets the needs of students and the objectives of the discipline, is essential. Writing instructional objectives, constructing formative and summative teacher-made assessments, designing authentic assessments, analyzing assessment data, interpreting standardized test scores, and addressing needs of learners is part of the curriculum. Emphasis on diversity using developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education

ETE 373 – Methods of Teaching High School Mathematics (3 hours)

Core Curr. WI

Emphasis on teaching strategies, curriculum materials, instructional planning, assessment of student performance, learning environments, creative and critical thinking, problem solving, and classroom organization related to the 9-12 mathematics curriculum. Focus is on active involvement of students in the learning process. Designing and implementing mathematics instruction and curriculum using a variety of approaches, appropriate utilization of mathematical technology, acknowledgment and accommodations of exceptionality and diversity, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to Candidacy; ETE 369; concurrent with ETE 308.

ETE 374 – Methods of Teaching High School Science (3 hours)

Content and pedagogy of high school science. Designing and implementing science instruction and curriculum using a variety of approaches including project-based science. Emphasis on instructional planning, assessment of student performance, learning environments, creative and critical thinking, problem solving, acknowledgment and accommodations of exceptionality and diversity, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 369; SCI 10x or concurrent; concurrent enrollment in ETE 308.

ETE 375 – Methods of Teaching High School Social Studies (3 hours)

Content and pedagogy of high school social studies, including family and consumer sciences, history, psychology, and general social science. Designing and implementing social studies instruction and curriculum using a variety of approaches. Emphasis on instructional planning, assessment of student performance, motivational strategies, microteaching, reading diagnostic techniques, learning environments, creative and critical thinking, problem solving, acknowledgment and accommodations of diversity and exceptionality, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 375; concurrent enrollment in ETE 308.

ETE 378 – Methods of Teaching Family & Consumer Science (3 hours)

Content and pedagogy in family and consumer sciences for grades 9-12. Designing and implementing instruction and curriculum using a variety of approaches including project-based family and consumer sciences. Emphasis on instructional planning, assessment of student performance, learning environments, creative and critical thinking, problem solving, acknowledgment and accommodations of exceptionality and diversity, and developmentally and culturally appropriate practices. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 369; concurrent enrollment in ETE 308.

ETE 386 – Methods of Teaching K-12 Art (3 hours)

Content and methods for teaching art K-12. Designing and implementing art instruction and curriculum using a variety of approaches. Emphasis on sequential enhancement of media and techniques in relation to the developmental needs of different levels of students, instructional planning, assessment of student performance, learning environments, creative and critical thinking, problem solving, acknowledgment and accommodations of exceptionality and diversity, and culturally appropriate practices, aligned with the state and national goals. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 369.

ETE 387 – Methods of Teaching K-12 World Languages and Cultures (3 hours)

Content and pedagogy of Pre K-12 World Language and Cultures. Designing and implementing world language instruction and curriculum using a variety of approaches. Emphasis on instructional planning, assessment of student performance, learning environments, creative and critical thinking, problem solving, acknowledgment and accommodation of exceptionality and diversity, and

developmentally and culturally appropriate practice. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 369.

ETE 391 – Characteristics and Methods for Learners with Developmental Disabilities (3 hours)

Characteristics and methods for planning and teaching students with moderate to severe exceptionalities (i.e., intellectual disabilities, developmental disabilities, traumatic brain injury, orthopedic, other moderate to severe exceptionalities). Emphasis on moderate to severe developmental disabilities, Individual Education Programs, self-determination, assessment, experiential-based curriculum in the psychomotor, cognitive, affective domains, transition planning, person-centered adaptations for inclusion within society. Students are required to complete 12 student contact hours with individual(s) with moderate to severe developmental disabilities in an educational setting. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; PSY 101 or equivalent.

ETE 393 – Characteristics and Methods for Learners with Emotional and Learning Disabilities (3 hours)

Characteristics, methods, strategies for use with children and adolescents with emotional and learning disabilities in K-12 and special education classrooms (ages 3-21). Helping process, communication and interpersonal skills are covered, as well as Applied Behavioral Analysis. Emphasis on analysis of classroom situations and application of theories, educational techniques to create positive learning environments for learners with mild to moderate emotional and learning disabilities. To ensure that students will become educational leaders and informed decision makers, teaching strategies in basic skills, metacognition, study skills, and social skills will be addressed. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; PSY 101 or equivalent.

ETE 395 – High School Special Education (3 hours)

Skills to plan, implement, and evaluate programs for adolescent students needing special education services in high school situations. Emphasis on a developmentally, sequenced planned curriculum, including basic academic skills, pre-vocational and vocational skills, as well as work-study programs. Current issues and trends: inclusion of the high school student in the least restrictive environment, life planning, consumer education, personal and social adjustment, appropriate individualized instruction, high school group instruction, and independent living skills. 12 hours of mentor/tutoring in the field with High School+ students is required. Preparation for Teacher Performance Assessment. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; one of ETE 393 or concurrent enrollment, or ETE 391 or concurrent enrollment.

ETE 402 – Educational Methods, Strategies and Evaluation Techniques (3 hours)

Designed to increase theoretical knowledge and practical skill for teaching persons with different learning styles. Classroom experiences include a focus on methods, strategies, and evaluation techniques to meet different learning styles. Prerequisite: Consent of ETE Department Chair.

ETE 425 – Life Planning for Learners with Exceptionalities (3 hours)

Addresses legal, psychological, and social impact of various exceptionalities, and professionalism. The laws governing the development and implementation of educational and transition programs for individuals with exceptionalities is also reviewed. Discussion and evaluation of legal documents for consent and notification. Code of Ethics and Standards for Professional Practice, and Individual Education Program development will be the focus. Preparation for Teacher Performance Assessment. Prerequisite: Senior standing; advancement to degree candidacy in the Department of Teacher Education; at least one of ETE 391, ETE 393, ETE 395.

ETE 426 – Assessments for Learners with Exceptionalities (3 hours)

Diagnostic processes for learners with exceptionalities, preschool through high school. Screening, formal, and informal assessment, and evaluation techniques. Practice in test administration, scoring, evaluation, Individual Education Programs. Preparation for Teacher Performance Assessment. Prerequisite: Senior standing; advancement to degree candidacy in the Department of Teacher Education; at least one of ETE 391, ETE 393, ETE 395.

ETE 443 – Early Childhood Assessment (3 hours)

Focus is on formal, informal, authentic, and performance-based assessments to determine student needs and progress; planning instruction incorporating assessment for Individualized Family Service Plans or Individualized Education Plans and to meet the needs of all students; transitional planning; collaboration and communication with families and professionals. Preparation for Teacher Performance Assessment. ETE 443 is one course that meets criteria for the Illinois ECSE Approval. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; ETE 324 or concurrent enrollment.

ETE 445 – Multidisciplinary Collaboration (3 hours)

Focus is effective collaboration with families, educators, administrators, related service providers, and personnel from community agencies in culturally responsive ways. Competent teachers will use knowledge and effective written, verbal and non-verbal communication techniques to foster leadership, active inquiry, supportive interaction, shared goals, and group consensus that advocate and support the success among learners with exceptionalities. Working together toward common goals of meeting unique needs of all students necessitates teamwork for successful co-teaching, Response to Intervention, and successful transitions pre- and post-secondary education. Preparation for Teacher Performance Assessment. Prerequisite: Senior standing. For education studies majors or majors not in an education program: one course at the 300 level; majors in an education program: advancement to degree candidacy, one methods course at the 300 level; LBS I: at least one of ETE 391, ETE 393, ETE 395 or concurrent enrollment; or consent of ECL Department chair.

ETE 491 – Student Teaching 5-8 (12 hours)**Core Curr. EL**

Engage in a supervised, full-time teaching experience in a Peoria-area 5-8 learning environment. Plan and implement instruction, assessments for individuals, groups, and class, gradually taking responsibility for 100% of teaching duties including issues related to equity, diversity and social and emotional awareness. Complete weekly reflections to assess professional growth as defined by the Illinois Professional Teaching Standards. Open only to students who have: adequate preparation in subject matter, demonstrated proficiency with regard to program and course objectives, prerequisites, and evidenced fitness for entering the teaching profession. Include Teacher Performance Assessment. Weekly seminar. Satisfactory/Unsatisfactory Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; completion of 2/3 of hours in concentration; all required ETE courses below the 400 level for the program; GPA 2.50+ for each: overall, teaching field, professional education courses; State of Illinois content area test passed & other related tests passed; cleared background check; approval of Department chair.

ETE 493 – Student Teaching For Music K-12 (12 hours)**Core Curr. EL**

Engage in 2 supervised, full-time teaching experiences, 1 at high school and 1 in middle or elementary school, in a Peoria-area learning environment. Plan and implement instruction and assessments for individuals, groups, and class, gradually taking responsibility for 100% of classroom teaching duties including issues related to equity, diversity, social and emotional awareness. Complete weekly reflections to assess their professional growth as defined by the Illinois Professional Teaching Standards. Open only to students who have: adequate preparation in subject matter, demonstrated proficiency with regard to program and course objectives, prerequisites, and evidenced fitness for entering the teaching profession. Satisfactory/Unsatisfactory. Prerequisite: Advancement to degree candidacy in the department; completion of 2/3 of hours in teaching field; all required ETE courses below the 400 level for the program; GPA 2.50+ for each: overall, teaching field, professional education courses; state of Illinois content area tests and other related tests passed; current certification of freedom from TB; cleared background check; approval of department chair.

ETE 496 – Student Teaching in LBS I (12 hours)**Core Curr. EL**

Engage in a supervised, full time teaching experience in a Peoria-area LBS I learning environment. Plan and implement instruction, assessments for individuals, small groups, and class, gradually taking responsibility for 100% of teaching duties including issues related to equity, diversity, social and emotional awareness. Complete weekly reflections to assess their professional growth as defined by the Illinois Professional Teaching Standards. Open only to students who have: adequate preparation in subject matter, demonstrated proficiency with regard to program and course objectives, prerequisites, and evidenced fitness for entering the teaching profession. Include Teacher Performance Assessment. Weekly seminar. Satisfactory/Unsatisfactory. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; all required ETE courses below the 400 level for the program; at least two of ETE 425, ETE 426, ETE 445; GPA 2.50+ for each of: overall, professional education courses; State of Illinois content area test & other tests passed; cleared background check; approval of Department chair.

ETE 497 – Student Teaching in Early Childhood (12 hours)**Core Curr. EL**

Engage in a supervised, full time teaching experience in a Peoria-area Pre-K or K-3 learning environment. Plan and implement instruction, assessments for individuals, groups, and class, gradually taking responsibility for 100% of teaching duties including issues related to equity, diversity, social and emotional awareness. Complete weekly reflections to assess professional growth as defined by the Illinois Professional Teaching Standards. Open only to students who have: adequate preparation in subject matter, demonstrated proficiency with regard to program and course objectives, prerequisites, and evidenced fitness for entering the teaching profession. Include Teacher Performance Assessment. Weekly seminar. Satisfactory/Unsatisfactory Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; all required ETE courses below the ETE 450 level for the program; ETE 485 or concurrent enrollment; GPA 2.50+ for each: overall and professional education courses; State of Illinois content area test & other related tests passed; cleared background check; approval of Department chair.

ETE 498 – Student Teaching 1-6 (12 hours)**Core Curr. EL**

Engage in a supervised, full time teaching experience in a Peoria-area grade 1-6 learning environment. Plan and implement instruction, assessments for individuals, groups, and class, gradually taking responsibility for 100% of teaching duties including issues related to equity, diversity and social and emotional awareness. Complete weekly reflections to assess professional growth as defined by the Illinois Professional Teaching Standards. Open only to students who have: adequate preparation in subject matter, demonstrated proficiency with regard to program and course objectives, prerequisites, and evidenced fitness for entering the teaching profession. Include edTPA. Weekly seminar. Satisfactory/Unsatisfactory. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; all required ETE courses below the 400 level for the program; GPA 2.50+ for each: overall and professional education courses; State of Illinois content area test passed & other related tests passed; cleared background check; approval of Department chair.

ETE 499 – Student Teaching in the High School (12 hours)**Core Curr. EL**

Engage in supervised, full time teaching experience in a Peoria-area high school learning environment. Plan, implement instruction, assessments for individual, groups, and class, slowly taking responsibility for 100% of teaching duties including issues related to equity,

diversity, social and emotional awareness. Complete weekly reflections to assess professional growth as defined by the Illinois Professional Teaching Standards. Open only to students who have: adequate preparation in subject matter, demonstrated proficiency with regard to program and course objectives, prerequisites, and evidenced fitness for entering the teaching profession. Include Teacher Performance Assessment. Weekly seminar. Satisfactory/Unsatisfactory. Prerequisite: Advancement to degree candidacy in the Department of Teacher Education; completion of 2/3 of hours in major; all required ETE courses below the 400 level for the program; GPA 2.50+ for each: overall, teaching field, & professional education courses; State of Illinois content area tests & other related tests passed; cleared background check; approval of Department chair.

ETE 515 – Mathematics Methods for the Middle School (3 hours)

Provides strategies and curriculum for teaching mathematics to youth in fifth through eighth grades. Strategies focus on problem solving, logical reasoning, and real life connections. Use of dynamic software and math modeling are emphasized. Assessment strategies appropriate for middle school mathematics will be addressed. Students will develop a deep understanding of national and state standards. Prerequisite: Senior standing in an education program and advancement to degree candidacy, or Teacher License. Not open to students who have had ETE 357.

ETE 655 – Instructional Theory (3 hours)

Investigation and development of a theory of instruction for practitioners built upon the research based on existing strategies, models, methods, assessment, skills, improvement techniques, movements in education, theorists, curriculum, and the learner.

ETE 678 – Leadership and Collaboration in Special Education (3 hours)

Provides advanced professional collaboration and leadership strategies to effectively work with the greater school community including families, other educators, related service providers, and personnel from community education agencies. Emphasis will be given toward honing candidates' leadership and collaboration skills essential to current practices across environments. Evidence-based, culturally responsive practices critical for the education leader and advocate in meeting the unique needs of individuals with exceptionalities will be discussed.

ETE 698 – Creative/Research (0-6 hours)

Individual study on a topic selected by student with advisor approval. Integration and application of research. Student must produce a product such as a software program, journal article, or program portfolio. May be repeated for a maximum of 6 hours credit. Student may not receive credit for both ETE 698 and ETE 699.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Annual Title II Report Card



Annual Title II Report Card

2022–2023 Title II Report Card

Teacher Education Mission

The mission of Teacher Education at Bradley University is to prepare teachers who will be effective leaders, advocates, and life-long learners. We believe that teaching and learning are dynamic, interactive, life-long processes based on empowering interactions among learners.

Teacher Preparation Programs

Bradley University offers 16 baccalaureate programs leading to state teacher certification and a graduate-level certification program in School Counseling.

Student Characteristics

Most undergraduates (80.6 percent) are traditional college age and 97.2 percent attend full-time. Twenty-eight percent of all students are minority students and 77.5 percent are Illinois residents. By gender, 2,423 male and 3,165 female students (the male-female ratio is 45:55) are attending school. Undergraduate enrollment is 4,143. Graduate enrollment is 1409. Total enrollment is 5,552.

Admissions Requirements

Admission to Teacher Education Program: Candidates must have earned a minimum grade point average of 2.5 overall, 2.5 in education courses, and a 2.5 in their content major. Candidates must have earned grades of not less than a C in COM 103, ENG 101, and a mathematics course that meets university core curriculum requirements. They must have completed a prescribed group of education courses for each major with the appropriate GPA and no Ds, demonstrated appropriate pre-professional behaviors and dispositions, been cleared on a check of criminal history, and received a satisfactory vote of the faculty.

Admission to Student Teaching: Candidates must have maintained a minimum grade point average of 2.5 overall, 2.5 in education courses, and a 2.5 in their content major. They must have been advanced to candidacy and passed the Illinois Content Area Test.

Accreditation

Bradley University is accredited by the Higher Learning Commission and all teacher preparation programs are approved by the Illinois

Summary of Illinois State Tests

Illinois Certification Testing System

Annual Institution Report

Program Year 2022-2023

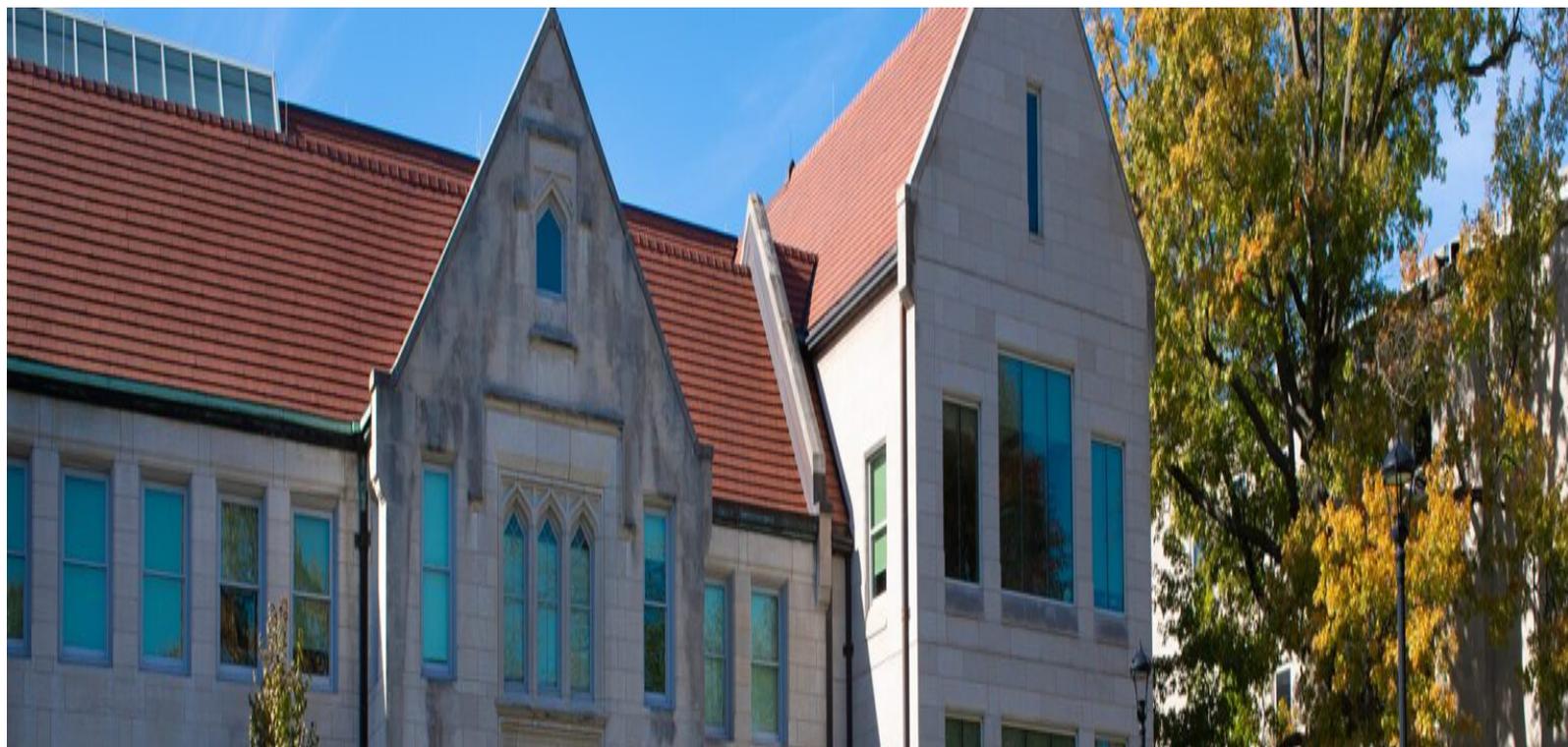
Number of Program Completers: 62

Content Area Test	Number Tested	Number Passed	Pass Rate (%)
206-Early Childhood Education	9	—	—
305-Elementary Education	23	23	100
207-English Language Arts	6	—	—
290-Learning Behavior Specialist I	10	10	100
201-Middle School Language Arts	4	—	—
202-Middle School Mathematics	3	—	—
203-Middle School Science	4	—	—
208-Mathematics	2	—	—
212-Music	2	—	—
214-Visual Arts	1	—	—
246-Social Science: History	6	—	—

Pass rates are not shown for tests taken by fewer than 10 students.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Family and Consumer Sciences



Family and Consumer Sciences

FACULTY Associate Professors Drake (chair), Keist, Olds, Vollmer; Assistant Professor Nigg.

The Department of Family and Consumer Sciences offers majors in child life science; nutrition and dietetics; and public health education. The department also offers a minor in family and consumer sciences.

Career opportunities continue to expand in the fast-growing fields represented by this interdisciplinary department. Careers in family and consumer sciences related business, social welfare, community health and wellness, dietetics, family and child services can all result from degree programs in the Department of Family and Consumer Sciences.

Departmental Requirements

All family and consumer sciences students must meet the family and consumer sciences core requirements listed below, a professional work experience, as well as the required courses for their chosen major. Students must take a minimum of 38 hours in FCS courses.

Family and Consumer Sciences Core

- FCS 100 Family Dynamics – 3 hrs
- FCS 220 Consumer Issues in Health Care – 3 hrs. **or** FCS 300 Consumer Issues in America – 3 hrs.
- FCS 310 Community Program Planning and FCS 311 Evaluation and Research Methods **or** FCS 346 FCS Resource Management – 3-6 hrs.
- FCS 442 Foundations of FCS – 3 hrs.

Total 12 – 15 hrs.

Required Professional Work Experience (0–13 credit hours, depending on major):

- EHS 301 Cooperative Education Or Internship in EHS – 0-6 hrs.
- ETE 499 Student Teaching in the High School (required for FCST) – 10-13 hrs.

Nutrition and Dietetics Major

Careers in health care, community and public health, wellness, foods science, foodservice, product development, food marketing, communication, and business consulting offer many diverse opportunities for graduates in this major. Students choosing the Nutrition and Dietetics major will be enrolled in the didactic program in dietetics (DPD). The DPD at Bradley University carries full accreditation

by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics (AND), 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, 1-800-877-1600. ACEND is recognized by the United States Department of Education (USDE). Students, who graduate from this program in compliance with all curricular requirements, and with an overall GPA of 3.0/4.0 and a science GPA of 2.75, will receive a verification statement. This verification statement will allow them to pursue an ACEND-accredited dietetic internship or supervised practice. After successful completion of supervised practice, they will be prepared to take the national registration examination to become registered dietitians.

University Requirements

Candidates for all baccalaureate degrees must complete requirements in the Bradley Core Curriculum (BCC), as outlined in the All-University Degree Requirements section of this catalog. BCC requirements emphasize eight "Areas of Inquiry" that will more deeply engage the student in the process of intellectual growth. Some required courses listed below will satisfy elements of the BCC, other BCC courses and electives should be selected in consultation with an advisor.

Family and Consumer Sciences Core: 15 hours

- FCS 100 Family Dynamics – 3 hrs.
- FCS 220 Consumer Issues in Health Care – 3 hrs.
- FCS 310 Community Program Planning – 3 hrs.
- FCS 311 Evaluation and Research Methods – 3 hrs.
- FCS 442 Foundations of FCS – 3 hrs.

Required Professional Work Experience: 0-2 hours

- EHS 301 Internship in EHS – 0-2 hrs.

Additional Required FCS Courses: 33 hours

- FCS 102 Profession of Dietetics – 1 hr.
- FCS 103 Food Resource Management – 3 hrs.
- FCS 171 Sanitation, Health, and Safety – 1 hr.
- FCS 202 Food and Nutrition – 3 hrs.
- FCS 204 Family Programs across the Lifespan – 3 hrs.
- FCS 220 Consumer Issues in Health Care – 3 hrs. (included in FCS core hrs)
- FCS 271 Food and World Cultures – 3 hrs.
- FCS 305 Experimental Foods – 1 hr.
- FCS 310 Community Program Planning – 3 hrs. (included in FCS core hrs)
- FCS 311 Evaluation and Research Methods – 3 hrs. (included in FCS core hrs)
- FCS 341 Human Development across the Lifespan – 3 hrs.
- FCS 405 Food Service Systems – 3 hrs.
- FCS 408 Management in Food Service – 3 hrs.
- FCS 410 Advanced Nutrition – 3 hrs.
- FCS 411 or FCS 511 Medical Nutrition Therapy I – 3 hrs.
- FCS 412 or FCS 512 Medical Nutrition Therapy II – 3 hrs.

Required Supporting Courses: 23 hours

- BIO 111 Introduction to Cell Biology – 3 hrs.
- BIO 202 Microbiology and Immunology – 4 hrs. (included in the University Requirements hrs)
- BIO 230 Human Anatomy and Physiology I- 3 hrs.
- BIO 231 Human Anatomy and Physiology I Lab – 1 hr.
- BIO 232 Human Anatomy and Physiology II – 3 hrs.
- BIO 233 Human Anatomy and Physiology II – 1 hr.
- CHM 100 Fundamentals of General Chemistry – 3 hrs. (included in the University Requirements hrs)
- CHM 101 Fundamentals of General Chemistry Lab – 1 hr.
- CHM 162 Fundamentals of Organic and Biochemistry – 4 hrs.
- ENS 305 Sustainability and Food **or** BIO 300 Population, Resources, and the Environment – 3 hrs.
- ML 350 Interpersonal Effectiveness in Organizations – 3 hrs. **or** PSY 321 Industrial and Organizational Psychology – 3 hrs.
- MTH 111 Elementary Statistics – 3 hrs. (included in the University Requirements hrs)
- PSY 101 Principles of Psychology – 3 hrs. (included in the University Requirements hrs)

Required Certificate:

- ANSI-CFP accredited Food Protection Manager Certification

Public Health Education Major

A major in public health education is an interdisciplinary, community-focused program that will prepare graduates to develop programs and materials to help individuals and community groups make healthy lifestyle choices. Through an innovative program, students will understand the concept of community wellness, disease prevention, and optimal well-being. A strong background in both the natural and social sciences along with a required minor in health will equip students to address today's public health issues. Students graduating from this program will be eligible to take the national exam for the Certified Health Education Specialist (CHES) credential.

Graduates with a B.S. in public health education will be competitive for jobs in public health: health education, social service agencies, healthcare providers, private and non-profit organizations such as local and state health departments, hospitals, agencies such as the American Red Cross and YMCA, and other human services groups. Graduates will also be well prepared to enter graduate school in a variety of programs, such as public health and health education.

University Requirements: 36 hours

Candidates for all baccalaureate degrees must complete requirements in the Bradley Core Curriculum, as outlined in the All-University Degree Requirements section of this catalog. BCC requirements emphasize eight "Areas of Inquiry" that will more deeply engage the student in the process of intellectual growth. Students in this major should choose the following:

- CHM 100 Fundamentals of General Chemistry – 3 hrs.
- CHM 101 Fundamentals of General Chemistry Lab – 1 hr.
- MTH 111 Elementary Statistics – 3 hrs.
- PSY 101 Principles of Psychology – 3 hrs.
- SOC 100 The Sociological Perspective – 3 hrs.
- Others as advised and required by the Bradley Core Curriculum program and the required Health Minor.

Family and Consumer Sciences Core: 15 hours

- FCS 100 Family Dynamics – 3 hrs
- FCS 220 Consumer Issues in Health Care – 3 hrs.
- FCS 310 Community Program Planning and FCS 311 Evaluation and Research Methods
- FCS 442 Foundations of FCS – 3 hrs.

Required Professional Work Experience: 0-2 hours (160 contact hours required)

- EHS 301 Cooperative Education or Internship in EHS – 0-2 hrs.

Additional Required FCS Courses: 24 hours

- FCS 120 Foundations in Public Health Education – 1 hrs.
- FCS 202 Food and Nutrition – 3 hrs
- FCS 203 School Health Promotion – 3 hrs.
- FCS 220 Consumer Issues in Healthcare – 3 hrs. (included in FCS core hrs).
- FCS 221 Introduction to Community and Public Health – 3 hrs.
- FCS 310 Community Program Planning – 3 hrs. (included in FCS core hrs).
- FCS 311 Evaluation and Research Methods – 3 hrs. (included in FCS core hrs).
- FCS 320 Public Health Intervention Strategies – 2 hrs.
- FCS 341 Human Development through the Lifespan – 3 hrs.
- FCS 420 Public Health Policy – 2 hrs.
- FCS 421 Public Health Education Seminar – 1 hr.
- FCS 464 Leadership in Public Health Education – 3 hrs.
- FCS Elective (choose from FCS 103, 204, 271, 340, or 514) – 3 hrs.

Required Supporting Courses: 25 hours

- BIO 111 Introduction to Cell Biology – 3 hrs.
- BIO 230 Human Anatomy and Physiology I – 3 hrs.
- BIO 232 Human Anatomy and Physiology II – 3 hrs.
- BIO 300 Population, Resources, and Environment or ENS 110 Environmental Science – 3 hrs.
- CHM 100 Fundamentals of General Chemistry – 3 hrs.
- CHM 101 Fundamentals of General Chemistry Lab – 1 hr.
- CHM 162 Fundamentals of Organic and Biochemistry – 4 hrs.

- CHM 302 or NUR 391 Medical Terminology – 1 hr.
- MTH 111 Elementary Statistics – 3 hrs.
- NUR 363 Introduction to Personal and Community Health – 3 hrs.
- PSY 101 Principles of Psychology – 3 hrs.
- SOC 100 The Sociological Perspective – 3 hrs.
- 6 hrs of electives (choose from PSY 201, 309, 313, SOC 313, 333, 341, 343) – 6 hrs.

Required Health Minor: 18 hours

Required: FCS 202, FCS 221 or NUR 363, PSY 311, electives (9 hrs)

Open Electives for Student Personalization – 15 hours

Selected in consultation with advisor.

Child Life Science Major

The Child Life Science (CLS) major provides you the coursework required to become a Certified Child Life Specialist (CCLS). CCLS often use play-based or self-expression strategies, education, or emotional support for children and parents. CCLS can also work in non-clinical settings, such as schools, family intervention services, private clinics, funeral homes, rehabilitation clinics, and the court system.

Preparing You For Success

As a CLS student, your real-world training begins your first semester. Plus, there's an opportunity for you to earn a practicum at one of many local medical facilities BU works closely with. These facilities offer hands-on experience working with infants, children, youth, or families.

By the time you graduate, your experiences may include:

- A practicum at places like Carle Health, OSF Children's Hospital, the Ronald McDonald House, Crittenton Centers, Family House, and the Children's Home
- Research projects in the community
- Leadership, networking and service opportunities through Kappa Omicron Nu
- Off-campus study in countries around the world

Making Your Mark

Certified Child Life Specialists (CCLS) are an integral part of the interdisciplinary pediatric healthcare team. You'll help children and families navigate and cope with all aspects of pediatric healthcare to help them feel safe and supported.

Major Requirements

Family and Consumer Sciences Core – 12-15 hrs.

FCS 100: Family Dynamics – 3hrs.

FCS 220: Consumer Issues in Health Care – 3 hrs.

FCS 310: Community Program Planning – 3 hrs. and FCS 311: Evaluation and Research Methods – 3 hrs. OR FCS 346 FCS Resource Management – 3 hrs.

FCS 442: Foundations of FCS – 3 hrs.

Additional Required FCS Courses – 12 credit hours

FCS 342: Child Development – 3 hrs.

FCS 450 or 550: Play Therapy – 3 hrs.

FCS 451: Child Life Profession – 3 hrs.

FCS 350: Matters of Life and Death – 3 hrs.

Required Supporting Courses – 16 credit hours

ETE 210: Human Development from Birth to Young Adulthood – 3 hrs. **or** PSY 350 Developmental Psychology – 3 hrs.

BIO 111: Introduction to Cell Biology – 3 hrs.

BIO 230: Human Anatomy & Physiology I – 3 hrs.

BIO 232: Human Anatomy & Physiology II – 3 hrs.

ETE 280: Exploring Diversity, Equity, and Inclusion of Children Families **or** FCS 204 Family Programs Across the Lifespan **or** SOC 311 Comparative Family Systems **or** SW 310 Child Welfare I -3 hrs.

NUR 391: Medical Terminology – 1 hr.

Research Course (choose 1) – 3-4 credit hours

FCS 311: Research Methods & Evaluation – 3 hrs.

FCS 541: Research Methods – 3 hrs.

KHS 310: Statistical Procedures in Health Sciences – 3 hrs.

NUR 303: Research in Nursing – 3 hrs.

PSY 206: Research Methods in Psychology – 4 hrs.

SOC 240: Research Methods – 3 hrs.

SW 260: Research Methods – 3 hrs.

Required Professional Work Experience – 0-2 credit hours

EHS 301: Cooperative Education Internship

Family and Consumer Sciences Minor – 15 hrs.

The minor in family and consumer sciences enhances other career options, provides career flexibility, and enhances personal knowledge. This minor will allow students to choose courses within:

- Family and Consumer Sciences
- Dietetics
- Apparel and Textiles
- Hospitality Leadership
- Public Health Education

Transfer policies for minors are the same as for family and consumer sciences majors. Prior approval of transfer credit must be secured from the chair of Family and Consumer Sciences. The requirements for a minor in family and consumer sciences are:

1. FCS 300 Consumer Issues In America – 3 hrs.
2. FCS electives: 12 hours (9 hours must be in Family and Consumer Sciences courses above the 200 level.)

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Family and Consumer Sciences Courses



Family and Consumer Sciences Courses

FCS 100 – Family Dynamics (3 hours)

Core Curr. SB

Examine relationships within family systems across the life span, and their reciprocal relationship with cultural and societal dynamics. Strengthen skills necessary for healthy relationships, including problem solving, communication, conflict resolution, decision-making, time- and stress management. Explore and integrate research and theories in family studies.

FCS 102 – Profession of Dietetics (1 hour)

An introduction to the profession of dietetics including history of the profession, career opportunities, role in a healthcare team, scope of practice, code of ethics, and professional associations. Prerequisite: Nutrition and Dietetics major or consent of instructor.

FCS 103 – Food Resource Management (3 hours)

Application of concepts related to decision-making, planning and budgeting, and preparation of food. Prerequisite: FCS major or consent of instructor.

FCS 120 – Foundations in Public Health Education (1 hour)

Introduction to public health education including historical, philosophical, and ethical foundations, core concepts and values. Covers professional roles and responsibilities of public health educators. Prerequisite: Public Health Education major or instructor consent

FCS 131 – The Fashion Industry (3 hours)

Exploration of the structure and scope of the fashion industry and related careers.

FCS 133 – Apparel Production (3 hours)

Study of garment manufacturing and decision making involved in producing apparel. Includes laboratory.

FCS 170 – Introduction to the Hospitality Industry (3 hours)

Introduction to the history, growth, and development of global tourism and the hospitality industry including the leadership, ownership, management, organization, and structure of hotels and food service operations, and the many diverse hospitality venues; professional associations; hospitality labor trends; promotional practices; and best practices in hospitality.

FCS 171 – Sanitation, Health, and Safety (1 hour)

Sanitation and safety principles and regulations as related to the hospitality industry including Hazard Analysis Critical Control Point (HACCP) principles and procedures, safety and security issues and procedures, and associated health issues related to sanitation and safety in the hospitality industry. Students must take an ANSI-CFP accredited food safety sanitation certification examination to receive credit.

FCS 173 – Lodging Operations (3 hours)**Core Curr. EL**

Discover and apply information about lodging operations, such as front office procedures, guest relations, reservations, selling strategies, handling guest inquiries, night audit functions, and computer applications.

FCS 202 – Food and Nutrition (3 hours)**Core Curr. NS**

An overview of the science of nutrition including macronutrients and micronutrients. Primarily focuses on the relationship between dietary intake and health. Examines current issues in human nutrition.

FCS 203 – School Health Promotion (3 hours)

Concepts of promoting health of K-12 and college students. Emphasis on skills-based health education, components of coordinated school health, school wellness policies, and teaching strategies for meeting health needs of learners in group settings. Prerequisite:

FCS 204 – Family Programs Across the Life Span (3 hours)

Exploration of local, state, and national level programs, services, and policies for families from a life span perspective. Prerequisite: FCS majors or consent of instructor

FCS 220 – Consumer Issues in Health Care (3 hours)

Evaluating consumer health information and resources, including an overview of health care systems and health services across the life span. Cross listed as HS 220. Prerequisite: HS 110 or FCS major, and sophomore standing; or instructor consent.

FCS 221 – Introduction to Community and Public Health (3 hours)

Overview of principles and concepts of community and public health including determinants of health, community health needs among diverse populations, and health agencies and organizations. Prerequisite:

FCS 231 – Pattern Making (3 hours)

Principles of flat pattern method; pattern alteration; original pattern design; completed garment. Prerequisite: FCS 133 or consent of instructor.

FCS 233 – Consumer Textiles (3 hours)

Consumer-oriented study of textiles emphasizing fibers, yarns, fabric constructions, and finishes. Prerequisite:

FCS 237 – Sustainability in the Apparel Industry (3 hours)**Core Curr. GP GS**

Environmental, economical, and ethical sustainability practices of the apparel industry from the raw material to disposal. Prerequisite:

FCS 270 – Special Event Planning (3 hours)

Study of event planning, implementation, and evaluation.

FCS 271 – Food & World Cultures (3 hours)**Core Curr. GP WC**

This course is an exploration of a variety of foods and cultures that demonstrate the influences of demography, geography, history, social traditions, religious beliefs, and other environmental considerations on food, its preparation, service, and symbolism/meaning.

FCS 272 – Hospitality Facilities Management (3 hours)

A comprehensive introduction to hospitality-related facility services and establishment of departments, examination of the associated functions, and the interdependent relationship among departments. Facilities and property management concepts introduced.

Prerequisite:

FCS 300 – Consumer Issues in America (3 hours)**Gen. Ed. SF****Core Curr. SB**

Personal finance, consumer credit, durable and non-durable goods and services, and consumer protection in the marketplace.

FCS 304 – Sports and Exercise Nutrition (3 hours)

Design of approximate diets for exercise and sports to enhance utilization and maximize performance. An integrative, case study approach. Prerequisite: FCS 202, FCS 301 or FCS 303; junior standing.

FCS 305 – Experimental Foods (1 hour)

Scientific principles of food composition, preparation, and preservation. Prerequisite: FCS 103 or 104, FCS 171 or ANSI-CFP accredited Food Protection Manager Certification, and FCS 202.

FCS 310 – Community Program Planning (3 hours)**Core Curr. WI**

Assessing and prioritizing community health needs, principles of program planning including use of comprehensive planning models,

development of goals and objectives, incorporating health behavior theory, and gaining community support. Prerequisite: Junior standing and FCS major; or instructor consent

FCS 311 – Evaluation and Research Methods (3 hours)

Core Curr. EL

Methods of monitoring, evaluating, and assessing impact of health education programs, emphasis on selecting valid and reliable measures, use of statistics, and communicating outcomes to stakeholders. Prerequisite: FCS 310 and MTH 111; or consent of instructor

FCS 320 – Public Health Intervention Strategies (2 hours)

Methods including health communication, education, policy and advocacy, environmental change, and community services to promote and protect health. Prerequisite: FCS 203; or instructor consent

FCS 330 – Fashion Merchandising (3 hours)

Merchandising: organization, operation, and interrelationship of major facets of textile and clothing industry. Prerequisite: FCS 131

FCS 331 – Fashion Merchandising Laboratory (1 hour)

Experimental work related to fashion merchandising. Prerequisite: FCS 131; concurrent enrollment in FCS 330.

FCS 333 – Apparel Product Development and Quality Assurance (3 hours)

Examines the processes of apparel product development and quality assurance. Emphasis is placed on apparel design elements in relation to appearance, performance, quality, and cost. Prerequisite: FCS 233

FCS 334 – Visual Merchandising (1 hour)

The investigation and application of various areas and methods of merchandise presentation to maximize the salability of merchandise. Prerequisite: FCS 131 or consent of instructor

FCS 335 – Survey of Fashion Designers (3 hours)

A cultural and historical study of fashion and fashion designers from the mid-nineteenth century to the present. Prerequisite: Junior standing or consent of instructor

FCS 336 – History of Fashion (3 hours)

Survey of dress history from antiquity through the mid-nineteenth century; examines broad changes in Western dress and connections to culture, society, and technology.

FCS 337 – Clothing and Human Behavior (3 hours)

Core Curr. WI

Interdisciplinary study of cultural, social, psychological, economic, and aesthetic relationship of clothing to today's society. Prerequisite:

FCS 340 – Parent Education (3 hours)

Core Curr. WI

Examines how parents teach, guide, and influence children/adolescents across the lifespan. Principles of family life education with an emphasis on parent education programs. Prerequisite: FCS 100 or FCS 341 or equivalent, or consent of instructor

FCS 341 – Human Development Through the Lifespan (3 hours)

Physical, cognitive, emotional and social growth and development throughout the human lifespan. Not open to students with credit in PSY 303 or PSY 350. Prerequisite:

FCS 342 – Child Development in the Family (3 hours)

Normal growth and development of children from birth to young adulthood using a family systems perspective.

FCS 346 – FCS Resource Management (3 hours)

Application of resource management concepts within a service learning project. Students perform needs assessment, program design, and evaluation relying on basic research methods. Prerequisite: FCS 100 and FCS major; or consent of instructor.

FCS 350 – Matters of Life and Death (3 hours)

Core Curr. MI

How do you "prepare" for death? How do we make sense of death? What is a "good" death? How is death portrayed in art, media, and literature? Through an interdisciplinary examination of the process and meaning of death, dying, and grieving, students will be able to develop their own perspectives on life, death, and the afterlife. Prerequisite: Junior standing or consent of instructor

FCS 357 – Housing and Interior Design Concepts (3 hours)

Basic concepts of housing and interior design; emphasis on historic periods and their relationship to contemporary housing and furnishings.

FCS 376 – Professional Development Seminar (1 hour)

Discussion-based exploration of employee empowerment, leadership in the workplace, and quality measurement in FCS organizations. Prerequisite: Junior standing or consent of instructor.

FCS 401 – Readings in Family and Consumer Sciences (1-3 hours)

Individual readings in specialized areas of family and consumer sciences for qualified students, under faculty supervision. Prerequisite: consent of department chair.

FCS 402 – Problems in Family and Consumer Sciences (1-3 hours)

Independent study in family and consumer sciences for qualified students, under faculty supervision. Prerequisite: consent of department chair.

FCS 403 – Supervised Research (0-3 hours)

Independent student research in family and consumer sciences, under faculty supervision. May be repeated for a maximum of 6 hours. Satisfactory/Unsatisfactory. Prerequisite: FCS major, junior standing, and consent of department chair.

FCS 405 – Food Service Systems (3 hours)

Exploration of food service systems concepts, organization of food service operations, menu planning, food production and procurement, quantitative evaluations of food service operations, and laboratory experiences. Prerequisite: FCS 103 or 104; FCS 171 or ANSI-CFP accredited Food Protection Manager Certification

FCS 408 – Management in Food Service (3 hours)

Application of theories, principles, and functions of management to a food service system operation. Emphasis on qualitative and quantitative evaluation of operational, financial, sales, inventory, and procurement data. Prerequisite: FCS 405

FCS 410 – Human Metabolism (3 hours)

Biochemistry of energy and nutrient utilization in relation to human biological functions, performance, disease prevention, and health. Prerequisite: BIO 232; CHM 116 or CHM 162; Grade of B or better in FCS 202 or FCS 303

FCS 411 – Medical Nutrition Therapy I (3 hours)

Biochemical and physiological principles underlying dietary modification in the prevention and treatment of various conditions; diet design; nutrigenomics; pharmaceuticals; complementary and integrative therapies; emphasis on applications and case studies to foster critical thinking and problem-solving. Prerequisite: Grade of C or better in FCS 410.

FCS 412 – Medical Nutrition Therapy II (3 hours)

Biochemical and pathophysiological rationale, therapeutic dietary modifications for various disease conditions; nutrition support in malnutrition and hypermetabolic conditions; emphasis on evidence-based practice applications and case studies to foster critical thinking and problem-solving. Prerequisite: Grade of C or better in FCS 411

FCS 420 – Public Health Policy (2 hours)**Core Curr. WI**

Analysis of policies including laws, regulations, and decisions by government and other organizations influencing public health. Prerequisite: FCS 220 and 320; or instructor consent

FCS 421 – Public Health Education Seminar (1 hour)

Exploration of selected contemporary issues within the public health profession. Prerequisite: Senior standing and Public Health Education major; or instructor consent

FCS 433 – Issues and Trends in Apparel and Textiles (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Course may be repeated for a maximum of 6 hours credit. Prerequisite: FCS 130 or 233 or consent of instructor.

FCS 438 – Global Issues in Textiles and Apparel (3 hours)

Evaluation of key issues facing textile and apparel business in global markets including economic, political, and professional implications; theoretical foundation of global sourcing. Prerequisite: Junior Standing

FCS 442 – Foundations of FCS (3 hours)

Review of theoretical, philosophical, ethical, and historical foundations of FCS; includes analysis, critique, and discussion of FCS literature. Emphasizes the integrative and applied nature of the discipline. Prerequisite: FCS major and junior standing; or consent of instructor

FCS 450 – Play Therapy (3 hours)

Play as a therapeutic intervention for children and families, including theories, techniques and strategies, and application of play therapy. Cross-listed with FCS 550. Prerequisite: ETE 210 or FCS 342, or equivalent

FCS 451 – Child Life Profession (3 hours)

Capstone course to integrate coursework and fundamental skills needed by Child Life Specialists, including theoretical foundations of Child Life, helping children and families cope with the stress of a healthcare experience, scope of practice, the impact of illness on children and families, and therapeutic play interventions. Prerequisite: FCS 100 and ETE 210, FCS 342 or PSY 350

FCS 462 – Public Health Education Practicum I (3 hours)

Field-oriented, supervised learning activities outside the college classroom, including a preplanned assessment of the experience. Course registration for the experience is required and a postevaluation with the instructor will be conducted. Prerequisite: Senior standing and public health education major; or consent of instructor

FCS 463 – Public Health Education Practicum II (1-6 hours)

Field-oriented, supervised learning activities outside the college classroom that including a preplanned assessment of the experience. Course registration for the experience is required and a postevaluation with the instructor will be conducted. Prerequisite: FCS 462 or consent of instructor

FCS 464 – Leadership in Public Health Education (3 hours)

Emphasis on leadership, management, and administration in public health settings. Prerequisite: FCS 462 or consent of instructor

FCS 470 – Special Topics in Hospitality Business (3 hours)

This special topics course may vary each time it is offered. The course name will appear in the class schedule. Prerequisite: Junior standing or consent of instructor.

FCS 476 – Hospitality Seminar II (1 hour)

Study of leadership topics in the hospitality industry; students will also explore issues based on their personal interests and experiences to date. Prerequisite: Senior standing in HLP.

FCS 501 – Community Nutrition Intervention (3 hours)

This course aims to give students the skills to design and evaluate an evidence-based nutrition intervention program. Students will learn about behavior change theory, conducting a needs assessment, designing a program including intervention strategies, and evaluating a program's effectiveness. Prerequisite: Enrollment in MS in Nutrition and Dietetics Program or consent of instructor

FCS 502 – Foundations of Dietetic Practice (1 hour)

An orientation to the Master of Science in Nutrition and Dietetics program and an introduction to the profession of dietetics, as well as professional development for practice. Topics include the history of the profession, legal and ethical consideration, cultural humility, interdisciplinary healthcare teams, mentorship, and professional career development. Prerequisite: Enrollment in the MS program in Nutrition and Dietetics

FCS 505 – Food Development (1 hour)

Hands-on application of food science principles to modify foods to meet nutritional requirements. Prerequisite: FCS 305 or Enrollment in MS in Nutrition and Dietetics Program

FCS 507 – Nutrition Counseling and Assessment (3 hours)

This course will focus on motivational interviewing techniques. Nutritional assessment will be centered around the nutrition care process with an emphasis on nutrition focused physical examinations. Prerequisite: FCS 411 or FCS 511 or concurrent enrollment

FCS 508 – Advanced Food Service Management (3 hours)

Advanced application of theories, principles, and functions of management to a food service system operation. Emphasis on advanced qualitative and quantitative evaluation of food service systems operations. Prerequisite: Enrollment in MS Nutrition and Dietetics Program or consent of instructor

FCS 510 – Topics in Global Wellness (3 hours)

Designed to provide global cultural experiences that focus on nutrition and wellness. Emphasis is placed on the health and wellness systems of different cultures, including complementary and alternative medicine (CAM).

FCS 511 – Medical Nutrition Therapy I (3 hours)

Biochemical and physiological principles underlying dietary modification in the prevention and treatment of various conditions with an emphasis on integrated supervised experiential learning activities. Prerequisite: Admission into MS program in Nutrition and Dietetics

FCS 512 – Medical Nutrition Therapy II (3 hours)

Biochemical and pathophysiological rationale and therapeutic dietary modifications for various disease conditions with an emphasis on integrated supervised experiential learning activities. Prerequisite: B or better in FCS 511

FCS 513 – Cultural Influences in Food and Nutrition (3 hours)

This course explores the cultural influence of food and nutrition with particular attention to the impact that food patterns have on nutritional status and health. Prerequisite: Enrollment in MS Nutrition and Dietetics Program or consent of instructor

FCS 514 – Food Security and Food Systems (3 hours)**Core Curr. EL**

Causes and consequences of food insecurity on the health and well-being of individuals and families, as well as the nutritional and political implications these may pose in the local, national and global food systems. Prerequisite: FCS 202 or 303 or enrollment in MS Nutrition and Dietetics Program

FCS 541 – Research Methods (3 hours)

Introduction to concepts, methods, and strategies for research. Topics include article database search, literature review, the nature of scientific research, research idea conceptualization, formulation of hypotheses and research questions, research proposals, and Institutional Review Board (IRB) requirements. Prerequisite: Enrollment in the MS in Nutrition and Dietetics program, or MA in Nonprofit Leadership program, or consent of instructor.

FCS 550 – Play Therapy (3 hours)

Play as a therapeutic intervention for children and families, including theories, techniques and strategies, and application of play therapy. Cross-listed with FCS 450. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: ETE 210 or FCS 342, or equivalent

FCS 585 – Topics in Family & Consumer Sciences (1-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: senior or graduate standing, and consent of instructor.

FCS 586 – Supervised Research in Family and Consumer Sciences (1-6 hours)

Graduate student research in Family and Consumer Sciences under faculty supervision. May be repeated up to a total of 6 credit hours. Prerequisite: Graduate standing in FCS; consent of instructor.

FCS 595 – Supervised Experiential Learning (1-3 hours)

Professional experiential learning supervised by an approved preceptor for a minimum of 100 contact hours. May be repeated up to a total of 3 credit hours. Prerequisite: Graduate standing in FCS; consent of instructor.

FCS 695 – Supervised Experiential Learning in Food Service Management (2 hours)

In this course, students will work directly with approved preceptors in the food service setting for a minimum of 200 hours. Satisfactory/Unsatisfactory. Prerequisite: B or better in FCS 508

FCS 696 – Supervised Experiential Learning in Community Dietetics (2 hours)

In this course, students will work directly with approved preceptors in the community setting for a minimum of 200 hours. Satisfactory/Unsatisfactory. Prerequisite: B or better in FCS 501

FCS 697 – Supervised Experiential Learning in Clinical Dietetics (3 hours)

In this course, students will work directly with approved preceptors in the clinical setting for a minimum of 300 hours. Satisfactory/Unsatisfactory. Prerequisite: B or better in FCS 507, B or better in FCS 511, B or better in FCS 512

FCS 699 – Thesis Research (0-6 hours)

Design and conduct a nutrition/wellness themed-research project. May be repeated for a maximum of six semester hours. Prerequisite: Enrollment in the DI-MS program or consent of program director; FCS 641

NPL 300 – Advanced Leadership (3 hours)

Advanced leadership theories and the development of leadership skills will be developed and discussed. Students study theories of leadership development grounded in varied academic disciplines and apply the theoretical framework to case studies and to live leadership presentations.

NPL 381 – Seminar in Leadership (1-6 hours)

Special topics or current issues related to leadership in various fields. May be repeated under different topics to a maximum of six hours.

NPL 580 – Financial Leadership in Nonprofit Organizations (3 hours)

Provides students with a comprehensive overview of financial management related to nonprofit organizations. Topics include various budgeting systems and other financial management tools; service costing and the linking of costs to performance measures; fee setting; and government contracting.

NPL 581 – Topics in Nonprofit Leadership (1-3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours credit.

NPL 582 – Grant Writing in Nonprofit Leadership (3 hours)

This course is designed to provide an introduction to grant writing and methods for writing grant proposals. Students will learn to critique, research, and write grant proposals. Emphasis will be placed upon organization of a grant writing campaign and preparation of a complete proposal package.

NPL 583 – Supervision and Employee Engagement in Nonprofit Leadership (3 hours)

Focuses on the recruitment, selection, and engagement of employees within the context of mission in nonprofit organizations.

NPL 605 – Legal and Social Change (3 hours)

Analysis of the effects of legal and social change on communities and nonprofit organizations; focus on selected issues of legal and social change with diverse populations.

NPL 606 – Digital Media Applications for the Nonprofit Leader (3 hours)

This course focuses on the ever-evolving digital media tools, technologies, applications, and best practices utilized in nonprofit leadership. The design and development of innovative digital strategies using the latest digital tools to achieve specific organizational goals will be emphasized.

NPL 610 – Survey in Nonprofit Leadership (3 hours)

An introduction to the roles and responsibilities of administrators in nonprofit organizations. Trends in nonprofit service delivery, including organizational leadership and culture, human resource management, financial management, strategic planning, working with boards, marketing and public relations, social service partnership and collaboration.

NPL 612 – Strategic Planning in Nonprofit Organizations (3 hours)

Identification, analysis, and application of techniques and tools of institutional planning and evaluation. Program, personnel, financial, facility, and institutional planning. Prerequisite: NPL 610

NPL 673 – Effective Leadership in Nonprofit Organizations (3 hours)

Concepts of leadership, organizational theory, and decision making presented from multiple perspectives; focus on the practice of educational administration and nonprofit leadership.

NPL 686 – Field Experiences in Administration (0-6 hours)

A culminating experience to give the student the opportunity to work with a practicing administrator in the application of theoretical knowledge from previous coursework to administrative tasks. Accompanying seminars focus on selected topics associated with leadership and administration. Requires 150 hours of supervised activity for three hours of credit. Prerequisite: Departmental consent

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Kinesiology and Health Science



Kinesiology and Health Science

FACULTY Professors Peterson (chair), Strubhar; Associate Professors Dominguese, Kelly; Assistant Professors S. Bertram, Cattone, Donlan, Durr, Koors, Latva, Starkey, Way.

The Department of Physical Therapy and Health Science offers a Bachelor of Science degree with a kinesiology and health science major (KHS) in addition to a Doctor of Physical Therapy (D.P.T.) degree and a Health minor. For more information regarding the D.P.T. degree, please refer to the Graduate Catalog.

Mission

The mission of the Department of Physical Therapy and Health Science is to develop versatile individuals in a student-focused environment that prepares our graduates to lead, educate, advocate, and serve in an interdisciplinary healthcare environment.

Kinesiology and Health Science Major

The major provides students with requisite knowledge and skills for post graduate study in a variety of healthcare fields as well as entry level positions in the workforce. Our graduates have gone on to successfully complete post baccalaureate degrees in physical therapy, physician assistant, occupational therapy, medicine, athletic training, chiropractic, counseling, public health and other professions. Graduates entering the workforce have gained employment in medical sales, pharmaceutical sales, healthcare management and administration, as well as various positions in the health and fitness arena.

Admission Requirements

In addition to University and College of Education and Health Sciences requirements, the following are recommended for students to receive full consideration for admission to the Kinesiology and Health Science major as a first-year student:

1. a minimum of three years of high school mathematics and science (biology, chemistry, physics, anatomy and physiology are recommended)

Areas of Focus

Students pursuing the Kinesiology and Health Science degree typically plan to either continue their education in graduate programs for physical or occupational therapy, medicine, or another health profession. Others choose to pursue graduate work in non-direct patient care or to enter the workforce upon graduation. The KHS degree is designed to allow flexibility for students to gain the requisite knowledge needed for their specific professional goal. Major electives as well as the required minor provide the opportunity for students

to complete coursework needed for graduate programs. Students work with an academic advisor to determine an appropriate plan of study.

Major Requirements (65-75 total hours)

Required Core Courses (62 hours)

- BIO 111 and 113: Introduction to Cell Biology & Lab – 4 hrs.
- BIO 112 and 114: Introduction to Ecology and Evolution & Lab OR BIO 202: Microbiology and Immunology – 4 hrs.
- BIO 230 and 231: Human Anatomy and Physiology I & Lab – 4 hrs.
- BIO 232 and 233: Human Anatomy and Physiology II & Lab – 4 hrs.
- CHM 110 and 111: General Chemistry I & Lab – 4 hrs.
- MTH 111: Elementary Statistics or MTH 115: Brief Calculus with Application I (for Physics pathway) 3 or 4 hrs.
- PHY 107: General Physics I – 4 hrs.
- PSY 101: Principles of Psychology – 3 hrs.
- KHS 110: Introduction to Health Science – 1 hr.
- FCS 202: Food and Nutrition – 3 hrs.
- KHS 110: Introduction to Health Science – 1 hr.
- KHS 210: Concepts in Personal Wellness and Fitness – 3 hrs.
- KHS 230: Measurement in Physical Activity (EL) – 3 hrs.
- KHS 310: Statistical Procedures in Health Sciences (WI) (PSY 205 Acceptable for neuroscience minors)
- KHS 380: Disability and Health in a Global Society (WI) – 3 hrs.
- KHS 460: Kinesiology – 3 hrs.
- KHS 470: Health Science Applications of Exercise Prescription **or** KHS 480: Motion Analysis – 3 hours
- CHM 302 Medical Terminology **or** NUR 391 Medical Terminology -1 hr.
- FCS 202: Food and Nutrition – 3 hrs.

Required Elective Courses (4-10 hours)

Choose at least 3 electives. At least 2 courses must be from KHS. (KHS 210 or 230, 470 or 480 may be taken as an elective if not already used as a required course)

- CHM 116 and 117: General Chemistry II & Lab – 4 hrs.
- FCS 220: Consumer Issues in Health Care – 3 hrs.
- FCS 304: Sports and Exercise Nutrition – 3 hrs.
- FCS 410: Advanced Nutrition – 3 hrs.
- KHS 300: Experiential Learning (EL) – 1-4 hrs.
- KHS 306: Health Science Applications for Sports – 3 hrs.
- KHS 320 Applied Physiology of Exercise – 3 hrs. *
- KHS 343 Ethics of Healthcare – 3 hrs.
- KHS 345 Motor Control and Motor Learning – 3hrs.
- KHS 350 Special Topics in Health Care – 3 hrs.
- KHS 425: Independent Study – 1-3 hrs.
- KHS 470: Health Science Application of Exercise Prescription – 3 hrs.
- KHS 480: Motion Analysis – 3 hrs.
- ML 350: Managing for Results in Organizations – 3 hrs.
- NUR 217: Men's Health Issues – 2 hrs.
- NUR 219: Women's Health Issues – 3 hrs.
- PHY 108: General Physics – 4 hrs.
- PSY 303: Lifespan Developmental Psychology – 3 hrs.
- PSY 311: Principles of Abnormal Psychology – 3 hrs.

*Students planning to apply to Doctor of Physical Therapy programs should choose CHM 116 & 117 AND PHY 108 as electives as these are prerequisites. Students must take these courses (plus KHS 320) to be eligible for Early Assurance in Bradley's DPT program.

At least 120 credit hours are required for the bachelor's degree, with at least 40 credit hours at the 300 level or above. Students must also meet Bradley University Core Curriculum requirements. Kinesiology and Health Science majors are required to take a minor, chosen in consultation with advisors in the Department of Physical Therapy and Health Science and in the minor department. For students choosing to complete two majors, the minor requirement will be waived.

Extra-Curricular Opportunities

Post-baccalaureate educational programs and future employers seek well rounded students who are involved in activities outside of the classroom. Bradley offers more than 200 student organizations that provide opportunities for Health Science students to become engaged on campus and in the local community. The Department of Physical Therapy and Health Science sponsor two organizations

that include the Health Science Organization, and a service dog training program called "Wags for Mags." Health Science students have also served as tutors for local grade school and high school students who are patients at the Children's Hospital of Illinois, have volunteered side by side with Department faculty for Special Olympics, and have participated in other community programs as well. Health Science students have also taken advantage of unique opportunities to study in London, Dublin, and other foreign cities associated with Bradley's Study Abroad Program and in doing so have successfully completed the College of Education and Health Science Global Scholars Program. Students have also accompanied Doctor of Physical Therapy students and Department faculty on mission trips to the Dominican Republic.

The Doctorate of Physical Therapy

First-year students admitted to the undergraduate program in Kinesiology and Health Science have the opportunity for Early Assurance (formerly known as direct admission) into Bradley's Doctor of Physical Therapy graduate program. Applications are accepted starting in the second semester of the first year. See department for requirements.

Suggested Plan of Study

Following is a suggested plan of study for Kinesiology and Health Science Majors. Students must create a formal plan of study and discuss progress towards their degree with their advisors at least once a semester. Please note that course offerings can vary semester to semester. According to the Bradley University catalog, every candidate for a degree is personally responsible for meeting all requirements for graduation. No University official can relieve the student of this responsibility.

First Year – Fall Semester (15-16 hours)

- BIO 111 and 113: Introduction to Cell Biology and Lab – 4 credit hours
- MTH 111 Statistics – 3 credit hours OR MTH 115: Calculus I – 4 credit hours
- Bradley Core Curriculum Courses – 6 credit hours
- KHS 110: Intro to Health Science – 1 credit hour
- EHS 120 University Experience – 1 credit hour

First Year – Spring Semester (16 hours)

- BIO 112 and 114: Introduction to Ecology and Evolution and Lab OR BIO 202 Microbiology and Immunology – 4 credit hours
- KHS 210: Concepts in Personal Wellness – 3 credit hours
- PSY 101: Principles of Psychology – 3 credit hours
- Bradley Core Curriculum Courses – 6 credit hours

Sophomore – Fall Semester (15 hours)

- CHM 110 and 111: General Chemistry I and Lab – 4 credit hours
- PHY 107: General Physics I – 4 credit hours
- FCS 202: Food and Nutrition – 3 credit hours
- Bradley Core Curriculum Courses – 3 credit hours
- EHS 101 Big Questions in EHS – 1 credit hour

Sophomore – Spring Semester (14 hours)

- CHM 116 and 117: General Chemistry II and Lab – 4 credit hours*
- PHY 108: General Physics II – 4 credit hours
- KHS 230 Measurement in Physical Activity – 3 credit hours
- Bradley Core Curriculum Courses – 3 credit hours

Junior – Fall Semester (14 hours)

- BIO 230 and 231: Human Anatomy and Physiology I and Lab – 4 credit hours
- KHS 300: Experiential Learning – 1 credit hour
- KHS 310: Statistical Procedures in Health Sciences or PSY 205 Quantitative Methods – 3 credit hours
- Bradley Core Curriculum, Minor, or Elective courses – 6 credit hours

Junior – Spring Semester (16 hours)

- BIO 232 and 233: Anatomy and Physiology II and Lab – 4 credit hours
- KHS 320: Applied Physiology of Exercise – 3 credit hours
- KHS 380: Disability and Health in a Global Society or other KHS elective – 3 credit hours
- Bradley Core Curriculum and/or Minor Courses – 6 credit hours

Senior – Fall Semester (16 hours)

- KHS 345: Motor Control and Motor Learning – 3 credit hours
- KHS 460: Kinesiology – 3 credit hours
- Bradley Core Curriculum Course – 3 credit hours
- CHM 302 or NUR 391: Medical Terminology – 1 credit hour
- Minor Courses and/or Electives – 6 credit hours

Senior – Spring Semester (15 hours)

- KHS 306: Health Science Application for Sports or other KHS elective – 3 credit hours
- KHS 470: Health Science Application of Exercise Prescription **or** KHS 480: Motion Analysis – 3 credit hours
- Bradley Core Curriculum and/or Minor Courses – 9 credit hours

* CHM 116/117 and PHY 108 are required for students planning to apply to DPT programs and for Bradley's DPT Early Assurance.

Course sequence information is provided for sample purposes only. Students should consult with their academic advisor about their individual plan for course registration and completion of program requirements.

FACULTY Professors Peterson (chair), Strubhar; Associate Professor Dominguese; Assistant Professors S. Bertram, Cattone, Durr, Kelly, Koors, Latva, Starkey, Way.

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Mission

The mission of the Department of Physical Therapy and Health Science is to develop versatile individuals in a student-focused environment that prepares our graduates to lead, educate, advocate, and serve in an interdisciplinary healthcare environment.

Kinesiology and Health Science Major

The major provides students with requisite knowledge and skills for post graduate study in a variety of healthcare fields as well as entry level positions in the workforce. Our graduates have gone on to successfully complete post baccalaureate degrees in physical therapy, physician assistant, occupational therapy, medicine, athletic training, chiropractic, counseling, public health and other professions. Graduates entering the workforce have gained employment in medical sales, pharmaceutical sales, healthcare management and administration, as well as various positions in the health and fitness arena.

Admission Requirements

In addition to University and College of Education and Health Sciences requirements, the following are recommended for students to receive full consideration for admission to the Kinesiology and Health Science major as a first-year student:

1. a minimum of three years of high school mathematics and science (biology, chemistry, physics, anatomy and physiology are recommended).

Areas of Focus

Majors typically pursue course work associated with one of three distinct tracks or areas of focus. One track is geared towards students pursuing graduate study in health care professions such as physical therapy, occupational therapy, and athletic training. Another common track or area of focus is for students wishing to pursue professions in medicine, physician assistant or chiropractic. The third area of focus is for students wishing to pursue post-graduate study in a non-direct patient care capacity or students wishing to immediately enter the workforce following graduation.

In addition to required coursework students are required to choose a minor course of studies. Students are encouraged to explore the various options for their required minor and discuss their plans with their academic advisor before declaring a minor prior to the end of the sophomore year.

Major Requirements (65-75 total hours)

Required Core Courses (62 hours)

- BIO 111/113: Introduction to Cell Biology – 4 hrs.
- BIO 112/114: Introduction to Ecology and Evolution – 4 hrs.
- BIO 230/231: Human Anatomy and Physiology I – 4 hrs.

- BIO 232/233: Human Anatomy and Physiology II – 4 hrs.
- CHM 110/111: General Chemistry I – 4 hrs.
- CHM 116/117: General Chemistry II – 4 hrs.
- CHM 302 Medical Terminology **or** NUR 391 Medical Terminology -1 hr.
- FCS 202 Food and Nutrition – 3 hrs.
- KHS 110 Introduction to Health Science – 1 hr.
- KHS 210: Concepts in Personal Wellness and Fitness **or** KHS 230: Measurement in Physical Activity – 3 hrs.
- KHS 310: Statistical Procedures in Health Sciences (PSY 205 Acceptable for neuroscience minors)
- KHS 320: Applied Physiology of Exercise – 3hrs.
- KHS 345: Motor Control and Motor Learning – 3 hrs.
- KHS 460: Kinesiology – 3 hrs.
- KHS 470: Health Science Applications of Exercise Prescription **or** KHS 480: Motion Analysis – 3 hours
- MTH 115: Brief Calculus with Applications I **or** MTH 121: Calculus I – 4 hrs.
- PHY 107: General Physics I – 4 hrs.
- PHY 108: General Physics II – 4 hrs.
- PSY 101: Principles of Psychology – 3 hrs.

Required Elective Courses (3-10 hours)

Choose 3 electives. At least 2 courses must be from KHS. (KHS 210 or 230, 470 or 480 may be taken as an elective if not already used as a required course)

- FCS 220: Consumer Issues in Health Care – 3 hrs.
- FCS 304: Sports and Exercise Nutrition – 3 hrs.
- FCS 410: Advanced Nutrition – 3 hrs.
- KHS 210: Concepts in Personal Wellness and Fitness – 3 hrs.
- KHS 230: Measurement in Physical Activity (EL) – 3 hrs.
- KHS 300: Experiential Learning (EL) – 1-4 hrs.
- KHS 306: Health Science Applications for Sports – 3 hrs.
- KHS 343 Ethics of Healthcare – 3hrs.
- KHS 350 Special Topics in Health Care – 3hrs.
- KHS 380 Disability and Health in a Global Society (WI) – 3hrs.
- KHS 425: Independent Study – 1-3hrs.
- KHS 470: Health Science Application of Exercise Prescription – 3 hrs.
- KHS 480: Motion Analysis – 3 hrs.
- ML 350: Managing for Results in Organizations – 3 hrs.
- NUR 217: Men’s Health Issues – 2 hrs.
- NUR 219: Women’s Health Issues – 3 hrs.
- PSY 303: Lifespan Developmental Psychology – 3 hrs.
- PSY 311: Principles of Abnormal Psychology – 3 hrs.

*Kinesiology and Health Science majors will take HS 310 unless they are pursuing a neuroscience minor.

In addition to the required list of courses, students interested in physical therapy, occupational therapy, and athletic training are encouraged to choose as many Kinesiology and Health Science courses as possible and should consider enrolling in PSY 303: Lifespan Developmental Psychology and/or PSY 311: Principles of Abnormal Psychology.

In addition to the required list of courses, students interested in physician assistant, medicine, and chiropractic are encouraged to enroll in BIO 202: Microbiology and Immunology, CHM 162: Fundamentals of Organic and Biochemistry.

At least 120 credit hours are required for the bachelor’s degree, with at least 40 credit hours at the 300 level or above. Students must also meet Bradley University Core Curriculum requirements. Kinesiology and Health Science majors are required to take a minor, chosen in consultation with advisors in the Department of Physical Therapy and Health Science and in the minor department.

Extra-Curricular Opportunities

Post-baccalaureate educational programs and future employers seek well rounded students who are involved in activities outside of the classroom. Bradley offers more than 200 student organizations that provide opportunities for Health Science students to become engaged on campus and in the local community. The Department of Physical Therapy and Health Science sponsor two organizations that include the Health Science Organization; and a service dog training program called “Wags for Mags.” Health Science students have also served as tutors for local grade school and high school students who are patients at the Children’s Hospital of Illinois, have volunteered side by side with Department faculty for Special Olympics, and have participated in other community programs as well. Health Science students have also taken advantage of unique opportunities to study in London, Dublin, and other foreign cities associated with Bradley’s Study Abroad Program and in doing so have successfully completed the College of Education and Health Science Global Scholars Program. Students have also accompanied Doctor of Physical Therapy students and Department faculty on

mission trips to the Dominican Republic.

The Doctorate of Physical Therapy

First-year students admitted to the undergraduate program in Kinesiology and Health Science have the opportunity for early assurance (formerly known as direct admission) into Bradley's graduate program if they meet the following main criteria:

- all math and science courses must be taken at Bradley
- students must attain a math, science and overall GPA of 3.4 at the end of the sophomore year and 3.5 at the end of the junior year.

In addition to the GPA requirements – student must meet the following criteria to remain eligible for the early assurance option:

Criteria to maintain the Early Assurance Option.

1. After matriculation, all required math/science courses must be taken at Bradley. Advanced placement credit in the required math/science courses posted to their Bradley transcript will be accepted
2. Students must attain a math, science and overall GPA of 3.4 at the end of the sophomore year and 3.5 end of the junior year. Students must have a minimum of a B average in Anatomy and Physiology I and II including the lab.
3. The following courses must be completed by the beginning of the senior year: BIO: 111/113, BIO: 112/114, BIO 230/231, BIO 232/233, PHY 107/108, and MTH 115 or MTH 121.
4. Prior to the beginning of senior year, a student must have a minimum of 40 hours of observation in a physical therapy clinic with a minimum of 8 hours in an inpatient, skilled nursing or acute care setting. Time observing in the Department's Clinic for Fitness and Function does not count toward these observation hours.
5. Early assurance cannot be deferred to the next application cycle.
6. Students who have early assurance and will be graduating in 3 years must let the department know of their early graduation in the fall of their sophomore year. In addition, students graduating in 3 years must have a math, science and overall GPA 3.5 at the end of their sophomore year (second year) and apply through PTCAS in the fall of their final year (3rd year).
7. Students MUST complete the application process to the DPT program through Physical Therapy Centralized Application Service (PTCAS). This includes submitting GRE scores, completing all the items in the application and submitting all fees before the published deadlines.
8. The GRE is waived for students satisfying early assurance requirements admission into Bradley's DPT program. Please note that other DPT programs may still require the GRE.
9. Early assurance can be denied for the following reasons: not following the procedures above, not maintaining the required GPA, not completing the application through PTCAS, not meeting the required observation hours, demonstrating egregious behavior while a student at Bradley, demonstrating unprofessional behavior in classes taken at Bradley.

Suggested Plan of Study

Following is a suggested plan of study for Kinesiology and Health Science Majors. Students should create a formal plan of study and discuss progress towards their degree with their advisors at least once a semester. Please note that course offerings can vary semester to semester. According to the Bradley University catalog, every candidate for a degree is personally responsible for meeting all requirements for graduation. No University official can relieve the student of this responsibility.

First Year – Fall Semester (16 hours)

- BIO 111/113: Introduction to Cell Biology – 4 credit hours
- MTH 115 or 121: Calculus I – 4 credit hours
- Bradley Core Curriculum Courses – 6 credit hours
- KHS 110: Intro to Health Science – 1 credit hour
- EHS 101 Big Questions in EHS or 120 University Experience – 1 credit hour

First Year – Spring Semester (16 hours)

- BIO 112/114: Introduction to Ecology and Evolution – 4 credit hours
- KHS 210: Concepts in Personal Wellness – 3 credit hours
- PSY 101: Principles of Psychology – 3 credit hours
- Bradley Core Curriculum Courses – 6 credit hours

Sophomore – Fall Semester (14 hours)

- CHM 110: General Chemistry I – 3 credit hours
- CHM 111: General Chemistry I Lab – 1 credit hour
- PHY 107: General Physics I – 4 credit hours
- FCS 202: Food and Nutrition – 3 credit hours
- Bradley Core Curriculum Courses – 3 credit hours

Sophomore – Spring Semester (14 hours)

- CHM 116: General Chemistry II – 3 credit hours
- CHM 117: General Chemistry II Lab – 1 credit hour
- PHY 108: General Physics II – 4 credit hours
- KHS 230 Measurement in Physical Activity – 3 credit hours
- Bradley Core Curriculum Courses – 3 credit hours

Junior – Fall Semester (14 hours)

- BIO 230/231: Human Anatomy and Physiology I – 4 credit hours
- KHS 300: Experiential Learning – 1 credit hour
- KHS 310: Statistical Procedures in Health Sciences or PSY 205 Quantitative Methods – 3 credit hours
- Bradley Core Curriculum Courses, Minor, or Elective – 6 credit hours

Junior – Spring Semester (16 hours)

- BIO 232/233: Anatomy and Physiology II – 4 credit hours
- KHS 320: Applied Physiology of Exercise – 3 credit hours
- KHS 380: Disability and Health in a Global Society or other KHS elective – 3 credit hours
- Bradley Core Curriculum Courses and/or Minor Courses – 6 credit hours

Senior – Fall Semester (16 hours)

- KHS 345: Motor Control and Motor Learning – 3 credit hours
- KHS 460: Kinesiology – 3 credit hours
- Bradley Core Curriculum Course – 3 credit hours
- CHM 302 or NUR 391: Medical Terminology – 1 credit hour
- Minor Courses and/or Electives – 6 credit hours

Senior – Spring Semester (15 hours)

- KHS 306: Health Science Application for Sports or other KHS elective – 3 credit hours
- KHS 470: Health Science Application of Exercise Prescription **or** KHS 480: Motion Analysis – 3 credit hours
- Bradley Core Curriculum Courses and/or Minor Courses – 9 credit hours

Students considering graduate work as a physician, physician assistant, chiropractor, or dentist should consider electives in organic chemistry, microbiology and other pertinent course work.

Course sequence information is provided for sample purposes only. Students should consult with their academic advisor about their individual plan for course registration and completion of program requirements.

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Kinesiology and Health Science Courses



Kinesiology and Health Science Courses

KHS 110 – Introduction to Health Science (1 hour)

Health care professions, terminology, concepts in health science, and basic knowledge and skills of those in health science. Prerequisite: H S or KHS major or consent of department Chair.

KHS 210 – Concepts in Personal Wellness and Fitness (3 hours)

An overview of topics designed to provide students with skills and knowledge needed to incorporate concepts of personal wellness and physical fitness. Focusing on the health benefits of personal wellness and fitness, students will participate in exploring concepts critically and in lab activities designed to engage the student actively in planning personalized programs for physical activity, nutrition, and other wellness concepts. Prerequisite: BIO 111, BIO 113; HS or KHS major or consent of instructor

KHS 220 – Consumer Issues in Health Care (3 hours)

Possible care obtained, level of health care, and how to access care for persons from birth to death. Cross listed as FCS 220. Prerequisite: HS 110 or KHS 110 and HS or KHS major or consent of a cross-listed Department Chair (PT, FCS).

KHS 230 – Measurement in Physical Activity (3 hours)

Core Curr. EL

Methods of assessing health, fitness, and tolerance during physical activity for program development, group assessment, and research. Prerequisite: H S or KHS Major or consent of instructor

KHS 300 – Experiential Learning in Healthcare (1-4 hours)

Core Curr. EL

The Experiential Learning in Health Science course provides an engaging opportunity for direct experience in healthcare. Students choose an area of focus to increase knowledge, develop skills, clarify values and develop student's capacity to contribute to their communities. May be repeated under different topics for a total of 4 credit hours; concurrent enrollment in 2 separate sections is permitted. Prerequisite: HS or KHS major

KHS 305 – Health Minor Practicum (1 hour)

Core Curr. EL

Self-directed, 40 clock hour practicum focused on health, nutrition, and/or fitness. Prerequisite: Declared Health minor; FCS 220 or KHS 210.

KHS 306 – Health Science Applications for Sports (3 hours)

Integration of the understanding of basic human structure and function with common conditions and injuries that impact the athlete. Prerequisite: BIO 230, 231, 232, 233; HS or KHS major or consent of instructor.

KHS 310 – Statistical Procedures in Health Sciences (3 hours)**Core Curr. WI**

Principles and procedures for statistical interpretation of data. Study of measures and control tendency, variability, correlation, and introductory predictive and inferential statistics. Prerequisite: HS or KHS major or consent of instructor; junior/senior standing or consent of instructor

KHS 320 – Applied Physiology of Exercise (3 hours)

A systems approach to the study of the human body's response to exercise and physical activity. Prerequisite: BIO 111, 112; CHM 110, 111, 116, 117; PHY 107; HS or KHS major and junior/senior standing or consent of department chair.

KHS 343 – Ethics of Healthcare (3 hours)

This course is designed to expand the undergraduate student's basic understanding of ethics to promote ethical awareness in healthcare. Students will be exposed to typical ethical issues encountered in healthcare and practice making difficult decisions. Students will be asked to synthesize and implement strategies for applying morals, values, and ethics in the various settings in which healthcare is delivered, and will be called to consider the perspectives of all stakeholders, including the role of the healthcare researcher, provider, patient advocate, and consumer of medical care. Prerequisite: HS or KHS major.

KHS 345 – Motor Control and Motor Learning (3 hours)

This course provides an overview of the sensorimotor physiological events related to motor control and motor learning. Concepts of how healthy individuals initiate and execute movement will be discussed as well as strategies for learning novel movements. Prerequisite: BIO 111, 112, 113, 114; CHM 110, 111, 116, 117; junior/senior standing; HS or KHS major or consent of instructor.

KHS 350 – Special Topics in Health Science (3 hours)

Selected topics in the various fields of health science. May be repeated under different topics for a total of six hours. Prerequisite: cumulative grade point average of 2.75; at least junior standing or consent of department chair.

KHS 362 – Essential Clinical Neuroanatomy (3 hours)

This course provides an introduction to the human nervous system, focused on pertinent neuroscience material including neuroanatomy, neurophysiology, and disorders of the human nervous system. Emphasis is put on the relationship between structure and function, focusing on the basic neurological examination. A key goal of this course is to provide students with introductory knowledge for engaging in basic clinical problem-solving, by applying neuroanatomical principles to case studies of neurological disorders. Students will also be introduced to the cross-disciplinary nature of studying the human nervous system and will appreciate how neuroanatomical concepts are used in clinical practice across several disciplines. Prerequisite: BIO 111, BIO 113; CHM 110/111 or PHY 107; junior/senior standing

KHS 380 – Disability and Health in a Global Society (3 hours)**Core Curr. GP WC,WI**

This course will explore health and disability issues affecting individuals around the world and across the lifespan. Students will develop a greater understanding of the ways in which physical disabilities and health issues impact an individual's ability to participate at home, in the community, and in the workplace. The influence of health care availability, education, cultural practices, and the physical environment will be explored. Prerequisite: ENG 101 or CIV 111/112; junior/senior standing; HS or KHS major or consent of instructor.

KHS 402 – Educational Methods, Strategies, and Evaluation Techniques (3 hours)

Designed to increase theoretical knowledge and practical skill for teaching persons with different learning styles. Classroom experiences include a focus on methods, strategies, and evaluation techniques to meet different learning styles. Cross listed as ETE 402. Prerequisite: HS or ETE or KHS major or consent of instructor.

KHS 425 – Independent Study (1-3 hours)

Individual study and investigations through selected readings, discussion, and/or written assignment(s). May be repeated up to a total of three hours. Prerequisite: HS or KHS major and/or permission of the Department of Physical Therapy chair.

KHS 460 – Kinesiology (3 hours)

Basic science principles and functional applications that govern function of normal musculoskeletal system. Prerequisite: HS or KHS major and junior/senior standing or consent of PT Department chair.

KHS 470 – Health Science Application of Exercise Prescription (3 hours)

Lab-based course focused on utilization of scientific knowledge related to increasing flexibility, strength, power, and endurance for practical application in exercise prescription. Prerequisite: HS or KHS Major; H S 230 or KHS 230, H S 320 or KHS 320, H S 460 or KHS 460

KHS 480 – Motion Analysis (3 hours)

Analysis of the kinetic and kinematic principles influencing human motion with emphasis on sport and fitness activity from a health science perspective. Prerequisite: HS or KHS major and junior/senior standing; HS 320 or KHS 320; HS 460 or KHS 460; or consent of PT Department Chair

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Health Minor



Health Minor

The Health minor facilitates development of personal knowledge, skills, and routines for maintaining a healthy lifestyle and prepares students of any major to apply and promote knowledge, skills, and best practices about physical and mental health and wellbeing in personal, community, and professional settings.

Drawing from health and healthcare perspectives in biology, communication, economics, education, family and consumer sciences, kinesiology and health science, nursing, psychology, sociology, this multidisciplinary, 19-20-semester hour minor requires a health skills core (4 s.h.) that includes a personal health- or healthcare-focused core course and a self-directed 40 clock hour health/nutrition/fitness practicum; one course each in the topic areas of fitness and nutrition, disease and pathology, and mental health and wellbeing (9-10 s.h.); and 6 s.h. of elective courses within one of two areas of emphasis: Personal Health or Community and Professional Health. The elective courses must be taken in addition to the required courses. Following University requirements, a majority of the courses taken must be at the 200 (sophomore) level or above with no fewer than 6 semester hours at the 300 (junior) level or above.

The Health minor credential is useful for students of all majors committed to maintaining lifelong personal health; those planning to seek employment in human services, non-profit organizations, recreation and fitness, insurance and risk management, or healthcare; students interested in accumulating additional academic credit in preparation for graduate-level healthcare programs; and/or those interested in serving on health-related community boards or wellness committees, now or in the future.

Health Minor Learning Objectives:

1. Students will explore current issues in fitness and nutrition, disease and pathology, and mental health and wellbeing.
2. Students will identify best practices related to fitness and nutrition, disease and pathology, and mental health and wellbeing.
3. Students will develop knowledge, skills, and routines designed to maintain optimum physical and mental health.
4. Students will use current thinking and best practices to promote physical and mental health and wellbeing in personal, community, and professional settings.
5. Students will apply knowledge, skills, and best practices about physical and mental health and wellbeing in personal, community, and/or professional settings.

Required courses – 13-14 hrs.

Health Minor core (4 hrs)

- KHS 210: Concepts in Personal Wellness and Fitness – 3 hrs OR FCS 220 (or KHS 220): Consumer Issues in Healthcare – 3

AND

- KHS 305: Health minor Practicum (EL) – 1

Fitness and Nutrition (3 hrs)

Select one:

- FCS 202: Food and Nutrition – 3
- FCS 304: Sport and Exercise Nutrition – 3
- KHS 210: Concepts in Personal Wellness and Fitness – 3
- NUR 363: Personal and Community Health – 3

Disease and Pathology (3-4 hrs)

Select one:

- BIO 101: Diseases of Life – 3
- BIO 202: Microbiology and Immunology – 4
- BIO 345: Virology – 3
- NUR 220: Alcohol Use and Abuse – 3
- NUR 221: Substance Abuse – 3

Mental Health and Well Being (3 hrs)

Select one:

- FCS 100: Family Dynamics – 3
- PSY 311: Principles of Abnormal Psychology OR PSY 356: Abnormal Psychology – 3
- PSY 313: Health Psychology – 3
- SOC 343: Sociology of Mental Health – 3

Health Minor Areas of Emphasis and Elective Courses

Personal Health Area of Emphasis: Elective Courses

Select a minimum of 6 semester hours from the following courses. The elective courses must be in addition to the 13-14 hours of required coursework.

- BIO 101: Diseases of Life – 3
- BIO 103: The Biology of Sex – 3
- BIO 345: Virology – 3
- ETE 210: Human Development from Birth to Young Adulthood OR FCS 341: Human Development through the Lifespan OR PSY 303: Lifespan Developmental Psychology OR ENC 540: Human Growth and Development – 3
- ETE 270: Physical Development and Health – 1
- FCS 100: Family Dynamics – 3
- FCS 202: Food and Nutrition – 3
- FCS 304: Sport and Exercise Nutrition – 3
- KHS 210: Concepts in Personal Wellness and Fitness – 3
- NUR 217: Men's Health Issues – 2
- NUR 219: Women and Health – 3
- NUR 220: Alcohol: Use and Abuse – 3
- NUR 221: Substance Abuse – 3
- NUR 233: Sexually Transmitted Infections – 1
- NUR 363: Personal and Community Health – 3
- NUR 372: Safety and Emergency Care – 3
- PSY 245: Stress and Resilience – 3
- PSY 313: Health Psychology – 3
- PSY 314: Adult Development and Aging – 3

OR

Community and Professional Health Area of Emphasis: Elective Courses

Select a minimum of 6 semester hours from the following courses. The elective courses must be in addition to the 13-14 hours of required coursework.

- BIO 202: Microbiology and Immunology – 4

- BIO 300: Population, Resources, and Environment OR ENS 110: Environmental Science – 3
 - BIO 301: Biotechnology and Society – 3
 - BMS 320: Environment and Human Health – 3
 - COM 318: Health Communication – 3
 - ECO 360: The Economics of Healthcare – 3
 - ETE 210: Human Development from Birth to Young Adulthood OR FCS 341: Human Development through the Lifespan OR PSY 303: Lifespan Developmental Psychology OR ENC 540: Human Growth and Development – 3
 - FCS 203: School Health Promotion – 3
 - FCS 221: Introduction to Public and Community Health – 3
 - FCS 510: Topics in Global Wellness – 3
 - FCS 514: Food Security and Food Systems – 3
 - KHS 306: Health Science Applications for Sports – 3
 - KHS 343: Ethics of Healthcare – 3
 - KHS 380: Disability and Health in a Global Society – 3
 - NUR 163: Health of the School Age Child – 3
 - NUR 363: Personal and Community Health – 3
 - NUR 376: Advanced Concepts in Health – 3
 - NUR 433/533: International Health and Nursing – 3
 - PSY 311: Principles of Abnormal Psychology OR PSY 356: Abnormal Psychology – 3
 - SOC 211: Contemporary Social Problems – 3
 - SOC 341: Medical Sociology – 3
 - SOC 343: Sociology of Mental Health – 3
-

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Leadership Studies Minor



Leadership Studies Minor

The minor in leadership studies is designed to provide students the information, experience, and opportunities necessary to gain an in-depth knowledge of leadership theory and practice. Courses in the program integrate students' leadership experiences on campus and in the community.

A minimum of 15 semester hours is required for the minor: 12 hours of required courses and three hours of electives. Students must achieve a minimum GPA of 2.0 in all courses. The requirements for the minor are outlined below.

Required Courses (12 hours)

- NPL 300 Advanced Leadership – 3 hrs
- M L 350 Managing for Results in Organizations – 3 hrs
- M L 357 Leading Organizations – 3 hrs
- NPL 381 Seminar in Leadership – 3 hrs (1 hr topics course, can be repeated for up to 6 hrs, at least 3 hrs are required)

Elective Courses (3 hours)

- COM 315 Intercultural Communication Theory – 3 hrs
- COM 384 Organizational Accidents – 3 hrs
- ENS 105 Introduction to Sustainability – 3 hrs
- FCS 204 Family Programs across the Lifespan – 3 hrs
- FCS 221 Introduction to Community and Public Health – 3 hrs
- FCS 270 Event Planning – 3 hrs
- M L 358 Design Making – 3 hrs.
- M L 415 Diversity in the Workplace – 3 hrs
- NPL 381 Seminar in Leadership – 1 hr (can be repeated for up to 6 hrs)
- PHL 347 Ethics – 3 hrs
- PLS 419 Introduction to Public Administration – 3 hrs
- SOC 313 Race, Ethnicity, and Power – 3 hrs
- WGS 200 Introduction to Women's and Gender Studies – 3 hrs

Total Hours: 15

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Nursing



Nursing

**Approved by the Illinois Department of Financial and Professional Regulation (IDFPR). Accredited by the Commission on Collegiate Nursing Education (CCNE), 655 K Street NW, Suite 750. Washington, DC 20001, (202) 887-6791 .
ccneaccreditation.org**

FACULTY

Associate Professors: Erickson (Associate Dean and Director of Online and Distance Education), Smith (DNP Program Director)

Assistant Professors: Borton (Chairperson of Nursing), Bloompott, Boore, Boyer, Bridgewater, Clark, S., Copeland, Flinn, Fogelmark, Friebohle, Grugan, Hermann, Hinthorne, Hoyle, Krause, Lucia, Nelson, Pierce, Ragon, Reed, Sarsfield, Singh, Tupper, Warmick, Welker

Professional Staff: Daly, McKenzie, Hinspeter

The Department of Nursing offers an undergraduate curriculum leading to a Bachelor of Science in Nursing (BSN). Graduates of the program are eligible for licensure as a registered nurse (R.N.) upon successful completion of the National Council Licensure Examination (NCLEX-RN). The department also offers an accelerated BSN program.

The purpose of the BSN program is to prepare graduates for the beginning practice of professional nursing in a variety of settings. To achieve this purpose, a four-year educational program is provided which includes foundation, elective, and supporting courses in the humanities, the social sciences, the sciences, mathematics, and the theory and practice of nursing. The faculty believes that nursing education is a dynamic interactive process. Baccalaureate nursing education prepares students to integrate the knowledge, skills, and attitudes necessary to enter practice as generalists. Baccalaureate educated nurses are prepared to translate, integrate, and apply knowledge to improve patient outcomes and foster a culture of safety.

The objectives of the curriculum are to prepare graduates for

1. professional growth and advancement through acquired knowledge and experience;
2. graduate study in a major field of concentration in nursing; and
3. continuous personal growth and development.

The faculty of the Department of Nursing reserves the right to revise policies and course requirements based upon changes in accreditation, licensure, and nursing practice.

Admission

Applicants must meet the admission requirements of the University and of the Department of Nursing.

Instruction And Requirements

Instruction is provided in classrooms and laboratories on the campus and in a variety of health care agencies in the community. Clinical experiences (practicum) are planned and supervised by Department of Nursing faculty members.

In addition to the fees and expenses listed in the University catalog, students majoring in nursing are financially responsible for the purchase and maintenance of uniforms, for certain practicum and laboratory supplies and materials, and for transportation between the campus and the community agencies where clinical experiences are provided.

Prior to enrollment in the first nursing course that includes a practicum, each student must show proof of

1. Immunity to Rubella (German measles) by one of the following:

- written verification of having had the immunization, or
- written verification of rubella titer greater than 1:10

2. Immunity to Rubeola

- Written verification of having had the immunization
- Most individuals would have had an **MMR booster** before entering high school, which covers both the Rubella and Rubeola

3. Immunity to Hepatitis B Virus (HBV)

- Series of (3) doses given at one-month and six-month intervals after the initial dose.

4. Tuberculin Test Results

- A negative, two-step tuberculin skin test administered or negative blood test

5. Tetanus/Diphtheria with Pertussis (T-DAP)

- Documentation of receiving a T-DAP, which included the Pertussis vaccine, **within the last 10 years**
- If your TDAP is over 10 years old, students are required to also get a **TD booster**

6. Varicella Titer

- **Written documentation of a blood test showing immunity to the Varicella (Chicken Pox) virus.**
 - documentation of a positive titer or
 - if the titer is negative, submit documentation of receipt of a booster.

7. CPR/BLS Certification

- Certification must be "Health Care Provider" or "Professional Rescuer" level

8. Drug screen

9. Student Nurse Liability Insurance

- Offered under a blanket policy carried by the University.

10. Flu Vaccine

- Seasonal flu vaccine each fall by **October 31st annually**

11. Fingerprint Background Check

12. Personal Health and Hospitalization Insurance

These requirements must be current for the entire academic year of enrollment in all practicum courses: NUR 203, 207, 307, 309, 315, 317, 403, 409, 413 and 417.

Students must maintain a 2.50 cumulative grade point average in order to maintain enrollment in the nursing program. Students must earn a grade of C or better in all courses required in the nursing major.

Students majoring in nursing will pursue the following recommended curriculum:

Bachelor Of Science in Nursing (BSN) Requirements

First Year

First Semester

- COM 103 Oral Comm. Process – 3 hrs.
- PSY 101 Principles of Psychology – 3 hrs.
- CHM 100 Fund. of Gen. Chemistry. – 3 hrs.
- CHM 101 Fund. of Gen. Chemistry Laboratory – 1 hr.
- BIO 111 Cell Biology – 3 hrs.
- MTH 111 Elementary Statistics – 3 hrs.

16 hours

Second Semester

- ENG 101 Composition – 3 hrs.
- CHM 162 Fundamentals of Organic Chemistry and Biochemistry – 3 hrs.
- BIO 202 Microbiology and Immunology – 4 hrs.
- SOC 100 Sociological Perspective – 3 hrs.
- NUR 391 Medical Terminology – 1 hr.

14 hours

Sophomore Year

First Semester

- BIO 230 Human Anatomy and Physiology I (Lecture) – 3 hrs.
- BIO 231 Human Anatomy and Physiology Laboratory I – 1 hrs.
- ^{1,2} NUR 200 Fundamentals of Nursing (T) – 4 hrs.
- ^{1,2} NUR 203 Fundamentals of Nursing (P) – 2 hrs.
- FCS 202 Food and Nutrition – 3 hrs.
- Elective or BCC course – 3 hrs.

16 hours

Second Semester

- BIO 232 Human Anatomy and Physiology II (Lecture) – 3 hrs.
- BIO 233 Human Anatomy and Physiology Laboratory II – 1 hr.
- NUR 204 Intro. to Health Assessment – 2 hrs.
- ^{1,2} NUR 206 Adult Health I: Intro. to Medical-Surgical Nursing (T) – 3 hrs.
- ^{1,2} NUR 207 Adult Health I: Intro. to Medical-Surgical Nursing (P) – 2 hrs.
- PSY 303 Lifespan Developmental Psychology – 3 hrs.

14 hours

Junior Year

First Semester

- ¹ NUR 306 Maternal/Newborn Nursing (T) – 3 hrs.
- ¹ NUR 307 Maternal/Newborn Nursing (P) – 2 hrs.
- ¹ NUR 308 Nursing of Children (T) – 3 hrs.
- ¹ NUR 309 Nursing of Children (P) – 2 hrs.
- NUR 318 Pharmacology and Nursing Implications – 2 hrs. (may be taken either fall or spring semester)
- PSY 311 Principles of Abnormal Psychology – 3 hrs.

15 hours

Second Semester

- NUR 303 Research in Nursing – 3 hrs. (may be taken either fall or spring semester)
- ¹ NUR 314 Psychiatric/Mental Health Nursing (T) – 2 hrs.
- ¹ NUR 315 Psychiatric/Mental Health Nursing (P) – 2 hrs.
- ¹ NUR 316 Adult Health II: Medical-Surgical Nursing (T) – 4 hrs.
- ¹ NUR 317 Adult Health II: Medical-Surgical Nursing (P) – 2 hrs.
- Elective or BCC course – 3 hrs.

16 hours

Senior Year

First Semester

- NUR 403 Community Health Practicum (P) – 2.5 hrs. (taken either fall or spring semester when enrolled in NUR 404)

- NUR 404 Community Health Nursing (T) – 2 hrs. (may be taken either fall or spring semester)
- NUR 408 Adult Health III: Medical-Surgical Nursing (T) – 3 hrs.
- NUR 409 Senior Practicum I (P) – 2.5 hrs.
- NUR 417 Senior Practicum II (P) – 2.5 hrs. (taken if not enrolled in NUR 403 and 404)
- ENG Composition (ENG 300, 301, 304, 305, or 306) – 3 hrs.
- Elective or BCC course – 3 hrs.

16 hours

Second Semester

- NUR 410 Adult Health IV: Nursing Care of the Patient with Multi-System Challenges (T) – 3 hrs.
- NUR 413 Leadership Practicum (P) – 2.5 hrs
- NUR 414 Senior Seminar – 1 hr.
- NUR 417 Senior Practicum II (P) – 2.5 hrs. (taken if not enrolled in NUR 403 and 404)
- NUR 418 Nursing Leadership (T) – 2 hrs.
- Elective or BCC course – 3 hrs.

14 hours

Accelerated BSN

Bradley's Department of Nursing offers an accelerated undergraduate curriculum leading to a Bachelor of Science in Nursing (BSN) for students who have already completed a bachelor's degree in another discipline. The full-time, 15-month program begins each May and runs through the next August.

The 15-month program is designed to provide an intensive nursing preparation for students who hold a bachelor's degree in another discipline but would like to pursue a career in nursing. At Bradley, the study of nursing blends theory and practice to prepare graduates to successfully complete the National Council of State Boards of Nursing's NCLEX-RN examination to become a registered nurse. The program is fully accredited by the Commission on Collegiate Nursing Education (CCNE). Graduates of the program will be prepared for the beginning practice of professional nursing in a variety of settings.

Candidates for the program must hold a Bachelor's degree in a discipline other than nursing, have a minimum of a 3.0 grade point average (GPA) for the last 60 hours of college coursework, and have completed all prerequisite courses listed below prior to the start of the program in May. Transfer students enrolled in a second baccalaureate program will be automatically granted credit for all Bradley Core Curriculum requirements upon verification that their first baccalaureate was completed at a regionally accredited institution of higher education.

Prerequisites

- Anatomy and Physiology (with lab)
- Fundamentals of Chemistry (with lab)
- Organic Chemistry
- Microbiology
- Pathophysiology
- Developmental Psychology
- Abnormal Psychology
- Nutrition
- Statistics

Cohorts of students will begin the program in May Interim of each year and will move through the program following the suggested program timeline.

Summer

May Interim

- NUR 204 Health Assessment – 2 hrs.

2 hours

Summer Session 1

- NUR 200 Fundamentals of Nursing – 4 hrs.
- NUR 203 Fundamentals of Nursing Practicum – 2 hrs.

6 hours

Summer Session 2

- NUR 206 Adult Health I – 3 hrs.
- NUR 207 Adult Health I Practicum – 2 hrs.

5 hours

Fall

- NUR 303 Nursing Research – 3 hrs.
- NUR 306 Maternal-Newborn Nursing – 3 hrs.
- NUR 307 Maternal-Newborn Nursing Practicum – 2 hrs.
- NUR 308 Nursing Care of Children – 3 hrs.
- NUR 309 Nursing Care of Children Practicum – 2 hrs.
- NUR 318 Pharmacology and Nursing Implications – 2 hrs.
- **15 hours**

Spring

- NUR 314 Psych/Mental Health Nursing – 2 hrs.
- NUR 315 Psych/Mental Health Nursing Practicum – 2 hrs.
- NUR 316 Adult Health II – 4 hrs.
- NUR 317 Adult Health II Practicum – 2 hrs.
- NUR 404 Community Health Nursing – 2 hrs.
- NUR 418 Nursing Leadership – 2 hr.

14 hours

Summer

May Interim

- NUR 403 Community Health Practicum (P) – 2.5 hrs.

3.5 hours

Summer Session 1

- NUR 408 Adult Health III – 3 hrs.
- NUR 409 Senior Practicum I – 2.5 hrs.
- NUR 414 Senior Seminar – 1 hr.

5.5 hours

Summer Session 2

- NUR 410 Adult Health IV – 3 hrs.
- NUR 413 Leadership Practicum (P) – 2.5 hrs
- NUR 417 Senior Practicum II – 2.5 hrs.

8 hours

The BSN degree is awarded in August and graduates are eligible to sit for the NCLEX-RN licensure exam in September.

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Nursing Courses



Nursing Courses

NUR 100 – Introduction to the Nursing Profession (1 hour)

Students explore contemporary issues within the nursing profession. Historical development of the roles in nursing, perspectives on current delivery of health care, nursing education, nursing literature, professional licensing, ethics, and legal issues will be discussed.

NUR 163 – Health of the School Age Child (3 hours)

School health services and health education; emphasis on health promotion and prevention of health related problems. Recognition and management of common health problems of the school age child.

NUR 200 – Fundamentals of Nursing – Theory (4 hours)

Introduction to Nursing. Concepts and theories of individuals, society, and health. Nursing process as the basis for promoting wellness within the health care delivery system. Prerequisite: Nursing majors only, sophomore standing, PSY 101, SOC 100, CHM 100, 101, 162, and NUR 391.

NUR 203 – Fundamentals of Nursing – Practicum (2 hours)

Selected practicum experiences correlated with theoretical content of NUR 200 (Fundamentals of Nursing) and applied to individual's adaptive responses. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only, sophomore standing, PSY 101, SOC 100, CHM 100, 101, 162, and NUR 391.

NUR 204 – Introduction to Health Assessment (2 hours)

Students utilize previously learned communication techniques and newly learned physical assessment techniques to complete a comprehensive approach to health history and physical assessment. Significance of normal and abnormal findings is emphasized. Prerequisite: Nursing majors only; sophomore standing; NUR 200 (minimum grade of C); NUR 203 (minimum grade of S); BIO 230 (minimum grade of C); BIO 231 (minimum grade of C); FCS 202 or concurrent enrollment; PSY 303 or concurrent enrollment.

NUR 206 – Adult Health I: An Introduction to Medical-Surgical Nursing (3 hours)

An introduction to medical-surgical nursing with emphasis on health promotion and restoration. Concepts and theories of nursing care of the adult are applied to foster the adaptive response of individuals. Prerequisite: Nursing majors only, sophomore standing, BIO 230 (minimum grade of C), BIO 231 (minimum grade of C), NUR 200 (minimum grade of C), NUR 203 (minimum grade of S); FCS 202 or concurrent enrollment; PSY 303 or concurrent enrollment.

NUR 207 – Adult Health I: An Introduction to Medical-Surgical Nursing (2 hours)

Core Curr. EL

Selected practicum experiences correlated with theoretical content of NUR 206 (Adult Health 1) that foster adaptive responses. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only, sophomore standing, BIO 230 (minimum grade of C), BIO 231 (minimum grade of C), NUR 200 (minimum grade of C), NUR 203 (minimum grade of S); FCS 202 or concurrent enrollment; PSY 303 or

concurrent enrollment.

NUR 217 – Men’s Health Issues (2 hours)

Biological, epidemiological, psychological, and sociological aspects of men’s health. Specific preventive and health promotion activities for health problems.

NUR 219 – Women and Health (3 hours)

Basic scientific and sociological knowledge related to women’s health: social, emotional, and physiological components of selected health problems of women. Historical development of the health care system and social values as they relate to women and their health: evolution of health care today as it relates to women.

NUR 220 – Alcohol: Use and Abuse (3 hours)

Development of alcohol as the most widely-used drug. Psychological and physiological effects on the person; effect on the family and society; therapeutic approaches to alcohol abuse.

NUR 220 – Alcohol: Use and Abuse (3 hours)

Development of alcohol as the most widely-used drug. Psychological and physiological effects on the person; effect on the family and society; therapeutic approaches to alcohol abuse.

NUR 221 – Substance Abuse (3 hours)

Psychosocial and physiological impact of substance abuse on the individual, family, and society: self-awareness, culture, tolerance, withdrawal, and motivation.

NUR 233 – Sexually Transmitted Infections (1 hour)

Issues pertinent to common sexually transmitted infections (STIs), including the social and physical factors contributing to the current epidemic occurrence rate, prevention measures, and treatment approaches will be reviewed. Prerequisite:

NUR 300 – Conceptual Bases for Professional Nursing (theory) (3 hours)

Theories of nursing, professional roles, the nursing process, adaptation theory, nursing research, and societal influences on nursing and health. Prerequisite: Nursing majors only, current LPN or RN licensure.

NUR 303 – Research in Nursing (3 hours)

Core Curr. WI

As a consumer of research, the student evaluates published nursing research and its importance to the profession. The student examines steps of the research process in critiquing literature and writing a comprehensive review of literature. Use of the computer in nursing research correlated with study of the research process. Prerequisite: Nursing majors only, junior standing, ENG 101, Math 111 or concurrent enrollment.

NUR 306 – Maternal-Newborn Nursing – Theory (3 hours)

Theoretical overview of maternal/newborn nursing with emphasis on application of the nursing process to individuals and families. Concepts and theories of nursing care of the expanding family are discussed to foster the adaptive responses. Prerequisite: Nursing majors only; junior standing; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S); FCS 202; PSY 303; PSY 311 or concurrent enrollment; BIO 202 (minimum grade of C); BIO 232 & 233 (minimum grade of C).

NUR 307 – Maternal-Newborn Nursing – Practicum (2 hours)

Core Curr. EL

Selected practicum experiences correlated with theoretical content of NUR 306 that foster patient/client adaptive responses. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only; junior standing; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S); FCS 202; PSY 303; PSY 311 or concurrent enrollment; BIO 202 (minimum grade of C); BIO 232 & 233 (minimum grade of C).

NUR 308 – Nursing of Children (Theory) (3 hours)

Nursing care of the child with emphasis on caring for the infant, toddler, child, adolescent, and family with acute and chronic disease. Growth and development, health promotion, and disease prevention are emphasized. Prerequisite: Nursing majors only; junior standing; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S); FCS 202; PSY 303; PSY 311 or concurrent enrollment; BIO 202 (minimum grade of C); BIO 232 & 233 (minimum grade of C).

NUR 309 – Nursing of Children (Practicum) (2 hours)

Core Curr. EL

Selected practicum experiences correlated with theoretical content of NUR 308. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only; junior standing; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S); FCS 202; PSY 303; PSY 311 or concurrent enrollment; BIO 202 (minimum grade of C); BIO 232 & 233 (minimum grade of C).

NUR 310 – Health Assessment (2 hours)

Performance of a complete health assessment incorporating a health history, with faculty supervision. Prerequisite: Nursing majors only, Illinois LPN or RN licensure, or consent of department chair.

NUR 314 – Psychiatric/Mental Health Nursing (Theory) (2 hours)

Theoretical overview of psychiatric/mental health nursing with emphasis on application of the nursing process to individuals, families, and the community. Concepts and theories of nursing care of the individual and family with psychiatric disorders are discussed to foster the adaptive response. Prerequisite: Nursing majors only, junior standing; PSY 311 or concurrent enrollment; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S).

NUR 315 – Psychiatric/Mental Health Nursing (Practicum) (2 hours)**Core Curr. EL**

Application of psychiatric/mental health nursing principles in health care settings. Concepts and theories of nursing care of the client and family with psychiatric disorders are utilized to foster the adaptive response. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only; junior standing; PSY 311 or concurrent enrollment; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S).

NUR 316 – Adult Health II: Medical-Surgical Nursing (Theory) (4 hours)

Medical-surgical nursing with emphasis on selected physiologic systems. Concepts and theories of nursing care of the individual and family are applied to foster the adaptive response. Prerequisite: Nursing majors only; junior standing; PSY 311 or concurrent enrollment; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S); NUR 318 or concurrent enrollment.

NUR 317 – Adult Health II: Medical-Surgical Nursing (Practicum) (2 hours)**Core Curr. EL**

Selected practicum experiences correlated with theoretical content of NUR 316 that foster adaptive responses. Satisfactory/Unsatisfactory Prerequisite: Nursing majors only; junior standing; PSY 311 or concurrent enrollment; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (minimum grade of S); NUR 318 or concurrent enrollment.

NUR 318 – Pharmacology and Nursing Implications (2 hours)

Introduction to pharmacology: nursing process and drug therapy; life span considerations; legal, ethical, and cultural issues; and patient education. Prerequisite: Nursing majors only; junior standing; NUR 204 (minimum grade of C); NUR 206 (minimum grade of C); NUR 207 (Minimum grade of S).

NUR 353 – Aging: A Life Experience (3 hours)

Attitudes about the aged, historical perspectives, transcultural concepts, health problems and health care, methods of coping with growing old, and prospects for the future. Practical experiences promote examination of students' own attitudes about the aged and growing old.

NUR 353 – Aging: A Life Experience (3 hours)

Attitudes about the aged, historical perspectives, transcultural concepts, health problems and health care, methods of coping with growing old, and prospects for the future. Practical experiences promote examination of students' own attitudes about the aged and growing old.

NUR 363 – Introduction to Personal and Community Health (3 hours)

Introduction to health concepts and practices which affect individuals and groups in society.

NUR 372 – Safety and Emergency Care (3 hours)

Principles and techniques of emergency care for common injuries and illnesses. Environmental needs of individuals at various levels of maturity. Cardiopulmonary Resuscitation and First Aid cards awarded upon satisfactory completion.

NUR 376 – Advanced Concepts in Health (3 hours)

Complex health problems and issues in contemporary society; various concepts, models, theories, and determinants of health. Multi-disciplinary approach for application to individual and professional situations. Prerequisite: NUR 263 or consent of instructor.

NUR 391 – Medical Terminology (1 hour)

Terminology used in all areas of medical and paramedical specialties. Emphasis on word building, techniques, and understanding typical medical reports.

NUR 403 – Community Health Nursing – Practicum (2.5 hours)**Core Curr. EL**

Selected community practicum experiences will be correlated with theoretical content of NUR 404. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only, senior standing; NUR 314 (minimum grade of C); NUR 315 (minimum grade of S); NUR 316 (minimum grade of C); NUR 317 (minimum grade of S); NUR 318 (minimum grade of C).

NUR 404 – Community Health Nursing – Theory (2 hours)

Explores the role of the nurse in community settings. Applies principles of epidemiology, health promotion, and disease prevention to nursing practice. Examines core functions of public health nursing, essential services, and population-based practice. Prerequisite: Nursing majors only, senior standing, NUR 316 (minimum grade of C); NUR 317 (minimum grade of S); NUR 318 (minimum grade of

C); or RN to MSN Major

NUR 405 – Cooperative Education in Nursing (Theory) (0-1 hours)

Theory for nursing care of clients in a variety of health care settings. Prerequisite: Nursing majors only; senior standing; 2.8 overall GPA; consent of co-op Nursing Advisor; and successful completion of co-op interview.

NUR 406 – Cooperative Education in Nursing (Theory) (0-1 hours)

Theory for nursing care of clients in a variety of health care settings. Prerequisite: Nursing majors only; senior standing; 2.8 overall GPA; consent of co-op Nursing Advisor; and successful completion of co-op interview.

NUR 407 – Community Health Practicum RN-MSN (0-1 hours)

Selected community practicum experiences will be correlated with theoretical content of NUR 404. Prerequisite: RN-MSN student; NUR 404 or concurrent enrollment

NUR 408 – Adult Health III: Medical-Surgical Nursing (Theory) (3 hours)

Medical-surgical nursing with emphasis on selected physiologic systems. Concepts and theories of nursing care of the individual, family, and community are applied to foster the adaptive response. Prerequisite: Nursing majors only; senior standing, NUR 316 (minimum grade of C); NUR 317 (minimum grade of S); NUR 318 (minimum grade of C)

NUR 409 – Senior Practicum I (2.5 hours)

Core Curr. EL

Selected practicum experiences, correlated with theoretical content of NUR 408, that foster adaptive responses. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only; senior standing; NUR 314 (minimum grade of C); NUR 315 (minimum grade of S); NUR 316 (minimum grade of C); NUR 317 (minimum grade of S); NUR 318 (minimum grade of C)

NUR 410 – Adult Health IV: Nursing Care of the Patient with Multi-System Challenges (T) (3 hours)

Core Curr. WI

Medical-Surgical nursing with emphasis on caring for the patient with multi-system challenges. Concepts and theories of nursing care of the individual, family, and community are applied to foster the adaptive responses. Prerequisite: Nursing majors only; senior standing, NUR 404 (minimum grade of C) or concurrent enrollment, NUR 408 (minimum grade of C); NUR 409 (minimum grade of S).

NUR 411 – Senior Practicum I Medical Surgical (2.5 hours)

Core Curr. EL

Selected practicum experiences correlated with theoretical content of NUR 408 that foster adaptive responses. To be taken concurrently with NUR 409 when not enrolled in NUR 404 and NUR 403. Satisfactory/Unsatisfactory Prerequisite: Nursing majors only; senior standing; NUR 314 (minimum grade of C); NUR 315 (minimum grade of S); NUR 316 (minimum grade of C); NUR 317 (minimum grade of S); NUR 318 (minimum grade of C)

NUR 413 – Leadership Practicum (2.5 hours)

Core Curr. WI,EL

Selected practicum experiences correlate with theoretical content of NUR 418 that foster adaptive responses of clients in complex health care settings. Emphasis is on application of leadership and management principles. Satisfactory/Unsatisfactory Prerequisite: Nursing majors only; senior standing; NUR 404 (minimum grade of C) or concurrent enrollment; NUR 403 (minimum grade of S) or concurrent enrollment; NUR 408 (minimum grade of C); NUR 409 and / or NUR 411 (minimum grade of S)

NUR 414 – Senior Seminar: Preparation for Professional Nursing (1 hour)

Emphasis on NCLEX preparation, including the NCLEX-RN test plan, test taking skills, critical thinking skills, and computer usage skills for test-taking. Prerequisite: Nursing majors only, senior standing.

NUR 415 – Cooperative Education in Nursing (0-2 hours)

In-depth practicum in a variety of health care settings, integrated with theory. Prerequisite: Nursing majors only; senior standing; 2.8 overall GPA; consent of co-op Nursing Advisor; and successful completion of co-op interview.

NUR 416 – Cooperative Education in Nursing (Practicum) (0-2 hours)

In-depth practicum in a variety of health care settings, integrated with theory. Prerequisite: Nursing majors only; senior standing; 2.8 overall GPA; consent of co-op Nursing Advisor; and successful completion of co-op interview.

NUR 417 – Senior Practicum II (2.5 hours)

Core Curr. EL

Selected practicum experiences correlated with theoretical content of NUR 410 that foster adaptive responses. Satisfactory/Unsatisfactory. Prerequisite: Nursing majors only; NUR 408, NUR 409 or 411.

NUR 418 – Contemporary Nursing Leadership (2 hours)

Emphasis is on application of leadership and management principles, healthcare informatics, and the nurse's role in the legislative process to facilitate change in nursing practice. Prerequisite: Nursing majors only; senior standing; NUR 303 (minimum grade of C).

NUR 419 – Independent Studies in Nursing (1-3 hours)

Individual study addressing special needs and interests: selected readings, observations, and conferences. Prerequisite: Nursing majors only; senior standing; NUR 303 (minimum grade of C); consent of advisor and department chair.

NUR 420 – Independent Studies in Nursing (1-3 hours)

Individual study addressing special needs and interests: selected readings, observations, and conferences. Prerequisite: Nursing majors only; senior standing; NUR 303 (minimum grade of C); consent of advisor and department chair.

NUR 421 – Role Exploration in Professional Nursing (2 hours)

Individual study addressing special needs and interests: selected readings, observations, and conferences. Prerequisite: Nursing majors only, senior standing; NUR 408 (minimum grade of C) or concurrent enrollment; NUR 409 (minimum grade of C) or concurrent enrollment; 3.0 GPA (minimum); consent of instructor.

NUR 425 – Clinical Topics in Nursing (1-4 hours)

Discussions, laboratory, and clinical experiences will be provided for nursing students to maintain clinical knowledge and skills. This variable credit course may be taken more than once for a maximum of 4 semester hours. Satisfactory/Unsatisfactory Prerequisite: Nursing majors only

NUR 433 – International Health and Nursing (3 hours)

Study of health and nursing in another country: nursing and health organizations, educational programs, hospitals. Seminars in comparative health and nursing practices in the United States. Cross-listed as NUR 533.

NUR 501 – Nursing Theories: Analysis and Development (3 hours)

Analysis of theoretical models. Emphasis on assessment and implications of models for advanced professional nursing practice and research. Prerequisite: Nursing major.

NUR 505 – Leadership in the Health Care System (3 hours)

Leadership theory: role of the nurse as a leader, colleague, and consultant in health care systems. Prerequisite: Nursing major.

NUR 510 – Legal and Ethical Issues in Healthcare (3 hours)

Legal and ethical issues that influence the practice of advanced nursing and leadership in health care systems. Critical assessment of the ethical implications of law and public policy in health care. Case studies. Prerequisite: Nursing major

NUR 526 – Evidence Based Practice (3 hours)

Allows the learner to explore theories related to the generation of evidence, Research Utilization (RU), and Evidence Based Practice (EBP). Issues from practice areas are identified, developed, and refined into a researchable project. Prerequisite: Nursing majors only

NUR 533 – International Health and Nursing (3 hours)

Study of health care systems and nursing in a foreign country in selected hospitals, health care settings, and universities. Establishing health care professional and research networks. Cross-listed as NUR 433. Not open to students with credit in NUR 433.

NUR 600 – Advanced Health Assessment (3 hours)

Systematic method for collecting data used in holistic health assessment of persons throughout the lifespan and in various healthcare settings. Emphasis is placed on interviewing techniques for history taking and advanced physical assessment skills. Prerequisite: Nursing major

NUR 615 – Health Informatics (3 hours)

Introduces the learner to concepts in health informatics and provides the foundation for practice in the healthcare technology field. Explores healthcare data, clinical information management systems, security, personal productivity applications, consumer informatics, legal issues, and professional skills, knowledge, and certifications related to health informatics. Prerequisite: Nursing major

NUR 625 – DNP Practice Seminar I (1 hour)

Provides for a student-initiated endeavor culminating in a scholarly proposal. The project will provide an opportunity for leadership in healthcare policy resulting in safe and effective nursing and healthcare practice. An emphasis on healthcare financing, regulation, and/or delivery is required. Students will choose a clinical setting to assess the needs of healthcare providers, consumers, and stakeholders in the development of the proposal. Student will choose and collaborate with a faculty project advisor and committee of scholars and experts in the field. Prerequisite: DNP Major

NUR 630 – Nursing Administration I (Theory) (3 hours)

Theories, concepts, and principles from nursing and related disciplines as a foundation for nursing administration. Theories of change, role, adaptation, need, and leadership as related to nursing management. Prerequisite: Nursing major Corequisite: NUR 631 or consent of department chair

NUR 631 – Nursing Administration I (Practicum) (3 hours)

Practicum applying concepts, theories, and principles from NUR 630. Use of relevant research findings. Advanced practice in management. Prerequisite: Nursing major Corequisite: NUR 630 or consent of department chair.

NUR 632 – Nursing Administration II (Theory) (3 hours)

Advanced concepts and principles relevant to external and internal nursing organizational situations including power, authority, and politics. Review of various organizational patterns and their relationship to nursing personnel management, budgeting, public relations, leadership style, and research. Prerequisite: Nursing major Corequisite: NUR 633 or consent of department chair

NUR 633 – Nursing Administration II (Practicum) (3 hours)

Practicum applying advanced concepts, theories, and principles from NUR 632. Use of management skills such as staffing, budgeting, and developing positive public relations. CoRequisite: NUR 632 or consent of department chair.

NUR 638 – Principles of FNP Practice I: Acute/Chronic (3 hours)

Basic principles and concepts of the advanced nurse practitioner's roles and responsibilities in caring for adult clients with select acute and chronic illness. Prerequisite: Family Nurse Practitioners majors only

NUR 639 – Healthcare Clinical Practicum I (3 hours)

This practicum course focuses on the delivery of advanced nursing care to adult clients with acute and chronic disorders. Various practicum settings with diverse populations will be utilized for practicum experiences. Prerequisite: Family Nurse Practitioners major

NUR 640 – Healthcare Policy (3 hours)

Explores health policy development and implementation and its impact on healthcare regulation, delivery, and finance. There is a focus on wellness and promotion of health for local, national, and worldwide health initiatives. Students will define healthcare provider roles in health promotion, healthcare delivery, and quality improvement through activities related to health policy reform and finance.

Prerequisite: Nursing major

NUR 642 – Principles of FNP Practice II: Acute/Chronic (3 hours)

Basic principles and concepts of advanced nurse practitioner's roles and responsibilities of caring for adult clients with acute and chronic disorders. Prerequisite: Family Nurse Practitioners major

NUR 643 – Healthcare Clinical Practicum II (3 hours)

This practicum course focuses on the delivery of advanced nursing care to adult clients with acute and chronic disorders. Various practicum settings with diverse populations will be utilized for practicum experiences. Prerequisite: Family Nurse Practitioners majors only

NUR 644 – Principles of FNP Practice III: Women's Health (3 hours)

Basic principles and concepts of the advanced nurse practitioner's roles and responsibilities in caring for women from adolescence through adulthood. Prerequisite: Family Nurse Practitioners majors only

NUR 645 – Healthcare Clinical Practicum III Women's Health (3 hours)

This practicum course focuses on the delivery of advanced nursing care to women from adolescence through adulthood. Various practicum settings with diverse populations will be utilized for practicum experiences. Prerequisite: Family Nurse Practitioner majors only

NUR 646 – Principles of FNP Practice IV: Children (3 hours)

Basic principles and concepts of the advanced nurse practitioner's roles and responsibilities in caring for infants, children, and adolescents. Prerequisite: Family Nurse Practitioners majors only

NUR 647 – Healthcare Clinical Practicum IV Children (3 hours)

This practicum course focuses on the delivery of advanced nursing care to infants, children, and adolescents. Various practicum settings with diverse populations will be utilized for practicum. Prerequisite: Family Nurse Practitioners majors only

NUR 648 – Principles of FNP Practice V: Aging Adult Populations (3 hours)

Basic principles and concepts of the advanced nurse practitioner's roles and responsibilities in caring for the aging adult clients. Prerequisite: Family Nurse Practitioners majors only

NUR 649 – Healthcare Clinical Practicum V Aging Adult (3 hours)

This practicum course focuses on the delivery of advanced nursing care to aging adult clients. Various practicum settings with diverse populations will be utilized for practicum experiences. Prerequisite: Family Nurse Practitioners majors only

NUR 651 – Advanced Pharmacology I (3 hours)

Provides the student with the knowledge and skills to assess, diagnose, and pharmacologically manage the treatment of common health problems in a safe, high-quality, and cost-effective manner. Prerequisite: Nursing major

NUR 652 – Advanced Pharmacology II (3 hours)

Students study and apply general principles of pharmacokinetics, pharmacodynamics, and pharmacotherapeutics of medications used in areas of advanced practice nursing specialties. Further in-depth study will focus on the pharmacologic selection of client populations exhibiting various coexisting disease and pathophysiologies. Prerequisite: Nursing major; NUR 651

NUR 655 – Diagnostic Reasoning (3 hours)

This course focuses on application of content from advanced health assessment by teaching diagnostic reasoning skills needed to assess and manage the care of clients across the continuum. Evaluation of diagnostic studies to formulate differential diagnoses and thereafter develop and/or update clinical treatment plans for clients will be integrated into course content

NUR 656 – Management of Acutely Ill Adults and Geriatrics I (6 hours)

This course focuses on the clinical foundation of advanced practice management of adolescents, adults, and geriatric clients with acute and chronic health problems. Emphasis is placed on diagnosis and management. Students utilize clinical practice guidelines to ensure safe evidence-based care. The clinical focus (provided in a variety of direct patient care settings) is on the role of the acute care nurse practitioner working with a multidisciplinary team across settings to facilitate and accelerate the patient's return to optimal health. Students will register for 6 semester hours, completing 200 clinical hours at selected facilities under the guidance of the clinical preceptor. Prerequisite: BIO 526, NUR 600, NUR 651

NUR 657 – Management of Acutely Ill Adults and Geriatrics II (6 hours)

This course continues the focus on the clinical foundation of advanced practice nursing management of adolescents, adults, and geriatric clients with acute and chronic health problems. Emphasis is placed on the diagnosis and management. Students utilize clinical practice guidelines to ensure safe evidence-based care. The clinical focus (provided in a variety of direct patient care settings) is on the role of the acute care nurse practitioner working with a multidisciplinary team across settings to facilitate and accelerate the patient's return to optimal health. Students will register for 6 semester hours, completing 200 clinical hours at selected facilities under the guidance of the clinical preceptor. Prerequisite: BIO 526, NUR 651, NUR 600, NUR 656

NUR 658 – Management of Acutely Ill Adults and Geriatrics III (6 hours)

This course continues the focus on the clinical foundation of advanced practice nursing management of adolescents, adults, and geriatric clients with acute and chronic health problems. Emphasis is placed on the diagnosis and management. Students utilize clinical practice guidelines to ensure safe evidence-based care. The clinical focus (provided in a variety of direct patient care settings) is on the role of the acute care nurse practitioner working with a multidisciplinary team across settings to facilitate and accelerate the patient's return to optimal health. Students will register for 6 semester hours, completing 200 clinical hours at selected facilities under the guidance of the clinical preceptor. Prerequisite: BIO 526, NUR 600, NUR 651, NUR 656, NUR 657

NUR 660 – Seminar in Nursing Education (3 hours)

Application of educational theories and techniques for the nurse educator. Prerequisite: Nursing major

NUR 661 – Nursing Education Practicum I (3 hours)

Application of nursing educational theories, principles, and techniques in the classroom and clinical settings. Prerequisite: Nursing major; concurrent enrollment in NUR 660

NUR 662 – Nursing Education Practicum II (3 hours)

Application of nursing educational theories, principles, and techniques in the staff development setting. Prerequisite: Nursing major; NUR 661 Corequisite: NUR 660, NUR 661 or consent of department chair.

NUR 666 – Management of Adolescents, Adults, and Geriatrics I (6 hours)

This course focuses on the evaluation, diagnosis, and comprehensive care management of primary care needs of adolescents, adults and geriatric clients. The clinical component focuses on the role of nurse practitioners in primary care settings including comprehensive physical assessment, formulation of differential diagnoses, and evidenced-based management plans for acute and chronic illnesses as well as health promotion, health restoration, and disease prevention strategies. Interdisciplinary clinical experiences and collaborative practice are emphasized. Students will register for 6 semester hours, completing 200 clinical hours at selected facilities under the guidance of the clinical preceptor. Prerequisite: BIO 526, NUR 651, NUR 600

NUR 667 – Management of Adolescents, Adults and Geriatrics II (6 hours)

This course continues to focus on the evaluation, diagnosis, and comprehensive care management of primary care needs of adolescents, adults and geriatric clients. The clinical component focuses on the role of nurse practitioners in primary care settings including comprehensive physical assessment, formulation of differential diagnoses, and evidenced-based management plans for acute and chronic illnesses as well as health promotion, health restoration, and disease prevention strategies. Interdisciplinary clinical experiences and collaborative practice are emphasized. Students will register for 6 semester hours, completing 200 clinical hours at selected facilities under the guidance of the clinical preceptor. Prerequisite: BIO 526, NUR 651, NUR 600, NUR 666

NUR 668 – Management of Adolescents, Adults, & Geriatrics III (6 hours)

This course continues to focus on the evaluation, diagnosis, and comprehensive care management of primary care needs of adolescents, adults and geriatric clients. The clinical component focuses on the role of nurse practitioners in primary care settings including comprehensive physical assessment, formulation of differential diagnoses, and evidenced-based management plans for acute and chronic illnesses as well as health promotion, health restoration, and disease prevention strategies. Interdisciplinary clinical experiences and collaborative practice are emphasized. Students will register for 6 semester hours, completing 200 clinical hours at selected facilities under the guidance of the clinical preceptor. Prerequisite: BIO 526, NUR 651, NUR 600, NUR 666, NUR 667

NUR 676 – Primary Care Acute Conditions Across the Lifespan I (6 hours)

This practicum course focuses on the delivery of advanced nursing care to clients with acute disorders across various practicum settings. Diverse populations will be utilized for practicum experiences. Students will register for 6 semester hours, completing 100 clinical hours at selected facilities under the guidance of the clinical preceptor. This practicum is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and evidence-based treatment. Prerequisite: BIO 526, NUR 600, NUR 651

NUR 677 – Primary Care Chronic Conditions Across the Lifespan II II (6 hours)

This practicum course focuses on the delivery of advanced nursing care to clients with chronic disorders in practicum settings. Various practicum settings with diverse populations will be utilized for practicum experiences. Students will register for 6 semester hours, completing 150 clinical hours at selected facilities under the guidance of the clinical preceptor. This practicum is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and evidence-based treatment. Prerequisite: NUR 676

NUR 678 – Primary Care Across the Lifespan III (6 hours)

This practicum course focuses on the delivery of advanced nursing care to women from adolescence through adulthood and infants, children, and adolescents in practicum settings. Various practicum settings with diverse populations will be utilized for practicum experiences. Students will register for 6 semester hours, completing 200 clinical hours at selected facilities under the guidance of the clinical preceptor. This practicum is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and evidence-based treatment. Prerequisite: NUR 677

NUR 679 – Primary Care Immersion IV (6 hours)

This practicum course focuses on the delivery of advanced nursing care to clients across the lifespan with acute and chronic disorders in practicum settings. Various practicum settings with diverse populations will be utilized for practicum experiences. Students will register for 6 semester hours, completing 300 clinical hours at selected facilities under the guidance of the clinical preceptor. This practicum is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and evidence-based treatment. Prerequisite: NUR 678

NUR 680 – Psychiatric Mental Health Nurse Practitioner (PMHNP) Roles Roles (3 hours)

This course provides an overview of PMHNP roles with an emphasis on the provision of ethical, evidence-based, and person-centered care in a variety of settings, including clinical practice, academia and population health. The course will emphasize utilization of communication technology to address health care inequities and gaps through telemedicine. Students will examine the importance of interprofessional collaboration and teamwork, as well as professional development, leadership, and personal wellness. Prerequisite: NUR 600, NUR 651 and BIO 526 Corequisite: NUR 682, NUR 684

NUR 682 – Psychopharmacology and Neurophysiology for the PMHNP (3 hours)

This course provides the opportunity to deepen the learner's understanding of neurophysiology as it relates to the underpinnings of psychiatric disease and related treatments. The learner will develop the skills necessary to utilize psychopharmacology to manage the treatment of common psychiatric health problems in a safe, high-quality, and cost-effective manner. Prerequisite: BIO 526, NUR 600, NUR 651 Corequisite: NUR 680, NUR 684

NUR 684 – Advanced Psychiatric Interviewing and Differential Diagnosis (3 hours)

This practicum and theory course focuses on the development of advanced psychiatric interviewing skills necessary to assess clients across the lifespan. Students will register for 3 semester hours completing 50 clinical simulation hours under the guidance of the practicum instructor. This practicum and theory course is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and interprofessional collaboration. Students are able to develop the skills to begin diagnosing psychiatric disorders in a culturally sensitive, evidence-based manner. Prerequisite: BIO 526, NUR 600, NUR 651 Corequisite: NUR 680, NUR 682

NUR 685 – PMHNP Continuum of Care Across the Lifespan and Practicum I (6 hours)

This practicum and theory course focuses on the delivery of advanced nursing care to clients with acute and chronic psychiatric disorders across various settings. Diverse populations will be utilized for practicum experiences. Students will register for 6 semester hours, completing 150 clinical hours at selected facilities under the guidance of the clinical preceptor. This practicum and theory course is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and evidence-based treatment, including psychotherapeutic interventions. Prerequisite: BIO 526, NUR 680, NUR 682, NUR 684

NUR 686 – PMHNP Continuum of Care Across the Lifespan and Practicum II (6 hours)

This practicum and theory course focuses on the delivery of advanced nursing care to clients with acute and chronic psychiatric disorders across various practicum settings. Diverse populations will be utilized for practicum experiences. Students will register for 6 semester hours, completing 250 practicum hours at selected facilities under the guidance of the clinical preceptor. This practicum and theory course is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and evidence-based treatment, including psychotherapeutic interventions. Prerequisite: NUR 685

NUR 687 – PMHNP Sub-Specialty Focus and Practicum III (4 hours)

This practicum and theory course focuses on special considerations in the delivery of advanced nursing care to clients across the various PMHNP sub-specialty settings, including forensics, consult liaison, child/ adolescent, and geriatric psychiatry. Diverse

populations will be utilized for practicum experiences. Students will register for 4 semester hours, completing 150 practicum hours at selected facilities under the guidance of the clinical preceptor. This practicum and theory course is established to further develop competency in the areas but not limited to: history taking, assessing, developing differential diagnoses, and evidence-based treatment, including psychotherapeutic interventions. Prerequisite: NUR 686

NUR 688 – Professional Aspects of the PMHNP (2 hours)

Designed for the psychiatric/mental health nurse to explore the professional aspects and challenges associated with advanced practice nursing, including legal, regulatory and reimbursement issues. Tailored to meet the needs of PMHNPs entering practice including a focus upon organizational, systems, and population strategies. Prerequisite: NUR 686

NUR 689 – Independent Research (1-6 hours)

Readings, research, or project complementing the student's program of study. May be repeated for a maximum of six hours. Prerequisite: consent of instructor.

NUR 690 – Professional Aspects of Advanced Nursing Practice (1-2 hours)

Designed for the nurse to explore the professional aspects and challenges associated with advanced practice nursing. Tailored to meet the needs of a variety of specialties including a focus upon organizational, systems, and population strategies. Prerequisite: Nursing major

NUR 697 – Capstone Project in Nursing (0-3 hours)

A student-initiated endeavor that culminates in a scholarly project, which synthesizes advanced practice knowledge and skills to address a current nursing practice issue related to chosen advanced practice field of study. May be repeated for a maximum of three semester hours. Prerequisite: Nursing major

NUR 699 – Topics in Advanced Healthcare Practice (1 hour)

This course will explore emerging topics relevant to the students seeking and/or collaborating with individuals seeking advanced practice healthcare degrees. Focusing on interdisciplinary concepts and subject matter, this course will help students gain competence and grow professionally in ways that may be applied to their specific field or practice areas. May be repeated for a maximum of 3 credit hours. Prerequisite: Graduate Student Standing.

NUR 700 – Theoretical Foundations of Nursing Science (3 hours)

Provides a theoretical analysis of nursing and the natural and social sciences for application as frameworks for research, practice, education, and quality healthcare delivery. Prerequisite: DNP Major

NUR 703 – Health Promotion in Populations (3 hours)

Focuses on core concepts in health and health promotion for groups, communities, and populations. There are two inter-related goals for this course. (1) Provide students with a basic understanding of the principles and determinants of population health with an emphasis on the tools provided by basic epidemiology for understanding health in populations. (2) Provide students with a comprehensive understanding of the steps needed to develop, implement, and evaluate population-based health promotion and illness prevention programs. Prerequisite: Nursing Majors only or consent of instructor

NUR 705 – Research Design and Statistical Methods (3 hours)

Examination of research study design/methodology and application and interpretation of descriptive and inferential statistical methods appropriate for critical appraisal of evidence. Use of analytic software for data management and preliminary analysis prepares students to assess quantitative and qualitative data, understand research methodology, and critically evaluate research findings. Prerequisite: Admission to the NUR DNP Program or approval by the lead instructor.

NUR 720 – Methods in Evidence Based Practice (3 hours)

Introduces the learner to theories related to Research Utilization (RU) and Evidence-based Practice (EBP) and provides opportunities to explore issues and refine questions related to quality and cost-effective healthcare delivery for the best client outcomes. Methods to collect evidence, plan changes for the transformation of practice, and evaluate quality improvement methods will be discussed. Emphasis on best practice based on evidence and preferences of the client. Prerequisite: DNP Major

NUR 725 – DNP Practice Seminar II (2 hours)

Provides for a student-initiated endeavor culminating in implementation of a scholarly proposal. The project will provide an opportunity for leadership in healthcare policy resulting in safe and effective nursing and healthcare practice. Students will refine their proposals and implement their projects in the chosen clinical setting to meet the needs of healthcare providers, consumers, and stakeholders by assuring safe and cost-effective care. Students will demonstrate leadership in the practice setting and serve in the role of educator, consultant, and change agent. Prerequisite: DNP Major

NUR 730 – Ethics in Advanced Practice Nursing (3 hours)

Provides participants with opportunities to critically analyze ethical issues that arise in practice, research, education, and administration and their intersection with one's personal values. Discussions will also include the legal obligations which freq Prerequisite: DNP Majors only

NUR 735 – Leadership in Advance Nursing Practice (3 hours)

Emphasizes organizational and system leadership strategies for the advanced practice nurse with an emphasis on productivity in emerging practice environment. Improvement of health outcomes, patient safety, and inter-professional collaboration will be included. Prerequisite: Doctor of Nursing Practice majors only

NUR 740 – Healthcare Policy and Ethics in Advanced Practice Nursing (3 hours)

This course examines the political and ethical decisions and issues that shape the organization, financing, and implementation of health care services and delivery systems at the local, national and global levels. Students will have opportunities to critically analyze ethical, social and political issues that affect the provision of healthcare practice, research, education, and administration and how each intersects with one's personal values. Students will define the APNs role in health promotion, healthcare delivery, and quality improvement through activities related to health policy reform. Health policy development and implementation and its impact on healthcare regulation, delivery and finance will also be explored. Prerequisite: Admission to the NUR DNP Program or approval by the lead instructor.

NUR 752 – Advanced Health Informatics (3 hours)

This course examines the current trends in health informatics and data analytic methods. It provides opportunities for the advanced practice nurse (APN) to apply theoretical concepts of informatics to individual and aggregate level health information. Emphasis is placed on the APN's leadership role in the use of health information to improve health care delivery and outcomes. Prerequisite: DNP Major

NUR 826 – DNP Practice Seminar III-A (1.5 hours)

Provides for a student-initiated endeavor culminating in implementation, evaluation, and dissemination of a scholarly project. The project will provide opportunities for leadership and advocacy in healthcare policy development. Students will implement, evaluate, and disseminate their project in the chosen clinical setting to meet the needs of healthcare providers, consumers, and stakeholders in assuring safe and cost-effective care. Students will demonstrate leadership in the dissemination of project findings through publication and presentation. Prerequisite: DNP Major

NUR 827 – DNP Practice Seminar III -B (1.5 hours)

Provides for a student-initiated endeavor culminating in implementation, evaluation, and dissemination of a scholarly project. The project will provide opportunities for leadership and advocacy in healthcare policy development. Students will implement, evaluate, and disseminate their project in the chosen clinical setting to meet the needs of healthcare providers, consumers, and stakeholders in assuring safe and cost-effective care. Students will demonstrate leadership in the dissemination of project findings through publication and presentation. Prerequisite: DNP Major

NUR 840 – DNP Clinical Practice (1-4 hours)

Designed for the nurse to complete practicum hours required to achieve the practice doctorate. Tailored to meet the needs of a variety of specialty areas depending upon the educational backgrounds of participants. Students enrolled in this course will implement professional and leadership roles of the practice doctorate in their specialty areas. May be repeated for a maximum of 15 semester hours. Prerequisite: Doctor of Nursing Practice majors only

NUR 841 – DNP Project I (3 hours)

This course, the first of a four-course series, provides the DNP student with mentored opportunities to plan, implement, and evaluate a multifaceted DNP project built upon the DNP Essentials. Each course builds on the knowledge, skills, and practice expertise of the DNP student and culminates in the completion of the DNP project. The focus of this course is on the identification and planning components of the written DNP project proposal. Students will register for 3 semester hours, completing 50 practicum hours in which the DNP student will seek opportunities, with the guidance of their mentor, to hone skills within the DNP Essentials. Prerequisite: NUR 705, NUR 720, NUR 735

NUR 842 – DNP Project II (3 hours)

This course, the second of a four-course series, provides the DNP student with mentored opportunities to plan, implement, and evaluate a multifaceted DNP project built upon the DNP Essentials. Each course builds on the knowledge, skills, and practice expertise of the DNP student and culminates in the completion of the DNP project. The focus of this course is on the completion of a written DNP project proposal and the application and approval of Institutional Review Board or Committee on the Use of Human Subjects in Research of the DNP project. Students will register for 3 semester hours, completing 50 practicum hours in which the DNP student will seek opportunities, with the guidance of their mentor, to hone skills within the Prerequisite: NUR 841

NUR 843 – DNP Project III (3 hours)

This course, the third course in a four-course series, provides the DNP student with mentored opportunities to plan, implement, and evaluate a multifaceted DNP project built upon the DNP Essentials. Each course builds on the knowledge, skills, and practice expertise of the DNP student, culminating in the completion of the DNP project. The focus of this course is on project implementation and evaluation of the DNP project. Students will register for 3 semester hours, completing 125 practicum hours in which the DNP student will seek opportunities, with the guidance of their mentor, to hone skills within the DNP Essentials. Prerequisite: NUR 842

NUR 844 – DNP Project IV (3 hours)

This course, the fourth course in a four course series, provides the DNP student with mentored opportunities to plan, implement, and evaluate a multifaceted DNP project built upon the DNP Essentials. Each course builds on the knowledge, skills and practice expertise

of the DNP student, culminating in the completion of the DNP project paper. The DNP project culminates in a final oral presentation and dissemination of the DNP project course. Students will register for 3 semester hours, completing 75 practicum hours in which the DNP student will seek opportunities, with the guidance of their mentor, to hone skills within the DNP Essentials. Prerequisite: NUR 843

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Caterpillar College of Engineering and Technology



Caterpillar College of Engineering and Technology

Mission and Objectives

Our mission is to educate and graduate well-integrated individuals who possess the technical and social competence and confidence to succeed in professional practice and advanced education, to be life-long learners, and to exercise responsible citizenship. To accomplish this mission we have established the following objectives:

Our graduates should have:

1. sufficient knowledge and understanding of the appropriate scientific and mathematical fundamentals upon which to develop their professional skills;
2. skill in integrating knowledge and applying this understanding to professionally define problems and produce effective solutions;
3. effective written, oral, and graphic communication skills;
4. awareness and understanding of diverse cultures and social conditions, past and present, in which their professional and personal endeavors will take place;
5. commitment to continuing professional growth and the ethical development of their chosen discipline.

Objectives of the undergraduate curricula focus on the attainment of professional competence, the achievement of intellectual maturity and personal growth, and the development of social responsibility. All the College's programs seek to facilitate creative communication between technologists, engineers, and scientists and those educated in the liberal arts and other disciplines. The College's courses provide the basic bodies of knowledge with which the methods and philosophies of engineering and engineering technology are developed. The education stresses professionalism both for today and for the future.

Curricula

The Caterpillar College of Engineering and Technology offers undergraduate programs of study leading to baccalaureate degrees as follows:

- **Civil Engineering** B.S. in Civil Engineering
- **Construction** B.S. in Construction
- **Electrical Engineering** B.S. in Electrical Engineering
(available with a computer option or a robotics & controls concentration)
- **Industrial Engineering** B.S. in Industrial Engineering
(available with engineering management or supply chain concentrations)
- **Manufacturing Engineering** B.S. in Manufacturing Engineering

(available with lean manufacturing or process engineering concentrations)

- **Manufacturing Engineering Technology** B.S. in Manufacturing Engineering Technology
- **Mechanical Engineering** B.S. in Mechanical Engineering
(biomedical engineering concentration)
(available with biomedical engineering, chemical engineering, energy or robotics & autonomous vehicles concentration)

The College also offers the following undergraduate minors:

- Construction
- Quality Engineering

Additionally, students obtaining baccalaureate degrees can choose to pursue graduate degrees with the follow 4+1 programs:

- B.S. in Civil Engineering + M.S. in Civil Engineering
- B.S. in Construction + M.S. in Civil Engineering
- B.S. in Electrical Engineering + M.S. in Electrical Engineering

Special Academic Programs

Cooperative Education

The College participates with employers in an optional Cooperative Education Program. Students alternate periods of full-time study with full-time employment. The program provides academic- or career-related work experiences. To be eligible, the student must have sophomore standing and a 2.0 minimum overall grade point average at Bradley. Students must have authorization to work in the United States.

Internships

Engineering internships provide engineering and technology students in good academic standing (2.0 grade point average or better) an opportunity to participate in a full-time internship semester and/or summer away from campus providing career-related work experience. This internship is equivalent in work-time to a full-time cooperative education assignment. Interns will be monitored in the same way as EGT cooperative education students. Participating students will enroll in EGT 210, EGT 310, or EGT 410 for zero credit hours. While on a full-time internship assignment, students are considered to have full-time student status, making normal progress toward a degree in a recognized University program, and are entitled to all student privileges at the University. Also while on a full-time internship assignment, students may register for additional hours of classroom study upon departmental approval. Students must have authorization to work in the United States.

Practicums

Undergraduate students enrolled in chemistry, civil engineering, computer science, construction, electrical engineering, industrial engineering, manufacturing engineering, manufacturing engineering technology, mechanical engineering, and physics have an opportunity for off-campus employment for 10-20 hours per week in the engineering practicum program. Students are assigned technically challenging projects with a near-term economic payback. Participating students will be enrolled in EGT 200, EGT 300, or EGT 400 for zero credit hours. While participating in the practicum program, students may wish to enroll in fewer credit hours of academic courses. Such students are still considered by the University to have full-time status, making normal progress towards a degree in a recognized University program. However, students who wish to enroll in less than 12 semester hours of credit should consult the director of financial assistance about possible impact on financial aid and/or insurance benefits. Students must have authorization to work in the United States.

Global Scholars

Students enrolled in the Caterpillar College of Engineering and Technology have an opportunity to earn the designation of Global Scholar in recognition of achievement in global technical studies. The EGT Global Scholars designation may be earned in conjunction with any baccalaureate degree earned within the Caterpillar College of Engineering and Technology.

Coursework for the Global Scholars Program has been designed to broaden student perspectives by providing enhanced preparation for careers in a global marketplace. Topics and issues taught on both the Bradley campus and in international environments will develop within students a capacity to assess international business opportunities and to understand business in the context of different cultures.

The Global Scholars Program provides:

- Recognition on the student's transcript as having achieved the Global Scholars designation
- Opportunity to study abroad as early as a student's sophomore

- Seminars with experienced international business leaders
- Social interaction with guest speakers, Bradley alumni, and international students

Program Requirements

1. Minimum GPA 2.50
2. Immersive cultural study-abroad experience, and 2-page reflective essay on their experience
3. Global Scholars Seminar – 1 hour
4. Total of 12 hours of relevant coursework in at least three of the following areas.
 - Courses offered in CCET (as approved by the CCET Executive Committee)
 - International Business (IB204/IB205, IB206, IB323, IB391), Economics (ECO355), Finance (FIN323), Marketing (MTG388), and/or Accounting (ATG 461/ATG561)
 - Global Perspectives (BCC)
 - World Cultures (BCC)
 - Fine Arts (BCC)
 - Humanities (BCC)
 - Courses designated as MI (BCC)
 - World Language

Graduation Requirements

For graduation, students in the College must satisfy Bradley's all-University degree requirements as specified elsewhere in this catalog as well as the specific degree requirements of the program in which they major. The programs' requirements, which incorporate requirements of appropriate professional accrediting agencies, are listed in their respective curriculum sections of this catalog. Effective academic advisement is stressed in the College; students are required to consult regularly with their academic advisor to plan their course schedules. However, students are individually responsible for insuring that their program's requirements are met.

Specific college requirements are:

1. A minimum grade point average of 2.00 (C) must be earned in all courses taken in the Caterpillar College of Engineering and Technology. (See departmental program descriptions for additional requirements.)
2. All students majoring in programs in the Caterpillar College of Engineering and Technology are required to pass, while at Bradley, a minimum of one junior or senior level course in which writing of papers, essays, and the like is given substantial emphasis and critical evaluation.

Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation. A change in major could mean meeting new requirements in force at the time of the change as a condition for acceptance into that major. Students whose work has been interrupted for one or more semesters may be held to requirements in effect at the time of their re-enrollment.

In addition to the undergraduate programs described in this catalog, the College offers graduate work leading to Master of Science degrees in civil, electrical, industrial, mechanical, and manufacturing engineering. These graduate programs are described in detail in the Graduate Catalog.

Admission and Transfer Requirements

General and special entrance requirements are listed in the admissions section of the catalog.

Community college transfer students entering the Caterpillar College of Engineering and Technology can complete their degree requirements in a time frame (normally two to three years) that depends on the major being sought and courses taken at the community college. Transfer students are urged to consult as early as possible with the Bradley department in which they will seek a major to make sure the transfer process is efficient. Because the fields of engineering and engineering technology are dynamic and rapidly changing, students transferring into the College from other programs in the University are usually expected to complete their major's graduation requirements as found at the time of transfer. A change of major may result in a change of requirements.

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EGT Courses



EGT Courses

EGT 101 – Introduction to Engineering & Technology (0-3 hours)

This course offers an in-depth introduction of the engineering profession in order to provide undecided engineering students more awareness of opportunities and differences within the engineering disciplines. Emphases: the design process, engineering problem solving and tools, engineering ethics, experimentation, and communication. Prerequisite: Major in EGT UEG

EGT 200 – Sophomore Engineering Practicum (0 hours)

Solving technically challenging problems with a near-term economic benefit. Only for students approved for practicum by the Dean's Office. Pass/fail.

EGT 210 – Sophomore Engineering Internship (0 hours)

Core Curr. EL

Full-time internship away from campus for engineering and technology students to gain academic or career-related work experience in industry. May be repeated only with consent of internship coordinator and internship faculty advisor. Satisfactory/Unsatisfactory. Prerequisite: Sophomore standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of engineering and technology Co-op coordinator and Co-op faculty advisor.

EGT 300 – Junior Engineering Practicum (0 hours)

Solving technically challenging problems with a near-term economic benefit. Only for students approved for practicum by the Dean's Office. Pass/Fail.

EGT 301 – CCET Global Scholars Seminar (1-1 hours)

Seminar topics of special interest relevant to enhancement of the study abroad program. Topics may vary each time course is offered. May be repeated under different topics for a total of 2 semester hours. Topic and prerequisites stated in current Schedule of Classes. Prerequisite: Overall GPA of 2.50 or higher.

EGT 310 – Junior Engineering Internship (0 hours)

Core Curr. EL

Full-time internship away from campus for engineering and technology students to gain academic or career-related work experience in industry. May be repeated only with consent of internship coordinator and internship faculty advisor. Satisfactory/Unsatisfactory. Prerequisite: Junior standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of internship coordinator and internship faculty advisor.

EGT 340 – Sustainability Issues in Business and Engineering (3 hours)

Core Curr. MI

This course will provide an overview and history of sustainability. Students will gain a greater appreciation of sustainability by integrating

engineering and business methods. Topics include carbon markets, renewable resources, sustainable communities, green marketing, and innovative technologies. Cross-listed with BUS 340.

EGT 400 – Senior Engineering Practicum (0 hours)

Solving technically challenging problems with a near-term economic benefit. Only for students approved for practicum by the Dean's Office. Pass/fail. Prerequisite: Sophomore standing

EGT 410 – Senior Engineering Internship (0 hours)

Core Curr. EL

Full-time internship away from campus for engineering and technology students to gain academic or career-related work experience in industry. May be repeated only with consent of internship coordinator and internship faculty advisor. Satisfactory/Unsatisfactory.

Prerequisite: Senior standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of internship coordinator and internship faculty advisor.

EGT 500 – Graduate Engineering Practicum (0 hours)

Solving challenging problems with a near-term economic benefit. Only for students approved for practicum by the Dean's Office. Pass/fail. Prerequisite: Graduate student.

EGT 510 – Graduate Engineering Internship (0 hours)

Full-time internship away from campus for engineering and technology students to gain academic or career-related work experience in industry. May be repeated only with consent of internship coordinator and internship faculty advisor. Satisfactory/Unsatisfactory.

Prerequisite: engineering and technology graduate student. Newly admitted graduate student must be unconditionally admitted and continuing student must have a minimum of 3.0 grade point average in graduate courses. Approval of internship coordinator and internship faculty advisor.

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Civil Engineering



Civil Engineering

The baccalaureate program in civil engineering is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>.

FACULTY Professors Elhouar, Khodair, Lee, Maillacheruvu (Interim Dean), Schattler (Chair); Associate Professors Hossain, Soltani, Spelman; Assistant Professors Ashraf, Ghannad, Terreno; Associate Professor in Residence Willis; Emeritus Professors Adrian, Al-Khafaji, Rebholz.

The Department of Civil Engineering and Construction offers undergraduate programs in both civil engineering (BSCE) and construction (BSC), a Construction Minor, and accelerated 4+1 programs leading to a Master of Science in Civil Engineering (BSCE/MSCE and BSC/MSCE).

Mission and Objectives

Produce graduates who possess a keen awareness of the global dimensions of our profession, leadership skills required to serve our society, and the technical knowledge to pursue multiple career paths, including advanced degrees. To achieve our mission, our department will strive to achieve the following civil engineering program objectives:

1. Our alumni have the skills to become leaders and stewards in their chosen profession and in society through their contributions to professional practice, research, entrepreneurial initiatives, or policy.
2. Our alumni apply ethics and sustainability principles in their profession and commit to life-long learning, earn licensure and become experts and mentors in their chosen profession.
3. Our alumni have the needed awareness of relevant global issues and cultures in order to thrive in a complex and multicultural world.

Student Outcomes

In order to meet these program educational objectives, students graduating from Bradley's civil engineering program will attain the following outcomes.

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

The Department

Facilities. The curriculum is supported by 11 cutting-edge laboratory and computer facilities equipped with modern hardware and software. Laboratories include fluid mechanics/hydraulics, environmental, concrete, asphalt pavement, construction, structural, geotechnical, two design projects, transportation, and the college machine shop. In addition, the college has three computer classrooms with a wide range of up-to-date software available through the university Virtual Desktop Infrastructure (VDI) platform.

Scholarships. Currently nearly 30 annual and endowed scholarships are available to students through the department. The total endowed scholarship from industry of about 2 million dollars is dedicated specifically to CEC students. This reflects the faith and trust that industry has in the quality of our programs.

Placement. For the past 20 years, almost all of our civil engineering majors secure full-time jobs or continue to pursue graduate degrees after graduation. Starting salaries for CEC graduates are very competitive nationwide. Employers recognize that our students have the knowledge, experience, and intellectual curiosity to succeed in their profession. High placement and scholarship opportunities for our students are a direct benefit from the strong partnerships that CEC has developed with our professional partners in industry, government, and academe.

Leadership. A focus of the department is the development of leadership skills in our students. Students are encouraged to participate in student professional organizations and academic honorary organizations by being officers or committee chairs. Leadership skills are also developed through service and outreach programs that teach our students the value of giving back to the community. Our students have been involved in many different community outreach activities through their involvement in building school playground projects, Illinois River Sweep, Habitat for Humanity, and others. The CEC department offers scholarships for leadership to applicants whose academic and leadership skills meet or exceed the requirements:
(<http://www.bradley.edu/admissions/freshman/cost/sources/cecles/index.dot>).

Faculty Qualifications. CEC faculty have received numerous awards for teaching excellence and scholarship, as well as for their professional contributions. They have conducted research for national, state, and local sponsors, benefitting society and our students.

Graduation. To graduate, students must meet all university and college graduation requirements. Additionally, CE students must achieve a minimum GPA of 2.25 in civil engineering courses. CEC students are expected to attend a number of seminars and other events that promote leadership and service.

Internationalization. The CEC department believes that exposure to different world cultures can expand the professional capabilities, stimulate intellectual growth, and broaden the personal perspective of all participants. The CEC department and the university are committed to giving all of our students the opportunity to study overseas. Arrangements have been made with universities around the world to send our students overseas to take courses either during an interim semester, or the Fall/Spring semesters. Students with financial need have received financial support that enables them to study abroad for equal to or less than what it would cost to study on campus. As a part of the Study Abroad program, hundreds of CEC students have studied overseas in various countries including England, France, Denmark, Norway, Sweden, Egypt, Jordan, and Malta.

Graduate Program. In addition to the undergraduate program described above, the Department offers a graduate program leading to the Master of Science in Civil Engineering (MSCE) degree. Our undergraduate students have the opportunity to pursue an accelerated 4+1 program leading to a Master of Science in Civil Engineering. The MSCE degree also provides students the ability to emphasize in Construction Management. Details of this program can be found in the Graduate Catalog and below for the 4+1 (BSCE/MSCE) program. The graduate program allows talented undergraduate students to engage in scholarly research activities and to enroll in advanced courses to meet their special interests and needs.

Civil Engineering Major

The Department of Civil Engineering and Construction offers an ABET-accredited BSCE program that provides students with the necessary background for continued professional growth and prepares them for engineering careers. The program offers a broad spectrum of courses including structural engineering, water resources, environmental engineering, sustainability, transportation engineering, pavement design, geotechnical engineering, and construction management. The curriculum is designed to give students the broad technical background required for modern civil engineering practice and/or to pursue higher education. Students are trained to be leaders who understand their critical roles in the development of sustainability and maintenance of society's infrastructure.

The program is founded on a strong core in mathematics as well as natural and engineering sciences. Design practices in civil engineering are integrated throughout the curriculum, culminating in a two-semester capstone design course sequence under the supervision of well-qualified faculty and industrial partners. A sequence of courses in the humanities and social sciences help students understand the impact of engineering solutions on society and are chosen to meet Bradley Core Curriculum requirements. The curriculum gives students flexibility in selecting electives while meeting all accreditation requirements. The listed courses, an expected total of **124 hours**, must be completed to meet degree requirements and to earn a Bachelor of Science in Civil Engineering (BSCE). The Civil Engineering curriculum consists of (1) Bradley Core Curriculum, (2) Mathematics and Basic Science courses, (3) the required courses, and (4) the elective courses.

Bradley Core Curriculum (BCC) 24 hours

- BCC Communications Oral Communications (BCC – CM) – 3 hrs.
- BCC Communications Writing (BCC – W1) – 3 hrs.
- BCC Communications Advanced Writing (BCC – W2) – 3 hrs.
- BCC Fine Arts (BCC – FA) – 3 hrs.
- BCC Global Perspectives (BCC – GP) – 3 hrs.
- BCC Humanities (BCC – HU) – 3 hrs.
- BCC Multidisciplinary Integration (BCC – MI) – 3 hrs.
- BCC Social and Behavioral Sciences (BCC – SB) – 3 hrs.

Mathematics and Basic Sciences 32 hours

- CHM 110: General Chemistry I – 3 hrs. (BCC – NS1)
- CHM 111: General Chemistry I Lab – 1 hr.
- C E 210: Numerical Methods in CE – 3 hrs.
- C E 310: Probability, Statistics and Decision Making in CE – 3 hrs.
- MTH 121: Calculus I – 4 hrs. (BCC – QR1)
- MTH 122: Calculus II – 4 hrs. (BCC – QR2)
- MTH 223: Calculus III – 4 hrs.
- MTH 224: Differential Equations – 3 hrs.
- PHY 110: University Physics I – 4 hrs. (BCC – NS2)
- Basic Science Elective – 3 hrs.
 - Any biology course
 - Any astronomy course
 - Any geological science course
 - Any environmental science course

Required Courses 53 hours

- C E 100: Intro. to Civil Engineering – 1 hr.
- C E 150: Mechanics I – 3 hrs.
- C E 224: CADD – 3 hrs.
- C E 250: Mechanics II – 3 hrs.
- C E 260: Fluid Mechanics – 3 hrs.
- C E 270: Mechanics of Materials – 3 hrs.
- C E 350: Geotechnical Engineering – 4 hrs.
- C E 356: Pavement Design – 4 hrs.
- C E 359: Structural Analysis – 4 hrs.
- C E 360: Introduction to Environmental Engineering – 4 hrs.
- C E 365: Reinforced Concrete Design – 4 hrs.
- C E 383: Ethics and Sustainability – 1 hr.
- C E 393: Sustainability and Public Policy – 2 hrs.
- C E 480: Transportation Engineering – 3 hrs.
- C E 493: CE Design Project I (EL, WI) – 3 hrs.
- C E 498: CE Design Project II (EL, WI) – 3 hrs.
- CON 132: Construction Graphics – 2 hrs.
- CON 326: Construction Estimating – 3 hrs.

Elective Courses 15 hours

- C E Elective Courses, see below – 6 hrs.
- Technical Elective Courses, see below – 9 hrs.

C E Elective Courses

Students must take 6 hours from the courses listed below. Note: All electives selected by the student should be approved by the student's academic advisor. The student should select technical electives that reflect career objectives. Students wishing to enroll in a CEC graduate-level course must have a minimum 2.75 GPA overall.

- CON 206: Surveying – 3 hrs
- C E 430: Water Supply and Hydraulic Engineering – 3 hrs.
- C E 422: Foundation Analysis and Design – 3 hrs.
- C E 442: Design of Steel Structures – 3 hrs.
- C E 465: Surface Water Hydrology – 3 hrs.
- C E 491: Special Topics I – 1-3 hrs.
- C E 492: Special Topics II – 1-3 hrs.
- C E 508: Advanced Soil Mechanics – 3 hrs.
- C E 515: Advanced Foundation Engineering – 3 hrs.
- C E 520: Advanced Numerical Methods – 3 hrs.
- C E 541: Pollution Modeling – 3 hrs.
- C E 542: Advanced Water Treatment – 3 hrs.
- C E 543: Advanced Wastewater Treatment – 3 hrs.
- C E 546: Groundwater Hydrology – 3 hrs.
- C E 555: Sustainability and Environmental Regulations – 3 hrs.
- C E 558: Solid Waste Management – 3 hrs.
- C E 560: Advanced Structural Analysis – 3 hrs.
- C E 562: Advanced Steel Design – 3 hrs.
- C E 565: Advanced Concrete Design – 3 hrs.
- C E 567: Prestressed Concrete Design – 3 hrs.
- C E 570: Advanced Mechanics of Materials – 3 hrs.
- C E 575: Structural Dynamics – 3 hrs.
- C E 577: Seismic Design – 3 hrs.
- C E 580: Highway Safety – 3 hrs.
- C E 582: Traffic Flow Theory – 3 hrs.
- C E 583: Geometric Highway Design – 3 hrs.
- C E 584: Urban Transportation Planning – 3 hrs.
- C E 585: Pavement Management Systems – 3 hrs.
- C E 586: Advanced Pavement Design – 3 hrs.
- C E 587: Traffic Signal Design – 3 hrs.
- C E 588: Transportation Economics – 3 hrs.
- C E 591: Advanced Topics I – 1-3 hrs.
- C E 592: Advanced Topics II – 1-3 hrs.
- C E 593: Advanced Project I – 1-3 hrs.
- C E 594: Advanced Project II – 1-3 hrs.

Technical Elective Courses

Students must take 9 hours from the courses listed below. Note: All electives selected by the student should be approved by the student's academic advisor. The student should select technical electives that reflect career objectives. Students wishing to enroll in a CEC graduate-level course must have a minimum 2.75 GPA overall.

- Any CE Elective course listed above
- CON 262: Mechanical and Electrical Systems I – 3 hrs.
- CON 270: Construction Materials and Methods I – 3 hrs.
- CON 272: Construction Materials and Methods II – 3 hrs.
- CON 330: Housing – 3 hrs.
- CON 342: Construction Equipment – 3 hrs.
- CON 352: Sustainable Urban Environment – 3 hrs.
- CON 356: Construction Safety – 3 hrs.
- CON 368: Mechanical and Electrical Systems II – 3 hrs.
- CON 372: Construction Methods Improvements – 3 hrs.
- CON 388: Contract Administration- 3 hrs.
- CON 392: Construction Scheduling – 3 hrs.
- CON 394: Construction Labor and Unions – 3 hrs.
- CON 430: Commercial Construction – 3 hrs.
- CON 435: Heavy and Highway Construction – 3 hrs.
- CON 452: Green Construction and LEED – 3 hrs.
- CON 492: Construction Project Controls – 3 hrs.

- CON 494: Construction Practices – 3 hrs.
- CON 520: Advanced Construction Practice – 3 hrs.
- CON 522: Advanced CADD – 3 hrs.
- CON 524: Building Information Modeling – 3 hrs.
- CON 526: Advanced Construction Estimating – 3 hrs.
- CON 528: Advanced Construction Scheduling – 3 hrs.
- CON 529: Advanced Construction Contracts – 3 hrs.
- CON 536: TQM Principles – 3 hrs.
- CON 537: Construction Simulation – 3 hrs.
- CON 540: Project and Company Management – 3 hrs.
- CON 591: Advanced Topics I – 1 to 3 hrs.
- CON 592: Advanced Topics II – 1 to 3 hrs.
- CON 593: Advanced Project I – 1 to 3 hrs.
- CON 594: Advanced Project II – 1 to 3 hrs.
- ME 301: Thermodynamics I- 3 hrs.
- ME 302: Thermodynamics II- 2 hrs.
- ME 521: Intermediate Fluid Mechanics – 3 hrs.
- ME 536: Industrial Pollution Prevention – 3 hrs.
- ME 537: Building Energy Management- 3 hrs.
- ME 556: Mechanics of Composite Materials- 3 hrs.
- ME 577: Finite Element Methods in Engineering- 3 hrs.
- IME 301: Engineering Economy I – 3 hrs.
- IME 313: Operations Research I – 3 hrs.
- ECE 227: Electrical Engineering Fundamentals – 4 hrs.
- Any BUS, BSA, ATG, ECO, BLW, BMA, ENT, MIS, FIN, ML, MTG, or IB course
- Any computer science course above CS 210
- Any biology course
- Any astronomy course
- Any geological science course
- Any environmental science course
- Any mathematics course above MTH 224
- Any physics course above PHY 110
- Any chemistry course above CHM 110

Internship Options

With support from the Bradley University Smith Career Center, students are strongly encouraged to engage in at least one internship by the time they are ready to graduate. Internships are managed by the Smith Career Center through one of the following courses, which can be taken during the summer session right before the associated class year:

- EGT 210: Sophomore Engineering Internship (Bradley Core: EL), 0 hrs.
- EGT 310: Junior Engineering Internship (Bradley Core: EL), 0 hrs.
- EGT 410: Senior Engineering Internship (Bradley Core: EL), 0 hrs.

4 + 1 Bachelor of Science in Civil Engineering/Master of Science in Civil Engineering Program

Admission

Bradley University Civil Engineering undergraduates may enroll in the 4 + 1 BSCE/MSCE program while completing their bachelor's degree and meet the following requirements:

Students will be considered for the BSCE/MSCE program during the spring of the student's junior year (preferred date: April 1) or in fall of the student's senior year, at the latest. Students will not be admitted to the program after the first day of spring semester of their senior year. The student must follow the application procedures consistent with application to Graduate Education and the Civil Engineering Graduate Program with the following exceptions. The student:

- does not need to have completed the bachelor's degree to be admitted to the program,
- has a 3.0 overall GPA or greater,
- has a minimum of 78 hours completed at the time of admission to the program if admitted before completion of junior year, or 94 hours if admitted at the beginning of the senior year,
- does not need to submit letters of recommendation, essays, transcripts, or GRE scores.

Graduation Requirements

Students admitted to the graduate program pursuing the MSCE degree as an undergraduate student as stipulated above will need to complete 30 semester hours of graduate course work (with 9 hours dual counted in the BSCE program). A minimum of 18 hours will be in CE and/or CON designated courses (with a minimum of 6 hours of CE graduate courses required); the remaining hours may include courses from other related departments, per the approved Elective Courses list. Students are required to pass a comprehensive examination during the last semester of their graduate program.

Undergraduates will apply for graduation for their bachelor's degree in the semester that they will achieve a minimum of 124 approved semester hours and complete all undergraduate degree requirements. Following graduation with the BSCE degree, students are considered graduate students. Students who are admitted to the BSCE/MSCE program will have up to 9 graduate hours taken during the final year of the bachelor's degree dual counted for the BSCE and MSCE degrees. In the student's senior year of their undergraduate program, they will take:

- 2 graduate courses, 6 hours of 500-level Civil Engineering courses, and
- 1 graduate course, 3 hours of 500-level courses in Civil Engineering, or Construction, or graduate level approved elective course.

In the remaining two semesters in the MSCE program, the graduate student will take:

- 12 hours of graduate courses in the first semester of Year 5
- 9 hours of graduate courses in the second semester of Year 5, plus the comprehensive exam

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Civil Engineering Courses



Civil Engineering Courses

C E 100 – Introduction to Civil Engineering (1 hour)

Introduction to the civil engineering professions. Introduction to fundamental engineering concepts; engineering design; engineering ethics; professional societies; introduction to computers and computer applications.

C E 150 – Mechanics I (3 hours)

Analysis of two- and three-dimensional force systems by vector algebra. Applications of principles of equilibrium to particles, rigid bodies, and simple structures. Friction, distributed forces, center of gravity, centroids, moments of inertia. U.S. and SI systems of units and applications. Prerequisite: MTH 121 or MTH 115 or MTH 119

C E 200 – Engineering Co-Op (0 hours)

Core Curr. EL

Full-time cooperative education assignment for civil engineering students who alternate periods of full-time school with periods of full-time academic or career-related work in industry. Satisfactory/Unsatisfactory. Prerequisite: Sophomore standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of engineering and technology Co-op coordinator and Co-op faculty advisor.

C E 210 – Numerical Methods in Civil Engineering (3 hours)

Introduction to numerical methods commonly needed to solve complex problems and work with datasets in civil engineering. Software skill development through application; including arrays, programming basics, analysis and visualization of numeric data, and development of mathematical models in spreadsheets and scripts. Prerequisite: MTH 223.

C E 224 – CADD (3 hours)

Examinations of graphical capabilities of current computer-aided design and drafting (CADD) systems. Theoretical and hands-on applications of the most widely used CADD systems available for Civil Engineering and Construction students. Prerequisite: CON 132.

C E 250 – Mechanics II (3 hours)

Kinematics and kinetics of particles and rigid bodies using vector analysis. Kinetics includes principles of force-mass-acceleration, work-energy, and impulse-momentum. Prerequisite: CE 150.

C E 260 – Fluid Mechanics (3 hours)

Fluid properties and fluid motion: basic laws of motion in integral form; applications of basic laws in solving fluid flow problems. Hydrostatics, dimensional analysis, similitude, and incompressible viscous flow (both laminar and turbulent) in conduits. Introduction to open channel flow; culverts, sewers, and streams. Laboratory experiments. Prerequisite: CE 250.

C E 270 – Mechanics of Materials (3 hours)

Internal forces; stress, strain, and their relations; stresses and deformations in axial and torsional loading; indeterminate problems; stresses and deformations in flexural members; transformation of stresses; introduction to member design; column buckling analysis. Prerequisite: CE 150.

C E 310 – Probability, Statistics and Decision Making in Civil Engineering (3 hours)

Basic probabilistic and statistical decision making principles used in civil engineering design and practice. Probabilistic models and decision theory. Prerequisite: MTH 121

C E 350 – Geotechnical Engineering (4 hours)

Physical properties of soils, soil profiles, and deposits. Soil strength determination. Flow of water through soil masses. Laboratory experiments. Prerequisite: CE 260, CE 270.

C E 356 – Pavement Design (4 hours)

Pavement engineering and design. Selection testing, and use of highway pavement construction materials in relation to function, environment, and cost. Structural properties of asphalt (flexible) and concrete (rigid) pavements; laboratory experiments. Prerequisite: CE 350.

C E 359 – Structural Analysis (4 hours)

Analysis of statically determinate structures including influence lines. Deflections by area-moment, conjugate beam, and Castigliano's theorem. Analysis of statically indeterminate structures including influence lines. Classical solutions by consistent displacements, three-moment theorem, moment distribution, and slope deflection methods. Matrix methods for structural analysis by stiffness approach. Prerequisite: CE 270.

C E 360 – Introduction to Environmental Engineering (4 hours)

Analysis techniques and design procedures for unit operations and unit processes for water and waste water treatment. Techniques for the examination of water and waste water quality. Laboratory experiments. Prerequisite: CHM 110 and CHM 111.

C E 365 – Reinforced Concrete Design (4 hours)

Theory and design of reinforced concrete structures: beams, columns, slabs, walls, and buildings. Current ACI Code provisions for elastic and ultimate design. Laboratory experiments. Prerequisite: CE 359.

C E 383 – Ethics and Sustainability (1 hour)

Engineering ethics with applications to sustainable civil infrastructure. Ethical responsibilities to public, clients, and employers. Social responsibility and public participation for civil infrastructure.

C E 393 – Sustainability and Public Policy (2 hours)

Introduction to engineering economics with applications to assessment of sustainable alternatives in infrastructure, ability to engage in life-long learning, knowledge of contemporary issues, understanding professional and ethical responsibility, and ability to function on multi-disciplinary teams. Applications of systems engineering concepts including optimization. Prerequisite: Junior standing or consent of instructor

C E 400 – FE Review (0 hours)

To review Civil Engineering topics in preparation for the Fundamentals of Engineering (FE) Examination offered through the National Council of Examiners for Engineering and Surveying (NCEES). Satisfactory/Unsatisfactory. Prerequisite: Senior standing

C E 422 – Foundation Analysis and Design (3 hours)

Analysis and design of footings, raft foundations, retaining walls, piles, and caissons, based on current theories and design considerations in soil mechanics, concrete, and steel. Prerequisite: CE 350, CE 365.

C E 430 – Water Supply & Hydraulic Engineering (3 hours)

Water use and wastewater generation. Conveying and distributing water. Wastewater and stormwater conveyance system design. Design of storage structures and other systems for water conservation and water use; open channel flow, closed conduit flow, hydraulic structures, hydraulic power conversion. Prerequisite: CE 260.

C E 442 – Design of Steel Structures (3 hours)

Design of steel structural members. Behavior of members and connections. Theoretical and practical considerations in member selection and joint design. Prerequisite: CE 359.

C E 465 – Surface Water Hydrology (3 hours)

Introduction to hydrological cycle. Hydrologic measurements and monitoring. Surface water hydrology: runoff and the catchment, hydrographs, unit hydrographs, hydrograph routing, urban and small watershed hydrology, hydrologic design, synthetic streamflows, simulation models, applications of probability and statistics to surface water hydrology. Prerequisite: CE 260, CE 310 or equivalent.

C E 480 – Transportation Engineering (3 hours)

Introduction to transportation engineering and planning as it relates to highways. Characteristics of highway systems: the driver, vehicle and roadway, traffic engineering studies, highway safety, traffic flow fundamentals, capacity and level of service concepts, intersection

traffic control, transportation planning and site impact analysis, geometric design of highways. Prerequisite: Junior standing or consent of Instructor

C E 491 – Special Topics I (1-3 hours)

Topics of special interest which may vary each time course is offered. Topics are stated in the current Schedule of Classes.

Prerequisite: consent of advisor.

C E 492 – Special Topics II (1-3 hours)

Topics of special interest which may vary each time course is offered. Topics stated in current Schedule of Classes. Prerequisite:

consent of advisor.

C E 493 – Civil Engineering Design Project I (3 hours)

Core Curr. EL,WI

First of a two-semester course design project sequence. Discussions of the relationship between the owner, architect, consultant, superintendent, construction manager, general contractor and subcontractors. Methods of project delivery, Project concepts through construction, design phases, and project challenges. Leadership, ethics, public policy issues, LEED, and basic business management practices. Oral and written report of preliminary plan. Prerequisite: C E 393

C E 498 – Civil Engineering Design Project II (3 hours)

Core Curr. WI,EL

Detailed design of systems. Application of engineering design principles to realistic projects in structural engineering, environmental engineering, site development. Codes and standards, feasibility studies, consideration of design alternatives, selection criteria including systems sustainability, and aesthetics. Oral and written report of final design with specifications, engineering drawings, and project cost estimates. Prerequisite: C E 493. Advisor consent may be required.

C E 508 – Advanced Soil Mechanics (3 hours)

Consolidation theory and settlements, stress-path method, strength and deformation behavior of soils, failure theories, confined flow, flow nets, numerical analysis of flow, unconfined flow, seepage through earth dams. Laboratory experiments on consolidation and shear strength. Prerequisite: C E 350; or graduate standing.

C E 515 – Advanced Foundation Engineering (3 hours)

Advanced pile capacity formulations, buckling, and lateral loading. Mat foundations, finite difference solutions. Foundations on difficult soils. Slope stability; stability of earth dams. Excavations; geotechnical instrumentation. Prerequisite: C E 422; or graduate standing.

C E 520 – Advanced Numerical Methods (3 hours)

Selected numerical methods and applications chosen to meet current needs for solving problems in civil engineering. Prerequisite: C E 210; or graduate standing.

C E 541 – Pollution Modeling (3 hours)

Phenomena that affect mass balance of contaminants in environmental systems. Advection, diffusion, dispersion, and interfacial mass transfer. Physical, chemical, and biological descriptions of these processes with mathematical models. Solutions to these models with illustrations from reactor engineering and surface water quality modeling. Application to actual process reactor. Prerequisite: C E 360; or graduate standing.

C E 542 – Advanced Water Treatment (3 hours)

Design of physical and chemical unit processes and unit operations with an emphasis on water treatment. Design of aeration systems, coagulation and flocculation processes, sedimentation tanks, filtration systems, chemical precipitation processes, ion exchange processes, and disinfection processes. Advanced purification methods including adsorption, reverse osmosis, electro-dialysis, and membrane processes. Treatment and disposal of physiochemical process sludges. Prerequisite: C E 360; or graduate standing.

C E 543 – Advanced Wastewater Treatment (3 hours)

Application of concepts from microbiology and biology to environmental engineering systems. Detailed integrated design of waste water treatment. Microbiology of waste water treatment processes and soil bioremediation processes. Interaction between biogeochemical phenomena and microbial processes in an environmental engineering context. Prerequisite: C E 360; or graduate standing.

C E 546 – Groundwater Hydrology (3 hours)

Groundwater in the hydrological cycle, fundamentals of groundwater flow; flow net analysis; steady-state and transient well testing techniques for parameter estimation; multiple well systems; leaky aquifers; sea water intrusion; groundwater investigation; artificial recharge of aquifers, design of wells; subsidence and lateral movement of land surface due to groundwater pumping. Design and computer applications. Prerequisite: C E 260, or graduate standing.

C E 555 – Sustainability and Environmental Regulations (3 hours)

Sustainability as it is expressed in environmental regulations and policies for conventional and hazardous wastes in air, water, and groundwater. Toxicological, risk assessment, risk-based engineering, and regulatory aspects for the sustainable management of all types of waste. Prerequisite: C E 360 or CON 352; or graduate standing.

C E 558 – Solid Waste Management (3 hours)

Sources, composition, and properties of solid waste. Transport of solid wastes and design of transfer stations. Separation, transformation, and recycling of waste materials. Landfill siting. Leachate generation, collection, and removal systems. Liner system design. Landfill settlement and stability analysis. Accelerated treatment of solid waste. Methane recovery from landfills. Closure, restoration, and rehabilitation of landfills. Case studies. Prerequisite: C E 350 or CON 320; or graduate standing.

C E 560 – Advanced Structural Analysis (3 hours)

Direct stiffness method for the analysis of two-dimensional trusses and frames, equivalent nodal forces, thermal and settlement effects, principle of virtual work, space trusses, grid structures, static condensation, Lagrange multipliers, tapered elements. Prerequisite: C E 210 and C E 359; or graduate standing.

C E 562 – Advanced Steel Design (3 hours)

Structural framing systems; rigid frame design; design of bracing; design of simple rigid and moment resisting connections; torsion of steel open sections; design of beams subjected to torsion; design of steel plate girders; design of composite beams. Prerequisite: C E 442; or graduate standing.

C E 565 – Advanced Concrete Design (3 hours)

Advanced topics in flexural design; torsion in beams; behavior and design of slender columns; biaxial bending of columns; design of two-way slabs; behavior and design of frame-wall structural systems; inelastic analysis of flexural members; use of strut and tie analysis; yield line analysis; design of mat foundations. Prerequisite: C E 365; or graduate standing.

C E 567 – Prestressed Concrete Design (3 hours)

Theory and analysis of prestressed concrete members by various methods of prestressing; design of simple and continuous beams and slabs; prestress losses; composite beams. Extensive study of materials used in prestressed concrete. Precast concrete systems. Prerequisite: C E 365; or graduate standing.

C E 570 – Advanced Mechanics of Materials (3 hours)

Two- and three-dimensional stress and strain at a point; two-dimensional elasticity; beams on elastic foundations; torsion of noncircular sections; curved beams; unsymmetrical bending; plastic collapse and limit analysis. Prerequisite: C E 270; or graduate standing.

C E 575 – Structural Dynamics (3 hours)

Single degree of freedom systems; multi-degree of freedom systems; lumped mass and consistent mass-MDOF beams; free and forced vibrations; earthquake loading; impact and impulsive loads; numerical procedures. Prerequisite: C E 210 and C E 359; or graduate standing.

C E 577 – Seismic Design (3 hours)

Theory, analysis, and design of building structures under earthquake loading. Application of current codes and standards related to steel, concrete, masonry, and wood structures. Prerequisite: C E 365 and C E 442; or graduate standing.

C E 580 – Highway Safety (3 hours)

Safety aspects of streets and highways; planning, implementation, and evaluation of highway safety improvement projects and programs. Highway risk analysis and risk management systems. Prerequisite: C E 310 and C E 480; or graduate standing.

C E 582 – Traffic Flow Theory (3 hours)

Traffic flow theories and applications in the design, development and operation of transportation systems, macroscopic and microscopic models of traffic flow, mathematical distributions of traffic events, car following theory, shock wave analysis, queuing analysis. Prerequisite: C E 480 and C E 310; or graduate standing.

C E 583 – Geometric Highway Design (3 hours)

Application of standards, theory, and practice in design of streets and highways. Design of streets and highways including cross section elements, shoulder, and roadside features. Prerequisite: C E 480; or graduate standing.

C E 584 – Urban Transportation Planning (3 hours)

Planning and analysis of urban transportation; travel demand models including trip generation, trip distribution, mode choice and traffic assignment; land use planning, site impact analysis and traffic impact studies for proposed developments, and context sensitive solutions. Prerequisite: C E 480; or graduate standing.

C E 585 – Pavement Management Systems (3 hours)

Distresses in pavements, assessment of asphalt (flexible) and concrete (rigid) pavements, performance tests of pavement materials, material characterization to maintain and rehabilitate pavements, pavement maintenance and rehabilitation methods, life cycle cost analysis of pavement maintenance and rehabilitation. Prerequisite: C E 356; or graduate standing.

C E 586 – Advanced Pavement Design (3 hours)**Core Curr. NS**

Materials characterization for pavement, base, and subgrade; traffic load analysis to design pavement; structural design of flexible

(asphalt), rigid (concrete) and composite pavements; pavement distress evaluation and rehabilitation. Prerequisite: C E 356; or graduate standing.

C E 587 – Traffic Signal Design (3 hours)

Analysis and design of traffic signals for isolated intersections and coordinated systems. Hardware, communication, and detection systems associated with signal systems. Fundamental concepts of simulation of traffic operations. Application of optimization/simulation computer software programs. Prerequisite: C E 480; or graduate standing.

C E 588 – Transportation Economics (3 hours)

Application of engineering economy for transportation systems; analysis of congestion costs, highway transportation costs, and road user consequences. Identification and measurement of highway benefits, concepts of value and time, and willingness to pay; discount rate and vest charge; concepts of depreciation and service life; life cycle cost analysis; evaluation of transportation alternatives and evaluation of completed projects/programs. Prerequisite: C E 393; or graduate standing.

C E 591 – Advanced Topics I (1-3 hours)

Topics of special interest, which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: Consent of department chair.

C E 592 – Advanced Topics II (1-3 hours)

Topics of special interest, which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: Consent of department chair.

C E 593 – Advanced Project I (1-3 hours)

Supervised individual study of civil engineering and construction projects. Prerequisite: Consent of department chair.

C E 594 – Advanced Project II (1-3 hours)

Supervised individual study of civil engineering and construction projects. Prerequisite: Consent of department chair.

C E 650 – Site Remediation (3 hours)

Preliminary studies and engineering design of various treatment technologies used for remediation of contaminated soil and groundwater. Brownfield remediation. Soil composition and behavior, development and movement of groundwater. Soil sampling and monitoring of contaminants in groundwater. Drilling techniques based on soil type. Processes affecting the distribution of inorganic and organic pollutants in the environment, exchange among soil, water, sediment, and biota. Prerequisite: C E 350 and C E 360; or graduate standing.

C E 655 – Environmental Management Modeling (3 hours)

Development, solution, and interpretation of management models used in environmental planning and water resource systems. Risk analysis and management. Risk and how its various aspects influence environmental regulations and policy. Decision making with risk including risk-based design. Environmental impact assessment. Water resource allocation decisions. Prerequisite: C E 360; or graduate standing.

C E 691 – Advanced Graduate Topics I (3 hours)

Advanced topics of special interest in civil engineering and construction which may vary each time course is offered. Topic stated in current Schedule of Classes Prerequisite: Consent of department chair

C E 692 – Advanced Graduate Topics II (3 hours)

Advanced topics of special interest in civil engineering and construction which may vary each time course is offered. Topic stated in current Schedule of Classes Prerequisite: Consent of department chair

C E 699 – Thesis (0-6 hours)

Research on a topic selected by the student and approved by the chair. Repeatable to a maximum of six hours total. Prerequisite: Consent of department chair

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Construction



Construction

Construction Program

The baccalaureate program in construction is accredited by the American Council for Construction Education and is a charter member of the Associated Schools of Construction.

FACULTY Professors Elhouar, Khodair, Lee, Maillacheruvu (Interim Dean), Schattler (Chair); Associate Professors Hossain, Soltani, Spelman; Assistant Professors Ashraf, Ghannad, Terreno; Associate Professor in Residence Willis; Emeritus Professors Adrian, Al-Khafaji, Rebholz.

The Department of Civil Engineering and Construction offers undergraduate programs in both civil engineering (BSCE) and construction (BSC), a Construction minor, and accelerated 4+1 programs leading to a Master of Science in Civil Engineering (BSCE/MSCE and BSC/MSCE).

Mission and Objectives

Produce graduates who possess a keen awareness of the national and global dimensions of the construction industry, leadership skills required to serve our society, and the technical knowledge to pursue multiple career paths including advanced degrees. To achieve our mission, the Construction program will strive to achieve the following objectives:

1. **Leadership in Construction.** Graduates understand the need for teamwork, communication, skills, integrity, good citizenship, and service. They have the needed knowledge to become leaders in the construction industry.
2. **Professional Achievement.** Graduates have the needed understanding of ethical responsibilities, certification, the necessity for continuing education, and contemporary issues required for placement and career advancement.
3. **Globalization.** Offer programs to ensure that graduates have the needed awareness of global construction issues and cultures to help them thrive in an emerging world market.
4. **Industry Partnerships.** Partner with the construction profession to offer an innovative program that promotes cultural diversity and responds to the needs of the profession and society in the areas of sustainability, infrastructure, and emerging technology.

Student Outcomes

In order to meet these program educational objectives, students graduating from Bradley's construction program will attain the following outcomes.

1. Create written communications appropriate to the construction discipline

2. Create oral presentations appropriate to the construction discipline
3. Create a construction project safety plan
4. Create construction project cost estimates
5. Create construction project schedules
6. Analyze professional decisions based on ethical principles
7. Analyze methods, materials, and equipment used to construct projects
8. Apply electronic-based technology to manage the construction process
9. Apply basic surveying techniques for construction layout and control
10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process
11. Understand construction accounting & cost control
12. Understand construction quality assurance & control
13. Understand construction project control processes
14. Understand the legal implications of contract, common, and regulatory law to manage a construction project
15. Understand the basic principles of sustainable construction
16. Understand the basic principles of structural behavior
17. Understand the basic principles of mechanical, electrical and plumbing systems

The Department

Facilities. The curriculum is supported by 11 cutting-edge laboratory and computer facilities equipped with modern hardware and software. Laboratories include fluid mechanics/hydraulics, environmental, concrete, asphalt pavement, construction, structural, geotechnical, two design projects, transportation, and the college machine shop. In addition, the college has three computer classrooms with a wide range of up-to-date software available through the university Virtual Desktop Infrastructure (VDI) platform.

Scholarships. Currently nearly 30 annual and endowed scholarships are available to students through the department. The total endowed scholarship from industry of about 2 million is dedicated specifically to CEC students. This reflects the faith and trust that industry has in the quality of our programs.

Placement. For the past 20 years, job placement for construction graduates has been 100% in most years. Starting salaries for CEC graduates are very competitive nationwide. Employers recognize that our students have the knowledge, experience, and intellectual curiosity to succeed in their profession. High placement and scholarship opportunities for our students are a direct benefit from the strong partnerships that CEC has developed with our professional partners in industry, government, and academe.

Leadership. A focus of the department is the development of leadership skills in our students. Students are encouraged to participate in student professional organizations and academic honorary organizations by being officers or committee chairs. Leadership skills are also developed through service and outreach programs that teach our students the value of giving back to the community. Our students have been involved in many different community outreach activities through their involvement in building school playground projects, Illinois River Sweep, Habitat for Humanity, and others. The CEC department offers scholarships for leadership to applicants whose academic and leadership skills meet or exceed the requirements: (<http://www.bradley.edu/admissions/freshman/cost/sources/cecles/index.dot>).

Faculty Qualifications. CEC faculty have received numerous awards for teaching excellence and scholarship, as well as for their professional contributions. They have conducted research for national, state, and local sponsors, benefitting society and our students.

Graduation. To graduate, students must meet all university and college graduation requirements. Construction students must achieve a minimum GPA of 2.0 in college of engineering courses. CEC students are expected to attend a number of seminars and other events that promote leadership and service.

Internationalization. The CEC department believes that exposure to different world cultures can expand the professional capabilities, stimulate intellectual growth, and broaden the personal perspective of all participants. The CEC department and the university are committed to giving all of our students the opportunity to study overseas. Arrangements have been made with universities around the world to send our students overseas to take courses either during an interim semester, or the Fall/Spring semesters. Students with financial need have received financial support that enables them to study abroad for equal to or less than what it would cost to study on campus. As a part of the Study Abroad program, hundreds of CEC students have studied overseas in various countries including England, France, Denmark, Norway, Sweden, Egypt, Jordan, and Malta.

Graduate Program. In addition to the undergraduate program described above, the Department offers a graduate program leading to the Master of Science in Civil Engineering (MSCE) degree. Our undergraduate students have the opportunity to pursue an accelerated 4+1 program leading to a Master of Science in Civil Engineering. The MSCE degree also provides students the ability to emphasize in Construction Management. Details of this program can be found in the Graduate Catalog and below for the 4+1 (BSCE/MSCE) program. The graduate program allows talented undergraduate students to engage in scholarly research activities and to enroll in advanced courses to meet their special interests and needs.

Construction Major

The construction industry is large, varied, and complex. It is intimately interwoven with, and exerts significant influence on, the overall economy of our nation. Constructors—the modern construction professionals—are educated in engineering and architectural principles in the building process, allowing effective communication with the many persons with whom contact is necessary: the design professionals (engineers and architects), specialty subcontractors, manufacturers and distributors of construction materials and products, financiers and others. Additionally, and most importantly, the constructor is a manager. The constructor's education must include the essentials of contemporary management philosophy, sound business and construction practice, emerging trends in sustainable development, and enlightened human relations. This multidisciplinary curriculum has been developed from these aims which are in consonance with the goals of the Associated Schools of Construction and the philosophy of the American Institute of Constructors.

The program described below was developed for the typical student interested in general preparation for a construction career. A minor in Business Administration is achievable without additional hours by careful selection of electives. Other minors in business related fields are also possible by careful selection of electives and taking additional required courses.

The listed courses, an expected total of **126 hours**, must be completed to meet degree requirements and to earn a Bachelor of Science in Construction (BSC). The Construction curriculum consists of (1) Bradley Core Curriculum, (2) Mathematics and Basic Science courses, (3) Business Management courses, and (4) Construction courses.

Bradley Core Curriculum (BCC) 21 hours

- BCC Communications (BCC – CM) COM 103 Oral Communications Process – 3 hrs.
- BCC Communications (BCC – W1) ENG 101 English Composition – 3 hrs.
- BCC Communications (BCC – W2) ENG 300, 301, 305, or 306 Advanced Writing – 3 hrs.
- BCC Fine Arts (BCC – FA) – 3 hrs.
- BCC Global Perspectives (BCC – GP) – 3 hrs.
- BCC Humanities (BCC – HU) – 3 hrs
- BCC Multidisciplinary Integration (BCC – MI) – 3 hrs.

Mathematics and Basic Sciences 15 hours

- Calculus: MTH 115 or MTH 121 — 4 hrs. (BCC – QR1)
- Quantitative Analysis: QM 262 I — 3 hrs. (BCC – QR2)
- Physics: PHY 107 or PHY 110 – 4 hrs. (BCC – NS1)

- Science Elective – 4 hrs.
 - GES 101: Principles of Earth Science – 3 hrs. and GES 102: Principles of Earth Science Laboratory – 1 hr.
 - CHM 110: General Chemistry I – 3 hrs. and CHM 111: General Chemistry I Lab – 1 hr.
 - PHY 108: General Physics II – 4 hrs.

Business Management 21 hours

- ECO 221 Microeconomics – 3 hrs. (Bradley Core – SB1)
- ECO 222 Macroeconomics – 3 hrs. (Bradley Core – SB2)
- ATG 157 Accounting-Financial – 3 hrs.
- ATG 158 Accounting-Managerial – 3 hrs.
- BLW 342 The Legal Environment of Business – 3 hrs.
- MIS 173: Information Systems and Business Applications – 3 hrs
- M L 350 Managing for Results in Organizations – 3 hrs.

Construction 57 hours

- CON 100 Introduction to Construction – 1 hr.
- CON 114 Ethics in Construction – 1 hr.
- CON 132 Construction Graphics – 2 hrs.
- CON 206 Surveying – 3 hrs
- CON 224 CADD in Construction – 3 hrs.
- CON 262 Mechanical and Electrical Systems I – 3 hrs.
- CON 270 Construction Materials and Methods I – 3 hrs.
- CON 320 Soil Mechanics – 3 hrs.
- CON 326 Construction Estimating – 3 hrs.
- CON 342 Construction Equipment – 3 hrs.
- CON 356 Construction Safety – 3 hrs.
- CON 372 Construction Methods Improvements – 3 hrs.
- CON 388 Contract Administration – 3 hrs
- CON 392 Construction Scheduling – 3 hrs.

- CON 470 Design of Steel and Wood Structures – 3 hrs.
- CON 471 Concrete and Masonry Construction – 3 hrs.
- CON 492 Construction Project Controls – 3 hrs.
- CON 493 Senior Project Planning – 2 hrs.
- CON 498 Senior Project – 3 hrs.
- CE 150 or IMT 222 Statics – 3 hrs.
- CE 270 or IMT 324 Strength of Materials 3 to 4 hrs.

Elective Courses 12 hours

- CON Elective Courses, see below – 6 hrs.
- Business Management Elective Courses, see below – 6 hrs.

Construction Electives

Students must take 6 hours from the courses listed below. Note: All electives selected by the student should be approved by the student's academic advisor. The student should select technical electives that reflect career objectives. Students wishing to enroll in a CEC graduate-level course must have a minimum 2.75 GPA overall.

- CON 272: Construction Materials and Methods II – 3 hrs.
- CON 330: Housing – 3 hrs.
- CON 352: Sustainable Urban Environment – 3 hrs.
- CON 368: Mechanical and Electrical Systems II – 3 hrs.
- CON 394: Construction Labor and Unions – 3 hrs.
- CON 430: Commercial Construction – 3 hrs.
- CON 435: Heavy and Highway Construction – 3 hrs.
- CON 452: Green Construction and LEED – 3 hrs.
- CON 490: Special Topics I (approved topic only) – 1-3 hrs.
- CON 491: Special Topics II (approved topic only) – 1-3 hrs.
- CON 494: Construction Practice – 3 hrs.
- CON 520: Advanced Construction Practice – 3 hrs.
- CON 522: Advanced CADD – 3 hrs.
- CON 524: Building Information Modeling – 3 hrs.
- CON 526: Advanced Cost Estimating – 3 hrs.
- CON 528: Advanced Construction Scheduling – 3 hrs.
- CON 529: Advanced Construction Contracts – 3 hrs.
- CON 536: TQM Principles – 3 hrs.
- CON 537: Construction Simulation – 3 hrs.
- CON 540: Project and Company Management – 3 hrs.
- CON 591 Advanced Topics I (approved topic only) – 1 to 3 hrs.
- CON 592 Advanced Topics II (approved topic only) – 1 to 3 hrs.
- CON 593 Advanced Project I (approved topic only) – 1 to 3 hrs.
- CON 594 Advanced Project II (approved topic only) – 1 to 3 hrs.
- CE 250: Dynamics – 3 hrs
- CE 356: Pavement Design – 4 hrs.

Business Management Electives

Students must take 6 hours from the courses listed below.

- BLW 345: Law of Business – 3 hrs.
- BLW 355: Labor-Management Relations – 3 hrs.
- BLW 446: Employment Law – 3 hrs.
- ENT 280: Entrepreneurial Creativity – 3 hrs.
- ENT 381: Entrepreneurship for Non-Business Students – 3 hrs. or ENT 382: Entrepreneurship – 3 hrs.
- ENT 383: Managing Entrepreneurial Growth – 3 hrs.
- ENT 385: Technology Entrepreneurship – 3 hrs.
- ENT 386: Social Entrepreneurship – 3 hrs.
- ENT 389: Topics in Entrepreneurship – 3 hrs.
- FIN 322: Business Finance – 3 hrs.
- MIS 272: Business Analytics Tools and Techniques – 3 hrs.
- MIS 276: Developing Information Systems for E-Commerce – 3 hrs.
- MIS 378: Human/Computer Interaction and Usability Testing – 3 hrs.
- MIS 379: Information Systems Security – 3 hrs.
- ML 353: Operations Management in Organizations – 3 hrs.

- ML 356: Human Capital in Organizations – 3 hrs.
- ML 357: Leading Organizations – 3 hrs.
- ML 358: Managerial Decision Making – 3 hrs.
- ML 456: Compensation Management – 3 hrs.
- ML 457: Advanced Human Capital Management – 3 hrs.
- ML 459: Topics in Management – 3 hrs.
- MTG 315: Principles of Marketing – 3 hrs.

Internship Options

With support from the Bradley University Smith Career Center, students are strongly encouraged to engage in at least one internship by the time they are ready to graduate. Internships are managed by the Smith Career Center through one of the following courses, which can be taken during the summer session right before the associated class year:

- EGT 210: Sophomore Engineering Internship (Bradley Core: EL), 0 hrs.
- EGT 310: Junior Engineering Internship (Bradley Core: EL), 0 hrs.
- EGT 410: Senior Engineering Internship (Bradley Core: EL), 0 hrs.

4 + 1 Bachelor of Science in Construction/Master of Science in Civil Engineering

Admission

Bradley University Construction undergraduates may enroll in the 4 + 1 BSC/MSCE program while completing their bachelor's degree and meet the following requirements:

Students will be considered for the BSC/MSCE program during the spring of the student's junior year (preferred date: April 1) or in fall of the student's senior year, at the latest. Students will not be admitted to the program after the first day of spring semester of their senior year. The student must follow the application procedures consistent with application to Graduate Education and the Civil Engineering Graduate Program with the following exceptions. The student:

- does not need to have completed the bachelor's degree to be admitted to the program,
- has a 3.0 overall GPA or greater,
- has a minimum of 79 hours completed at the time of admission to the program if admitted before completion of junior year, or 94 hours if admitted at the beginning of the senior year,
- does not need to submit letters of recommendation, essays, transcripts, or GRE scores

Graduation Requirements

Students admitted to the graduate program pursuing an MSCE degree as an undergraduate as stipulated above will need to complete 30 semester hours of graduate course work with 9 hours dual counted in the BSC program. A minimum of 18 hours will be in CON designated courses; the remaining hours may include courses from other related departments, per the approved Elective Courses list. Students are required to pass a comprehensive examination during the last semester of their graduate program.

Undergraduates will apply for graduation for their bachelor's degree in the semester that they will achieve a minimum of 126 approved semester hours and complete all undergraduate degree requirements. Following graduation with the BSC degree, students are considered graduate students. Students who are admitted to the BSC/MSCE program will have up to 9 graduate hours taken during the final year of the bachelor's degree dual counted for the BSC and MSCE Degrees. In the student's senior year of their undergraduate program, they will take:

- 2 graduate courses, 6 hours of 500-level Construction courses, and
- 1 graduate course, 3 hours of 500-level courses in Business Management.

In the remaining two semesters in the MSCE program, the graduate student will take:

- 12 hours of graduate courses in the first semester of Year 5
- 9 hours of graduate courses in the second semester of Year 5, plus the comprehensive exam

Construction Minor

A Minor in Construction from the Department of Civil Engineering and Construction creates tremendous opportunities for students majoring in business or engineering to join the booming construction industry. Business and engineering students with a construction minor will have an adequate understanding of the principles of construction management, including an understanding of the construction project life cycle, project acquisition processes, estimating, scheduling, and construction risk management, among other concepts. The minor was designed to allow students from the various majors to complete it while completing the requirements of their major with the least number of additional courses compared to minors being offered by other institutions.

Entry Requirements

Minor is open to students from the Foster College of Business and the Caterpillar College of Engineering and Technology with a minimum GPA of 2.25.

Required Courses

For Civil Engineering Majors 17 hours

- CON 132: Construction Graphics – 2 hrs. Required in CE Major
- CON 262: Mechanical and Electrical Systems – 3 hrs.
- CON 270: Construction Materials and Methods – 3 hrs.
- CON 326: Construction Estimating – 3 hrs. Required in CE Major
- CON 388: Contract Administration – 3 hrs. CE Major Elective
- CON 392: Construction Scheduling – 3 hrs. CE Major Elective

For Other Majors 15 hours

- CON 100: Introduction to Construction – 1 hr.
- CON 132: Construction Graphics – 2 hrs.
- CON 262: Mechanical and Electrical Systems – 3 hrs.
- CON 270: Construction Materials and Methods – 3 hrs.
- CON 314: Principles of Construction Project Management – 3 hrs.
- CON 388: Contract Administration – 3 hrs.

Completion Requirements

Students must achieve a minimum GPA of 2.00 in all CON courses.

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Construction Courses



Construction Courses

CON 100 – Introduction to Construction (1 hour)

Introduction to the construction profession. Computer applications, problem solving concepts, design concepts and visualization, industry ethics, professional societies, and university services.

CON 114 – Ethics in Construction (1 hour)

Ethical and professional issues in the construction industry including an overview of applicable codes of ethical behavior and principles of professional conduct; introduction to ethical decision making; understanding of professional development opportunities; legal versus ethical responsibilities; written and oral communication practices and case studies.

CON 132 – Construction Graphics (2 hours)

Symbols, conventions, details of construction drawings, and blueprint reading. Emphasis on interpretation and communication of requirements of contract drawings.

CON 200 – Construction Co-op (0 hours)

Core Curr. EL

Full-time cooperative education assignment for construction students who alternate periods of full-time school with periods of full-time academic or career-related work in industry. Satisfactory/Unsatisfactory. Prerequisite: Sophomore standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of engineering and technology Co-op coordinator and Co-op faculty advisor.

CON 206 – Surveying (3 hours)

Theory and applications of measurements of horizontal distances, differences in elevations, horizontal angles, vertical angles, bearings, azimuths, and areas and volumes. Simple horizontal and vertical curves, topographic surveys and mapping. Basic surveying techniques for construction layout and control. Public land surveying systems. Emerging surveying and mapping technology. Prerequisite:

CON 224 – CADD in Construction (3 hours)

Introduction to commonly used computer based drafting and visualization programs with applications in construction; CAD standards; introduction to Building Information Modeling (BIM) and project collaboration techniques. Prerequisite: CON 132

CON 262 – Mechanical and Electrical Systems I (3 hours)

Survey of basic principles, methods, and equipment for building component systems related to human health and comfort. Introduces heating/cooling systems, electrical systems, plumbing, and lighting systems. Prerequisite: CON 132.

CON 270 – Construction Materials and Methods I (3 hours)

Characteristics and use of basic construction materials including concrete, metals, wood, masonry, and asphalt. Introduction to materials specifications, excavation, foundation systems, roofing, exterior and interior framing, doors and windows, glass and glazing, and finishes.

CON 272 – Construction Materials and Methods II (3 hours)

Applications of materials and construction techniques used in structural systems of wood, steel, concrete, and masonry. Placement of foundations, asphalt, cladding systems, and interior construction methods. Prerequisite: CON 270

CON 314 – Principles of Construction Project Management (3 hours)

Principles of Construction Management for non-construction or civil engineering majors. Basic concepts of ethics in construction. Introduction to estimating and scheduling. Prerequisite: CON 132, CON 270

CON 320 – Soil Mechanics (3 hours)

Introduction to soil mechanics and foundation construction. Soil index properties, classification, stress analysis, soil compaction, settlement, seepage, dewatering, excavations, and foundation construction. Prerequisite: IMT 222 or C E 150

CON 326 – Construction Estimating (3 hours)

Feasibility estimates, design estimates, quantity takeoff, direct and overhead costing, and cost control. Material, equipment, and labor estimates of construction projects, bidding strategy, and basic concepts in management and business. Includes laboratory. Prerequisite: CON 132

CON 330 – Housing (3 hours)

Planning residential areas: geographic location, orientation, functions, and interrelationships of functions. Fundamentals of residential design which can result in quality living environments for all income levels. Prerequisite: CON 132.

CON 342 – Construction Equipment (3 hours)

Characteristics of construction equipment; includes types, methods for their efficient use, and production calculations. Risk and cost analysis. Prerequisite: CON 206

CON 352 – Sustainable Urban Environment (3 hours)

Principles of land utilization, feasibility, subdivision planning, and other elements related to planning and developing sustainable urban environments. Prerequisite: CON 132.

CON 356 – Construction Safety (3 hours)

Introduction to OSHA Construction Safety Standards. Design of a safety program, risk analysis of a company's home office and field safety performance characteristics, potential problems, contingency planning, and safety audit analysis. Prerequisite: CON 262; CON 270.

CON 368 – Mechanical and Electrical Systems II (3 hours)

Survey of large scale integrated building component systems related to human health and comfort. Topics include lighting, electrical design and layout, vertical transportation, alarm and security systems, fire protection, total space conditioning, water treatment and sewage treatment, industrial piping design. Prerequisite: CON 262.

CON 372 – Construction Methods Improvements (3 hours)

Principles and methods for productivity improvement; uses and limitations; personnel management; labor productivity and productivity modeling. Prerequisite: CON 270.

CON 388 – Contract Administration (3 hours)

Introduction to construction law, bonding, insurance, DBE requirements, risk analysis and management. Types of contracts and contract content to include specifications, general conditions, and bidding requirements. Introduction to AGC, AIA and EJCDC construction contract documents. Regulations and types of potential claims and change orders and dispute resolution. Reasons and costs of change orders and claims. Global and emerging contractual and procedural issues. Dispute resolution. Case studies.

CON 392 – Construction Scheduling (3 hours)

Economic considerations and tools of management: cost reporting; scheduling. Emphasis on network methods of scheduling: resource allocation and least-cost expediting. Introduction to computerized scheduling with emphasis on Primavera and MS Project. Prerequisite: CON 326; QM 262 or equivalent.

CON 394 – Construction Labor and Unions (3 hours)

Union and non-union activities in construction industry: history, analysis, organizing, bargaining, contract language, jurisdictional disputes, training, and restrictions on operating non-union.

CON 430 – Commercial Construction (3 hours)

Principles and practices of commercial construction. Traditional and green building practices, and methods for selection and installation of material assemblies used in commercial construction. Prerequisite: CON 270

CON 435 – Heavy and Highway Construction (3 hours)

Contractual obligations and funding of horizontal construction. Emphasis on estimating, environmental compliance analysis, excavation and earthwork operations, and safety of horizontal construction operations. Prerequisite: CON 270

CON 452 – Green Construction and LEED (3 hours)

Green design, construction, and operations from a project management standpoint. Introduction to the design and construction of high performance green buildings. Building-Community Interaction. Economical and ecological benefits of green buildings. Preparation for the LEED GA Exam. Prerequisite: CON 270 & CON 326

CON 470 – Design of Steel and Wood Structures (3 hours)

Overview of the basic principles of structural behavior and introduction to the analysis and design of steel and wood structural members. Formwork design and applications in other construction related problems. Prerequisite: C E 270 or IMT 324

CON 471 – Concrete and Masonry Construction (3 hours)

Overview of materials used in concrete and masonry construction. Introduction to reinforced concrete design and basic concepts in concrete and masonry construction. Laboratory Experiments. Prerequisite: C E270 or IMT324

CON 481 – Projects I (1-3 hours)

Supervised individual study of construction projects. Prerequisite: Consent of Advisor.

CON 490 – Special Topics I (1-3 hours)

Topics of special interest which may vary each time course is offered. Topics are stated in the current Schedule of Classes. Prerequisite: consent of advisor.

CON 491 – Special Topics II (1-3 hours)

Topics of special interest which may vary each time course is offered. Topics are stated in the current Schedule of Classes. Prerequisite: consent of advisor.

CON 492 – Construction Project Controls (3 hours)

Use of project control processes for construction management to include risk management, cost, scheduling, and quality assurance and control. Practical application of financial and accounting fundamentals specific to the construction industry. Prerequisite: CON 392

CON 493 – Senior Project Planning (1 hour)

Core Curr. WI,EL

First of a two-semester course design project sequence. Discussions of the relationship between the owner, architect, consultant, superintendent, construction manager, general contractor, and subcontractors. Methods of project delivery, project concept through construction, design phases and project challenges. Leadership, ethics, public policy issues, LEED, and basic business management practices. Oral and written report of preliminary plan. Prerequisite: CON 380 and consent of advisor.

CON 494 – Construction Practice (3 hours)

Business ethics in construction; responsibilities and professionalism; construction business practices. Prerequisite: CON 380.

CON 498 – Senior Project (3 hours)

Core Curr. WI,EL

Application of construction principles to actual industry projects. Detailed estimate of the project, bidding strategies, site layout/development plan for construction staging, preparation of sample contracts using AIA and AGC formats, construction scheduling, project closeout plan, jobsite safety plan, and strategies to achieve LEED rating points. Prerequisite: CON 493

CON 520 – Advanced Construction Practice (3 hours)

Issues of the processes affiliated with the construction and engineering consulting profession: project delivery, conception through construction of projects, phases of design, and unique challenges. Case studies will be utilized. Prerequisite: CON 494, or graduate standing.

CON 522 – Advanced CADD (3 hours)

Applications of CAD systems. Visualization and optimization of the processes used in construction through three-dimensional modeling and utilization in various civil engineering and construction applications. Prerequisite: CON 224 or C E 224, or graduate standing.

CON 524 – Building Information Modeling (3 hours)

Application of state-of-the-art technology in projects during various phases from inception to completion including planning, design, procurement, construction, handing over, and operation and maintenance. Investigation of different available tools and technologies in recording, storing, and sharing project information. Prerequisite: CON 224 or C E 224, or graduate standing.

CON 526 – Advanced Construction Estimating (3 hours)

Advanced techniques in taking-off quantities, pricing techniques, computer estimating, and bidding strategy models. Prerequisite: CON 326, or graduate standing.

CON 528 – Advanced Construction Scheduling (3 hours)

Project scheduling methods with emphasis on network scheduling techniques, work breakdown structure (WBS), resource and cost

loading, scheduling under uncertainties, project time compression, resource leveling, scheduling for linear projects (LOB), time-cost trade-offs, project status, reporting and updating, schedules as tools for claims documentation. Case studies. Computer based. Prerequisite: CON 392, or graduate standing.

CON 529 – Advanced Construction Contracts (3 hours)

Issues in the administration and implementation of a construction contract. Coordinating and controlling the construction project under legal and ethical considerations. Prerequisite: CON 388, or graduate standing.

CON 536 – TQM Principles (3 hours)

Theory and analysis of the Total Quality Management system as applied within the construction industry. Case studies. Prerequisite: Q M 262 or equivalent, or graduate standing.

CON 537 – Construction Simulation (3 hours)

Decision making using simulation and simulation languages to model construction operations. Simulation of construction process using what-if analysis. Role of simulation and decision making in the planning and scheduling phases in the construction industry. Topics include introduction to discrete event simulation, generation of random numbers, queuing, simulation languages for construction. Prerequisite: Q M 262 or equivalent, or graduate standing.

CON 540 – Project and Company Management (3 hours)

Unique issues of company and project management in the construction industry not traditionally found in construction programs, such as fraud, regulatory issues, and international construction. Presentations on project and company management by renowned experts will give the student knowledge and insights on new trends, innovative procedures, practical case studies, and exposure to innovation in construction. The course will give the student knowledge of the business aspects of running a wide range of construction companies and a variety of projects. Prerequisite: CON 326 and CON 392, or graduate standing.

CON 591 – Advanced Topics I (1-3 hours)

Topics of special interest, which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: Consent of department chair.

CON 592 – Advanced Topics II (1-3 hours)

Topics of special interest, which may vary each time course is offered. Topic stated in current Schedule of Classes Prerequisite: Consent of department chair.

CON 593 – Advanced Project I (1-3 hours)

Supervised individual study of construction projects. Prerequisite: Consent of department chair.

CON 594 – Advanced Project II (1-3 hours)

Supervised individual study of construction projects. Prerequisite: Consent of department chair.

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Electrical and Computer Engineering



Electrical and Computer Engineering

The baccalaureate program in electrical engineering is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>.

FACULTY Professors: Lu (Chair), Malinowski, Shastry; Associate Professors: Imtiaz, Miah; Emeritus Professors: Anakwa, Schertz, Stewart; Emeritus Associate Professors: Huggins, Jetton; Assistant Professor in Residence: Gutschlag (Emeritus)

The department offers degree programs in electrical engineering (B.S.E.E. and M.S.E.E.), electrical engineering with computer option (B.S.E.E.), and robotics and controls concentration (B.S.E.E.). Bradley University Electrical Engineering undergraduates may enroll in the 4+1 accelerated BSEE/MSEE program while completing their bachelor's degree. Students who are admitted to the accelerated 4+1 BSEE/MSEE program will have nine graduate hours dual counted for the BSEE and MSEE Degrees. In the student's graduating year of their undergraduate program, they will take 9 hours of ECE graduate level courses. See the Graduate Catalog for information about graduate programs.

It takes special pride in the particularly close student-faculty relationships developed over the years. Entrance requirements can be obtained by contacting the chair of the ECE department.

Department Mission and Educational Objectives

Department Mission: the mission of the Electrical and Computer Engineering Department is to educate the next generation of electrical and computer engineers to meet the challenges of the future, and empower electrical engineering graduates for immediate and sustained success in their professional practice.

Program Educational Objectives: The ECE faculty recognize that there are a number of common elements inherent to the success in the profession, which include the following: ability to acquire, generate, and use new knowledge; ability to complete complex electrical engineering projects; critical thinking, experience, knowledge, skills, and capabilities relevant to profession. These elements required for success in the profession translate into these educational objectives of the program. It is the expectation of the ECE faculty that graduates of the EE program will attain the following goals within a few years of graduation,

1. Are applying their education to their professional work in the public or private sectors or obtaining an advanced degree in electrical engineering or related areas;
2. Are engaging in lifelong learning using their education as a foundation.
3. Are productive while demonstrating professional growth and assuming positions of increasing responsibility.

Student Outcomes

In order to meet these program educational objectives, students graduating from Bradley's electrical engineering program will attain the following outcomes.

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

The goal of the ECE department is to provide the intellectual and physical learning environment in which students achieve these outcomes. The intellectual component of this environment is supplied by the ECE faculty members, in their roles as mentors, advisors, and engineering professionals, as well as by the curriculum they establish for the programs. The physical component consists of quality facilities equipped with state-of-art instrumentation, equipment, computers, and professional software.

Undergraduate Degree Program

By providing intelligent devices, circuits, and systems, ECE has been the driving force behind most modern technological innovations used to address societal challenges, issues, and needs. The efficiency and ecological demands associated with virtually every product or system produced in the world today requires a significant ECE component. Bradley ECE graduates are now working in many different areas including robotics and controls, machine learning and artificial intelligence (AI), Internet of Things (IoT) and cybersecurity, embedded systems, software development, wireless communication, high performance computing, signal processing, power electronics and energy conversion systems, power systems, medical and healthcare technologies, transportation, and integrated electronics.

In this dynamic profession, the Bradley ECE faculty recognize that each student's career path is unique, depending upon the individual's ambitions and interests. By combining the focus on student-centric undergraduate education, depth of faculty expertise, small student-to-faculty ratio, and design projects, the ECE faculty can respond to the needs and interests of each ECE student.

The department offers three programs:

Electrical Engineering

Electrical Engineering with Computer Option

Electrical Engineering with Robotics and Controls Concentration

In addition, for those students who are in our BSEE program, the department offers an accelerated 4+1 BSEE/MSEE program.

All ECE programs consist of several curricular components that give the student the opportunity to build a solid foundation of basic physical principles to obtain experience in design, and to acquire useful insight into the profession and practice of electrical engineering.

1. Lecture sequence consists mostly of required core courses through which the student learns about and acquires problem-solving and/or design skills in circuit analysis, digital design, programming in high- and low-level languages, electronics, microcontrollers, signals and systems, and electromagnetic fields.

2. Laboratory and project design sequence: Though many design techniques are taught in the lecture courses, the student learns the practice of electrical engineering design primarily through the laboratory and project sequence. Each year contains at least one design project experience. The lab courses integrate material from the lecture courses and are taught by experienced faculty members. The small student faculty ratio allows for close interactions between students and instructors. Furthermore, the laboratory facilities and equipment are modern and readily accessible. Many of the lecture courses and all of the lab courses require the use of computers as well as the oral and/or written presentation of technical material.

Several aspects of design are taught in the first year, sophomore, and junior labs (ECE 100, ECE 221, and ECE 322). The student's design experience in these courses includes synthesis to meet specifications, analysis, construction, testing, and evaluation with respect to specifications. Furthermore, the first year, sophomore, and junior design projects associated with these courses are particularly valuable and establish the foundation of the design project sequence. In addition to the implementation steps described above, the projects also require formulation of design problem statements and criteria, consideration of alternative solutions, and system descriptions.

The laboratory and project design sequence culminates with a yearlong senior capstone project (ECE497, ECE498 and ECE499). The capstone project is a major educational component of the program. It involves the student in design at or near the professional level and requires the formulation of design specifications, consideration of alternative solutions, feasibility considerations, time management, allocation of design responsibilities, and detailed system documentation.

The student builds on this capstone project experience in ECE 401 and ECE 402 (Undergraduate Design Seminar I and II) during the senior year. In these courses, the student works on a multidisciplinary team to prepare a business plan delineating the development of a venture based on an electronic product. The student also explores other aspects of engineering and, through the process, gains a broader view of the engineering profession.

3. Vertical Integrated Project(VIP) Course:

The ECE398 Vertical Integrated Project course (0 – 2 hrs) is introduced to extend project-based learning. Students are required to take ECE398 at least for a semester before they take their senior capstone project. With this repeatable course, students can participate a project for up to 3 years till they get into their senior capstone design project. Stackable ECE398 hours can be counted towards Professional electives. Students have opportunity to work on an interdisciplinary project in a multidisciplinary team of students, from various years, and background. It provides time and context to practice professional skills and gain deeper insights, make contributions to real-world projects early-on, experience different roles and build up leadership. It makes ambitious multi-year projects possible.

4. Electrical and Computer Engineering (ECE) Electives:

Through 15-hour ECE Elective courses, the student can specialize in areas such as controls, communication, cyber physical and digital system, digital signal processing, electromechanical systems, embedded systems, mechatronics, power electronics and system, robotics, and wireless components and systems.

5. Professional Electives:

All ECE programs require the student to complete a 9-hour professional elective stem. This stem allows the student to take a coherent set of courses so as to enhance the student's competitiveness in the job market or better prepare for graduate or professional school. These 9-hour professional electives could be dual counted for the BSEE major program and the minor program at their choice. In another word, for students pursuing a minor program, they may use the 9-hour professional elective stem to take required courses from their minor program.

6. Bradley Core Curriculum: In addition to the technical part of the program described above, the student must also meet the Bradley Core Curriculum (BCC) requirements (see All-University Degree Requirements in this catalog.) As part of the BCC requirements, the student gains effective communication skills via introductory and advanced English composition and a speech course. The BCC emphasizes eight "Areas of Inquiry" that will more deeply engage the student in the process of intellectual growth. The student chooses the required BCC courses from a list of approved courses.

A wide range of career opportunities are available to the electrical engineering graduate in many different technical areas and industries. For those who wish to continue their professional studies, details of the Master Science of Electrical Engineering (MSEE) program are given in the Bradley University Graduate Catalog.

Professional and Personal Growth

The electrical engineering lecture courses and lab/project sequence prepare students very well for success as design engineers in the electrical and computer engineering profession. The ECE faculty also urges students to participate in activities and take courses that promote professional growth. It is strongly recommended that students join the Bradley Student Branch of the Institute of Electrical and Electronics Engineers (IEEE). The IEEE is the world's leading professional association for the advancement of technology and promotes professional development through various activities. In addition, students are advised to consider experiential education such as summer internships and co-op programs. Finally, students can choose their BCC courses and professional electives to put a distinctive stamp on their programs of study. For example, they can seek a minor appropriate to career goals or participate in a study abroad program. (Note that certain minors and study abroad program will add hours and/or time to the normal eight-semester program of study.)

In addition, students can choose their BCC courses and professional electives to put a distinctive stamp on their programs of study. For example, they can seek a minor appropriate to career goals or participate in a study abroad program. (Note that certain minors and study abroad program will add hours and/or time to the normal eight-semester program of study.)

Programs of Study

Academic advisor closely works with students on their BSEE program of study tailored to their academic background, interest and career goals. BSEE programs have an expected total of 126 credit hours. These courses can be listed in five categories: Bradley Core

Bradley Core Curriculum (BCC) 21 hours

- BCC Communications Oral Communications (BCC – CM) – 3 hrs.
- BCC Communications Writing (BCC – W1) 3 hrs.
- BCC Communications Advanced Writing (BCC – W2) – 3 hrs.
- BCC Fine Arts (BCC – FA) – 3 hrs.
- BCC Global Perspectives (BCC – GP) – 3 hrs.
- BCC Humanities (BCC – HU) – 3 hrs
- BCC Multidisciplinary Integration (BCC – MI) – 3 hrs.

Mathematics and Basic Sciences 33 hours–

- CHM 110 General Chemistry I (BCC – NS1) – 3 hrs.
- CHM 111 General Chemistry I Lab – 1 hr.
- MTH 121 Calculus I (BCC – QR1) – 4 hrs.
- MTH 122 Calculus II (BCC – QR2) – 4 hrs.
- MTH 223 Calculus III – 4 hrs.
- MTH 207 Elementary Linear Algebra with Applications – 3 hrs.
- MTH 224 Differential Equations – 3 hrs.
- PHY 110 University Physics I (BCC – NS2) – 4 hrs.
- PHY 201 University Physics II – 4 hrs.
- ECE 302 Probability, Statistics, and Random Processes for EE – 3 hrs.

Required Courses 48 hours

- ECE 100 Introduction to Electrical and Computer Engineering – 2 hrs.
- ECE 102 Intro to EE: Digital Systems – 3 hrs.
- ECE 103 Intro to EE: Computers and Programming – 3 hrs.
- ECE 206 Continuous-Time Signals and Systems – 3 hrs.
- ECE 208 Transmission Lines and Electromagnetic Fields – 3 hrs.
- ECE 214 Circuits Analysis and Design – 4 hrs.
- ECE 221 Circuits and Systems Laboratory – 2 hrs.
- ECE 301 Discrete-Time Signals and Systems – 3 hrs.
- ECE 303 Electronics Fundamentals – 3 hrs.
- ECE 304 Advanced Electronics and Integrated Circuit – 3 hrs.
- ECE 305 MCU Architecture and Programming – 4 hrs.
- ECE 322 Electronics and Interfacing Laboratory – 3 hrs.
- ECE 398 Vertical Integrated Project – 1 hr.
- ECE 401 Undergraduate Design Seminar I – 1 hr.
- ECE 402 Undergraduate Design Seminar II – 1 hr.
- ECE 498 Senior Capstone Project I – 3 hrs. (BCC WI, EL)
- ECE 499 Senior Capstone Project II – 3 hrs. (BCC WI, EL)
- ECO 100 Introduction to Economics (BCC – SB) – 3 hrs

Approved ECE Electives – 15 hours

Approved Professional Electives – 9 hours

Expected Program: 126 hours

ECE Electives Description

ECE electives are available in the areas of controls, communication, cyber physical and digital system, digital signal processing, electromechanical systems, embedded systems, mechatronics, power electronics and system, robotics, and wireless components and systems. Approved ECE electives include all 400-level ECE courses except for ECE 401, ECE 402, ECE 497, ECE 498, and ECE 499.

ECE EE Electives:

Through EE electives, the student can specialize in areas such as controls, communication, digital signal processing, electromechanical systems, mechatronics, power electronics and system, and wireless components and systems.

Five EE electives are required and two must be from the core pool listed below:

- ECE 431 Communication Theory I
- ECE 440 Electromechanical Systems
- ECE 441 Control System Theory I

- ECE 451 Radio Frequency Circuits and Systems
- ECE 460 Digital Signal Processing
- ECE 470 Data-Structures and Object-oriented Programming
- ECE 481: Digital Systems: Design and Synthesis

Special topic courses may be offered as EE electives. See your advisor for a current list of approved EE electives.

ECE Digital Electives:

The demand for and continuing advances in computers and digital systems have created opportunities for professionals capable of not only designing computer systems but also applying these systems to a broad range of applications. Such fields as communications, automatic control, robotics, and signal processing have benefitted greatly from developments in the digital area. Additionally, the development of modern computers requires a thorough understanding of the methodologies of software and hardware design.

Five ECE digital electives are required and two must be from the core pool, listed below:

- ECE 444 Introduction to Autonomous Robotics
- ECE 465 Engineering Application of Machine Learning
- ECE 470 Data-Structures and Object-Oriented Programming
- ECE 471 Real-time Operating Systems
- ECE 472 Embedded Microcontroller Linux
- ECE 473 Embedded TCP/IP
- ECE 481 Digital Systems: Design and Synthesis
- ECE 482 Digital Systems: High Level Synthesis and Codesign
- ECE 483 Digital Systems: Microprocessor Architecture and Design

It is also expected that the students in the option focus their project work in the digital area. Special topic courses may be offered as ECE digital electives. See your advisor for a current list of approved ECE digital electives.

ECE Robotics and Controls Electives:

The Robotics and Controls concentration provides ECE students with essential knowledge and skills in the practice of sensory feedback, geometric control, optimal control, cooperative control, planning and information processing for robotics. Completing this concentration will help students acquire the fundamentals and practical skills in autonomous robotics and prepare them for a career in intelligent robotics and/or for pursuing advanced degrees in robots.

Five elective courses for Robotics and Controls electives

1. Require project-based Robotics and Controls electives:

ECE 444 Introduction to Autonomous Robotics (3 hours)

2. Take any two of these Robotics and Controls electives courses that emphasize dynamics, mechatronics, robotics and control:

- ECE 440 Electromechanical Systems (3 hours)
- ECE 441 Control System Theory I (3 hours)
- ECE 442 Control System Theory II (3 hours)
- ECE 443 Cooperative Control of Multiagents (3 hours)
- ECE 467 Mobile Robotics Laboratory (3 hours)
- ECE 468 Introduction to Mechatronics (3 hours)
- ECE 474 Mobile Robot Navigation and Mapping (3 hours)

3. Take any two of these Robotics and Controls electives courses that emphasize artificial intelligence, information processing and programming

- ECE 460 Digital Signal Processing (3 hours)
- ECE 462 Digital Image Processing (3 hours)
- ECE 465 Engineering Application of Machine Learning (3 hours)
- ECE 470 Embedded Data Structures and Object Oriented Programming (3 hours)
- ECE 471 Real-time Operating Systems (3 hours)
- ECE 472 Embedded Microcontroller Linux (3 hours)
- ECE 475 Security for Industrial Automation
- ECE 481 Digital System: Design and Synthesis (3 hours)

4. Students in robotics and controls concentration are recommended to complete a senior capstone project in the area of Robotics and Controls. The senior capstone project courses include

- ECE 497 Capstone Project Level Design (1 hour)
- ECE 498 Senior Capstone I (2 hours)
- ECE 499 Senior Capstone Project II (3 hours)

Special topic courses may be offered as ECE Robotics and Controls electives. See advisor for updated list of Robotics and Control electives.

Introductory Course Exception:

Students who do not earn credit for ECE100 may be required to take an extra ECE elective to replace those credit hours.

Accelerated 4+1 BSEE/MSEE Program

For students in BSEE/MSEE 4+1 program, they will apply for graduation for their bachelor's degree in the semester that they will complete all requirements for their BSEE degree. Students are considered as graduate students once their BSEE degree is conferred. Students who are admitted to the accelerated 4+1 BSEE/MSEE program will have nine graduate hours dual counted for the BSEE and MSEE Degrees. In the student's graduating year of their undergraduate program, they will take:

- 9 hours of ECE graduate level courses

In the remaining two semesters (i.e., Year 5) in the BSEE+MSEE program, students will take 21 hours of approved graduate level courses including at least 3 hours of research experience either from ECE691 Research or ECE699 Thesis and pass a comprehensive exam in the graduating semester. Students will apply for graduation for their Master Science in Electrical Engineering (MSEE) degree in the semester that they will complete all requirements for their MSEE degree.

BSEE/MSEE 4+1 Program Admission:

- Bradley University Electrical Engineering undergraduates may enroll in the 4 + 1 BSEE/MSEE program while completing their bachelor's degree.
- Students will be considered for the BSEE/MSEE program during the spring of the student's junior year (preferred date: April 1) or in fall of the student's senior year, at the latest.
- Students will not be admitted to the program after the first day of spring semester of their senior year. Students are considered as graduate students once their BSEE degree is conferred.
- The student must follow the application procedures consistent with application to Graduate Education and the Electrical Engineering Graduate Program with the following exceptions. The student:
 - does not need to have completed the bachelor's degree to be admitted to the program,
 - has greater than a 3.0 GPA in the last 60 semester hours of undergraduate coursework.
 - has a minimum of 79 hours completed at time of admission to the program if admitted before completion of junior year, or 95 hours if admitted at the beginning of the senior year.
 - does not need to submit letters of recommendation, essays, transcripts, or test scores

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Electrical Engineering Courses



Electrical Engineering Courses

ECE 100 – Introduction to Electrical and Computer Engineering (2 hours)

Introduction to fundamental concepts in electrical and computer engineering. Prerequisite:

ECE 101 – Introduction to EE: DC Circuits (2 hours)

Introduction to electrical engineering. Topics includes: voltage, current, and power, circuit elements, fundamentals of DC circuit analysis using Ohm's and Kirchoff's laws, Thevenin and Norton equivalent circuits, superposition, and DC analysis of operational amplifiers.

ECE 102 – Intro to EE: Digital Systems (3 hours)

Introduction to logic design with focus on the following topics: fundamentals of Boolean algebra and minimization techniques, logic realizations of SOP and POS functions, multiple function synthesis using PLDs, combinational circuit design as it applies to computers, sequential circuit elements, flip flops, counters and shift-registers, clock generation circuits, algorithmic state machine method of designing sequential circuits, and VHDL design and synthesis. Course culminates with a design project that uses VHDL to implement a finite state machine.

ECE 103 – Intro to EE: Computers and Programming (3 hours)

Introduction to computers and operating systems; introduction to programming in a high level language appropriate to electrical engineering.

ECE 200 – Engineering Co-Op (0 hours)

Core Curr. EL

Full-time cooperative education assignment for electrical engineering students who alternate periods of full-time school with periods of full-time academic or career-related work in industry. Satisfactory/Unsatisfactory. Prerequisite: Sophomore standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of engineering and technology Co-op coordinator and Co-op faculty advisor.

ECE 204 – AC Circuits and Introduction to Systems (3 hours)

The study of AC circuits with a dynamical systems approach. Topic covered: capacitance, inductance, phasors, impedance, admittance, Thevenin and Norton equivalents, operational amplifiers, differential equation models of linear circuits and systems, impulse and step responses, convolution integral, Laplace transform, frequency response, and transformers. Simulation and analysis of AC circuits using SPICE and MATLAB. Prerequisite: ECE 101 with a minimum grade of C

ECE 205 – Microcontroller Architecture and Programming (3 hours)

Introduction to an 8-bit microcontroller. Topics include: architecture, instruction set, assembly language programming, assembler directives, input/output operations, C language programming for an 8-bit embedded device, timers, analog-to-digital conversion, interrupts, timing analysis, embedded design project, and discussion of an integrated design environment that includes a assembler,

compiler, and debugger. Prerequisite: A minimum grade of C in: ECE 102, ECE103

ECE 206 – Continuous-time Signals and Systems (3 hours)

The study of signals and systems using the continuous-time approach. Topics covered: Modeling of continuous time physical systems, sampling, transformation of continuous-time signals, Fourier series, Fourier transform, energy and power density spectra, filter design, stability, state variables for continuous-time systems, feedback, bandwidth, modulation. Simulation and analysis of systems using MATLAB and Simulink. Prerequisite: ECE 204 with a minimum grade of C.

ECE 207 – Simulation and Analysis for Electrical Engineers (2 hours)

Numerical analysis and modeling techniques of real-world problems as pertinent to electrical engineers using MATLAB and Simulink. Prerequisite: ECE103 with a minimum grade of C. Corequisite: Concurrent enrollment in MTH 207.

ECE 208 – Transmission Lines and Electromagnetic Fields (3 hours)

Time-harmonic steady-state and transient analysis of radio frequency (RF) transmission lines (T Lines); impedance matching; the Smith chart and its applications; vector analysis; static electric fields and capacitance; steady currents and resistance; static magnetic fields and inductance; electrical and magnetic properties of materials; electric and magnetic boundary conditions; electric and magnetic energies. Prerequisite: ECE 204 with a minimum grade of C, Concurrent enrollment in MTH 223

ECE 214 – Linear Circuits Analysis and Design (4 hours)

The study of linear circuits analysis and design. DC and AC circuits. Basic circuit laws and circuit theorems. Characteristics of circuit elements (Resistor, Capacitor, Inductor, Signal Sources, Op-Amps). Signal waveforms, Phasors, Impedance. Thevenin and Norton equivalents. Time domain circuit analysis and design. Phasor domain circuit analysis and design. Laplace transform. S-domain circuit analysis and design. Frequency response. AC power systems. Transformers, average power, reactive power, and complex power. Simulation and analysis of linear circuits using SPICE and MATLAB. Circuit analysis and design hands-on labs and projects. Prerequisite: A minimum grade of C in ECE 100 or equivalent with consent of instructor.

ECE 221 – Circuits and Systems Laboratory (2 hours)

Introduction to experimental design and implementation of analog and digital electronic circuits and systems. Students develop hardware and software troubleshooting and testing skills. The design experience culminates in a multi-week, specification-driven project. CoRequisite: A minimum grade of C in ECE 214 and 103.,ECE 102.

ECE 227 – Electrical Engineering Fundamentals (4 hours)

Introduce fundamentals of electrical engineering principles. Basic circuit theory, Operational Amplifiers, First and second order passive circuits, AC sinusoidal analysis, Frequency Responses, Digital logic circuits, DC motors and generators, and accompanying laboratory experiments and projects. Open to non-electrical engineering majors only. Prerequisite: PHY 201 Corequisite: MTH 224

ECE 301 – Discrete-time Signals and Systems (3 hours)

The study of signals and systems using the discrete-time approach. Topic covered: modeling of discrete-time physical systems, sampling and reconstruction of signals, analog-to-digital converters, quantization, arithmetic formats (fixed- and floating-point), analysis of discrete-time LTI systems, Implementation of discrete-time systems, Z-transforms, frequency analysis of discrete-time signals, frequency domain analysis of LTI systems, discrete Fourier transform, design of FIR and IIR filters. Simulation and analysis of systems using MATLAB and Simulink. Prerequisite: A minimum grade of C in: ECE 206

ECE 302 – Probability, Statistics, and Random Processes for EE (3 hours)

Exploration of probability, statistics and random processes with emphasis on engineering applications. Topics covered: probability models, probability axioms, statistical independence, conditional probability, random variables, probability distributions, joint probability density functions, correlation, covariance, statistical estimate of random parameters, sampling distributions, reliability, random processes, power spectral density, and response of LTI systems to random inputs. Simulation and analysis using MATLAB. Prerequisite: A minimum grade of C in: ECE 206

ECE 303 – Electronics (3 hours)

Function and applications of diodes, transistors and operational amplifiers. Simulations of electronic devices and circuits using SPICE. Prerequisite: ECE 204 with a minimum grade of C.

ECE 304 – Advanced Electronics and Integrated Circuits (3 hours)

Fundamentals on analog IC and digital IC. Building blocks of integrated-circuit amplifiers. Differential and Multistage amplifiers. Power amplifiers. Feedback and filters. Oscillators. CMOS digital logic circuits. Memory and Clocking circuits. Electronic control devices and circuits. Simulations and experiments of electronic devices and circuits. Prerequisite: A minimum grade of C in ECE 303

ECE 305 – Microcontroller Architecture, Programming and Applications (4 hours)

Introduction to microcontroller architecture and programming. Topics include microcontroller architecture, fundamentals of assembly language, common microcontroller peripherals, and developing microcontroller-based applications in a relevant high-level procedural programming language. Students develop hardware and software troubleshooting and testing skills. The design experience culminates in a specification-driven project. Prerequisite: A minimum grade of C in: ECE 102, ECE 103

ECE 322 – Electronics and Interfacing Lab (3 hours)

Laboratory sequence with lectures focused on embedded system using devices such as microcontroller and FPGA. Interfacing from both a hardware and software perspective. Including electronic interfaces, data acquisition, communication protocols and applications; The design experience culminates in a multi-week, specification-driven project. Prerequisite: A minimum grade of C in: ECE 221, ECE 303, and ECE 305.

ECE 398 – Vertical Integrated Project (0-4 hours)

It provides the time and context necessary for students to learn and practice many different professional skills, make substantial contributions to a project, and experience many different roles in a team. Under the approval of department and advisors, up to 1 credit hour per semester for first and second year students; up to 2 credit hours per semester for third year students; not open to graduating senior students in ECE department. Prerequisite: Approval from department and advisors

ECE 401 – Undergraduate Design Seminar I (1 hour)

Multidisciplinary team effort to identify a market need based on realistic constraints; propose an electrical or electronic product to meet the need; prepare a feasibility study assessing economic and technical viability of the product. CoRequisite: ECE 497.

ECE 402 – Undergraduate Design Seminar II (1 hour)

Core Curr. EL,WI

Continuation of multidisciplinary team effort to prepare a business plan for the launch of a venture based on the electronic product proposed and analyzed in ECE 401. Each student will also gain insight into the critical importance of professional ethics by identifying and analyzing a case in which flawed ethical decisions lead to negative outcomes for individuals and their company. Both deliverables require significant writing, the quality of which will have a major impact on the student's grade. Prerequisite: ECE401 with a minimum grade of C.

ECE 409 – Special Topics (1-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: Consent of instructor.

ECE 410 – Special Topics (1-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: Consent of instructor.

ECE 431 – Communication Theory I (3 hours)

Orthogonal signal representation; review of Fourier series and Fourier transform; basic probability theory; random processes; power spectral density; Shannon's channel capacity; sampling theorem; baseband signaling; bandpass signaling; complex envelop representation of signals and systems; analog modulations; binary and M-ary digital modulations; phase locked loops, demodulation circuits; matched filter; error performance in digital communications. Cross-listed as ECE 531. Prerequisite: Minimum grade of C in ECE 206 Corequisite: Concurrent enrollment in ECE 302

ECE 432 – Communication Theory II (3 hours)

Digital communication systems; modulation; demodulation; maximum likelihood detection; trade-offs between bandwidth and power; bit error rate; channel coding techniques: block coding, convolutional coding, and iterative decoding; mutual information; channel capacity; trellis-coded modulation; synchronization. Cross-listed as ECE 532. Prerequisite: ECE 431 with a minimum grade of C.

ECE 440 – Electromechanical Systems (3 hours)

Introduction to dynamic systems analysis with emphasis on mathematical modeling of sensors and electromechanical devices for control system applications. Fundamentals of power and industrial electronics. Prerequisite: ECE 206 with a minimum grade of C Corequisite: Concurrent enrollment in ECE303

ECE 441 – Feedback Control of Dynamic Systems (3 hours)

Analysis and design of linear automatic control systems for continuous-time systems using classical control theory. Root locus and Bode methods. Modeling of physical systems. Introduction to digital control. Computer-aided design and simulation. Prerequisite: Minimum grade of C in ECE 206 and ECE 221 Corequisite: Concurrent enrollment in ECE 303

ECE 442 – Advanced Data-Driven Control and Applications (3 hours)

Frequency domain design of linear automatic control systems. Analysis and design of linear automatic control systems for sampled-data and discrete-time systems. Classical and modern control theory methods. Modeling of sampled-data and discrete-time systems. Prerequisite: A minimum grade of C in: ECE 441 and ECE 301 or approval of instructor

ECE 443 – Distributed Learning Control of Dynamic Systems (3 hours)

The analysis and control of distributed dynamic systems, distributed learning and control issues in dynamic systems, distributed control and estimation of multiple dynamic systems, use of fundamental tools in modeling and control of linear and nonlinear dynamic systems, applications of distributed learning and control for multiple dynamic systems through case studies in multiple robot coordination and distributed power grids. Cross-listed as ECE 543. Prerequisite: ECE 302 and MTH 207

ECE 444 – Introduction to Autonomous Robotics (3 hours)

The project-based course deals with the fundamentals on autonomous and intelligent robotics systems. It covers kinematics,

manipulability, motion of robots, the basic definition, architecture and motion planning, control and navigation of autonomous robotics. Cross-listed as ECE544. Not open to students with credit in ECE 544. Prerequisite: MTH 224, ECE 205 or ECE 103 or proficiency in programming in a structural computer language, ECE 221 or ECE 227.

ECE 445 – Power Electronics Fundamentals (3 hours)

Fundamentals of power electronics. Covered topics: DC/DC converters, DC/AC converters (inverters), and AC/DC rectifiers, analysis, design, simulation and application of power electronic based systems. Cross-listed as ECE 545. Prerequisite: ECE 303

ECE 446 – Power Laboratory (3 hours)

Experiments in transformers and rotating machines. Covered topics: electric machinery principles; brushed DC motor connections, operational characteristics, and applications; linear brushed DC motor model development, simulation, and verification; wound rotor and squirrel cage AC induction motor connections, operational characteristics, and applications; linear single-phase transformer model development and verification; power electronic H-bridge. Prerequisite: ECE 303

ECE 450 – Electromagnetic Theory (3 hours)

Time-varying electric and magnetic fields; Maxwell's equations; electromagnetic potentials; electromagnetic boundary conditions; plane-wave propagation in unbounded conducting and non-conducting media; wave polarization; Poynting vector; reflection and transmission of waves at boundaries; and radiation and antennas. Cross-listed as ECE 550. Prerequisite: ECE 208 with a minimum of C.

ECE 451 – Radio Frequency Circuits and Systems (3 hours)

Review of transmission lines, impedance matching and transformations, S-parameters, passive RF junctions, RF amplifier design, RF systems, and front-end design. Cross-listed as ECE 551. Prerequisite: A minimum grade of C in: ECE208, ECE221. Corequisite: Concurrent enrollment in ECE303.

ECE 452 – Wireless Communication Systems (3 hours)

Introduction to wireless communication systems; modulation and detection; noise, attenuation; multipath and fading; sensitivity, distortion, inter-modulation, and dynamic range; wireless link RF design; transmitter and receiver architectures; RF components and subsystems; selected wireless systems including multiple-access cellular systems. Cross-listed as ECE 552. Prerequisite: A minimum grade of C in: ECE 206, ECE 208 Corequisite: Concurrent enrollment in ECE303

ECE 453 – Radio Frequency Communications Laboratory (3 hours)

Radio frequency measurements of wireless system components and subsystems, time and frequency domain measurements of analog and digital signals in communication systems, computer-aided design, fabrication, and testing of microwave integrated circuit. Cross-listed as ECE 553. Prerequisite: ECE 451 with a minimum of C

ECE 460 – Digital Signal Processing (3 hours)

Design of digital filters and multirate systems. Topics include: review of discrete-time signals and systems, generalized linear phase, all-pass filters, minimum phase systems, inverse systems, FIR filter design, IIR filter design, resampling in time and frequency domain, half-band filters, polyphase filters, quadrature mirror filters and wavelets. Cross-listed as ECE 560. Prerequisite: ECE 301 with a minimum grade of C.

ECE 462 – Digital Image Processing (3 hours)

Introduction to image processing. Topics covered: digital image fundamentals, image enhancements in spatial domain, image restoration, color image processing, wavelets and multiresolution, image compression, morphological image processing, image segmentation, pattern recognition. Cross-listed as ECE 562. Prerequisite: ECE 301 or ME 273 with a minimum grade of C.

ECE 463 – Medical Imaging (3 hours)

Introduction to the common methods and devices employed for medical imaging, including conventional x-ray imaging, x-ray computed tomography (CT), nuclear medicine (single photon planar imaging), single photon emission computed tomography (SPECT), and positron emission tomography (PET), magnetic resonance imaging (MRI), and ultra-sound imaging. The physics and design of systems, typical clinical applications, medical image processing, and tomographic reconstruction. Cross-listed as ECE 563 and ME 582. Prerequisite: ECE 206 with a minimum grade of C.

ECE 465 – Engineering Applications of Machine Learning (3 hours)

This course covers the theory, design, and engineering applications of machine learning with the emphasis on computational intelligence. Embedded hardware platforms, high-performance libraries, and high-performance architectures are used for implementation. Variants such as Deep Neural Networks and Convolutional Neural Networks are examined. Cross-listed as ECE 565. Prerequisite: ECE 302 with a minimum grade of C.

ECE 467 – Mobile Robotics Laboratory (3 hours)

An explorative laboratory-based study of autonomous mobile robotics. Mobile robots utilizing sensors and microcontrollers to navigate using localization, motion control, and mapping algorithms. Prerequisite: ECE 207 and ECE 322 with a minimum grade of C.

ECE 468 – Introduction to Mechatronics (3 hours)

Introduction to mechatronics: mechatronics overview, sensors and actuators modeling, interfacing sensors and actuators with digital systems. Prerequisite: ECE 221 or ECE 227

ECE 470 – Embedded Data Structures and Object Oriented Programming (3 hours)

Introduction to data structures, object-oriented programming, memory management, problems of efficiency and complexity of algorithms applicable to embedded systems. Cross-listed as ECE 570. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C, or proficiency in microcontroller programming in a structural computer language.

ECE 471 – Real-time Operating Systems (3 hours)

Advanced programming of small microprocessor-based systems using high-level programming languages applied to real situations: data acquisition, control, communication, small real-time operating systems. Software development for devices from a family of microcontrollers that are relevant to industrial applications. Cross-listed as ECE 571. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C, or proficiency in microcontroller programming in a structural computer language.

ECE 472 – Embedded Microcontroller Linux (3 hours)

Understanding of Linux and its adoption as an embedded OS platform, including process and thread management; communication, synchronization, and deadlocks; virtual memory and file systems; overview of methods and techniques to design and create embedded systems based on the Linux kernel. The essentials of the Linux operating system are discussed from the embedded system point of view, including selecting, configuring, cross-compiling, and installing a target-specific kernel, drivers, and subsystems; the GNU development tool chain; and tools used to build embedded Linux systems. Cross-listed as ECE 572. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C, or proficiency in microcontroller programming in a structural computer language.

ECE 473 – Embedded TCP/IP (3 hours)

Fundamental concepts of computer networks and network programming; computer network topologies; TCP/IP stack; IP routing and routing algorithms; client-server paradigm; lower-layers protocols: IP, UDP, and TCP; basic application-layer protocols: HTTP, SMTP, POP3, TIME, TFTP, and DHCP; Berkeley Socket API; examples of socket API for small 8-bit or 16-bit embedded microcontroller system; principles of network security. Cross-listed as ECE 573. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C, or proficiency in microcontroller programming in a structural computer language.

ECE 474 – Mobile Robot Navigation and Mapping (3 hours)

Principles of locomotion, sensing, localization, and motion planning of mobile robots; building of and locating in probabilistic maps; cooperative localization, mapping, and exploration; cooperative object transport; multi-robot motion coordination. Cross-listed as ECE 574. Prerequisite: ECE 470 with a minimum grade of C.

ECE 475 – Security for Industrial Automation (3 hours)

Introductory topics in industrial automation cyber-physical systems security, fundamental security primitives specific to cyber-physical systems, and their application to a broad range of current and future security challenges. Purdue Model for ICS Security. Industrial control systems as an example instance of cyber-physical systems. Cross-listed as ECE575. Prerequisite: ECE 205 or ECE305 with a minimum grade of C, or proficiency in programming in a structural language and familiarity with microcontrollers.

ECE 480 – Digital Systems: Communication and Interface (3 hours)

A survey of the most common peripheral devices used in embedded and programmable devices. Cross-listed as ECE 580. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C.

ECE 481 – Digital Systems: Design and Synthesis (3 hours)

A structured guide to the modeling of the design of digital systems, using VHDL, a hardware description language. VHDL is designed to fill a number of needs in the design process. It allows description of the structure of a system and the specification of the function using familiar programming language forms. As a result it allows the design of a system to be simulated and synthesized. Cross-listed as ECE 581. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C.

ECE 482 – Digital Systems: High Level Synthesis and Codesign (3 hours)

Topics covered: FPGA architecture; embedded development tool flow; introduction to SoC; shared/dedicated busses; customized IP design; HW/SW interface; system performance analysis and bottleneck identification for a given HW/SW architecture; software partition; transformation between HW/SW components; hardware acceleration, FPGA codesign applications. Cross-listed as ECE 582. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C.

ECE 483 – Digital systems: Microprocessor Architecture and Design (3 hours)

Architectures of CISC & RISC microprocessors: CPU, Control Unit, ALU, MMU, pipelines, etc. Design trade-offs investigated. Cross-listed as ECE 583. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C.

ECE 484 – Digital Systems: Peripheral Architecture and Design (3 hours)

Architecture of microprocessor systems: Evolution, external memory, Input & Output, Operating Systems, etc. Design trade-offs investigated. Cross-listed as ECE 584. Prerequisite: ECE 205 or ECE 305 with a minimum grade of C.

ECE 497 – Capstone Project System Level Design (1 hour)

The primary goal of this course is to have the student (and partner) choose a senior project and use a top-down design approach prior to implementation in senior lab. In addition, the student will serve on a Design Review Team (DRT) that will analyze other senior projects. Prerequisite: A minimum grade of C in ECE 301, ECE 302, ECE 303, and ECE 322. Concurrent enrollment in two core

courses.

ECE 498 – Senior Capstone Project I (2 hours)

Core Curr. EL,WI

Design and implementation of senior design capstone project. Requires an oral progress presentation. Prerequisite: Concurrent enrollment in ECE 497.

ECE 499 – Senior Capstone Project II (3 hours)

Core Curr. EL,WI

Continuation of the design and implementation of the senior design capstone project. Culminates in an oral presentation and a written report. Prerequisite: ECE 498 with a minimum grade of C.

ECE 531 – Communication Theory I (3 hours)

Orthogonal signal representation; review of Fourier series and Fourier transform; basic probability theory; random processes; power spectral density; Shannon's channel capacity; sampling theorem; baseband signaling; bandpass signaling; complex envelope representation of signals and systems; analog modulations; binary and M-ary digital modulations; phase locked loops, demodulation circuits; matched filter; error performance in digital communications. Cross-listed as ECE 431. Prerequisite: Graduate standing or a minimum grade of C in: ECE 206, ECE 302 or equivalents. Not open to students with credit in ECE 431.

ECE 541 – Feedback Control of Dynamic Systems (3 hours)

Analysis and design of linear automatic control systems for continuous-time dynamic systems using classical control theory. Fundamentals on feedback control theory. Root locus and Bode methods. Modeling and control of physical systems. Introduction to digital control. Computer-aided design and simulation. Cross listed as ECE 441. Not open to students with credits in ECE 441. Prerequisite: Graduate standing or a minimum grade of C in ECE206 and ECE22 or their equivalents;

ECE 542 – Advanced Data-Driven Control and Applications (3 hours)

Frequency domain and time domain design of linear/nonlinear control systems. Analysis and design of linear/nonlinear control systems for sampled-data and discrete-time systems. Classical and modern control theory methods. Modeling and data driven system identification and control of sampled-data and discrete-time systems. Micro-controller based control applications. Cross listed with ECE 442. Not open to students with credit in ECE 442. Prerequisite: Graduate standing or a minimum grade of C in ECE 441 and ECE 301.

ECE 543 – Distributed Learning Control of Dynamic Systems (3 hours)

The analysis and control of distributed dynamic systems, distributed learning and control issues in dynamic systems, distributed control and estimation of multiple dynamic systems, use of fundamental tools in modeling and control of linear and nonlinear dynamic systems, applications of distributed learning and control for multiple dynamic systems through case studies in multiple robot coordination and distributed power grids. Cross-listed as ECE 443. Prerequisite: Not open to students with credit in ECE 443.

ECE 544 – Introduction to Autonomous Robotics (3 hours)

The project-based course deals with the fundamentals on autonomous and intelligent robotics systems. It covers kinematics, manipulability, motion of robots, the basic definition, architecture, motion planning, control and navigation of autonomous robotics. Cross-listed as ECE444. Not open to students with credit in ECE 444. Prerequisite: MTH 224, ECE 103 or proficiency in programming in a structural computer language, ECE 221 or ECE 227, or graduate standing. Not open to students with credit in ECE 444. Consent of the instructor may be required.

ECE 545 – Power Electronics Fundamentals (3 hours)

Fundamentals of power electronics. Covered topics: DC/DC converters, DC/AC converters (inverters), and AC/DC rectifiers, analysis, design, simulation and application of power electronic based systems. Cross-listed as ECE 445. Not open to students with credit in ECE 445.

ECE 546 – Power Laboratory (3 hours)

Experiments in transformers and rotating machines. Covered topics: electric machinery principles; brushed DC motor connections, operational characteristics, and applications; linear brushed DC motor model development, simulation, and verification; wound rotor and squirrel cage AC induction motor connections, operational characteristics, and applications; linear single-phase transformer model development and verification; power electronic H-bridge. Cross-listed as ECE 446. Not open to students with credit in ECE 446. Prerequisite: ECE 303

ECE 550 – Electromagnetic Theory (3 hours)

Time-varying electric and magnetic fields; Maxwell's equations, electromagnetic potentials, electromagnetic boundary conditions, plane-wave propagation in unbounded conducting and non-conducting media, wave polarization, Poynting vector, reflection and transmission of waves at boundaries; radiation and antennas. Cross-listed as ECE 450. Prerequisite: Graduate standing or a minimum grade of C in ECE 208. Not open to students with credits in ECE 450.

ECE 551 – Radio Frequency Circuits and Systems (3 hours)

Review of transmission lines, impedance matching and transformations, S-parameters, passive RF junctions, RF amplifier design, RF systems, and front-end design. Cross-listed as ECE 451. Prerequisite: Graduate standing or a minimum grade of C in: ECE 208, ECE 221, ECE 303 or equivalents. Not open to students with credit in ECE 451.

ECE 552 – Wireless Communication Systems (3 hours)

Introduction to wireless communication systems; modulation and detection; noise, attenuation; multipath and fading; sensitivity distortion, inter-modulation, and dynamic range; wireless link RF design; transmitter and receiver architectures; RF components and subsystems; selected wireless systems including multiple-access cellular systems. Cross-listed as ECE 452. Prerequisite: Graduate standing or a minimum grade of C in: ECE 206, ECE 208, ECE 303 or equivalents. Not open to students with credit in ECE 452.

ECE 553 – Radio Frequency Communications Laboratory (3 hours)

Radio frequency measurements of wireless system components and subsystems, time and frequency domain measurements of analog and digital signals in communication systems, computer-aided design, fabrication, and testing of microwave integrated circuit. Cross-listed as ECE 453. Prerequisite: ECE 551 with a minimum of B or equivalent. Not open to students with credit in ECE 453.

ECE 560 – Digital Signal Processing (3 hours)

Design of digital filters and multirate systems. Topics include: review of discrete-time signals and systems, generalized linear phase, all-pass filters, minimum phase systems, inverse systems, FIR filter design, IIR filter design, resampling in time and frequency domain, half-band filters, polyphase filters, quadrature mirror filters and wavelets. Cross-listed as ECE 460. Prerequisite: Graduate standing or a minimum grade of C in ECE 301 or equivalent. Not open to students with credit in ECE 460.

ECE 562 – Digital Image Processing (3 hours)

Introduction to image processing. Topics covered: digital image fundamentals, image enhancements in spatial domain, image restoration, color image processing, wavelets and multiresolution, image compression, morphological image processing, image segmentation, pattern recognition. Cross-listed as ECE 462. Prerequisite: Graduate standing or a minimum grade of C in ECE 301 or ME 273 or equivalent. Not open to students with credit in ECE 462.

ECE 563 – Medical Imaging (3 hours)

Introduction to the common methods and devices employed for medical imaging, including conventional x-ray imaging, x-ray computed tomography (CT), nuclear medicine (single photon planar imaging), single photon emission computed tomography (SPECT), and positron emission tomography (PET), magnetic resonance imaging (MRI), and ultra-sound imaging. The physics and design of systems, typical clinical applications, medical image processing, and tomographic reconstruction. Cross-listed as ECE 463. Prerequisite: Graduate standing or a minimum grade of C in ECE 206 or equivalent. Not open to students with credit in ECE 463.

ECE 565 – Engineering Applications of Machine Learning (3 hours)

This course covers the theory, design, and engineering applications of machine learning with the emphasis on computational intelligence. Embedded hardware platforms, high-performance libraries, and high-performance architectures are used for implementation. Variants such as Deep Neural Networks and Convolutional Neural Networks are examined. Cross-listed as ECE 465. Prerequisite: Graduate standing or a minimum grade of C in ECE 302 or equivalent. Not open to students with credit in ECE 465.

ECE 568 – Introduction to Mechatronics (3 hours)

Introduction to mechatronics: mechatronics overview, sensors and actuators modeling, interfacing sensors and actuators with digital systems. Cross-listed as ECE 468. Not open to students with credit in ECE 468. Prerequisite: ECE 221 or ECE 227

ECE 570 – Embedded Data Structures and Object Oriented Programming (3 hours)

Introduction to data structures, object-oriented programming, memory management, problems of efficiency and complexity of algorithms applicable to embedded systems. Cross-listed as ECE 470. Prerequisite: Graduate standing or a minimum grade of C in ECE 305 or proficiency in microcontroller programming in a structural computer language. Not open to students with credit in ECE 470. Instructor's consent may be required.

ECE 571 – Real-time Operating Systems (3 hours)

Advanced programming of small microprocessor-based systems using high-level programming languages applied to real situations: data acquisition, control, communication, small real-time operating systems. Software development for devices from a family of microcontrollers that is relevant to industrial applications. Cross-listed as ECE 471. Prerequisite: Graduate standing or a minimum grade of C in ECE 305 or high proficiency in microcontroller programming in a structural computer language. Not open to students with credit in ECE 471. Instructor's consent may be required.

ECE 572 – Embedded Microcontroller Linux (3 hours)

Understanding of Linux and its adoption as an embedded OS platform, including process and thread management; communication, synchronization, and deadlocks; virtual memory and file systems; overview of methods and techniques to design and create embedded systems based on the Linux kernel. The essentials of the Linux operating system are discussed from the embedded system point of view, including selecting, configuring, cross-compiling, and installing a target-specific kernel, drivers, and subsystems; the GNU development tool chain; and tools used to build embedded Linux systems. Cross-listed as ECE 472. Prerequisite: Graduate standing or a minimum grade of C in ECE 305 or proficiency in microcontroller programming in a structural computer language. Not open to students with credit in ECE 472. Instructor's consent may be required.

ECE 573 – Embedded TCP/IP (3 hours)

Fundamental concepts of computer networks and network programming; computer network topologies; TCP/IP stack; IP routing and routing algorithms; client-server paradigm; lower-layers protocols: IP, UDP, and TCP; basic application-layer protocols: HTTP, SMTP,

POP3, TIME, TFTP, and DHCP; Berkeley Socket API; examples of socket API for small 8-bit or 16-bit embedded microcontroller system; principles of network security. Cross-listed as ECE 473. Prerequisite: Graduate standing or a minimum grade of C in ECE305 or proficiency in microcontroller programming in a structural computer language. Not open to students with credit in ECE 473. Instructor's consent may be required.

ECE 574 – Mobile Robot Navigation and Mapping (3 hours)

Principles of locomotion, sensing, localization, and motion planning of mobile robots; building of and locating in probabilistic maps; cooperative localization, mapping, and exploration; cooperative object transport; multi-robot motion coordination. Cross-listed as ECE 474. Prerequisite: ECE 570 with a minimum grade of B or equivalent. Not open to students with credit in ECE 474.

ECE 575 – Security for Industrial Automation (3 hours)

Introductory topics in industrial automation cyber-physical systems security, fundamental security primitives specific to cyber-physical systems, and their application to a broad range of current and future security challenges. Purdue Model for ICS Security. Industrial control systems as an example instance of cyber-physical systems. Not open to students with credit in ECE 475. Prerequisite: Graduate standing or a minimum grade of C in ECE 305 or proficiency in microcontroller programming in a structural computer language. Not open to students with credit in ECE 475. Instructor's consent may be required.

ECE 581 – Digital Systems: Design and Synthesis (3 hours)

A structured guide to the modeling of the design of digital systems, using VHDL, a hardware description language. VHDL is designed to fill a number of needs in the design process. It allows description of the structure of a system and the specification of the function using familiar programming language forms. As a result it allows the design of a system to be simulated and synthesized. Cross-listed as ECE 481. Prerequisite: A minimum grade of C in ECE 322 or equivalent, or graduate standing, or consent of the instructor. Not open to students with credit in ECE 481.

ECE 582 – Digital Systems: High Level Synthesis and Codesign (3 hours)

Provides an introduction to hardware/software (HW/SW) codesign. The codesign is a set of methodologies and techniques to support the concurrent design to effectively reduce multiple iteration and major redesigns in embedded systems. FPGA device is an innovative platform to conduct codesign for System-on-a-Chip (SoC). Topics covered: FPGA architecture; embedded development tool flow; introduction to SoC; shared/dedicated busses; customized IP design; HW/SW interface; system performance analysis and bottleneck identification for a given HW/SW architecture; software partition; transformation between HW/SW components; hardware acceleration, FPGA codesign applications. Cross-listed as ECE 482. Prerequisite: ECE 205 with a minimum grade of C or equivalent, or graduate standing, or consent of the instructor. Not open to students with credit in ECE 482.

ECE 583 – Digital Systems: Microprocessor Architecture and Design (3 hours)

Architectures of CISC & RISC microprocessors: CPU, Control Unit, ALU, MMU, pipelines, etc. Design trade-offs investigated. Cross-listed as ECE 483. Prerequisite: A minimum grade of C in ECE 205 or equivalent, or graduate standing, or consent of the instructor. Not open to students with credit in ECE 483.

ECE 681 – Topics in Electrical Engineering (0-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Repeatable to a maximum of 6 semester hours.

ECE 691 – Research I (0-6 hours)

Graduate research on a project selected by student and advisor. Repeatable to a maximum of 6 semester hours.

ECE 699 – Thesis (0-6 hours)

Advanced electrical and computer engineering research or design under the guidance of a faculty advisor. Required of students choosing thesis option. Repeatable to a maximum of 6 semester hours. Prerequisite: Consent of department chair; unconditional status.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Industrial Engineering



Industrial Engineering

The baccalaureate programs in industrial engineering are accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>.

FACULTY Professors Chen (chair), Li, Shareef, Tayyari; Associate Professors Guo, Saboury, Yoo. Emeritus Professors Emanuel, Krishnamoorthi, Kroll, Lin; Emeritus Associate Professor Ness.

The department offers degree programs in industrial engineering (BSIE and MSIE) including UG concentrations in engineering management and supply chain analytics, manufacturing engineering (BSMFE and MSMFE) including UG concentrations in lean manufacturing and process engineering, manufacturing engineering technology (BSMFG), and an additional graduate degree in data science and analytics – engineering analytics concentration (MSDSA-EA). The department offers one minor in Quality Engineering. See the Graduate Catalog for information about graduate programs.

Mission and Core Values

Mission Statement

The mission of the Department is to educate students for life-long learning and equip them for distinguished careers in industrial engineering, manufacturing engineering, and manufacturing engineering technology.

IMET Core Values

The Department of Industrial & Manufacturing Engineering & Technology (IMET) at Bradley University is committed the following core values:

- **Customer-Driven**

As a consumer-focused educational provider, our program offerings and course structures are based entirely on the internal and external demands of our constituencies. Through catering to the needs of internal constituencies such as our students and external constituencies such as federal agencies, nonprofit organizations, and corporate companies, we ensure an ideally balanced curriculum. Further, we are conscious that our lectures reach not an audience, but a group of individual students, each with his or her specific interests and aspirations. Our varied programs and research opportunities allow students to pursue unique scholastic concentrations.

- **Global Understanding**

As a modern entity, we understand the magnitude of globalization's effects on today's economy. Our diverse and progressive department prepares our graduates to be competitive on a global scale.

- **Spirit of Entrepreneurship**

As a group of innovative leaders, we teach our students to become successful in any industry they may choose. Our emphasis on the spirit of entrepreneurship imparts to graduates management skills, the ability to be ingenious, and the motivation to capitalize on both opportunities and obstacles.

- **Community**

As a tightly woven community, we place great importance on respect, teamwork, communication, and cooperation. We encourage the development of lasting, professional relationships between students and faculty members through research projects and classroom interaction.

- **Adaptive Strategies**

As a dynamic organization, we harness the tools of improvisation and mold them to fit current situations. In a changing global environment and uncertain market, we believe the flexibility to re-evaluate, plan strategically, and adapt to varying circumstances is crucial to the success of our students.

Industrial Engineering Major (BSIE)

Program Educational Objectives

Within five years into their careers, the graduates from the Industrial Engineering Program at Bradley University will have successful careers based on

- Demonstrated ability to recognize business and technical engineering problems and implement effective solutions to such.
- Demonstrated ability to effectively lead cross-functional multi-disciplinary diverse teams in the design, implementation, and/or improvement of processes and systems both regionally and globally.
- Demonstrated professional development through continuous learning opportunities such as varied work assignments, promotions, graduate schools, and/or professional associations.
- Demonstrated involvement in service activities that benefit the profession or the community.

Student Outcomes

In order to meet these program educational objectives, students graduating from Bradley's industrial engineering program will attain the following outcomes.

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Industrial engineers design, develop, test, and evaluate integrated systems for managing production processes including human work factors, inventory control, logistics and material flow, quality control, cost analysis, and production coordination. Industrial engineers apply engineering methods to a variety of activities in the design, production, and distribution of goods and services; work in organizations including manufacturing, hospitals, commerce, and government agencies; and operate in such specific professional areas as human work measurement, management systems design, human factors engineering, applied statistics, operations research, reliability and quality control, and systems engineering. Industrial engineering is the combination of engineering and business administration.

The curriculum provides a sound basis in the fundamentals of engineering, physical and behavioral sciences, and theoretical and applied mathematics. The emphasis on problem solving of both structured and unstructured types prepares students for a wide variety of industrial & manufacturing engineering (IME) related employment opportunities as well as for graduate training in IME, or such associated professions business, law, or medicine. This diversity of career opportunities is a major reason that students choose IME. The student is encouraged to select a minor in a supporting area such as business, quality engineering, computer science, manufacturing, math, psychology, or economics. Some minors will require additional hours beyond BSIE requirements.

Most faculty teaching in the IME program have had full-time industrial experience. The emphasis of the department is directed towards real-world problems. During the senior year, students work under faculty supervision on actual problems that exist in the community in manufacturing organizations and service organizations such as hospitals, government agencies, air transport companies, court systems, and utility companies.

Programmatic Distinctions

Industrial engineers determine the most effective ways to use the production resources (people, machines, materials, information, and energy) to make a product or provide a service. They are concerned primarily with increasing productivity through the management of people, methods of business organization, and technology. They develop management control systems to aid in financial planning and cost analysis, and they design production planning and control systems to coordinate activities to meet the demand and ensure product quality. They also design or improve systems for the physical distribution of goods and services and determine the most efficient plant locations. Industrial engineers develop wage and salary administration systems and job evaluation programs. Many industrial engineers move into management positions because the work is closely related to the work of managers. Manufacturing engineers apply knowledge of materials and engineering theory and methods to design, integrate, and improve manufacturing systems and processes. They may work with designers to refine product designs to increase productivity and decrease costs.

The department works closely with industry and has an outstanding Industrial Advisory Council (IAC) consisting of distinguished members from industry, government, and education.

Industrial Engineering Program

Students have the option to complete the **Bachelor of Science in Industrial Engineering** program with or without declaring an area of concentration. The listed courses, an expected total of **121 hours**, in the Industrial Engineering curriculum must be completed to meet degree requirements in industrial engineering, leading to the Bachelor of Science in Industrial Engineering. The Industrial Engineering curriculum consists of (1) Bradley Core Curriculum, (2) Mathematics and Basic Science courses, (3) the required courses, and (4) the technical elective courses.

Bradley Core Curriculum (BCC) 18 hours

- BCC Communications Oral Communications (BCC – CM) – 3 hrs.
- BCC Communications Writing (BCC – W1) – 3 hrs.
- BCC Communications Advanced Writing (BCC – W2) ENG 300, 301, 305, or 306 – 3 hrs.
- BCC Fine Arts (BCC – FA) – 3 hrs.
- BCC Global Perspectives (BCC – GP) – 3 hrs.
- BCC Humanities (BCC – HU) – 3 hrs.

Mathematics and Basic Sciences 33 hours

- CHM 110 General Chemistry I — 3 hrs. (BCC – NS1)
- CHM 111 General Chemistry I Lab — 1 hr.
- MTH 121 Calculus I — 4 hrs. (BCC – QR1)
- MTH 122 Calculus II — 4 hrs. (BCC – QR2)
- MTH 207 or MTH 224 — 3 hrs.
- MTH 223 Calculus III — 4 hrs.
- PHY 110 University Physics I — 4 hrs. (BCC – NS2)
- PHY 201 University Physics II — 4 hrs.
- IME 311 Intro to Engineering Statistical Methods — 3 hrs. (2 hrs of Math/Basic Science)
- IME 331 Fundamentals of Materials Science — 3 hrs. (2 hrs of Math/Basic Science)

Required Courses 49 hours

- CE 150 Mechanics I — 3 hrs.
- CE 270 Mechanics of Materials — 3 hrs.
- ECO 100 or ECO 221 — 3 hrs. (BCC – SB)
- IME 101 Intro. to Industrial and Manufacturing Engineering — 1 hr.
- IME 103 Computer Aided Graphics — 2 hrs.
- IME 110 Intro. to Computers and Computational Analysis — 3 hrs.
- IME 301 Engineering Economy I — 3 hrs. (BCC – MI)
- IME 313 Operations Research I — 3 hrs.
- IME 341 Intro. to Manufacturing Processes — 3 hrs.
- IME 386 Industrial and Managerial Engineering — 3 hrs.
- IME 401 Engineering Economy II — 3 hrs.
- IME 412 Regression and Experimental Design — 3 hrs.
- IME 422 Manufacturing Quality Control — 3 hrs.
- IME 461 Simulation of Manufacturing and Service Systems — 3 hrs. (BCC – EL Tag)
- IME 466 Facilities Planning — 3 hrs.
- IME 485 Occupational Ergonomics — 3 hrs. (BCC – WI Tag)
- IME 499 Senior Design Project — 4 hrs. (BCC – WI and EL Tags)

Technical Elective Courses 21 hours

- Approved Technical Elective Courses, see below — 21 hrs.

Approved Technical Elective Courses

Students with a concentration should see the specific list of technical elective courses under their concentration. For students without a concentration, at least four of the technical electives (12 hrs.) must be Industrial Engineering courses from the following list:

- IME 314 Operations Research II – 3 hrs.
- IME 468 Engineering Analytics I – 3 hrs.
- IME 478 Engineering Analytics II – 3 hrs.
- IME 481 Lean Production Systems – 3 hrs.
- IME 483 Productions Planning and Control – 3 hrs.
- IME 486 Logistics and Supply Chain Systems – 3 hrs.
- IME 487 Occupational Safety and Health – 3 hrs.

The other elective requirements (9 hrs.) may be satisfied by any non-required IME courses above 300-level or by non-required courses from other disciplines as listed below.

- Accounting: ATG 304 to ATG 699
- Biology: BIO 302 to BIO 699
- Chemistry: CHM 316 to CHM 699
- Civil Engineering: CE 310 to CE 699
- Computer Science: CS 203 to CS 699
- Economics: ECO 300 to ECO 699
- Electrical Engineering: ECE 301 to ECE 699
- Finance: FIN 322 to FIN 699
- International Business: IB 306 to IB 699
- Mathematics: MTH 301 to MTH 699
- Management Information Systems: MIS 300 to MIS 699
- Management and Leadership: ML 699
- Marketing: MTG 304 to MTG 699
- Mechanical Engineering: ME 301 to ME 699
- Physics: PHY 320 to PHY 699
- Additional Business Courses: BLW 342, ENT 385
- Courses in Health Sciences: KHS 460, or KHS 480
- Courses in Psychology: PSY 320 or PSY 321

Supply Chain Analytics Concentration

The Bachelor of Science in Industrial Engineering (BSIE) program with the Supply Chain Analytics concentration focuses on descriptive, predictive, diagnostic, and prescriptive analytics theories and applications to supply chain management. Students with this concentration will learn theoretical background of data analytics and various applications in supply chain and engineering environment. The students will be equipped with data-driven decision-making skills in complex supply chain systems.

- **Approved Supply Chain Analytics Concentration Technical Electives (21 hrs.)**
 - IME 314 Operations Research II – 3 hrs.
 - IME 478 Engineering Analytics II – 3 hrs.
 - IME 483 Production Planning and Control – 3 hrs.
 - ECO 355 Supply Chain Economics – 3 hrs.
 - MTG 388 Global Supply Chain Management – 3 hrs.
 - MTG 394 Supply Chain Tools and Techniques – 3 hrs.
 - MIS 471 Business Analytics Software and Applications II – 3 hrs.
 - MIS 473 Data Visualization for Business Analytics – 3 hrs.
 - IME 468 Engineering Analytics I – 3 hrs.
 - IME 486 Logistics and Supply Chain Systems – 3 hrs.
 - Choose two courses from the following list (6 hrs.)
 - Two additional above 300-level non-required IME courses (6 hrs.)
 - An additional elective course from the Approved Technical Elective Courses (3 hrs.)

Engineering Management Concentration

The Bachelor of Science in Industrial Engineering (BSIE) program with the Engineering Management concentration is most appropriate for technically focused individuals who desire to achieve management-level positions in engineering environments. This concentration focuses on management of technology and intellectual property; research and development; engineering and technical projects;

people, resources and organizations; quality; and team-based projects. The courses listed in the following curricular schedule must be completed to meet degree requirements in industrial engineering, leading to the Bachelor of Science in Industrial Engineering with the Engineering Management concentration. Students declaring this concentration must also declare and complete the Management & Leadership minor in the Foster College of Business.

Approved Engineering Management Concentration Technical Electives(21 hrs.)

- M L 350 Managing for Results in Organizations – 3 hrs.
- M L 356 Human Capital in Organizations – 3 hrs.
- M L 357 Leading Organizations – 3 hrs.
- Two additional Management and Leadership courses: ML 350 to ML 499 – 6 hrs.
- **Choose two courses from the following list (6 hrs.)**
 - IME 314 Operations Research II – 3 hrs.
 - IME 468 Engineering Analytics I – 3 hrs.
 - IME 478 Engineering Analytics II – 3 hrs.
 - IME 481 Lean Production Systems – 3 hrs.
 - IME 483 Production Planning and Control – 3 hrs.
 - IME 486 Logistics and Supply Chain Systems – 3 hrs.
 - IME 487 Occupational Safety – 3 hrs.

BSIE Combined with MBA Program

Undergraduate students in the industrial engineering program may combine their studies and earn an MBA degree in five and one-half years or fewer. Students may include all of the prerequisites for the MBA program as part of their required undergraduate semester hours. Careful scheduling is required and should be coordinated with the student's undergraduate advisor and the director of graduate programs.

Students electing this option must be fully admitted before registering for graduate-level courses and have the written approval of the director of graduate programs. Students should contact the director of graduate programs during their sophomore year for particular information.

Student Organizations

Student chapters of the American Society for Materials (ASM), American Society for Quality (ASQ), Institute of Industrial and Systems Engineers (IISE), Society of Automotive Engineers (SAE), American Foundrymen's Society (AFS), Society of Manufacturing Engineers (SME), and The Association for Supply Chain Management (ASCM, formerly APICS) are sponsored by the department or the Caterpillar College of Engineering and Technology to support and encourage the professional development of the students. The department is also a strong supporter of the student chapter of the Society of Women Engineers (SWE).

Honor societies for industrial engineering students (Alpha Pi Mu) and for manufacturing students (Beta Tau Epsilon) are also represented.

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Manufacturing Engineering



Manufacturing Engineering

The baccalaureate programs in manufacturing engineering is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>.

FACULTY Professors Chen (chair), Li, Shareef, Tayyari; Associate Professors Guo, Saboury, Yoo. Emeritus Professors Emanuel, Krishnamoorthi, Kroll, Lin; Emeritus Associate Professor Ness.

The department offers degree programs in industrial engineering (BSIE and MSIE) including UG concentrations in engineering management and supply chain analytics, manufacturing engineering (BSMFE and MSMFE) including UG concentrations in lean manufacturing and process engineering, manufacturing engineering technology (BSMFG), and an additional graduate degree in data science and analytics – engineering analytics concentration (MSDSA-EA). The department offers one minor in Quality Engineering. See the Graduate Catalog for information about graduate programs.

Mission and Core Values

Mission Statement

The mission of the Department is to educate students for life-long learning and equip them for distinguished careers in industrial engineering, manufacturing engineering, and manufacturing engineering technology.

IMET Core Values

The Department of Industrial & Manufacturing Engineering & Technology (IMET) at Bradley University is committed the following core values:

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- **Global Understanding**

As a modern entity, we understand the magnitude of globalization's effects on today's economy. Our diverse and progressive department prepares our graduates to be competitive on a global scale.

- **Spirit of Entrepreneurship**

As a group of innovative leaders, we teach our students to become successful in any industry they may choose. Our emphasis on the spirit of entrepreneurship imparts to graduates management skills, the ability to be ingenious, and the motivation to capitalize on both opportunities and obstacles.

- **Community**

As a tightly woven community, we place great importance on respect, teamwork, communication, and cooperation. We encourage the development of lasting, professional relationships between students and faculty members through research projects and classroom interaction.

- **Adaptive Strategies**

As a dynamic organization, we harness the tools of improvisation and mold them to fit current situations. In a changing global environment and uncertain market, we believe the flexibility to re-evaluate, plan strategically, and adapt to varying circumstances is crucial to the success of our students.

Manufacturing Engineering Major (BSMFE)

Program Educational Objectives

Within five years into their careers, the graduates from the Manufacturing Engineering Program at Bradley University will have successful careers based on

- Demonstrated ability to recognize manufacturing business problems and implement effective solutions.
- Demonstrated ability to effectively lead cross-functional teams in the design, implementation and improvement of processes and systems.
- Demonstrated professional development through continuous learning opportunities such as varied work assignments, graduate education, or professional associations.
- Demonstrated involvement in service activities that benefit the profession or the community.

Student Outcomes

In order to meet the program educational objectives, students graduating from Bradley's manufacturing engineering program will attain the following outcomes.

1. An ability to identify, formulate, and solve complex manufacturing engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate technical concepts effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on multi-disciplinary teams whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct experiments, analyze, and interpret data related to manufacturing processes, materials evaluation, and manufacturing systems, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Manufacturing engineers apply their knowledge of the sciences of materials, processes, and information to the design, integration, and advancement of products and systems of manufacture. They understand value-added concepts through effective transformation of materials into products through manufacturing planning, strategy, and quality control.

The manufacturing engineer is responsible for designing manufacturing processes to meet specific product properties and design; and is able to design products and equipment, tooling, and facility for continuously improving manufacturing systems to add value and minimize total costs considering entire value chain. His/her role encompasses not only technological factors but also human, economic, and environmental factors, which makes the manufacturing engineer a great facilitator for team efforts in cross-functional teams.

The manufacturing engineering program is designed to provide the student with a broad intellectual horizon together with a firm technical foundation necessary to meet future challenges in manufacturing and related industries. The curriculum builds on a solid foundation of science and mathematics and combines a broad base of engineering tools and their application to analysis, synthesis, and control of manufacturing operations using statistical methods.

Graduates from the program would have a wide range of career options in industry, government, research, service, and entrepreneurship. Graduates may also choose to advance their education through post-graduate studies.

To meet the degree requirements for graduation in manufacturing engineering, students must obtain credit in the following courses and must achieve a minimum grade point average 2.25 in IME courses.

Students wishing to pursue a graduate degree in manufacturing engineering may refer to the graduate catalog, which describes course work leading to the MSMFE degree.

Programmatic Distinctions

In choosing a career option, the student should be aware of the respective functions of the engineer and engineering technologist. Generally speaking, the engineer conceives, designs, and advances the development of products and systems. On the other hand, the engineering technologist implements, maintains, and tests products and systems. The engineer creates new technologies while the engineering technologist applies existing technologies.

The distinction between industrial engineering and manufacturing engineering is one of breadth vs. depth. Industrial engineers are involved with the design, improvement, and management of technical systems. These systems may be located in service industries such as banks, hospitals, and government as well as in manufacturing industries. Manufacturing engineers are involved in the design, installation, and improvement of the production process and generally are limited to manufacturing industries.

The engineering student's selection of humanities and social science courses provide a broad education consistent with the objectives of the engineering profession. Courses should be selected to provide both breadth and depth and not be limited to unrelated introductory courses. This objective can be met by taking two courses in the same department with at least one being at the 300 level or above. Students minoring in business are permitted to use ECO 100/221 and ECO 222 to meet this requirement.

The department works closely with industry and has an outstanding industrial and manufacturing engineering and technology department Advisory Council consisting of distinguished members from industry, government, and education.

Manufacturing Engineering Program

Academic advisor closely works with students on their BSMFE program of study tailored to their academic background, interest, and career goals. BSMFE programs have an expected total of 123 credit hours. These courses can be listed in five categories: (1) Bradley Core Curriculum, (2) Mathematics and Basic Science courses, (3) the required courses, and (4) the technical elective courses.

Bradley Core Curriculum (BCC) 18 hours

- BCC Communications (BCC – CM) COM 103 Oral Communications Process – 3 hrs.
- BCC Communications (BCC – W1) ENG 101 English Composition – 3 hrs.
- BCC Communications (BCC – W2) ENG 300, 301, 305, or 306 Advanced Writing – 3 hrs.
- BCC Fine Arts (BCC – FA) – 3 hrs.
- BCC Global Perspectives (BCC – GP) – 3 hrs.
- BCC Humanities (BCC – HU) – 3 hrs.

Mathematics and Basic Sciences 33 hours

- CHM 110 General Chemistry I (BCC – NS1) – 3 hrs.
- CHM 111 General Chemistry I Lab – 1 hr.
- MTH 121 Calculus I (BCC – QR1) – 4 hrs.
- MTH 122 Calculus II (BCC – QR2) – 4 hrs.
- MTH 223 Calculus III – 4 hrs.
- MTH 224 Differential Equations – 3 hrs.
- PHY 110 University Physics I (BCC – NS2) – 4 hrs.
- PHY 201 University Physics II – 4 hrs.
- IME 311 Introduction to Engineering Statistical Methods -3 hrs. (2 hrs of Math/basic Science)
- IME 331 Fundamentals of Materials Science — 3 hrs. (2 hrs of Math/basic Science)

Required Courses – 51 hours

- CE 150 Mechanics I — 3 hrs.
- CE 270 Mechanics of Materials — 3 hrs.
- ECE 227 Electrical Engineering Fundamentals- 4 hrs.
- ECO 100 or 221 — 3 hrs. (BCC – SB)
- IME 101: Introduction to Industrial and Manufacturing Engineering – 1 hr.
- IME 103: Computer Aided Graphics – 2 hrs.
- IME 110: Introduction to Computers and Computational Analysis – 3 hrs.
- IME 301: Engineering Economy I – 3 hrs. (BCC – MI)
- IME 333: Material Science Laboratory – 2 hrs.
- IME 341: Introduction to Manufacturing Processes – 3 hrs.
- IMT 362: Metrology and Instrumentation – 3 hrs.
- IME 386: Industrial and Managerial Engineering – 3 hrs.
- IME 395: Solid Modeling and Rapid Prototyping – 3 hrs.
- IME 422: Manufacturing Quality Control – 3 hrs.
- IME 431: Materials Engineering – 2 hrs.

- IME 441 Manufacturing Processes I or IME 443 Manufacturing Processes II – 3 hrs.
- IME 445 Computer Aided Manufacturing Processes – 3 hrs.
- IME 499: Senior Design Project – 4 hrs.

Technical Elective Courses 21 hours

- Approved Technical Elective Courses, see below — 9 hrs.
- Core Elective Courses — 12 hrs

Core Elective Courses

Students with a concentration should see the specific list of technical elective courses under their concentration. For students without a concentration, at least four of the technical electives (12 hrs.) must be Manufacturing Engineering courses from the following list:

- IME 325: Transport Phenomena – 3 hrs.
- IME 385: Introduction to Logistics and Supply Chain – 3 hrs.
- IME 412: Design and Analysis of Experiments – 3 hrs.
- IME 441: Manufacturing Processes I – 3 hrs.
- or IME 443: Manufacturing Processes II – 3 hrs.
- IME 466: Facilities Planning – 3 hrs.
- IME 481: Lean Production Systems – 3 hrs.
- IME 495: Design for Manufacturability – 3 hrs.

Approved Technical Elective Courses

The other elective requirements (9 hrs.) may be satisfied by courses as listed below

- Any 300-level or higher IME course not required in the program.
- Any advisor-approved 300-level or higher IMT course.
- Any civil, electrical, or mechanical engineering course (CE, EE, ME) numbered 300 or higher, or approved by advisor.
- Any advisor-approved mathematics or science course not required in the program.
- Any advisor-approved 300 or higher course from college of Business.

Lean Manufacturing Concentration

The Lean Manufacturing concentration prepares students to meet the industry's increasing need for engineers who serve as facilitators for the lean movement toward excellence. In this concentration, students will develop skills to lead lean and Six Sigma teams to continuously improve processes, product design, and business acumen. Students will also develop skills targeted toward adding value, identifying problems, and eliminating waste, in order to enhance the market share with higher profitability.

- Concentration Core Courses – 12 hrs.
 - IME 385: Introduction to Logistics and Supply Chain – 3 hrs.
 - IME 412: Design and Analysis of Experiments – 3 hrs.
 - IME 466: Facilities Planning – 3 hrs.
 - IME 481: Lean Production Systems – 3 hrs.
- Approved Technical Elective – 9 hrs.
 - Additional elective courses from the Approved Technical Elective Courses (9 hrs.)

Process Engineering Concentration

The process engineering concentration provides the graduates with a strong set of knowledge and skills in product design, manufacturing processes, materials selection and design, automation, and manufacturing systems. Graduates may be employed in industries such as automotive, aerospace, and heavy equipment manufacturers.

- Concentration Core Courses – 12 hrs.
 - IME 325: Transport Phenomena – 3 hrs.
 - IME 441: Manufacturing Processes I – 3 hrs. or IME 443 Manufacturing Processes II – 3 hrs. (both are required for this concentration)
 - IME 412: Design and Analysis of Experiments – 3 hrs.
 - IME 495: Design for Manufacturability – 3 hrs.
- Approved Technical Elective Courses (choose three) – 9 hrs.
 - Additional elective courses from the Approved Technical Elective Courses (9 hrs.)

BSMFE Combined With MBA Program

Undergraduate students in the manufacturing engineering program may combine their studies and earn an MBA degree in five and

one-half years or less. Students may use any of the prerequisites for the MBA program from their MSMFE required 127 undergraduate semester hours. Careful scheduling through coordination between BSMFE undergraduate advisor and director of MBA graduate program is recommended.

Student Organizations

Student chapters of the American Society for Materials (ASM), American Society for Quality (ASQ), Institute of Industrial and Systems Engineers (IISE), Society of Manufacturing Engineers (SME), American Foundrymen's Society (AFS), and the Association for Operations Management (APICS) are sponsored by the department to support and encourage the professional development of the students. The department is also a strong supporter of the student chapter of the Society of Women Engineers (SWE).

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This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Manufacturing Engineering Technology



Manufacturing Engineering Technology

The baccalaureate programs in industrial engineering and manufacturing engineering are accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>. The baccalaureate program in manufacturing engineering technology is accredited by the Technology Accreditation Commission of ABET, <https://www.abet.org>.

FACULTY Professors Chen (chair), Emanuel (emeritus), Krishnamoorthi (emeritus), Kroll (emeritus), Li, Lin (emeritus), Shareef, Tayyari; Associate Professors Guo, Ness (emeritus), Saboury, Yoo.

The department offers three baccalaureate degree programs:

- Industrial engineering (B.S.I.E.)
 - Engineering Management Concentration
 - Supply Chain Analytics Concentration
- Manufacturing engineering (B.S.Mf.E.),
 - Lean Manufacturing Concentration
 - Process Engineering Concentration
- Manufacturing engineering technology (B.S.Mf.E.T.)

The department offers one minor:

- Minor in Quality Engineering

The department offers master's degrees in industrial engineering (M.S.I.E.), manufacturing engineering (M.S.MF.E.), and data science and analytics (M.S.D.S.A.). See the Graduate Catalog for information about these programs.

Mission and Core Values

Mission Statement

The mission of the Department is to educate students for life-long learning and equip them for distinguished careers in industrial engineering, manufacturing engineering, and manufacturing engineering technology.

IMET Core Values

The Department of Industrial and Manufacturing Engineering and Technology at Bradley University is committed the following core

values:

- **Customer-Driven**

As a consumer-focused educational provider, our program offerings and course structures are based entirely on the internal and external demands of our constituencies. Through catering to the needs of internal constituencies such as our students and external constituencies such as federal agencies, nonprofit organizations, and corporate companies, we ensure an ideally balanced curriculum. Further, we are conscious that our lectures reach not an audience, but a group of individual students, each with his or her specific interests and aspirations. Our varied programs and research opportunities allow students to pursue unique scholastic concentrations.

- **Global Understanding**

As a modern entity, we understand the magnitude of globalization's effects on today's economy. Our diverse and progressive department prepares our graduates to be competitive on a global scale.

- **Spirit of Entrepreneurship**

As a group of innovative leaders, we teach our students to become successful in any industry they may choose. Our emphasis on the spirit of entrepreneurship imparts to graduates management skills, the ability to be ingenious, and the motivation to capitalize on both opportunities and obstacles.

- **Community**

As a tightly woven community, we place great importance on respect, teamwork, communication, and cooperation. We encourage the development of lasting, professional relationships between students and faculty members through research projects and classroom interaction.

- **Adaptive Strategies**

As a dynamic organization, we harness the tools of improvisation and mold them to fit current situations. In a changing global environment and uncertain market, we believe the flexibility to re-evaluate, plan strategically, and adapt to varying circumstances is crucial to the success of our students.

Manufacturing Engineering Technology (BSMFG)

MFG Program Educational Objectives

Within five years into their careers, the graduates from the Manufacturing Engineering Technology Program at Bradley University will have successful careers based on:

- Demonstrated ability to move into a leadership role in various phases of a manufacturing system while communicating objectives and intentions to a diverse team of cross functional members.
- Demonstrated ability to expand into different areas of manufacturing using transferable skills learned through hands-on experience.
- Demonstrated ability to serve both the profession and the society balanced with the work environment.
- Demonstrated ability to gain additional knowledge and skills by obtaining certifications and additional education.

MFG Student Outcomes

In order to meet these program educational objectives, students graduating from Bradley's Manufacturing Engineering Technology program will attain the following outcomes.

1. An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline
2. An ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the discipline
3. An ability to apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature
4. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes
5. An ability to function effectively as a member or leader on a technical team.

The goal of the department is to provide the intellectual and physical learning environment in which students achieve these outcomes. The intellectual component of this environment is supplied by the IMET faculty members, in their roles as mentors, advisors, and engineering professionals, as well as by the curriculum they establish for the programs. The physical component consists of quality facilities equipped with state-of-art instrumentation, equipment, computers, and professional software.

Career Opportunities

Graduates of the Manufacturing Engineering Technology program are well-prepared for a diverse range of careers in industries where physical products are produced, including automotive, aerospace, heavy machinery, medical devices, consumer products, and food production. They play vital roles in transforming product designs into tangible, economically viable, and reliable products. Common job

titles for our graduates include design engineer, industrial engineer, quality engineer, project manager, process improvement engineer, systems engineer, and production engineer.

One of the unique aspects of our program is the ability to customize elective courses in management and marketing, allowing students to tailor their education to their career aspirations. Many students take advantage of this flexibility to earn minors in management or marketing, significantly enhancing their competitiveness in the job market. This combination of technical expertise and business acumen prepares our graduates for leadership and management roles, such as project managers, supply chain managers, and operations directors. Additionally, the extensive hands-on engineering courses ensure that students gain practical experience, making them highly effective in implementing and optimizing production processes.

Our department maintains close ties with industry through an outstanding Industrial & Manufacturing Engineering & Technology Department Advisory Council, which includes distinguished members from industry, government, and education. This collaboration ensures that our curriculum remains relevant and aligned with industry needs, providing our graduates with a competitive edge.

The Discipline

Today's industry faces complex challenges, including government regulation, consumerism, inflation, foreign competition, high labor costs, and escalating business expenses. Addressing these challenges requires individuals who can blend theoretical knowledge with practical skills to effectively implement cutting-edge technologies. Our Manufacturing Engineering Technology program is designed to meet these industry needs by integrating studies in mechanical design, modern manufacturing processes, materials science and technology, automation, management practices, and social sciences.

Graduates from our program are well-equipped for roles in various phases of management, production, product development, test and evaluation, sales, and service. The curriculum includes technical concentrations that develop competence in mathematics, physics, chemistry, and other technical sciences such as mechanics, strength of materials, and electronics. Laboratory activities support the fundamental concepts studied and provide hands-on experience with actual hardware, its theory of operation, and its uses in the current state of the art.

Moreover, the program offers technical elective courses in management and marketing, enabling students to customize their education according to their career goals. This flexibility allows many students to earn minors in management or marketing, further enhancing their job prospects. The combination of rigorous technical training and business education ensures that our graduates are not only proficient in engineering principles but also adept at navigating the business aspects of the manufacturing industry.

Manufacturing Engineering Technology Program

Each Manufacturing Engineering Technology student would be assigned a faculty academic advisor who closely works with students on their BSMFG program of study to be tailored to their academic background, interest, and career goals. BSMFG programs have an expected total of 124 credit hours. These courses can be listed in five categories: (1) Bradley Core Curriculum, (2) Mathematics and Basic Science courses, (3) the Required courses, and (4) the technical elective courses.

Bradley Core Curriculum Requirements (18 hrs.)

- BCC Communications Oral Communications (BCC – CM) – 3 hrs.
- BCC Communications Writing (BCC – W1) – 3 hrs.
- BCC Communications Advanced Writing (BCC – W2) ENG 300, 301, 305, or 306 – 3 hrs.
- BCC Fine Arts (BCC – FA) – 3 hrs.
- BCC Global Perspectives (BCC – GP) – 3 hrs.
- BCC Humanities (BCC – HU) – 3 hrs.

Mathematics and Basic Sciences 18 hours:

- Algebra/Precalculus: MTH 112 – 4 hrs.
- Calculus I: IMT 212 – 3 hrs. (BCC – QR1)
- Calculus II: IMT 214 – 3 hrs. (BCC – QR2)
- Physics: PHY 107 – 4 hrs. (BCC – NS1)
- Chemistry: CHM 100 – 3 hrs (BCC – NS2)
- Chemistry lab: CHM 101 – 1 hr.

Required Courses (70 hrs.)

- ECO 100 or ECO 221 — 3 hrs. (BCC – SB)
- IME 101 – Intro. to Industrial & Manufacturing Eng. – 1 hr.
- IME 103 – Computer Aided Graphics – 2 hrs.
- IME 110 – Intro. to Computers & Computation – 3 hrs.
- IME 301 – Engineering Economy I – 3 hrs. (BCC – MI)
- IME 333 – Materials Science Laboratory (BCC –WI) – 2 hr.

- IME 341 – Introduction to Manufacturing Processes – 3 hrs.
- IMT 346 – Computer Aided Manufacturing & Automation – 3 hrs.
- IME 386 – Industrial & Managerial Engineering – 3 hrs.
- IME 395 – Solid Modeling & Rapid Prototyping – 3 hrs.
- IME 445 – Computer Aided Manufacturing – 3 hrs.
- IMT 222 – Statics – 3 hrs.
- IMT 232 – Physical Metallurgy – 3 hrs.
- IMT 302 – Introduction to Quality Engineering – 3 hrs.
- IMT 322 – Dynamics – 3 hrs.
- IMT 324 – Strength of Materials – 4 hrs.
- IMT 332 – Non-metallic Materials – 3 hrs.
- IMT 342 Advanced Manufacturing Processes I – 3 hrs.
- IMT 344 Advanced Manufacturing Processes II – 3 hrs.
- IMT 362 – Metrology & Instrumentation – 3 hrs.
- IMT 366 – Mfg Facilities Design – 3 hrs.
- IMT 392 – Mechanical Component Design I – 3 hrs.
- IMT 446 – Computer Aided Manufacturing and Automation II – 3 hrs.
- IMT 498 – Senior Industrial Project (BCC –WI, EL) – 4 hrs.
-

Technical Elective Courses (18 hrs.)

- Approved Technical Elective Courses, see below — 18 hrs.

Approved Technical Electives

Students can tailor their program to their learning goals through technical electives with the following courses:

- IMET Electives: Any non-required IME or IMT courses above 300-level – 9 hrs.
- Technical and Business Electives – 6 hrs. Selected from:
 - any non-required IME or IMT courses above 300-level
 - Accounting: ATG 300 to ATG 699
 - Business: BUS 303 to 699
 - Business Law: BLW 300 to 699
 - Economics: ECO 300 to ECO 699
 - Entrepreneurship: ENT 300 to 699
 - Finance: FIN 300 to FIN 699
 - International Business: IB 300 to IB 699
 - Management Information Systems: MIS 300 to MIS 699
 - Management and Leadership: ML 300 to ML 699
 - Marketing: MTG 300 to MTG 699
 - Quantitative Methods: QM 300 to 699
 - Civil Engineering: CE 310 to CE 699
 - Construction: CON 300 to CON 699
 - Electrical Engineering: ECE 301 to ECE 699
 - Mechanical Engineering: ME 301 to ME 699
- Technical and Supportive Electives – 3 hrs.
 - ATG 157
 - Chemistry: CHM 112 or above
 - Physics: PHY 108 or above
 - Mathematics: MTH 223 or above.
 - any non-required IME or IMT courses above 300-level
 - Civil Engineering: CE 310 to CE 699
 - Construction: CON 300 to CON 699
 - Electrical Engineering: ECE 301 to ECE 699
 - Mechanical Engineering: ME 301 to ME 699
 - Any course listed below:
 - and health – 3 hrs.

Student Organizations

Student chapters of the American Society for Materials (ASM), American Society for Quality (ASQ), Institute of Industrial and Systems Engineers (IISE), Society of Automotive Engineers (SAE), American Foundrymen's Society (AFS), Society of Manufacturing Engineers (SME), and The Association for Supply Chain Management (ASCM, formerly APICS) are sponsored by the department or the

Caterpillar College of Engineering and Technology to support and encourage the professional development of the students. The department is also a strong supporter of the student chapter of the Society of Women Engineers (SWE).

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Industrial Engineering and Manufacturing Courses



Industrial Engineering and Manufacturing Courses

IME 101 – Introduction to Industrial & Manufacturing Engr (1 hour)

Survey of industrial and manufacturing engineering. Introduction to IME and MFE techniques and tools. Not open to students with credit in any 200-level or above IME, IME, or MFE course.

IME 103 – Computer Aided Graphics (2 hours)

Computer aided drafting, theory of orthographic projection, sections, auxiliaries, and basic dimensioning.

IME 105 – Introduction to Computers & Computation in Ind. & Mf Engineering (2 hours)

Use of computers in IME and MFE environments, use of various packages, LAN and WAN usage.

IME 110 – Introduction to Computers & Computational Analysis (3 hours)

Use of various modern computing technologies, including numerical analysis software and Internet-based applications. Coding of numerical algorithms as applied to engineering functions. CoRequisite: MTH 115 or IMT 212 or consent of instructor

IME 117 – Computer Numerical Applications (2 hours)

Continuation of IME 105; coding of numerical algorithms as applied to engineering functions. Includes laboratory. Prerequisite: IME 105. Corequisite: Integral calculus.

IME 200 – Engineering Co-Op (0 hours)

Core Curr. EL

Full-time cooperative education assignment for manufacturing engineering and industrial engineering students who alternate periods of full-time school with periods of full-time academic or career-related work in industry. Satisfactory/Unsatisfactory. Prerequisite: Sophomore standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of engineering and technology Co-op coordinator and Co-op faculty advisor.

IME 241 – Manufacturing Fundamentals (3 hours)

Fundamental knowledge and skills to work in the manufacturing field. The role, function and constraints of product design and process planning within a manufacturing system, and the basic principles of different manufacturing processes. The elements of physical manufacturing environment and the basic properties of different types of production materials. Not open to students with credits in any 300- or 400-level IME or IMT course. Prerequisite: IME 103 or consent of instructor

IME 300 – The World of Metals (3 hours)

Gen. Ed. TS

Designed for students concerned with metals and those with a general interest in the history of the metals upon which all civilization since the Stone Age has relied. Modern metallurgical technology, heat treatment, periodic table of elements, aspects of materials

science and engineering, and history of technical procedures. Draws upon many modern and ancient texts. Not open to majors in engineering and technology.

IME 301 – Engineering Economy I (3 hours)

Core Curr. MI

Analysis of economic aspects of engineering decisions. Effect of interest and other cost factors on evaluation of engineering alternatives. Roles of mathematical models and other techniques in economical design and test of products. Introduction to value engineering. Prerequisite: MTH 121 or IMT 212

IME 302 – Introduction to Quality Engineering (3 hours)

Definition of quality, need for quality in products and services, methods of assuring quality, fundamentals of probability and statistics, process control methods, acceptance sampling, designing experiments, a system for quality. IME 302 should not be open to students with credit in IME 311 or IME 422. Prerequisite: IMT 212, MTH 115, MTH 118, MTH 119, MTH 121, or consent of instructor

IME 311 – Introduction to Engineering Statistical Methods (3 hours)

Engineering data collection and analysis; discrete and continuous probability models; confidence intervals; tests of hypotheses; regression analysis; essentials of statistically designed experiments; engineering application of statistical methods. Extensive use of statistical computer software. Prerequisite: MTH 122.

IME 312 – Engineering Statistical Methods (3 hours)

Extension of IME 311: Probability models, multi-variable analysis, step-wise design of statistical experiments, multiple regression, response surface analysis, distribution of random vectors, function of random variable sample statistics. Required semester project. Extensive use of statistical computer software. Prerequisite: IME 311 with C or better.

IME 313 – Operations Research I (3 hours)

Philosophy and techniques of operations research. Emphasis on elementary model building and concepts of optimization, structure of problem solving; linear programming, transportation and assignment algorithms; game theory; network analysis, branch and bound theory; dynamic programming; decision theory involving one stage problems. Prerequisite: MTH 122

IME 314 – Operations Research II (3 hours)

Probabilistic models of operations research: inventory theory, Markov chains, queuing theory, and simulation. Prerequisite: Minimum grade of C in IME 311, 313

IME 325 – Transport Phenomena (3 hours)

Energy, heat, and mass transfer. Basic principles in thermodynamics, fluid flow, heat transfer, and mass diffusion. First and second laws of thermodynamics, work and adiabatic processes, reversible and irreversible processes, power. Fluid statics, pressure, energy, and losses. Heat conduction, convection, and radiation. Steady-state and transient mass diffusion. Prerequisite: CHM 110, 111, PHY 201, MTH 223.

IME 331 – Fundamentals of Materials Science (3 hours)

Materials science in engineering. Structure of perfect solids: metals, plastics, composites, and ceramics. Structure of imperfect solids: phase equilibria; diffusion, mechanical properties, and plastic deformation; strengthening mechanisms; relation between mechanical properties and microstructural control; organic polymers; electrical conduction in materials; semi-conductors; magnetic materials. Prerequisite: CHM 110, 111; PHY 110 or PHY 107

IME 333 – Materials Science Laboratory (2 hours)

Core Curr. WI

Laboratory practices and experience for basic materials science investigations. Mechanical testing, metallographic examination and thermal treatment of metals, non-destructive and destructive testing of non-metallic materials. Prerequisite: IMT 232 or IME 331

IME 341 – Introduction to Manufacturing Processes (3 hours)

A laboratory-intensive introduction to manufacturing machinery and processes, tooling, and safety. Product specification interpretation and associated planning for tooling and methods. Material removal; forming operations; casting and molding of metals and plastics; joining techniques. Prerequisite: IME 103, M E 102, or consent of instructor

IME 361 – Introduction to Simulation and Expert Systems (2 hours)

Procedures and rationale for planning, designing, and implementing computer simulation experiments and expert systems used to analyze human-machine systems in engineering, business, and social sciences. Prerequisite: IME 110; IME 311 or IME 302

IME 383 – Industrial Management (3 hours)

Principles of management applied to design of organizations' physical facilities and operation systems. Not open to IME majors.

IME 385 – Introduction to Logistics and Supply Chain (3 hours)

Logistics terms and definitions; logistics demand forecast; transportation decision models; supply chain concepts, analyzing, designing, and implementing logistics systems. Prerequisite: IME 302 or IME 311 or QM 262, or consent of the instructor

IME 386 – Industrial and Managerial Engineering (3 hours)

Principles of IME applied to design of an organization's physical facilities and operating systems. Analysis and measurement of human work applied to work system design. Laboratory and interdisciplinary community projects. Prerequisite: IME 341; and MTH 121 or MTH 115 or IMT 212 or Equivalent

IME 395 – Solid Modeling & Rapid Prototyping (3 hours)

Principles of solid modeling and 3D drafting. Solids, surfaces, wire frames, pictorial representation, advance dimensioning, tolerancing, geometric dimensioning and tolerancing, drafting for production, techniques of rapid prototyping. Prerequisite: IME 103; IME 341

IME 401 – Engineering Economy II (3 hours)

Continuation of IME 301. Economic aspects of engineering decisions including techniques of obtaining cost data, product costing, and break-even analysis. Industrial practices. Cross-listed with IME 501. Not open to students with credit in IME 305. Prerequisite: IME 301.

IME 409 – Selected Projects in Industrial & Manufacturing Engineering (1-6 hours)

Projects may be of an experimental, analytical, or creative nature. Course may be repeated for a maximum of 6 hours credit. Prerequisite: senior standing and consent of instructor.

IME 410 – Selected Topics in Industrial & Manufacturing Eng (1-6 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Course may be repeated under different topics for maximum of six hours credit. Prerequisite: Consent of instructor.

IME 412 – Design and Analysis of Experiments (3 hours)

Experimental design, analysis of variance and regression. Topics include the strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, and nested and split-plot designs. Cross listed with IME 512. Prerequisite: IME 302, IME 311, Q M 262, C E 310, MTH 325, or consent of the instructor

IME 422 – Manufacturing Quality Control (3 hours)

Analysis of factors affecting product quality during manufacturing; process control charts; process capability studies; error of measurement; sampling plans; motivation programs; quality audit; organization. Cross listed with IME 522. Prerequisite: IME 311 with C or better or consent of instructor

IME 431 – Materials Engineering (2 hours)

Properties and selection of materials for engineering applications. Mechanical and thermal treatment of materials. Destructive and non-destructive testing. Corrosion control and prevention. Wear and fracture of engineering materials. Design and testing for fracture resistance. Emphasis on case studies and applications. CoRequisite: IME 333.

IME 441 – Manufacturing Processes I (3 hours)

Principles, techniques, limitations, and applications of metal cutting and forming processes. Phenomena of tool life, tool wear, surface integrity, resultant properties, and tolerances of these operations. Traditional forging, rolling, drawing, and extrusion processes; processing limits and resultant effects on material and component properties. Non-traditional methods and processing economics. Lecture and Lab. Prerequisite: IME 331, IME 341, C E 270 or IMT 324, or consent of the instructor

IME 443 – Manufacturing Processes II (3 hours)

Principles, techniques, limitations, and applications of metal casting and non-metallic molding processes, traditional metal joining processes, fabrication, and assembly. Basic phenomena of near-net-shape manufacturing, tooling and equipment required, tolerances and economics. Emphasis on manufacturing parameters, design, and the resultant effects of material structure and properties. Lecture and Lab. Prerequisite: IME 331, IME 341, or consent of the instructor

IME 445 – Computer Aided Manufacturing (3 hours)

Introduction to the theory and practice of machining processes using Computer Numerically Controlled (CNC) technology; NC programming operations for CNC mills and lathes; transfer of parts descriptions into detailed process plans, tool selection, and NC machine codes with Design for Machining (DFM) concept verified through laboratory work; Computer-assisted CAD/CAM NC programming is emphasized. Laboratory work includes CNC machine setup, tooling setup, manual and computer assisted NC programming verification and operation. Prerequisite: IME 341 and IME 395; or consent of instructor

IME 461 – Simulation of Manufacturing and Service Systems (3 hours)**Core Curr. EL**

Procedures and rationale for planning, designing, and implementing computer simulation experiments used to analyze manufacturing and service systems in engineering, business, and social sciences. Use of a 3D state-of-art simulation software tool. Cross-listed with IME 561. Prerequisite: IME 311 or IME 302 or equivalent

IME 461 – Simulation of Manufacturing and Service Systems (3 hours)**Core Curr. EL**

Procedures and rationale for planning, designing, and implementing computer simulation experiments used to analyze manufacturing and service systems in engineering, business, and social sciences. Use of a 3D state-of-art simulation software tool. Cross-listed with

IME 561. Prerequisite: IME 311 or IME 302 or equivalent

IME 466 – Facilities Planning (3 hours)

Physical organization of work places and departments to optimize objectives such as material movement, safety, and worker satisfaction. Review of IME methods for work place design and productivity measurement and economic decision making. Computer solutions for layout problems and mathematical models for location problems. Cross listed with IME 566. Prerequisite: IME 386 or consent of instructor

IME 468 – Engineering Analytics 1 (3 hours)

Theoretical background of descriptive, predictive and prescriptive analytics methods and their applications to engineering. Various artificial intelligence techniques for data mining and expert system design and implementation. Computing foundations for data management and data analytics. Applications to Production Planning and Control and Inventory Management. Cross-listed with IME 568. Prerequisite: IME 110

IME 478 – Engineering Analytics 2 (3 hours)

Combination of machine learning theory with the hands-on practice of solving modern industry problems with an emphasis on optimization or intelligent control via data mining approaches. Topics include Fuzzy Logic, Neural Networks, Neuro-Fuzzy, and Genetic Algorithm for optimization or for intelligent control. The course uses Python as the primary language, although later projects can include R and other languages. Cross listed with IME 578. Prerequisite: IME 468

IME 481 – Lean Production Systems (3 hours)

Core Curr. EL

This course reviews the principles and concepts required for integrated production System in order to meet customer demand in production, quality, on-time delivery, and continuously reducing manufacturing cost. Emphasis is placed on applying lean manufacturing principles, simulation techniques, and Kaizen methodologies through hands-on projects. Cross listed as IME 581. Prerequisite: IME 301; IME466 or IMT 366; or consent of instructor

IME 483 – Production Planning and Control (3 hours)

Analysis of Service-Production-Inventory systems using common planning and scheduling techniques. Mathematical models for project planning, aggregate planning, master scheduling and inventory analysis. Interface with quality control and computer systems. Cross listed as IME 583. Prerequisite: IME 386, minimum grade of C in IME 311 and IME 313 or consent of instructor.

IME 485 – Occupational Ergonomics (3 hours)

Core Curr. WI

Functional anatomy and physiology of muscle and skeletal systems and their relationship to work design. Work physiology, kinesiology, and anthropometry in relation to their application in work-place design and hand-tool design. Utilization of physical work capacity and job demands for job design, personnel assignment, and assessment of work-rest scheduling. Cross listed as IME 585. Prerequisite: IME 302 or IME 311, and CE 150 or IMT 222, or consent of instructor.

IME 486 – Logistics & Supply Chain Systems (3 hours)

Logistics terms and definitions; logistics as a design process; supply chain concepts, analyzing, designing and implementing logistics systems. Prerequisite: IME 386, IME 311, IME 313; or consent of instructor.

IME 487 – Occupational Safety and Health (3 hours)

Occupational safety and health standards and regulations. Injury and illness statistics. Employer's responsibilities and bookkeeping requirements. Hazard analysis and systems safety, occupational and environmental hazards and controls. Cross listed with IME 587. Prerequisite: Prerequisites: Junior Standing.

IME 491 – Manufacturing Design (4 hours)

Static and dynamic design, analysis, specification, and financial analysis of manufacturing equipment specific to a particular product. A systems approach to the integration of machine tools, work holding, materials handling, processing, measurement, and operator interface. Laboratory in tool design, modular tool construction, and virtual modeling of tooling systems. CoRequisite: IME 445 and senior standing.

IME 495 – Design for Manufacturability (3 hours)

The design process; interaction of materials, processes, and design; economic considerations; design considerations for machining, casting, forging, extrusion, forming, powder metallurgy; designing with plastics; design for assembly; Research projects required. Cross listed with IME 595. Prerequisite: IME 341 and IME 395, or equivalences

IME 499 – Senior Industrial Project (4 hours)

Core Curr. WI,EL

Application of engineering principles to solve a real-world problem. Student works as member of a team assigned to a problem in a manufacturing, processing, service, or governmental organization. Requires a professional written and oral report. Cross-listed with IMT 498 Prerequisite: 30 hours of IMET Department courses with a minimum 2.25 GPA; COM 103; consent of course coordinator.

IME 501 – Engineering Cost Analysis (3 hours)

Economic aspects of engineering decisions including techniques of obtaining cost data, cost allocation and product costing, break-even analysis, financial analysis, and investment market. Prerequisite: Consent of instructor. Not open to students with credit in IME 401.

IME 511 – Probability and Statistics for Analytics (3 hours)

Theory and application of probability and statistics. Probability, random variable, distributions, sampling distributions, Central Limit Theorem, descriptive statistics, confidence interval, and hypothesis testing with various applications from business, engineering and science. Prerequisite: Consent of instructor.

IME 512 – Regression and Experimental Design (3 hours)

Inferential statistical analysis for two samples; Simple and multiple regression analysis and applications; Goodness of fit test; Independence test; Experimental designs for evaluating significance of main effects and interactions of multiple variables. Cross listed with IME 412. Prerequisite: IME 311 or IME 511 or consent of instructor

IME 514 – Introduction to Operations Research (3 hours)

Mathematical model building and use of deterministic and non-deterministic tools in problem solving. Problem solving structure, linear programming, transportation and assignment algorithms, game theory, networks, branch and bound algorithms, dynamic programming, deterministic and stochastic inventory models, markov chains, queueing theory and simulation. Prerequisite: Consent of instructor. Not open to students with credit in IME 313 and 314.

IME 515 – Linear Programming and Extensions (3 hours)

Theoretical and computational aspects of linear programming and its extensions in integer programming, nonlinear programming, dynamic programming, and network analysis; application to practical problems including production planning and supply chain optimization. Prerequisite: Consent of instructor

IME 522 – Manufacturing Quality Control (3 hours)

Analysis of factors affecting product quality during manufacturing; process control charts; process capability studies; error of measurement; sampling plans; motivation programs; quality audit; organization. A research paper required. Cross listed with IME 422 Prerequisite: One semester of statistics or consent of instructor. Not open to students with credit in IME 422

IME 524 – Six Sigma Theory and Methodologies (3 hours)

Comparative study of philosophies of using quality as a business management tool, with special reference to Deming's Theory of control charts and a study of their strengths and weaknesses. Special control charts such as CUSUM chart, median chart, moving average chart, and their application. The latest published articles used to keep up-to-date in quality technology. Prerequisite: IME 522 or consent of instructor.

IME 526 – Reliability Engineering (3 hours)

Specification, prediction, and evaluation of product reliability and maintainability. Use of models for failure distribution exponential, Weibull, lognormal and analytical and graphical methods for failure data analysis. Test plans and accelerated testing models. Design methods for increasing reliability and maintainability. Prerequisite: IME 511 or consent of instructor.

IME 531 – Polymer and Ceramic Materials and Processing (3 hours)

Recent developments and applications of polymeric and ceramic materials. Selection and design criteria, material properties, process engineering, quality considerations and failure prevention. Prerequisite: IME 331

IME 533 – Composite Material and Manufacturing (3 hours)

Science and technology of modern composite materials: properties, design, toughening mechanisms, fabrication methods, evaluation, mechanisms of failure, and quality assurance. Prerequisite: IME 331

IME 541 – Advanced Forming Processes (3 hours)

Analytical methods in metal forming processes including slab approach, upper bound techniques, slip-line field and visio-plasticity methods. Forging, rolling, extrusion, drawing, sheet forming, near net-shape processes, and CAD/CAM. Prerequisite: IME 441 or consent of Instructor

IME 543 – Advanced Material Removal Processes (3 hours)

Current and future trends in: mechanics of chip generation; forces and energies in cutting and dynamometry; thermal aspects of machining; cutting tool materials; friction, wear, vibrations and tool life; applications of engineering fundamentals to design and analysis of machining operations with emphasis on computer control. Prerequisite: IME 441

IME 545 – Advanced Joining and Fabrication (3 hours)

Principles of advances in joining and fabrication of engineering materials including metallic, non-metallic, and electronic. Process science and technology with emphasis on casting, welding, and micro-joining of electronic components. Physical and mathematical modeling of various processes. Prerequisite: IME 331

IME 553 – Advanced Computer Aided Manufacturing (3 hours)

Computer Aided Manufacturing (CAM) within the CAD/CAM and CIM contents. Computer Assisted Process Planning (CAPP), Computer Assisted Tool Design, Computer Assisted NC Programming (APT), Interactive Graphics, NC Programming, and the elements

of computer control of manufacturing equipment (CNC). A semester project. Prerequisite: IME 445.

IME 555 – Computer Integrated Manufacturing (3 hours)

Computer Integrated Manufacturing (CIM); elements of hardware and software within the manufacturing automation environment. Islands of factory automation and their interactions, information flow and Local Area Networks within the CIM architecture, standardization of electronic data and interfaces. Prerequisite: IME 386.

IME 560 – Principles of Robotic Programming (3 hours)

Programming of industrial robotic manipulators with external inputs, tactile sensing and vision sensing. A design project is required. Cross-listed as ME 560. Prerequisite: graduate or senior standing in engineering or computer science.

IME 561 – Simulation of Manufacturing & Service Systems (3 hours)

Procedures and rationale for planning, designing, and implementing computer simulation experiments used to analyze manufacturing and service systems in engineering, business, and social sciences. Use of a 3D state-of-art simulation software tool. Research projects required. Cross listed with IME 461. Prerequisite: IME 511 or equivalent

IME 563 – Process Engineering (3 hours)

The process design function interaction with product design, and the responsibilities within a manufacturing organization. Selection and design of machinery, tools, and methods. Computer aided process design and interactive accessing of machining data and tooling element of group technology and expert systems. Prerequisite: IME 395, 443.

IME 566 – Advanced Facility Planning (3 hours)

Physical organization of work places and departments to optimize objectives such as material movement, safety, and worker satisfaction. Review of IE methods of work place design and productivity measurement and economic decision making. Computer solutions for layout problems and mathematical models for location problems. A research project is required. Cross listed with IME 466. Prerequisite: IME 386 or IME 500 or consent of instructor

IME 568 – Engineering Analytics 1 (3 hours)

Theoretical background of descriptive, predictive and prescriptive analytics methods and their applications to engineering. Various artificial intelligence techniques for data mining and expert system design and implementation. Computing foundations for data management and data analytics. Applications to Production Planning and Control and Inventory Management. Cross-listed with IME 468. Prerequisite: One semester of computer programming and one semester of statistics, or consent of instructor.

IME 570 – Selected Topics in Industrial & Manufacturing Engineering (1-3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated up to a maximum of 6 hrs. Combined credit for IE 590 and IME 570 may not exceed six hours. Prerequisite: Consent of instructor.

IME 578 – Engineering Analytics 2 (3 hours)

Combination of machine learning theory with the hands-on practice of solving modern industry problems with an emphasis on optimization or intelligent control via data mining approaches. Topics include Fuzzy Logic, Neural Networks, Neuro-Fuzzy, and Genetic Algorithm for optimization or for intelligent control. The course uses Python as the primary language, although later projects can include R and other languages. Cross listed with IME 478. Not open to students with credit in IME 478. Prerequisite: IME 468 or IME 568

IME 581 – Cellular Lean Manufacturing Systems (3 hours)

This course reviews the principles and concepts required for integrated production System in order to meet customer demand in production, quality, on-time delivery, and continuously reducing manufacturing cost. Emphasis is placed on applying lean manufacturing principles, simulation techniques, and Kaizen methodologies through hands-on projects. A research paper is required. Cross listed as IME 481. Prerequisite: IME 566, or consent of instructor. Not open to students with credit in IME 481.

IME 583 – Production Planning and Control (3 hours)

Analysis of Service-Production-Inventory systems using common planning and scheduling techniques. Mathematical models for project planning, aggregate planning, master scheduling and inventory analysis. Interface with quality control and computer systems. A research paper is required. Cross listed as IME 483. Prerequisite: IME 386, minimum grade of C in IME 511, IME 514 or consent of instructor. Not open to students with credit in IME 483

IME 584 – Advanced Production Planning (3 hours)

Planning methods for converting to or creating Just-in-Time and/or group technology systems. Analytical and behavioral aspects. Prerequisite: Consent of instructor.

IME 585 – Occupational Ergonomics (3 hours)

Functional anatomy and physiology of muscle and skeletal systems and their relationship to work design. Work physiology, kinesiology, and anthropometry in relation to their application in work-place design and hand-tool design. Utilization of physical work capacity and job demands for job design, personnel assignment, and assessment of work-rest scheduling. Research projects required. Cross listed as IME 485. Prerequisite: Graduate Standing and Consent of instructor. Not open to students with credit in IME 485.

IME 586 – Logistics & Supply Chain Systems (3 hours)

Logistics terms and definitions; logistics as a design process; supply chain concepts, analyzing, designing and implementing logistics and supply chain systems. A research paper is required. Cross listed as IME 486. Prerequisite: Consent of instructor. Not open to students with credit in IME 486.

IME 587 – Occupational Safety and Health (3 hours)

Occupational safety and health standards and regulations. Injury and illness statistics. Employer's responsibilities and bookkeeping requirements. Hazard analysis and systems safety, occupational and environmental hazards and controls. Research projects required. Cross listed with IME 487. Prerequisite: Graduate Standing and Consent of instructor. Not open to students with credit in IME 487.

IME 590 – Geometric Modeling (3 hours)

Computer-based representations of the shape and spatially dependent attributes of real or conceived physical objects. Techniques and concepts needed to couple the digital computer with the techniques of geometric modeling and graphics display for analysis and viewing. Prerequisite: IME 395; MTH 223.

IME 592 – Tribology (3 hours)

An introduction to systems approach to tribology, surface topography, physical, chemical, and geometric nature of surfaces. Mechanics of contact between surfaces. Various theories of friction and wear, hydrodynamic, elastohydrodynamic, and boundary lubrication. Frictional instabilities. Rolling contact problems. Application of system methodology to tribological problems in engineering design and manufacturing. Prerequisite: IME 331 or ME 351 or consent of instructor.

IME 595 – Design for Manufacturability (3 hours)

The design process; interaction of materials, processes, and design; economic considerations; design considerations for machining, casting, forging, extrusion, forming, powder metallurgy; designing with plastics; design for assembly; A research paper required. Cross listed with IME 495. Prerequisite: IME 341; IME 395, or equivalences. Not open to students with credit in IME 495 or IME 591.

IME 670 – Independent Study (3 hours)

Critical investigation and analysis in management systems design, facilities and/or process design, material selection, or industrial economics. Prerequisite: Consent of instructor.

IME 690 – Engineering Data Analytics Capstone (3 hours)

The course provides students with the opportunity to integrate and apply the algorithms, methodologies, and analytical tools learned in the earlier coursework to solve engineering-related real-world data analysis problems. Students will conduct a team-based project that emphasizes the key aspects of data analytics using machine learning processes and will submit a consolidated report and present the results at the conclusion of the project. In addition to learning how to work in teams, participate in project planning and scheduling, write reports, give presentations, and interpret results, students will also gain an understanding of the fundamentals of data analytics project management. Prerequisite: Graduate Standing in Data Science and Analytics – Engineering Analytics concentration (DSA-EA), or consent of instructor. Taken in the last semester of enrollment.

IME 691 – Research (0-3 hours)

Research project or professional problem to be selected by student and advisor. May be repeated to a maximum of 3 hours credit. Beyond initial enrollment the student must register for 0 hours. Prerequisite: Unconditional graduate status, minimum GPA of 3.2 after 15 hours of graduate work, and consent of instructor

IME 699 – Thesis (0-6 hours)

Required of students choosing thesis option. Total of six hours to be taken; any semester after six hours, the student must register for zero hours to maintain progress. Prerequisite: Unconditional status, 3.25 GPA with at least 15 hours earned, and consent of graduate coordinator

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Manufacturing Engineering Technology Courses



Manufacturing Engineering Technology Courses

IMT 200 – Co-Op Assignment (0 hours)

Core Curr. EL

Full-time cooperative education assignment for manufacturing engineering technology students who alternate periods of full-time school with periods of full-time academic or career-related work in industry. Satisfactory/Unsatisfactory. Prerequisite: Sophomore standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of engineering and technology Co-op coordinator and Co-op faculty advisor.

IMT 212 – Technical Calculus I (3 hours)

Gen. Ed. MA

Core Curr. QR

Differentiation and integration of algebraic functions; applications to technology. Prerequisite: Minimum grade of C in MTH 109 or 112 or a score of at least 61 in the mathematics placement exam

IMT 214 – Technical Calculus II (3 hours)

Gen. Ed. MA

Core Curr. QR

Solution of first and second order differential equations; fourier series; polar coordinates; calculus of functions of two variables. Prerequisite: Minimum grade of C in IMT 212.

IMT 222 – Statics (3 hours)

Force systems in two and three dimensions: equilibrium; structures; distributed force; moments of inertia, friction, and work.

Prerequisite: IMT 212 or MTH 115, or equivalents.

IMT 232 – Physical Metallurgy (3 hours)

Crystal structures, metallography, destructive and nondestructive evaluation, physical properties, and applications of ferrous materials and alloys. Prerequisite: PHY 107, CHM 100

IMT 262 – Applied Statistics and Quality Control (3 hours)

Application of statistical methods: evaluating and designing experiments; fitting curves; determining confidence levels; aiding in selection and comparison of designs and products for quality control. Prerequisite: IMT 212.

IMT 322 – Dynamics (3 hours)

Study of particle and rigid body motion using principles of force-mass-acceleration, work-energy, and momentum. Prerequisite: IMT 222, IMT 214.

IMT 324 – Strength of Materials (4 hours)

Stresses, strains, shearing, bending moments, design of beams for strength and deflection. Combined stresses and strains, torsion, columns, and axial loaded members. Prerequisite: IMT 222 or equivalent.

IMT 328 – Mass and Energy Transfer (4 hours)

An introduction to fluid dynamics, heat transfer, and thermodynamics. Heat, work, equilibrium, and reversible processes. Conservation of mass, linear momentum, and energy. Heat transfer by conduction, radiation, convection. Prerequisite: IMT 214; IMT 222.

IMT 332 – Non-Metallic Materials (3 hours)

Properties, manufacturing techniques, and applications of nonmetallic materials including plastics, ceramics, composites, and electronic materials. Emphasizes design and processing considerations for quality products. Lecture and Lab. Prerequisite: IMT 232.

IMT 333 – Materials Science Laboratory (1 hour)

Laboratory practices and experience for basic materials science investigations. Mechanical testing, metallographic examination and thermal treatment of metals, non-destructive and destructive testing of non-metallic materials. Prerequisite: IME 331 or IMT 232

IMT 342 – Advanced Manufacturing Processes I (3 hours)

Traditional forging, rolling, extrusion, and sheet forming processes; processing limits. Applications of machining processes. Analysis of tool forces, heat generation, deflection, operation parameters, and resultant surface qualities and integrity. Processing economics and optimization. Lecture and Lab. Prerequisite: IMT 232, IMT 262, IMT 324, and IME 341.

IMT 344 – Advanced Manufacturing Processes II (3 hours)

Principles of metal casting and nonmetallic molding processes, powder metal processes, traditional metal joining processes, fabrication, and assembly. Tooling and equipment required, manufacturing parameters, tolerances, and economics of these operations. Lecture and Lab. Prerequisite: IMT 232, IMT 262, IMT 324, and IME 341.

IMT 346 – Electricity & Automation (3 hours)

Introduction to Computer Aided Manufacturing & Automation including: single- and three-phase power systems and transformers, programmable logic controllers, sensors and transducers, DC and AC Motors and control. Overview of industrial robots, systems, concepts, end effectors, computer control, specifications, justifications, and programming. Lecture and Lab. Prerequisite: IME 110, PHY 107

IMT 362 – Metrology and Instrumentation (3 hours)

Precision measurement and its relationship to Geometric dimensioning and tolerances (GD&T) and calibrations. Conduct Measurement Systems Analysis (MSA) for appropriate process measures. Statistical process control and quality assurance using automated gauges. Use of machine vision, Coordinate Measurement Machine, Robotic measurement arm, non-contact measuring systems. Prerequisite: IME 341 Corequisite: IMT 262 or IME 302 or equivalent

IMT 366 – Manufacturing Facilities Design (3 hours)

Principles and practices in designing, evaluating, and organizing existing facilities or creating new facilities. Emphasis on AutoCAD/ Factory CAD-based new facility design project – product design, production flow analysis, activity relationship analysis, layout deployment, materials handling, office and other service requirement design, and the necessary cost analysis for the new facility. Prerequisite: IME 383 or IME 386, and IME 341

IMT 392 – Mechanical Component Design I (3 hours)

Application of design principles covering: stress analysis, deflection, failure theories, fatigue, gears. Manufacturability and the use of references and manufacturers' data. Prerequisite: IMT 232, IMT 262, IMT 324.

IMT 394 – Dynamics of Machines (3 hours)

Velocities, accelerations, and forces in existing mechanisms. Design and analysis of linkages, cams, rolling contact, and drive trains. Prerequisite: IMT 322.

IMT 409 – Selected Manufacturing Projects (1-4 hours)

Individual or small team projects. May be of an experimental, analytical, or creative nature. May be repeated for a maximum of 6 hours credit.

IMT 410 – Selected Manufacturing Topics (1-4 hours)

Topics of special interest which may vary each time course is offered. Topic is stated in current Schedule of Classes. May be repeated for a maximum of 6 hours credit.

IMT 446 – Computer Aided Manufacturing and Automation (3 hours)

Computer assisted process planning and estimating. Concepts of computer control and feedback mechanisms. Design considerations for machine tools, machining cells, robotics, and flexible manufacturing systems. Lecture and Lab. Prerequisite: IMT 346, or consent of instructor

IMT 448 – Tooling Systems (3 hours)

Analysis, design, and layout of manufacturing tooling, including jigs and fixtures, gauging devices, and dies. Analysis of tooling for varying production volume, lead time, process capability, and cost. Laboratory in tooling and layout simulation. Prerequisite: IME 395, IMT 346; IMT 342 or IMT 344.

IMT 464 – Process Design and Planning (3 hours)

Translation of product design into specifications for manufacturing equipment and methods, simultaneous engineering, CAD/CAM, and organizational structures. Production volumes, life cycles, flexibility, skills, and cost. Prerequisite: IMT 342 or IMT 344; IMT 346.

IMT 492 – Mechanical Component Design II (3 hours)

Application and design principles. Inelastic stresses, fasteners, weldments, springs, bearings, shafts, clutches, belts, and chains. Manufacturability and the use of references and manufacturers' data Prerequisite: IMT 392.

IMT 494 – Computer Aided System Design (3 hours)

Application of design principles to definition of component properties, as determined by vibration, static, dynamic, and thermal loading for production system components and component systems. Techniques include analytical and FEM procedures. Prerequisite: IMT 214, IMT 394, IMT 492.

IMT 498 – Senior Industrial Project (4 hours)

Core Curr. EL,WI

Application of engineering technology principles to solve a real-world problem. Student works as a member of team assigned to a problem in a manufacturing or processing organization. Requires a professional written and oral report. Cross-listed with IME 499 Prerequisite: 30 hours of IMET Department courses with a minimum 2.25 GPA; COM 103; consent of course coordinator.

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Mechanical Engineering



Mechanical Engineering

The baccalaureate program in mechanical engineering is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>.

FACULTY Professors: Abou-Hanna, Elbella, Fakheri, Nair, Zietlow; Associate Professors: Henderson, Kim, Reyer (Interim Chair), Timpe; Emeritus Professors Hurt, Johnson, Mehta, Okamura, Wessler; Emeritus Associate Professors: Deller, Podlasek.

The department offers degree programs in mechanical engineering (BSME and MSME) and has four undergraduate ME concentrations in Biomedical, Energy, Chemical Engineering, and Robotics/Autonomous Vehicles Concentration. See the Graduate Catalog for information about graduate program.

Mission and Objectives

The mission of the Mechanical Engineering Department is to produce mechanical engineering graduates who possess the acumen, competence, and skills needed to enter, succeed, and lead in professional practice and/or graduate school. The goal is to provide a learning and nurturing environment that stimulates faculty and students to collaborate in solving practical problems, motivates lifelong learning, and helps them reach their highest potential.

The program educational objectives of the department are that alumni meet the following goals within a few years of graduation from the mechanical engineering program:

1. Are in professional practice or are pursuing advanced studies in mechanical engineering or related fields.
2. Are using their educational foundation to engage in lifelong learning
3. Are involved in local, regional, national or international practice to meet global technological and societal changing needs.

Student Outcomes

In order to meet these program educational objectives, students graduating from Bradley's mechanical engineering program will attain the following outcomes.

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Mechanical engineering is the broadest and most versatile of the engineering professions. Mechanical engineers are particularly concerned with the application of science and technology to translate ideas and theories into realistic engineering solutions that satisfy the needs of society, by using a combination of human, material, and economic resources. The broad discipline of mechanical engineering can be organized into two main branches, namely mechanical systems and thermal systems.

-Within mechanical systems, the following specialties may be pursued: applied mechanics, dynamic and control systems including robotics, materials, nanotechnology, and micro-electromechanical systems (MEMS).

-Within thermal systems, the following specialties may be pursued: energy systems, including aerospace, diesel and gasoline engine power, gas turbines, and solar energy, fluid dynamics, heat transfer, and air pollution control.

-Spanning both branches are the following specialties: bioengineering and computer and microprocessor applications

The undergraduate program also offers a broad technical background for persons wishing to enter graduate programs in different areas of mechanical engineering, business, law and medicine.

The faculty believes that engineers must be firmly grounded in the fundamentals of their field and the supporting areas of mathematics, communication, and the sciences, so that graduates will be able to adapt quickly to the rapid changes occurring in our technological society. Therefore, the curriculum has been designed to stress the basic tools of knowledge and practice essential to launch one's professional career and a lifelong process of continued learning.

The spectrum of mechanical engineering includes innovation and creation, research, design and synthesis, analysis, development, evaluation, production, and the marketing of machines, systems, and processes. Central to this activity is the design process which leads to the creation of solutions to real-world problems. Therefore, the mechanical engineering curriculum integrates design experiences into all levels of the program and into a majority of the technical electives. This culminates in a required comprehensive experience which is satisfied by a yearlong senior project and by the selection of technical.

In addition to the specific requirements listed for the Caterpillar College of Engineering and Technology, a minimum grade point average of 2.25 in mechanical engineering courses must be achieved in order to graduate.

Mechanical Engineering Program

The academic advisors work closely with students on their BSME program of study tailored to their academic background, interest and career goals. Students have the option to complete the **Bachelor of Science in Mechanical Engineering** program with or without declaring an area of concentration. The listed courses, an expected total of **127 hours**, leading to the Bachelor of Science in Mechanical Engineering. The Mechanical Engineering curriculum consists of (1) Bradley Core Curriculum, (2) Mathematics and Basic Science courses, (3) the required courses, and (4) the technical elective courses.

In addition to the specific requirements listed for the Caterpillar College of Engineering and Technology, a minimum grade point average of 2.25 in mechanical engineering courses must be achieved in order to graduate.

Bradley Core Curriculum (BCC) 18 hours

- BCC Communications Oral Communications (BCC – CM) – 3 hrs.
- BCC Communications Writing (BCC – W1) – 3 hrs.
- BCC Communications Advanced Writing (BCC – W2) ENG 300, 301, 305, or 306 – 3 hrs.
- BCC Fine Arts (BCC – FA) – 3 hrs.
- BCC Global Perspectives (BCC – GP) – 3 hrs.
- BCC Humanities (BCC – HU) – 3 hrs.

Mathematics and Basic Sciences 30 hours

- CHM 110 General Chemistry I (BCC – NS1) – 3 hrs.
- CHM 111 General Chemistry I Lab – 1 hr.
- Chemistry 2: CHM 112 or CHM 116 – 3 hrs.
- MTH 121 Calculus I (BCC – QR1) – 4 hrs.
- MTH 122 Calculus II (BCC – QR2) – 4 hrs.
- MTH 223 Calculus III – 4 hrs.

- MTH 224 Differential Equations – 3 hrs.
- PHY 110 University Physics I (BCC – NS2) – 4 hrs.
- PHY 201 University Physics II – 4 hrs.

Required Courses 64 hours

- CE 150 Mechanics I (Statics) – 3 hrs.
- CE 250 Mechanics II (Dynamics) – 3 hrs.
- CE 270 Mechanics of Materials – 3 hrs.
- ECE 227 Electrical Engineering Fundamentals – 4 hrs.
- ECO 100, 221 or 222 – 3 hrs. (BCC – SB)
- IME 301 Engineering Economy I —3 hrs. (BCC – MI)
- ME 101 Foundations of ME – 2 hrs.
- ME 102 Engineering Design Graphics – 2 hrs.
- ME 273 Computational Methods in ME – 3 hrs.
- ME 301 Thermodynamics I – 3 hrs.
- ME 302 Thermodynamics – 2 hrs.
- ME 303 Instrumentation and Measurement – 3 hrs.
- ME 308 Thermodynamics of Fluid Flow – 4 hrs.
- ME 341 Engineering Systems Dynamics – 3 hrs.
- ME 342 Design of Machine Elements – 3 hrs.
- ME 344 Kinematics and Dynamics of Machines – 3 hrs.
- ME 351 Engineering Materials Science I – 3 hrs.
- ME 403 Mechanical Engineering Systems Lab – 3 hrs.
- ME 415 Heat Transfer – 3 hrs.
- ME 441 Mechanical Control Systems – 3 hrs.
- ME Senior Capstone Project II**: ME 411 or ME 499 – 2 hrs. (BCC – WI, EL)
- ME Senior Capstone Project I**: ME 410 or ME 498 – 3 hrs. (BCC – WI, EL)

Technical Elective Courses 15-16 hours

- Approved Technical Elective or Concentration Courses, see below —15-16 hrs.

***ME Senior Capstone Projects require a 2–semester sequence of either an industrial based or academic research based design project – either ME 410 and 411 or ME 498 and 499—Enrollment in these courses is restricted to mechanical engineering students who are within the three semesters of graduation from the program.*

Approved Technical Elective Courses

Students with a concentration should see the specific list of technical elective courses under their concentration. For students without a concentration, at least four of the technical electives (12 hrs.) must be Mechanical Engineering Technical Elective courses from the following list:

- ME 354, ME 407, ME 409, ME 448, ME 491,
- All 500 level ME courses.

ME 409 may be repeated; only 6 hours of ME 409 will count towards the degree completion. ME 491/ME 591 may be repeated up to three (3) times (different topics) for technical elective credit.

The remaining elective requirement (3 hrs.) may be satisfied by ME courses from the above list or by non-required courses from other disciplines as listed below.

- Biology: BIO 310 to BIO 599
- Chemistry: CHM 252, 256, and CHM 316 to CHM 599
- Computer Science: C S 210, 321 to CS 599
- Computer Information Systems: CIS 377 to 446, CIS 545
- Mathematics: MTH 207, MTH 302 to MTH 599
- Physics: PHY 202, PHY 305 to PHY 599
- Civil Engineering: CE 310 to CE 599
- Electrical Engineering: ECE 301 to ECE 599
- Industrial and Manufacturing Engr: IME 311 to IME 325, IME 341 to IME 599
- Entrepreneurship: ENT 381, ENT 385
- Business: BUS 361, BUS 362
- Turner School of Entrepreneurship and Innovation: SEI 330

Biomedical Concentration

Biomedical Engineering integrates physical, chemical, mathematical, and computational sciences and engineering principles to study biology, medicine, behavior, and health. It advances fundamental concepts, creates knowledge from the molecular to the organ-system level, and develops innovative biologics, materials, processes, implants, devices and informatics approaches for the prevention, diagnosis, and treatment of disease, for patient rehabilitation, and for improving health. For engineering students who would like to have education in this expanding field, the Mechanical Engineering Department offers a Biomedical concentration that is embedded within the traditional Mechanical Engineering program. This concentration will require an additional one credit hour for graduation.

The Biomedical Engineering concentration requires the complete Mechanical Engineering curriculum with the following exceptions:

- Approved Biomedical Concentration Technical Electives (16 hrs.):
 - BIO 230 Human Anatomy and Physiology – 3 hrs.
 - BIO 231 Human Anatomy and Physiology Lab – 1 hr.
 - ME 280 Introduction to Biomedical Engineering – 3hrs.
 - Approved mechanical engineering biomedical electives: ME 580, ME 582, ME 588 – 6 hrs.
 - Approved mechanical engineering technical elective from the list above – 3 hrs.

The biomedical concentration program advisors may recommend that students take some of these courses earlier in their degree program than the last year. Students will work closely with their advisor in choosing the proper time and order for their coursework.

Energy Concentration

Energy is the lifeblood of industrial economies and is essential for economic growth. Today, some of the biggest engineering challenges are related to the production and efficient use of limited energy resources. This concentration prepares students to identify and analyze strategies to produce energy and to use energy resources in more economically efficient and environmentally responsible ways.

In emerging industrial economies, the demand for new energy sources is growing at a faster rate than in more mature industrial economies. This has stimulated the demand for engineers and creative solutions. Energy production resources are often not located in areas of the world with high energy demand, thus energy production and use have huge geopolitical implications. Accordingly, engineers must be aware of the robust set of relevant governmental rules and regulations.

The Energy Concentration follows the complete Mechanical Engineering curriculum but with restrictions to the topics of the technical electives:

- Approved Energy Concentration Technical Electives (15 hrs.):
 - Energy Electives – 12 hrs.
 - Choose from: ME 407, ME 409, ME 491, ME 501, ME 503, ME 507, ME 509, ME 515, ME 520, ME 521, ME 533, ME 534, ME 535, ME 536, ME 537, and ME 591 (depending on the topic)
 - Technical Elective – 3 hrs.
 - See list above under Approved Technical Electives Courses

Chemical Engineering Concentration

The concentration in chemical engineering is designed to introduce principles of chemical engineering to students majoring in Mechanical Engineering and other disciplines. Completing this concentration will help students to understand chemical engineering aspects of industrial processes and pursue careers in process industries or enter a graduate program in chemical engineering. This concentration will require an additional two credit hours for graduation (132 credit hours).

The Chemical Engineering Concentration requires the complete Mechanical Engineering curriculum with the following exceptions:

- The Chemical Engineering concentration replaces the following courses:
 - Second chemistry course: must be CHM 116 General Chemistry II – 3 hrs.
 - ME 301 is replaced with CHE 301 Chemical Engineering Thermodynamics – 3 hrs.
 - ME 302 is replaced with CHE 302 Material and Energy Balances – 3 hrs
 - ME 415 is replaced with CHE 415 Transport Phenomena I – 3 hrs.
- Approved Chemical Engineering Concentration Technical Electives (16 hrs.):
 - CHM 117 General Chemistry II Lab – 1 hr.
 - Organic Chemistry – 3 or 4 hrs. Choose from:
 - CHM 250 Concepts in Organic Chemistry – 3 hrs.
 - CHM 252 Organic Chemistry I – 4 hrs.
 - CHM 253 Organic Chemistry Lab – 1 hr.
 - CHE 321 Chemical Reaction Engineering – 3 hrs.
 - CHE 416 Transport Phenomena II – 3 hrs.

- Additional technical electives – 4 or 5 hrs, depending on Organic Chemistry. Choose from
 - See list above under Approved Technical Elective Courses
 - CHM 256 Organic Chemistry II – 3 hrs.
 - CHM 325 Analytical Chemistry – 4 hrs.
 - CHM 360 Biochemistry – 3 hrs.
 - CHM 416 Environmental Chemistry – 3 hrs.
 - CHM 420 Instrumental Analysis – 4 hrs.
 - CHM 440 Materials Chemistry – 3 hrs.
 - CHM 470 Physical Chemistry I – 3 hrs.
 - CHM 558 Topics in Organic Chemistry: Polymer Chemistry – 3

Robotics and Autonomous Vehicles Concentration

The concentration in Robotics and Autonomous Vehicles is designed to provide the most essential and practical knowledge/skills in robotics and autonomous vehicles to students majoring in Mechanical Engineering and other disciplines. Completing this concentration will prepare students for careers in this area or to pursue graduate education in Robotics and Autonomous Vehicles.

The Robotics and Autonomous Vehicles concentration requires the complete Mechanical Engineering curriculum with the following exceptions:

- Approved Robotics and Autonomous Vehicles Concentration Technical Electives (15 hrs.):
 - ME 561/ECE 444 Introduction to Robotics – 3 hrs.
 - ME 562 Dynamics, Modeling, and Control of Robots – 3 hrs.
 - ME 564 Sensor, Actuators, and Computer Vision – 3 hrs.
 - Cognition Elective – 3 hrs. Choose one from:
 - CS 461 Artificial Intelligence
 - CS 462 Machine Learning
 - CS 463 Knowledge Discovery and Data Mining
 - Mechatronics Elective – 3 hrs. Choose one from
 - ME 549 Microprocessor Interfacing in Mechanical Systems
 - ECE 468 Introduction to Mechatronics

Plan of Elective Study

To allow a student to earn a second major, a minor, and/or increase flexibility in developing an area of specialization, exceptions to the four ME tech electives policy may be granted on petition to the Mechanical Engineering Curriculum Committee. Students requesting an exception must submit a Plan of Elective Study with a recommendation from their advisor. This plan should outline the student's professional goals, their relationship to the courses in their plan and further documentation and evidence justifying proposed elective courses. This plan is then submitted to the Mechanical Engineering Curriculum Committee. Only courses on the individual student's Plan and approved no later than the first day of classes of the semester in which they are taken will count as technical electives.

Elective Plan Appeals Process

Appeal requests of the approval decisions should be sent to the ME Curriculum Committee by the student. If the Curriculum Committee's decision is not satisfactory, the Mechanical Engineering Faculty must approve any petition for exceptions to the Technical Elective Policy stated above.

Introductory Course Exception

Students who do not earn credit for ME 101 at Bradley may be required to take a 6th technical elective to replace those credit hours. Introductory courses from other engineering departments or EGT 101 are accepted in lieu of ME 101.

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Mechanical Engineering Courses



Mechanical Engineering Courses

M E 101 – Foundations of Mechanical Engineering (2 hours)

Nature of mechanical engineering as a profession and as a technological response to human needs. Emphases: design process, problem solving, and engineering experimentation. Prerequisite: Consent of instructor or department chair.

M E 102 – Engineering Design Graphics (2 hours)

Principles and methods of graphic communications, integrated with creative design problem solving: multi-view projections; pictorial drawing; fundamentals of descriptive geometry, sections, and dimensioning. Prerequisite: Enrolled as a mechanical engineering major; Minimum of C in ME 101 or equivalent with consent of instructor.

M E 200 – Engineering Co-Op (0 hours)

Full-time cooperative education assignment for mechanical engineering students who alternate periods of full-time school with periods of full-time academic or career-related work in industry. Satisfactory/Unsatisfactory. Prerequisite: Sophomore standing in the College of Engineering and Technology, 2.0 overall grade point average at Bradley, approval of engineering and technology Co-op coordinator and Co-op advisor.

M E 273 – Computational Methods in ME (3 hours)

Computational techniques and programming methods for mechanical engineering problems. Prerequisite: Minimum grade of C in both PHY 110 and MTH 223. Corequisite: MTH 224.

M E 280 – Introduction Biomedical Engineering (3 hours)

Core Curr. MI

Biomedical Engineering is an interdisciplinary field that encompasses biomechanics, biofluidics, medical imaging, bio-instrumentation etc for applications in the medical field. The content introduces a biological overview of the body, from cells to systems, and design and applications of engineering principles to biological systems. The broad objective of this course is to introduce students to the wide landscape early on in their curriculum. Prerequisite: Science and Engineering Majors

M E 300 – Energy and Society (3 hours)

Gen. Ed. TS

A general education course that covers fossil, renewable, and nuclear forms of energy, the related technologies, and the impact of energy usage on the environment, climate, security and economy. The course will meet in seminar format with discussions led by the instructor supplemented with hands on experiments and demonstrations, guest lectures, presentations by student teams and/or student team debates addressing energy related issues with especially important societal implications. Prerequisite: Jr/Sr standing or consent of the instructor

M E 301 – Thermodynamics I (3 hours)

Emphasis on concepts, laws, and problem solving; properties of materials, especially gases and vapors; simple equations of state; 1st and 2nd laws; introduction to cycles and systems. Prerequisite: Minimum grade of C in CHM 110, 111; Minimum grade of C in PHY 201; Minimum grade of C in MTH 223.

M E 302 – Thermodynamics II (2 hours)

Continuation of ME 301 with emphasis on engineering applications: including more detailed analysis of vapor cycles, power cycles, refrigeration cycles, and heat pump cycles, enhanced second law analysis, and more complex processes that include mixtures, humidification, combustion, and equilibrium. Prerequisite: minimum grade of C in ME 301.

M E 303 – Instrumentation and Measurement (3 hours)

Theory and practice of measurements and instrumentation. Definition of a measurement system that meets specified needs: identification, selection, and specification of instrumentation components. Weekly laboratory. Prerequisite: ECE 227 Corequisite: COM 103, M E 273, M E 301

M E 308 – Thermodyn Fluid Flow (4 hours)

Thermodynamics of fluid flow. Basic concepts of fluid mechanics; utility of the control volume approach to solving conservation equations governing the behavior of compressible and incompressible fluid flows. Design applications in thermal systems, aerodynamics, and convective heat transfer. Prerequisite: Minimum grade of C in ME 301, MTH 224

M E 341 – Engineering Systems Dynamics (3 hours)

Engineering systems dynamics, including mechanical, electrical, fluid, and thermal elements. Concepts of modeling. Mathematical methods for understanding and creating desired response behavior of linear systems. Prerequisite: Minimum grade of C in PHY 201; Minimum grade of C in MTH 224; Minimum grade of C in CE 250.

M E 342 – Design of Machine Elements (3 hours)

Application of stress analysis, deflection analysis, dynamic analysis, and materials to the design of mechanical components and machines. How available manufacturing processes influence nature of machine elements. Prerequisite: Minimum grade of C in CE 270 and ME 351; prerequisite or concurrent enrollment in ME 303

M E 344 – Kinematics and Dynamics of Machines (3 hours)

Kinematic and dynamic analysis and synthesis of mechanisms and machines; kinematics of linkages, cams and gearing systems; different analysis methods. Static and dynamic forces; balancing of rotating and reciprocating machines. Integration of these topics in solving open-ended design problems. Prerequisite: ME 273, CE 250.

M E 351 – Engineering Materials Science I (3 hours)

Understanding how atomic and crystalline structure influences the mechanical properties of metals, polymers, ceramics, composite, and biomedical materials. Thermal processes that influence the underlying structure of solids. Using materials in the engineering design process. Prerequisite: Minimum grade of C in PHY 110; Minimum grade of C in CHM 112 or Minimum grade of C in CHM 116. Corequisite: PHY 201.

M E 354 – Principles of Materials Science Laboratory Practices (3 hours)

Topics and experiments involving thermal analysis, mechanical measurements, phase transformation, mechanical deformation, diffusion, corrosion, and electrical properties of materials. Prerequisite: minimum grade of C in ME 351 or equivalent.

M E 390 – Mechanical Engineering Seminar (0-1 hours)

Selected topics in Mechanical Engineering. Students attend weekly seminars pertaining to all aspects of the field. May be repeated under different topics. Repeatable to a maximum of one hour. Course graded Satisfactory/Unsatisfactory. Prerequisite:

M E 403 – Mechanical Engineering Systems Laboratory (3 hours)

Student team investigations of thermal and mechanical systems emphasizing definition, planning, design, and execution of experiments involving system modeling and analysis. Written reports and oral presentations are required. Prerequisite: Minimum grade of C in both ME 303 and CE 270 Corequisite: 300-level English composition, ME 415, ME 441

M E 407 – Power Plant Design (3 hours)

Comprehensive study of equipment and thermodynamic cycles relating to modern, fossil fueled power plants. Development of thermal-hydraulic designs for heat exchangers, condensers, steam generators, and turbines for a proto-typical plant. Extensive computational parametric studies for understanding salient parameters governing selection of optimal hardware configurations. Prerequisite: ME 302, 308.

M E 409 – Mechanical Engineering Projects (1-4 hours)

Special topics or projects of an experimental, analytical, or creative nature. May be repeated up to 16 credit hours. Prerequisite: Consent of instructor.

M E 410 – Mechanical Engineering Senior Project I (3 hours)

Core Curr. WI,EL

Team based investigations of open-ended engineering design problems. Each project will place an emphasis on problem definition,

planning, analysis, synthesis, evaluation, and teamwork. The projects may involve experimentation and/or construction of models. Students enrolled in this course are required to be within 3 semesters of graduation and have a minimum ME GPA 2.25. Prerequisite: Senior standing in ME. Instructor consent may be required.

M E 411 – Mechanical Engineering Senior Design Project II (2 hours)

Core Curr. EL,WI

Continuation and completion of senior project begun in ME 410. Prerequisite: ME 410. Instructor consent may be required.

M E 415 – Introduction to Heat Transfer (3 hours)

Steady state and transient conduction; external and internal forced convection and free convection; radiation; heat exchanger design. Prerequisite: ME 302. C or better in ME 308.

M E 441 – Mechanical Control Systems (3 hours)

Linear feedback control design and analysis for dynamic systems with applications; examples taken from applications encountered by mechanical and manufacturing engineers. Time and frequency response techniques. System performance analysis. Prerequisite: ME 341. ECE 227.

M E 448 – Computer Aided Design in Mechanical Engineering (3 hours)

Design of mechanical systems and components enhanced by applications of computer graphics. Computer graphics hardware characteristics; transformation and projection geometry; space curves and surface presentations; solid geometric representations. User application CAD packages for finite element analysis and mechanisms and systems simulation. Prerequisite: senior standing in ME or consent of instructor.

M E 491 – Special Topics in Mechanical Engineering (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Undergraduate students may repeat the course under different topic names up to a maximum of 9 credits. Prerequisite: Consent of instructor

M E 498 – ME Senior Research Project I (3 hours)

Core Curr. WI,EL

Team investigations of open-ended engineering research problems. Each project will place an emphasis on problem definition, planning, analysis, synthesis, evaluation, and teamwork. The projects may involve experimentation and/or construction of models. Students enrolled in this course are required to be within 3 semesters of graduation and a minimum ME GPA of 2.25. Prerequisite: Senior standing in ME. Instructor consent may be required.

M E 499 – ME Senior Research Project II (3 hours)

Core Curr. WI,EL

Continuation and completion of senior project begun in ME 498. Prerequisite: ME 498. Instructor consent may be required.

M E 501 – Advanced Thermodynamics (3 hours)

Laws and concepts of classical thermodynamics: real gases and equations of state; availability; irreversibility; property relations; potential functions; equilibrium; multicomponent systems. Prerequisite: ME 302; or graduate standing.

M E 502 – Problems in Advanced Dynamics (3 hours)

Application of analytical and graphical methods to problems involving velocities, accelerations, working and inertia forces. Prerequisite: ME 341; or graduate standing.

M E 503 – Internal Combustion Engines (3 hours)

Thermodynamic analysis, thermo-chemistry, and performance characteristics of spark ignition and compression ignition engines. Prerequisite: ME 301 and ME 302; or graduate standing.

M E 509 – Solar Engineering (3 hours)

Nature and characteristics of solar energy as a renewable energy resource. Solar geometry and radiation. Thermodynamics of solar systems; emphasis on 2nd Law considerations. Performance characteristics of collectors, storage systems, house heating systems, cooling and refrigeration, and photovoltaics. Comprehensive design project. Theory and performance characteristics of solar devices and application to design of a comprehensive solar energy system. Prerequisite: ME 415 or consent of instructor.

M E 515 – Intermediate Heat Transfer (3 hours)

In-depth treatment of the three modes of heat transfer; design applications. Development of analytical and specific numerical skills needed for solving design problems involving heat transfer. Prerequisite: ME 415; or graduate standing.

M E 520 – Gas Dynamics (3 hours)

One dimensional flow: wave and shock motion in subsonic and supersonic flow; flow with heat transfer and friction; viscosity effects; similarity. Introduction to multidimensional flow. Prerequisite: ME 308; or graduate standing.

M E 521 – Intermediate Fluid Mechanics (3 hours)

Analysis of statics and dynamics of non-viscous and viscous fluids. Derivation of differential equations of motion. Potential flow; vortex

motion; creeping motion; introduction to boundary layer theory; turbulence. Prerequisite: MTH 224 and ME 308; or graduate standing.

M E 533 – Propulsion Systems (3 hours)

Gas turbine analysis; stationary power plants; turboprop, turbojet, and ramjet engines; rocket propulsion; application of thermodynamics. Prerequisite: ME 308; or graduate standing.

M E 534 – Environmental Engineering-Air Conditioning (3 hours)

Core Curr. WI

Heating and cooling of moist air; solar radiation; computation of heating and cooling loads; study of heating, ventilating, and cooling systems and equipment; design project. Prerequisite: ME 301.

M E 535 – Environmental Engineering-Refrigeration (3 hours)

Mechanical vapor compression refrigeration cycles; refrigerants; absorption refrigeration; miscellaneous refrigeration processes; cryogenics; semester design project. Prerequisite: ME 301.

M E 536 – Industrial Pollution Prevention (3 hours)

Industrial pollution prevention for small quantity generators such as foundries, metal fabrication, electroplating, electronics, soldering, wood products, cleaning, degreasing, and coating. Study of emerging technologies for pollution prevention. Relationships among energy consumption, waste production, and productivity enhancement. Actual plant assessments. Prerequisite: Consent of instructor; or graduate standing.

M E 537 – Building Energy Management (3 hours)

The energy problem. Energy consumption patterns in existing and new buildings. Analysis of energy saving strategies for existing buildings; developing designs for new, energy efficient buildings, including reliability, comfort, and economic considerations. Formal oral presentations.

M E 540 – Advanced Mechanical Vibrations (3 hours)

Principles of vibrations in one or more degrees of freedom; application to machine members. Prerequisite: ME 341; MTH 224; or graduate standing.

M E 544 – Mechanical Systems Analysis (3 hours)

Mathematical modeling of mechanical, electrical, pneumatic, hydraulic, and hybrid physical systems emphasizing a unified approach such as the Bond graph technique. LaPlace, state-variable, and matrix formulation of models. Systems response characteristics, prediction, and analysis. Prerequisite: ME 341; or graduate standing.

M E 547 – Fluid Power Control Systems (3 hours)

Definition and scope of fluid power control systems. Fluid properties. Continuity and power balance equations. Components function, operation, and dynamic performance. Use of perturbation theory for developing linearized transfer functions. Application of conventional control theory. Prerequisite: ME 301, ME 308; or graduate standing.

M E 548 – Optimization of Mechanical Systems (3 hours)

Development and application of optimization techniques in design of engineering systems and elements; mathematical modeling and formulation of design problems for optimization; different optimization methods including linear, non-linear, geometric and dynamic programming; shape optimization. Emphasis on development and choice of appropriate search methods, sensitivity analysis, and programming. Prerequisite: Senior standing in engineering or consent of department; or graduate standing.

M E 549 – Microprocessor Interfacing in Mechanical Systems (3 hours)

Principles of microprocessor hardware and software; integration of microprocessor hardware and software in mechanical systems for data acquisition and control purposes (e.g., robotics, internal combustion engine monitoring systems, and pneumatic controls). Intensive hands-on laboratory exercises and practical problem solving. Introduction of "mechatronics." Prerequisite: ME 303; ECE 227; proficiency in at least one computer language; or consent of instructor.

M E 554 – Fracture of Solids (3 hours)

Mechanical failure caused by stresses, strains, and energy transfers in mechanical parts: conventional design concepts and relationship to occurrence of fracture; mechanics of fracture; fracture toughness; macroscopic and microscopic aspects of fracture; high and low cycle fatigue failures; creep; stress rupture; brittle fracture; wear; case studies of failure analysis. Emphasis on time-dependent failures. Prerequisite: M E 354 and C E 270; or graduate standing.

M E 556 – Mechanics of Composite Materials (3 hours)

Mechanical behavior, analysis, and design of various advanced composite materials: introduction to composite materials and their applications; elasticity of anisotropic solids; micromechanics of fiber reinforced composites and particulate composites; short fiber composites; macromechanics of laminated composites; thermal stresses; failure criteria; fracture and fatigue, reliability, testing, and design of composite materials. Emphasis on developing simple microcomputer programs for analysis. Projects involve curing and testing composites. Prerequisite: CE 270; or graduate standing.

M E 557 – Advanced Design of Machine Elements (3 hours)

Review of mechanical testing, 3-D stress-strain relationship, complex and principal states of stress, yielding and fracture under combined stresses, fracture of cracked members, stress and strain based approaches to fatigue, creep damage analysis, and plastic damage analysis as applied to the design of machine elements. Prerequisite: ME 342 and ME 351, with a minimum grade of C; or graduate standing in ME. Requires consent of instructor if non-ME Student.

M E 560 – Principles of Robotic Programming (3 hours)

Programming of industrial robotic manipulators with external inputs, tactile sensing, and vision sensing. A design project is required. Cross-listed as IME 560. Prerequisite: graduate or senior standing in engineering or computer science.

M E 561 – Introduction to Robotics (3 hours)

Coordinate transformation, forward & inverse kinematics, robot dynamics, robot control, motion planning, actuators and sensors, and robotic vision. A design project is required. Prerequisite: Graduate or senior standing in engineering or computer science; consent of the instructor

M E 562 – Dynamics, Modeling, and Control of Robots (3 hours)

Fundamental concepts and methods to analyze, model, and control robotic systems. Kinematics/dynamics, modeling and controller design of robotic arms, mobile robots, and drones. Plant visits to observe robots in action; hands-on practice using Arduino or Raspberry-Pi. Prerequisite: M E 344, ECE 227; or consent of instructor.

M E 564 – Sensor, Actuators, and Computer Vision (3 hours)

Fundamental principles of sensors, actuators, and computer vision; Image processing, image recognition, and face detection; Introduction to OpenCV and MATLAB computer vision; Prerequisite: M E 273, M E 303; or consent of instructor

M E 568 – Motion planning (3 hours)

This course provides an in-depth treatment of path planning and motion in robotic systems. Common techniques and algorithmic procedures used for planning and decision-making are covered. Case studies include mobile manipulation platforms and multi-robot systems. The student evaluation will be done by tests, homework, and projects. Prerequisite: Senior or Graduate Standing

M E 573 – Methods of Engineering Analysis (3 hours)

Application of principles of analog and digital computers and numerical methods to solve mechanical engineering problems. Prerequisite: ME 341; ME 273; MTH 224; or graduate standing.

M E 577 – Finite Element Methods in Engineering (3 hours)

Theory of finite element methods and applications in mechanical engineering: review of matrix algebra and basic theorem of elasticity. Direct formulation of plane truss element and variational formulations of plane stress/strain, axisymmetric solids, flexural beam, and flat plate elements. Element analysis and isoparametric formulation. Applications to problems of stability, vibrations, thermal stress analysis, and fluid mechanics. Computer programming techniques. Prerequisite: Senior standing in ME or consent of instructor; or graduate standing.

M E 580 – Biomechanics (3 hours)

Human body as a mechanical system. Biomechanics of cells, soft issue and hard tissue Biomechanics of movement. Laboratory exercises on design and analysis of implants. Prerequisite: senior or graduate standing in engineering or consent of instructor.

M E 588 – Human Centered Design (3 hours)

Principles and practices of biomedical engineering for integration into design. The focus on human limits including physical, visual, cognitive and medical will serve as the basis for technology evaluations and case studies. Design and analysis with team-based, open ended client specific project. Prerequisite: Senior or graduate standing and consent of instructor

M E 591 – Topics in Mechanical Engineering (3-9 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Graduate students may repeat the course under different topic names up to a maximum of 9 credits. Prerequisite: consent of instructor.

M E 604 – Design of Internal Combustion Engines (3 hours)

Detailed study of design of internal combustion engines. Gas-pressure and inertia-force diagrams; determination of bearing loads; torsional vibration analysis; stress analysis and design of components, including piston, connecting rod, crankshaft, flywheel, valve mechanism, and cam layout. Prerequisite: undergraduate courses in dynamics of machines, internal combustion engines, and machine design, or consent of instructor.

M E 648 – Advanced Computer Aided Design (3 hours)

Augmentation of mechanical design through application of computer graphics. Hardware/software characteristics; elements of geometric/solid modeling. Emphasis on integration in the application of the design process through packages for geometric/solid modeling, finite element analysis, and mechanisms and system simulation. Prerequisite: BSME; or background in mechanical and thermal systems and consent of department chair. Students without a BSME degree may take ME 342, ME 344, ME 415, and ME 411 to help develop an appropriate background for the course.

M E 681 – Research (0-6 hours)

Research on a project selected by student and advisor.

M E 682 – Research (0-6 hours)

Individual study on a topic selected by the student with advisor approval. Integration and application of research. Student must produce a product such as a software program or journal article Prerequisite: consent of instructor.

M E 699 – Thesis (0-6 hours)

Maximum of 6 semester hours total of research and/or thesis may be applied toward the masters degree. Prerequisite: consent of department.

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CCET Minors



CCET Minors

Minor in Construction (CEC department)

A Minor in Construction from the Department of Civil Engineering and Construction creates tremendous opportunities for students majoring in business or engineering to join the booming construction industry. Business and engineering students with a construction minor will have an adequate understanding of the principles of construction management, including an understanding of the construction project life cycle, project acquisition processes, estimating, scheduling, and construction risk management, among other concepts. The minor was designed to allow students from the various majors to complete it while completing the requirements of their major with the least number of additional courses compared to minors being offered by other institutions.

Entry Requirements:

Minor is open to students from the Foster College of Business and the Caterpillar College of Engineering and Technology with a minimum GPA of 2.25.

Required Courses 15 hours

For non CEC – Majors:

- CON 100: Introduction to Construction (1 hr.)
- CON 132: Construction Graphics (2 hrs.)
- CON 262: Mechanical and Electrical Systems (3 hrs.)
- CON 270: Construction Materials and Methods (3 hrs.)
- CON 314: Principles of Construction Project Management (3 hrs.)
- CON 388: Contract Administration (3 hrs.)

For Civil Engineering Majors 17 hours

- CON 132: Construction Graphics (2 hrs.) Required in CE Major
- CON 262: Mechanical and Electrical Systems (3 hrs.)
- CON 270: Construction Materials and Methods (3 hrs.)
- CON 326: Construction Estimating (3 hrs.) Required in CE Major
- CON 388: Contract Administration (3 hrs.) CE Major Elective
- CON 392: Construction Scheduling (3 hrs.) CE Major Elective

Completion Requirements:

Students must achieve a minimum GPA of 2.00 in all CON courses.

Minor in Quality Engineering (IMET Department)

The Quality Engineering (QE) minor, which is open to all students, strengthens their ability to analyze and improve the quality of products and services, as well as the efficiency of the production systems. The QE minor aims to provide knowledge, critical thinking, and hands-on skills to the personnel who will be capable of improving and managing quality in all phases of production, such as in research and development, production planning, sourcing, manufacturing, distribution and customer service.

Requirements

A minimum of 21 hours must be taken from the following list of courses. Students desiring admission to the QE minor must have completed one semester of college calculus.

Required Course – 15 credit hours

- IME 302 Introduction to Quality Engineering (3 hrs.), or Q M 262 Quantitative Analysis I (3 hrs.), or IME 311 Introduction to Engineering Statistical Methods (3 hrs.)
- IME 341 Introduction to Manufacturing Processes (3 hrs.)
- IME 386 Industrial and Managerial Engineering (3 hrs.)
- IME 412 Design and Analysis of Experiments (3 hrs.)
- IMT 362 Metrology and Instrumentation (3 hrs.)

Electives – 6 credit hours

- Choose any two of the following three courses.
 - IME 395 Solid Modeling & Rapid Prototyping (3 hrs.)
 - IME 495 Design for Manufacturability (3 hrs.)
 - IME 524 Six Sigma Theory and Methodologies (3 hrs.)

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College of Liberal Arts and Sciences



College of Liberal Arts and Sciences

Mission and Values Statement

We affirm the centrality of an engaged education in the liberal arts and sciences to the mission of Bradley University and to an open, vibrant society. We are a community that seeks insight into the self, society, and the natural world with courage, humility, and open minds and hearts. We empower students to be capable, imaginative, responsible, and compassionate individuals who embrace the challenges of the twenty-first century.

We cultivate in ourselves and foster in others:

- advanced analytical, computational, and communication skills
- historically informed and comparative insights into diverse societies
- in-depth understanding of the natural world through scientific methods
- habits and methods of ethical thinking applied across disciplines and life experiences
- reflective approaches to the human condition in all its complexity
- intellectual curiosity and enthusiasm to enable lifelong learning
- knowledgeable and engaged citizenship across communities from the local to the global
- steadfast commitment to the democratic ideals of freedom, justice, civility, and equality

Curricula

The College of Liberal Arts and Sciences offers curricula leading to majors in over 24 areas of study. The major consists of not fewer than 24 semester hours of courses taken in one department, or in an approved interdepartmental program, including not fewer than 24 semester hours in courses above the first-year level. All of the departmental and interdepartmental curricula require a nucleus of core courses in humanities, social sciences, and natural and computational sciences. Each student in the College must declare a major in one of the following fields: biochemistry; biology; biomedical science; chemistry; computer science; computer information systems; criminology; economics; English; environmental science (with options in biology, chemistry, and physics); history; interdisciplinary major program; international studies; mathematics; medical laboratory science (interdepartmental, biology and chemistry); philosophy; physics; political science; psychology; religious studies; social work; sociology; statistics; world languages (French, Spanish).

High School Teaching Curricula

Students who wish to prepare for a teaching career in the secondary schools may fulfill the requirements for a teaching certificate while working on a degree program in the College of Liberal Arts and Sciences. Certification requirements are independent of graduation

requirements; students may graduate, as long as they have met the graduation requirements of the University, the College, and their department, without being certified. Requirements for certification are added to those for graduation, but, in most cases, the student may meet certification requirements through planned use of elective hours. Secondary education requirements are outlined in detail in the College of Education and Health Sciences section of this catalog.

Preprofessional Preparation for the Health Professions

The College has long prepared preprofessional students interested in the health professions. For example, the Department of Biology offers a specific curriculum leading to a degree in biomedical science with concentrations in pre-medicine, veterinary science and biomedical research and development; the Departments of Chemistry and Physics also offer preprofessional curriculum options. However, experience has shown that virtually any major is acceptable for professional education provided the student is careful to select, as electives, those courses necessary for admission to the professional school of his or her choice. Biology, chemistry, psychology, and physics are appropriate majors, but students majoring in the social sciences or the humanities have also been admitted to medical or dental school. Preprofessional students who prefer to design their own major or to obtain a general background in the College without concentrating their courses in a major, may do so under the liberal arts and sciences interdisciplinary major program.

Pre-Law Curriculum

Most American law schools desire their students to have a broad educational background and do not generally recommend any particular undergraduate major. Courses emphasized as effective preparation include those which contribute to organized and precise thought, to the proper use of English, and to an expanded perspective of one's social environment. Of basic importance is the ability to communicate competently in oral and written form; facility in this respect should be cultivated through both appropriate course work and independent effort.

While virtually any major is acceptable, breadth of knowledge is vital. The academic program should, therefore, provide significant coverage of the humanities, social sciences, and physical sciences. In addition, students will further benefit by undertaking, on their own initiative, a reading plan to supplement their formal study.

Pre-law students who prefer to design their own major or to obtain a general background in the College without concentrating their courses in a major, may do so under the liberal arts and sciences interdisciplinary major program.

Experiential Learning

The programs of the College provide opportunity for "hands on" learning through cooperative education/internships, practica in clinical settings, work/study opportunities, research participation, and undergraduate assistantships. These experiences link the world of the intellect and the world of work and practical affairs.

Cooperative Education/Internship Program

The College participates with employers in an optional Cooperative Education/Internship Program. Students either alternate periods of full-time study with full-time employment or have part-time employment while attending classes. The program provides academic- or career-related work experiences. To be eligible, the student must have sophomore standing and a 2.0 minimum overall grade point average at Bradley and in the College of Liberal Arts and Sciences.

Graduation Requirements:

The College confers two degrees, the Bachelor of Arts (which requires a world language) and the Bachelor of Science (see University requirements for the B.S. degree). The requirements for the degrees are outlined below; the degree received depends upon the course of study of the individual student.

Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation. A change in major could mean meeting new requirements in force at the time of the change as a condition for acceptance into that major. Students whose work has been interrupted for one or more semesters may be held to requirements in effect at the time of their re-enrollment.

All-University Requirements:

The student must satisfy the general university requirements as to residence, grade point average, and required courses. See "Academic Regulations" for these requirements.

1. Candidates for the Bachelor of Arts degree must present credit for three semesters of college-level world language or its equivalent. The world language requirement is outlined in detail under Department of World Languages and Cultures.

2. Candidates for the Bachelor of Science degree must successfully complete at least 15 hours of courses selected from mathematics, computer science, and the natural sciences. See requirements for the B.S. degree.
3. Transfer students from another institution or from within the University who have successfully completed a minimum of 5 semester hours of English composition shall not be required to take additional hours of composition. CLEP composition credit may substitute for ENG 101, but not for the junior-level composition course.

College Requirements:

In addition to the University requirements, the student must satisfy the following requirements which are concurrent, not cumulative:

1. A minimum of 30 semester hours credit (toward the 40 required for graduation) in courses numbered 300 or above offered by the College.*
2. All students majoring in the College of Liberal Arts and Sciences** will either

a. Take one additional course from any Bradley Core Curriculum Area of Inquiry (excluding Communication and Fine Arts) outside of their major cluster area. This option leads students to pursue a greater breadth of knowledge in Liberal Arts and Sciences disciplines outside their major field of study.

- a. Students majoring in humanities choose from Natural Sciences, Quantitative Reasoning, Social and Behavioral Sciences, or approved Global Perspectives courses.
- b. Students majoring in the social sciences choose from Humanities, Natural Sciences, Quantitative Reasoning, or approved Global Perspectives courses.
- c. Students majoring in the natural sciences choose from Humanities, Social and Behavioral Sciences, Quantitative Reasoning, or approved Global Perspectives courses.
- d. Students majoring in the computational sciences choose from Humanities, Natural Sciences, Social and Behavioral Sciences, or approved Global Perspectives courses.

Or

- b. Take a 3-credit hour first-year seminar, LAS 101

*For students who are double-majors across colleges, a minimum of 24 semester hours credit in courses numbered 300 or above offered by the College is required.

** Exclusive of those students completing a second major in another college, a high school education major, or two majors within LAS with over 50 total unduplicated major hours, as well as students who have earned transfer equivalency credit for a 3-credit hour first-year seminar.

Baccalaureate Articulation: Associate in Arts or Associate in Sciences Graduates

A transferring student who has completed an Associate in Arts or an Associate in Science degree in an Illinois public community college may expect to earn a baccalaureate degree from a College of Liberal Arts and Sciences program upon the completion of two additional years of course work (normally 60-64 semester hours) provided that the following qualifications are met:

1. that the transferring student does not change his or her intended major or area of specialization
2. that the College has a program in the transferring student's intended major or area of specialization
3. that the 60-64 semester hours of course work represented in the associate degree include only baccalaureate-oriented, college-level courses which appear in the ICCB master course file.

Major Requirements:

The student must complete a major of not fewer than 24 semester hours in one department or in an approved interdepartmental program, including not fewer than 20 hours in courses numbered 200 or above. Because some curricula require more than these minima and/or collateral work in other subject areas, students are urged to check requirements carefully with advisors for their major programs. The student must have a grade point average exceeding 2.0 in all courses numbered 200 or above in the department.

Transfer students who enter the College with 16 or more hours of the major already completed and are candidates for a degree must earn at Bradley at least nine hours in the major field with a grade point average exceeding 2.00. The department or program chair shall have the privilege of waiving some or all of these required nine hours but may not reduce the overall total for the major below 24 hours, 20 of which must be above the first-year level.

Secondary Teacher Preparation

Students who wish to prepare to teach in the secondary schools may seek to fulfill the requirements for a teaching certificate while they are working for the baccalaureate degree in the College of Liberal Arts and Sciences. Bradley University will recommend students for a

teaching certificate if they have obtained their degree at Bradley and have fulfilled the requirements listed in the College of Education and Health Sciences section of this Catalog. Recommendation for a certificate is, however, considered a privilege and is not automatically granted simply because a student has fulfilled the technical requirements. The student must also receive approval from the faculty of the field in which he or she plans to teach, the Dean of the College of Liberal Arts and Sciences, the chair of the Department of Teacher Education, and the Dean of the College of Education and Health Sciences. Certificate requirements are completely independent of graduation requirements. It should be noted that the State, for certification purposes, counts all course work, regardless of level, taken in the academic area. Our requirements for a 24-hour major are thus usually more demanding than the State's, and the student may be able to reach 32 hours by counting all course work in that area. Secondary education requirements are outlined in greater detail in the section of this catalog under College of Education and Health Sciences.

Global Scholars Program

Academic Mission

- A cross-disciplinary program of undergraduate study designed to offer students a background in global studies. The term "global" means a phenomenon or force that is worldwide in scope. We use the term to include both global systems and the diversity of cultures therein.
- A focus on diversified study within the College of Liberal Arts and Sciences aimed at expanding cross-cultural and global knowledge, buttressed by world languages, general education courses, and study abroad.
- A spotlight on global knowledge that is useful for developing information and skills needed to succeed in a competitive job market.

Program Information

The Global Scholars Program provides a unique opportunity for students majoring in the College of Liberal Arts and Sciences to gain substantive exposure to a broad spectrum of global and cultural forces. The required coursework spans several academic disciplines, introducing students to relevant content framed in a global setting. As a broad cross-disciplinary concentration, this program seeks to stimulate students' intellectual involvement in global affairs and helps those students wishing to pursue future international opportunities.

Program Benefits

Students electing to enroll in this program will earn the designation of "Global Scholar" in recognition of their achievement. They may do so within any academic major in the College of Liberal Arts and Sciences. This designation confers:

- Formal recognition by the dean of the college
- Citation at the College of Liberal Arts and Sciences Honors Day Ceremony
- Identification, through an exclusive logo, on the student's official university transcript and resume

Program Requirements

Beginning Fall 2017

World Languages (0-8 hours)

LAS Global Scholars students must complete at least two semesters of College-level world language study or its equivalent. This requirement may be met in several ways: 1) Completion of a two-semester sequence (101-102) or higher; 2) Transfer of similar credits from another institution; 3) By proficiency examination (AP or CLEP). Note: if a student places into a level above 102, only one course is necessary.

Link to course descriptions in World Languages and Cultures:

Coursework (10 hrs.)

LAS 125 (1 hour) Global Topics

Required coursework (9 hours): Students will take 9 credit hours, at least 3 credit hours from a course in the Bradley Core Curriculum (BCC) **World Cultures** category and 3 credit hours from a course in the BCC **Global Systems** category (for eligible courses, see link below).

<https://www.bradley.edu/sites/bcc/approved-courses/>

Please note: The third 3 credit hour course can also be from the World Cultures or Global Systems categories (see above link) or, optionally, from one of the following natural science courses:

- BIO 300 Population, Resources and Environment

- CHM 102 – Chemistry and Civilization
- GES 300 Oceanography: The Human Perspective

Study Abroad (3 hours)

Studying abroad gives students a deeper understanding of the institutions, history, and languages of other societies and cultures. Students in the Global Scholars Program must participate in a university-approved study abroad program for a minimum of 3 credit hours. Bradley provides a variety of study abroad options, including programs offered during Bradley's Interim and Summer Sessions as well as during the academic year. Study abroad is available to students throughout their academic career in a wide range of academic disciplines at over twenty academic institutions in eighteen countries.

Participants taking any of their required Global Scholars coursework abroad will receive credit for fulfilling both the course and the study abroad requirement. For specific information concerning the Study Abroad program offered by the Bradley University Study Abroad program, please visit the Study Abroad Program.

Capstone (3 hours)

Students have three options to complete this requirement:

- Completion of an independent study course on a global-themed topic (see list for courses)
- Completion of ENG 304 (Advanced Writing – Research in Individual Discipline) on a global-themed topic
- Completion of a capstone course on a global-themed topic (see list for courses)

Student must earn a "B" or better in the capstone course. Capstone application form must be completed ([here](#)).

GPA

Students must maintain at least a 3.0 overall GPA at Bradley in order to graduate as an LAS Global Scholar.

Previous to Fall 2017

World Language (0-8 hours)

Students must complete one of the following course sequences: FLF/WLF 101 and 102, FLG/WLG 101 and 102, FLH/WLH 101 and 102, or FLS/WLS 101 and 101 (elementary French, German, Hebrew and Spanish or equivalent.) Students with sufficient training in world languages may fulfill this requirement by appropriately passing the foreign language placement exam, administered by the Department of World Languages and Cultures.

Students who complete a university approved language program abroad will fulfill both the world languages and the study abroad requirements.

Global Forces (6 hours)

Two courses from the following; only one can be from student's major:

- BIO 300 Population, Resources and Environment
- CHM 300 Chemistry and Civilization
- GES 300 Oceanography: The Human Perspective
- HIS 339 Women in Global Perspective
- IS 250 Normative Theories of International Studies
- IS 415 Transnational Forces in World Affairs
- PHL/PLS 308 Modern Political Philosophy
- PLS 205 Introduction to Comparative Politics
- PLS 208 Fundamentals of International Relations
- PLS 317 International Law
- PLS 318 International Organization
- PLS 319 International Political Economy
- PSY 474 Cross-Cultural Psychology
- RLS 101 Comparative Religions
- RLS 332 Religions of the World
- SOC 300 Cross-Cultural Perspectives on Gender
- SOC 311 Comparative Family Systems
- SOC 326 Sociology of Globalization

Cultures from Around the Globe (6 hours)

Two courses from the following; only one can be from student's major

- ENG 123 European Writers
- ENG 381 Literatures of Asia
- ENG 385 Literatures of Europe
- FLF/WLF 315/325 Introduction to French Literature
- FLG/WLG 315/325 Introduction to German Literature
- FLS/WLS 315/325 Introduction to Literature (Hispanic)
- FLS/WLS 342 Survey of Hispanic-America Literature I
- FLS/WLS 343 Survey of Hispanic-American Literature II
- HIS 205 Non-Western Civilization: Latin America
- HIS 206 Non-Western Civilization: The Middle East Since Muhammad
- HIS 336 Early Non-Western History and Geography
- HIS 337 Modern Non-Western History and Geography
- IS 182 Fundamentals of Contemporary East Asian Civilization
- IS 275 Political Economy of the Developing World
- IS 285 East Asia in the Modern World
- IS 322 Latin America in the International System
- IS 340 Africa in the International System
- IS 363 Middle East Nations in International Affairs
- RLS 331 Religions of the Eastern World
- RLS 336 Buddhism and Asian Civilizations
- SOC 305 Peoples and Cultures of the Non-Western World

Study Abroad (3 hours)

Studying abroad gives students a deeper understanding of the institutions, history, and languages of other societies and cultures. Students in the Global Scholars Program must participate in a university-approved study abroad program for a minimum of 3 credit hours. Bradley provides a variety of study abroad options, including programs offered during Bradley's Interim and Summer Sessions as well as during the academic year. Study abroad is available to students throughout their academic career in a wide range of academic disciplines at over twenty academic institutions in eighteen countries.

Participants taking any of their required Global Scholars coursework abroad will receive credit for fulfilling both the course and the study abroad requirement. For specific information concerning the Study Abroad program offered by the Bradley University Study Abroad program, please visit the Study Abroad Program.

Combined LAS/MBA Program

A special program has been designed to enable students majoring in any undergraduate program in the College of Liberal Arts and Sciences to also earn an M.B.A. in a minimum of five years, with carefully coordinated advising. Interested students should see the director of graduate programs in the Foster College of Business their first year.

Washington Semester

Bradley University has a cooperative arrangement with American University for well-qualified students to study in one of these programs: the Washington Semester in American Politics, the Foreign Policy Semester, the Economic Policy Semester, the Justice Semester, and the Journalism Semester. A package of seminars with public and private officials, internships, research, and coursework provides students with a first-hand view of their area of interest. A full semester of credit is earned through the program.

Mission and Values Statement

We affirm the centrality of an engaged education in the liberal arts and sciences to the mission of Bradley University and to an open, vibrant society. We are a community that seeks insight into the self, society, and the natural world with courage, humility, and open minds and hearts. We empower students to be capable, imaginative, responsible, and compassionate individuals who embrace the challenges of the twenty-first century.

We cultivate in ourselves and foster in others:

- advanced analytical, computational, and communication skills
- historically informed and comparative insights into diverse societies
- in-depth understanding of the natural world through scientific methods
- habits and methods of ethical thinking applied across disciplines and life experiences
- reflective approaches to the human condition in all its complexity
- intellectual curiosity and enthusiasm to enable lifelong learning

- knowledgeable and engaged citizenship across communities from the local to the global
- steadfast commitment to the democratic ideals of freedom, justice, civility, and equality

Curricula

The College of Liberal Arts and Sciences offers curricula leading to majors in over 24 areas of study. The major consists of not fewer than 24 semester hours of courses taken in one department, or in an approved interdepartmental program, including not fewer than 24 semester hours in courses above the first-year level. All of the departmental and interdepartmental curricula require a nucleus of core courses in humanities, social sciences, and natural and computational sciences. Each student in the College must declare a major in one of the following fields: biochemistry; biology; biomedical science; chemistry; computer science; computer information systems; criminology; economics; English; environmental science (with options in biology, chemistry, and physics); history; interdisciplinary major program; international studies; mathematics; medical laboratory science (interdepartmental, biology and chemistry); philosophy; physics; political science; psychology; religious studies; social work; sociology; statistics; world languages (French, Spanish).

High School Teaching Curricula

Students who wish to prepare for a teaching career in the secondary schools may fulfill the requirements for a teaching certificate while working on a degree program in the College of Liberal Arts and Sciences. Certification requirements are independent of graduation requirements; students may graduate, as long as they have met the graduation requirements of the University, the College, and their department, without being certified. Requirements for certification are added to those for graduation, but, in most cases, the student may meet certification requirements through planned use of elective hours. Secondary education requirements are outlined in detail in the College of Education and Health Sciences section of this catalog.

Preprofessional Preparation for the Health Professions

The College has long prepared preprofessional students interested in the health professions. For example, the Department of Biology offers a specific curriculum leading to a degree in biomedical science with concentrations in pre-medicine, veterinary science and biomedical research and development; the Departments of Chemistry and Physics also offer preprofessional curriculum options. However, experience has shown that virtually any major is acceptable for professional education provided the student is careful to select, as electives, those courses necessary for admission to the professional school of his or her choice. Biology, chemistry, psychology, and physics are appropriate majors, but students majoring in the social sciences or the humanities have also been admitted to medical or dental school. Preprofessional students who prefer to design their own major or to obtain a general background in the College without concentrating their courses in a major, may do so under the liberal arts and sciences interdisciplinary major program.

Pre-Law Curriculum

Most American law schools desire their students to have a broad educational background and do not generally recommend any particular undergraduate major. Courses emphasized as effective preparation include those which contribute to organized and precise thought, to the proper use of English, and to an expanded perspective of one's social environment. Of basic importance is the ability to communicate competently in oral and written form; facility in this respect should be cultivated through both appropriate course work and independent effort.

While virtually any major is acceptable, breadth of knowledge is vital. The academic program should, therefore, provide significant coverage of the humanities, social sciences, and physical sciences. In addition, students will further benefit by undertaking, on their own initiative, a reading plan to supplement their formal study.

Pre-law students who prefer to design their own major or to obtain a general background in the College without concentrating their courses in a major, may do so under the liberal arts and sciences interdisciplinary major program.

Experiential Learning

The programs of the College provide opportunity for "hands on" learning through cooperative education/internships, practica in clinical settings, work/study opportunities, research participation, and undergraduate assistantships. These experiences link the world of the intellect and the world of work and practical affairs.

Cooperative Education/Internship Program

The College participates with employers in an optional Cooperative Education/Internship Program. Students either alternate periods of full-time study with full-time employment or have part-time employment while attending classes. The program provides academic- or career-related work experiences. To be eligible, the student must have sophomore standing and a 2.0 minimum overall grade point average at Bradley and in the College of Liberal Arts and Sciences.

Graduation Requirements:

The College confers two degrees, the Bachelor of Arts (which requires a world language) and the Bachelor of Science (see University requirements for the B.S. degree). The requirements for the degrees are outlined below; the degree received depends upon the course of study of the individual student.

Students who maintain continuous enrollment and who complete work toward the baccalaureate degree within five years from the date of entry may graduate under either the catalog in effect at the time of entrance or under the catalog in effect at the time of graduation. A change in major could mean meeting new requirements in force at the time of the change as a condition for acceptance into that major. Students whose work has been interrupted for one or more semesters may be held to requirements in effect at the time of their re-enrollment.

All-University Requirements:

The student must satisfy the general university requirements as to residence, grade point average, and required courses. See "Academic Regulations" for these requirements.

1. Candidates for the Bachelor of Arts degree must present credit for three semesters of college-level world language or its equivalent. The world language requirement is outlined in detail under Department of World Languages and Cultures.
2. Candidates for the Bachelor of Science degree must successfully complete at least 15 hours of courses selected from mathematics, computer science, and the natural sciences. See requirements for the B.S. degree.
3. Transfer students from another institution or from within the University who have successfully completed a minimum of 5 semester hours of English composition shall not be required to take additional hours of composition. CLEP composition credit may substitute for ENG 101, but not for the junior-level composition course.

College Requirements:

In addition to the University requirements, the student must satisfy the following requirements which are concurrent, not cumulative:

1. A minimum of 30 semester hours credit (toward the 40 required for graduation) in courses numbered 300 or above offered by the College.*
2. All students majoring in the College of Liberal Arts and Sciences** will either

a. Take one additional course from any Bradley Core Curriculum Area of Inquiry (excluding Communication and Fine Arts) outside of their major cluster area. This option leads students to pursue a greater breadth of knowledge in Liberal Arts and Sciences disciplines outside their major field of study.

- a. Students majoring in humanities choose from Natural Sciences, Quantitative Reasoning, Social and Behavioral Sciences, or approved Global Perspectives courses.
- b. Students majoring in the social sciences choose from Humanities, Natural Sciences, Quantitative Reasoning, or approved Global Perspectives courses.
- c. Students majoring in the natural sciences choose from Humanities, Social and Behavioral Sciences, Quantitative Reasoning, or approved Global Perspectives courses.
- d. Students majoring in the computational sciences choose from Humanities, Natural Sciences, Social and Behavioral Sciences, or approved Global Perspectives courses.

Or

- b. Take a 3-credit hour first-year seminar, LAS 101

*For students who are double-majors across colleges, a minimum of 24 semester hours credit in courses numbered 300 or above offered by the College is required.

** Exclusive of those students completing a second major in another college, a high school education major, or two majors within LAS with over 50 total unduplicated major hours, as well as students who have earned transfer equivalency credit for a 3-credit hour first-year seminar.

Baccalaureate Articulation: Associate in Arts or Associate in Sciences Graduates

A transferring student who has completed an Associate in Arts or an Associate in Science degree in an Illinois public community college may expect to earn a baccalaureate degree from a College of Liberal Arts and Sciences program upon the completion of two additional years of course work (normally 60-64 semester hours) provided that the following qualifications are met:

1. that the transferring student does not change his or her intended major or area of specialization

2. that the College has a program in the transferring student's intended major or area of specialization
3. that the 60-64 semester hours of course work represented in the associate degree include only baccalaureate-oriented, college-level courses which appear in the ICCB master course file.

Major Requirements:

The student must complete a major of not fewer than 24 semester hours in one department or in an approved interdepartmental program, including not fewer than 20 hours in courses numbered 200 or above. Because some curricula require more than these minima and/or collateral work in other subject areas, students are urged to check requirements carefully with advisors for their major programs. The student must have a grade point average exceeding 2.0 in all courses numbered 200 or above in the department.

Transfer students who enter the College with 16 or more hours of the major already completed and are candidates for a degree must earn at Bradley at least nine hours in the major field with a grade point average exceeding 2.00. The department or program chair shall have the privilege of waiving some or all of these required nine hours but may not reduce the overall total for the major below 24 hours, 20 of which must be above the first-year level.

Secondary Teacher Preparation

Students who wish to prepare to teach in the secondary schools may seek to fulfill the requirements for a teaching certificate while they are working for the baccalaureate degree in the College of Liberal Arts and Sciences. Bradley University will recommend students for a teaching certificate if they have obtained their degree at Bradley and have fulfilled the requirements listed in the College of Education and Health Sciences section of this Catalog. Recommendation for a certificate is, however, considered a privilege and is not automatically granted simply because a student has fulfilled the technical requirements. The student must also receive approval from the faculty of the field in which he or she plans to teach, the Dean of the College of Liberal Arts and Sciences, the chair of the Department of Teacher Education, and the Dean of the College of Education and Health Sciences. Certificate requirements are completely independent of graduation requirements. It should be noted that the State, for certification purposes, counts all course work, regardless of level, taken in the academic area. Our requirements for a 24-hour major are thus usually more demanding than the State's, and the student may be able to reach 32 hours by counting all course work in that area. Secondary education requirements are outlined in greater detail in the section of this catalog under College of Education and Health Sciences.

Global Scholars Program

Academic Mission

- A cross-disciplinary program of undergraduate study designed to offer students a background in global studies. The term "global" means a phenomenon or force that is worldwide in scope. We use the term to include both global systems and the diversity of cultures therein.
- A focus on diversified study within the College of Liberal Arts and Sciences aimed at expanding cross-cultural and global knowledge, buttressed by world languages, general education courses, and study abroad.
- A spotlight on global knowledge that is useful for developing information and skills needed to succeed in a competitive job market.

Program Information

The Global Scholars Program provides a unique opportunity for students majoring in the College of Liberal Arts and Sciences to gain substantive exposure to a broad spectrum of global and cultural forces. The required coursework spans several academic disciplines, introducing students to relevant content framed in a global setting. As a broad cross-disciplinary concentration, this program seeks to stimulate students' intellectual involvement in global affairs and helps those students wishing to pursue future international opportunities.

Program Benefits

Students electing to enroll in this program will earn the designation of "Global Scholar" in recognition of their achievement. They may do so within any academic major in the College of Liberal Arts and Sciences. This designation confers:

- Formal recognition by the dean of the college
- Citation at the College of Liberal Arts and Sciences Honors Day Ceremony
- Identification, through an exclusive logo, on the student's official university transcript and resume

Program Requirements

Beginning Fall 2017

World Languages (0-8 hours)

LAS Global Scholars students must complete at least two semesters of College-level world language study or its equivalent. This requirement may be met in several ways: 1) Completion of a two-semester sequence (101-102) or higher; 2) Transfer of similar credits from another institution; 3) By proficiency examination (AP or CLEP). Note: if a student places into a level above 102, only one course is necessary.

Link to course descriptions in World Languages and Cultures:

Coursework (10 hrs.)

LAS 125 (1 hour) Global Topics

Required coursework (9 hours): Students will take 9 credit hours, at least 3 credit hours from a course in the Bradley Core Curriculum (BCC) **World Cultures** category and 3 credit hours from a course in the BCC **Global Systems** category (for eligible courses, see link below).

<https://www.bradley.edu/sites/bcc/approved-courses/>

Please note: The third 3 credit hour course can also be from the World Cultures or Global Systems categories (see above link) or, optionally, from one of the following natural science courses:

- BIO 300 Population, Resources and Environment
- CHM 102 – Chemistry and Civilization
- GES 300 Oceanography: The Human Perspective

Study Abroad (3 hours)

Studying abroad gives students a deeper understanding of the institutions, history, and languages of other societies and cultures. Students in the Global Scholars Program must participate in a university-approved study abroad program for a minimum of 3 credit hours. Bradley provides a variety of study abroad options, including programs offered during Bradley's Interim and Summer Sessions as well as during the academic year. Study abroad is available to students throughout their academic career in a wide range of academic disciplines at over twenty academic institutions in eighteen countries.

Participants taking any of their required Global Scholars coursework abroad will receive credit for fulfilling both the course and the study abroad requirement. For specific information concerning the Study Abroad program offered by the Bradley University Study Abroad program, please visit the Study Abroad Program.

Capstone (3 hours)

Students have three options to complete this requirement:

- Completion of an independent study course on a global-themed topic (see list for courses)
- Completion of ENG 304 (Advanced Writing – Research in Individual Discipline) on a global-themed topic
- Completion of a capstone course on a global-themed topic (see list for courses)

Student must earn a "B" or better in the capstone course. Capstone application form must be completed ([here](#)).

GPA

Students must maintain at least a 3.0 overall GPA at Bradley in order to graduate as an LAS Global Scholar.

Previous to Fall 2017

World Language (0-8 hours)

Students must complete one of the following course sequences: FLF/WLF 101 and 102, FLG/WLG 101 and 102, FLH/WLH 101 and 102, or FLS/WLS 101 and 101 (elementary French, German, Hebrew and Spanish or equivalent.) Students with sufficient training in world languages may fulfill this requirement by appropriately passing the foreign language placement exam, administered by the Department of World Languages and Cultures.

Students who complete a university approved language program abroad will fulfill both the world languages and the study abroad requirements.

Global Forces (6 hours)

Two courses from the following; only one can be from student's major:

- BIO 300 Population, Resources and Environment

- CHM 300 Chemistry and Civilization
- GES 300 Oceanography: The Human Perspective
- HIS 339 Women in Global Perspective
- IS 250 Normative Theories of International Studies
- IS 415 Transnational Forces in World Affairs
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- PLS 205 Introduction to Comparative Politics
- PLS 208 Fundamentals of International Relations
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- PLS 318 International Organization
- PLS 319 International Political Economy
- PSY 474 Cross-Cultural Psychology
- RLS 101 Comparative Religions
- RLS 332 Religions of the World
- SOC 300 Cross-Cultural Perspectives on Gender
- SOC 311 Comparative Family Systems
- SOC 326 Sociology of Globalization

Cultures from Around the Globe (6 hours)

Two courses from the following; only one can be from student's major

- ENG 123 European Writers
- ENG 381 Literatures of Asia
- ENG 385 Literatures of Europe
- FLF/WLF 315/325 Introduction to French Literature
- FLG/WLG 315/325 Introduction to German Literature
- FLS/WLS 315/325 Introduction to Literature (Hispanic)
- FLS/WLS 342 Survey of Hispanic-America Literature I
- FLS/WLS 343 Survey of Hispanic-American Literature II
- HIS 205 Non-Western Civilization: Latin America
- HIS 206 Non-Western Civilization: The Middle East Since Muhammad
- HIS 336 Early Non-Western History and Geography
- HIS 337 Modern Non-Western History and Geography
- IS 182 Fundamentals of Contemporary East Asian Civilization
- IS 275 Political Economy of the Developing World
- IS 285 East Asia in the Modern World
- IS 322 Latin America in the International System
- IS 340 Africa in the International System
- IS 363 Middle East Nations in International Affairs
- RLS 331 Religions of the Eastern World
- RLS 336 Buddhism and Asian Civilizations
- SOC 305 Peoples and Cultures of the Non-Western World

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Combined LAS/MBA Program

A special program has been designed to enable students majoring in any undergraduate program in the College of Liberal Arts and Sciences to also earn an M.B.A. in a minimum of five years, with carefully coordinated advising. Interested students should see the director of graduate programs in the Foster College of Business their first year.

Washington Semester

Bradley University has a cooperative arrangement with American University for well-qualified students to study in one of these programs: the Washington Semester in American Politics, the Foreign Policy Semester, the Economic Policy Semester, the Justice Semester, and the Journalism Semester. A package of seminars with public and private officials, internships, research, and coursework provides students with a first-hand view of their area of interest. A full semester of credit is earned through the program.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

LAS Courses



LAS Courses

LAS 101 – Arts and Ideas Seminar (1-3 hours)

Seminar on selected intellectual and artistic topics which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of six hours credit.

LAS 102 – Topics in Interdisciplinary Studies (3 hours)

Core Curr. MI

Selected intellectual topics which may vary each time course is offered. Students are introduced to a topic with sufficient scope to warrant its examination through an integrative approach. Topic stated in the current Schedule of Classes.

LAS 125 – Global Topics in Liberal Arts and Sciences (1 hour)

Selected topics with a special emphasis on globally-focused subjects that introduce students to diverse perspectives and to forces of worldwide scope.

LAS 300 – Belief Systems: Truth versus Proof (3 hours)

Core Curr. MI

Mathematicians and philosophers have been intrigued by questions about the nature of mathematical truth for several centuries. The techniques used to address these questions are developed, subjected to philosophical analysis, then applied to the belief systems that govern other aspects of the human condition. Prerequisite: A grade of C or better in MTH115, MTH119, MTH121, or MTH120.

LAS 301 – Cooperative Education/Internship in LAS (0-9 hours)

Core Curr. EL

Cooperative education or internship experience. Non-departmental credit in LAS, not intended to satisfy departmental or major program requirements. May be repeated for a total of 9 hours credit with a combined total of 9 hours available for all Cooperative Education & Internship work assignments. The number of hours awarded for the work assignment will be dependent upon the number of total hours worked during the semester. Pass/Fail. Prerequisite: Sophomore standing in the College of Liberal Arts and Sciences, 2.0 Bradley overall grade point average and LAS cumulative grade point average, consent of LAS Co-op and internship coordinator and Co-op and internship faculty advisor.

LAS 305 – Study Abroad Seminar (1 hour)

Study of the cultural and historical contexts of the study abroad site. Prerequisite: registration for study abroad interim session.

LAS 325 – International Programs Special Topics in LAS (0-9 hours)

Examines a designated topic with a special emphasis on the history, culture, and social practices of a particular Study Abroad venue. May be repeated under a different topic for maximum of 9 hrs credit.

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SCI Courses



SCI Courses

SCI 100 – Science through Inquiry I: (Biology, Physics) (4 hours)

Gen. Ed. FS

Core Curr. NS,WI

Interdisciplinary, inquiry-based course exploring the science of motion. Integrates content in biology and physics. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. Prerequisite: 12 hours college credit.

SCI 101 – Science through Inquiry I: Special Topics (4 hours)

Gen. Ed. FS

Core Curr. NS,WI

Interdisciplinary, inquiry-based course exploring the science of various themes. Integrates content in a life science and a physical science. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. The course may be repeated once under a different topic for a maximum of eight credit hours. Prerequisite: 12 hours college credit.

SCI 102 – Science through Inquiry I: Molecules (Biology and Chemistry) (4 hours)

Gen. Ed. FS

Core Curr. NS,WI

Interdisciplinary, inquiry-based course exploring the science of molecules. Integrates content in biology and chemistry. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. Prerequisite: 12 hours college credit.

SCI 103 – Science through Inquiry I: Energy (Biology, Physics) (4 hours)

Gen. Ed. FS

Core Curr. NS WI

Interdisciplinary, inquiry-based course exploring the science of energy. Integrates content in biology and physics. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. Prerequisite: 12 hours college credit.

SCI 104 – Science through Inquiry I: Water (Biology, Chemistry) (4 hours)

Gen. Ed. FS

Core Curr. NS,WI

Interdisciplinary, inquiry-based course exploring the science of water. Integrates content in biology and chemistry. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. Prerequisite: 12 hours college credit.

SCI 185 – Directed Research in STEM Fields for Novice Researchers (0-3 hours)

Provides participants with a knowledge of important issues in STEM research, and an opportunity to develop/refine skills necessary to pursue scholarship in a STEM discipline: accessing and reading scientific literature, question formulation and scientific research, and the presentation of research results. CoRequisite: Participation in summer research program

SCI 280 – Directed Readings in Science for Non-majors (0.5-3 hours)

Provide students with an opportunity to develop/refine skills necessary to read scientific literature: accessing and reading scientific literature, developing knowledge of research questions in a single focused field, developing qualitative skills necessary to evaluate research and classify materials based on novelty, quality, and utility. Prerequisite: Three hours of college-level science

SCI 300 – Science through Inquiry II: Evolution (Biology, Earth Science) (4 hours)**Gen. Ed. TS****Core Curr. NS,WI**

Interdisciplinary, inquiry-based course exploring the science of evolution. Integrates content in biology and earth science. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. Prerequisite: C or better in a course from the SCI 100 series, or consent of instructor.

SCI 301 – Science through Inquiry II: Environmental Science (Biology, Chemistry) (4 hours)**Gen. Ed. TS**

Interdisciplinary, inquiry-based course exploring the science of environmental science. Integrates content in biology and chemistry. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. Prerequisite: C or better in a course from the SCI 100 series, or consent of instructor.

SCI 302 – Science through Inquiry II: Ecosystems (Biology, Earth Science) (4 hours)**Gen. Ed. FS****Core Curr. NS,WI**

Interdisciplinary, inquiry-based course exploring the science of ecosystems. Integrates content in biology and earth science. The course provides investigative science experiences, appropriate for education and other majors requiring a laboratory science course. Prerequisite: C or better in a course from the SCI 100 series, or consent of instructor.

SCI 501 – Topics in Investigative Science for Educators (3 hours)

Laboratory-based biological and physical science. Content developed along interdisciplinary themes. Course taught in an inquiry/investigative format and includes application to Pre K-12 classroom settings. Course may be repeated under different topic. Credit will not be given for SCI 501 students who have obtained credit for SCI 101 under the same theme. Registration is not open to undergraduate or graduate students enrolled in a natural science degree program. Prerequisite: Concurrent enrollment in ETE 550.

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African-American Studies



African-American Studies

The African American Studies program at Bradley University engages students in the interdisciplinary study of African-American cultures and the transnational history of the black experience. This minor emphasizes African-American political, social, cultural, literary, and intellectual expression and the variety and scope of African American Studies as a discipline. The minor offers two possible tracks to completion, one accentuating community engagement and the other stressing research and writing.

Minor in African-American Studies (15 Credit Hours)

Course requirements:

- 3 hours of introductory course work (AAS 200: Introduction to African American Studies)
- 9 hours of electives drawn from the list below (minimum of 3 hours at the 300 level or above)
- Completion of one of two 3 hour capstone experiences:
 - **Research and writing track:** complete AAS 400: Directed Research in African American Studies under the supervision of program faculty
 - **Community Engagement track:** complete an approved internship, service-learning project, or other approved program of community engagement administered under the course title AAS 401 (or another approved community engagement course pending approval of the AAS committee). Capstone projects for the community engagement track must be approved in advanced by the AAS committee and will culminate in a presentation to the committee and/or other appropriate audience.

Elective Courses:

AAS 100: Introductory Topics in African American Studies
ENG 129: Introduction to African-American Literature
HIS 201: Violence, Crime, and Punishment
MUS 202: History of Jazz
HIS 209: History of Africa
ETE 280: Exploring Diversity
AAS 300: Advanced Topics in African American Studies
SOC 312: Social Inequality/Sociological Perspectives on Race, Class, and Gender
SOC 313: Race, Ethnicity, and Power
HIS 316: African-American History Since 1877
HIS 317: American Masculinities
ENG 329: Studies in African-American Literature
COM 386: Media, Race, and Gender

A 2.5 grade point average in African American Studies courses is required for satisfactory completion of the minor.

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African-American Studies Courses



African-American Studies Courses

AAS 200 – Introduction to African-American Studies (3 hours)

Gen. Ed. CD

Core Curr. GP WC,MI

Provides students with an introduction to the study of African American cultures and the relationship of those cultures to the broader African diaspora. Often organized around a particular theme, AAS 200 is an explicitly interdisciplinary course designed to familiarize students with the scope, concerns, and methods of African American Studies rather than a chronological survey of African American history.

AAS 400 – Directed Research in African-American Studies (3 hours)

Directed readings or research for a paper which analyzes, synthesizes, and interprets an area of African-American studies.

Prerequisite: AAS 200; 9 hrs. of African-American studies elective courses; or consent of instructor.

AAS 401 – Community Engagement in African American Studies (3 hours)

Provides the community engagement capstone experience for completion of the AAS minor. Involves an internship, service learning, or other semester long community engagement project approved by the African American Studies Committee. Prerequisite:

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Sociology and Anthropology Courses



Sociology and Anthropology Courses

SOC 100 – The Sociological Perspective (3 hours)

Gen. Ed. SF

Core Curr. SB

Sociological insight into study of humans, society, and culture.

SOC 105 – Foundations of Social Justice (3 hours)

This course examines how principles of social justice are conceptualized in diverse communities and translated into strategies for social change. The course draws on multidisciplinary perspectives to examine how systems of inequality and oppression perpetuate past and present injustices, highlighting case studies of attempts to create a more just world. The course emphasizes experiential learning by connecting students with the resources, organizations, and communities that align with their own social justice commitments. Students will work on projects to amplify existing campus or community justice efforts, propose their own ideas, and discover how to integrate social justice into their unique academic and career goals.

SOC 111 – Contemporary Social Problems (3 hours)

Core Curr. SB

Sociological analysis of current social problems in the U.S.: poverty, racism, sexism, agism, medical care, the environment, population, urban disorganization, crime, juvenile delinquency, alcoholism, drug addiction, family disorganization, and mental illness. Use of different perspectives promotes a broad understanding of the study of social problems.

SOC 240 – Research Methods (3 hours)

Core Curr. EL

Social research methods: research design and models of observation, including single subject and program evaluation, quantitative and qualitative methods, sampling techniques, questionnaire construction, types of surveys, measurement problems, and data analysis.

Prerequisite: SOC 100 or SOC 111 or consent of instructor.

SOC 300 – Gender in Cross-Cultural Perspective (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Examines the construction of gender in societies around the world, concentrating on the way gender shapes and is shaped by power relations in these societies. Prerequisite: SOC 100 or SOC 111 or ANT 101; or consent of instructor.

SOC 308 – Immigration: People, Place and Power (3 hours)

Core Curr. MI,SB

This course examines the origins and outcomes of international immigration. Using perspectives and evidence from diverse fields in the social sciences and the humanities, we consider issues including the complex social and environmental factors that drive immigration;

state, popular and media responses to immigration; and the effects of immigration, both for immigrants and for the nations they leave and enter.

SOC 310 – Sociology of Families (3 hours)

Examination of the notion of the U.S. American family from a sociological perspective. Focus on perceptions of the family throughout U.S. American history, in mass media, and in relation to public policy; the historical transformation of families; the diverse and changing aspects of families; and the impact of social change and problems on the families of U.S.A. Emphasis on how society and the economic system affect families.

SOC 311 – Families in Cross-Cultural Perspective (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Comparative study of family systems in societies around the world, with a focus on variation across cultures and times. Prerequisite: SOC 100 or SOC 111 or ANT 101, or consent of instructor.

SOC 312 – Social Inequality (3 hours)

Gen. Ed. SF

Core Curr. SB

Inequality in income, wealth, prestige, and power. Theories explaining roots of and changes in inequality. Emphasis on the U.S.; variations in the extent and forms of inequality across different nations.

SOC 313 – Race, Ethnicity, and Power (3 hours)

Core Curr. SB,WI

Analysis of dominant-minority group relations. The emergence and dynamic of racism. Exploration of the experience of various ethnic and “racial” groups. Prerequisite: SOC 100 or SOC 111, or consent of instructor.

SOC 313 – Race, Ethnicity, and Power (3 hours)

Core Curr. SB,WI

Analysis of dominant-minority group relations. The emergence and dynamic of racism. Exploration of the experience of various ethnic and “racial” groups. Prerequisite: SOC 100 or SOC 111, or consent of instructor.

SOC 313 – Race, Ethnicity, and Power (3 hours)

Core Curr. SB,WI

Analysis of dominant-minority group relations. The emergence and dynamic of racism. Exploration of the experience of various ethnic and “racial” groups. Prerequisite: SOC 100 or SOC 111, or consent of instructor.

SOC 315 – Gender and Society (3 hours)

Gen. Ed. SF

Core Curr. SB

An examination of gender as a system of stratification, as a social construction, and as a system of meaning which changes trans-historically and differs cross-culturally. Focus on structural and interactional aspects of gender inequality, as well as the relationship between gender and other social hierarchies, including class, race, ethnicity, religion, and sexuality. Prerequisite:

SOC 320 – Social Theory (3 hours)

Core Curr. WI

Review of sociology’s major perspectives, from classic statements on social life to contemporary theories. Emphasis on the contributions of theorists of color, women, and non-Western scholars to the development of social thought. Application of sociological theories to contemporary problems and issues. Prerequisite: SOC Major, SOC Minor, or consent of Instructor.

SOC 322 – Self and Social Interaction (3 hours)

Focus on relationship between individuals and the broader society, the formation of personality, and group influences on human perception and behavior. Prerequisite: SOC 100 or instructor consent.

SOC 325 – Environmental Sociology (3 hours)

Core Curr. SB

This course introduces students to the social causes and consequences of environmental problems and the conflicting interests and power dynamics that make sustainable solutions difficult to find and implement. The course begins by examining a range of philosophical perspectives on the relationship between Humans and Nature, followed by a brief survey of the range and extent of current environmental crises. We will then focus on four macro-sociological causes of environmental harm worldwide: international development, modern agriculture, armed violence, and energy production. Special attention will be paid to the linkages between environmental harm and political and economic inequality.

SOC 326 – Sociology of Globalization (3 hours)

Gen. Ed. SF

Core Curr. GP GS,SB

Analysis of the process of global integration and its impact on communities, social institutions, and culture. Emphasis on theories of

social change and social conflict over the nature and pace of globalization and its impact on non-Western societies. Focus on social class, ethnicity, gender, media, religion, the environment, and social problems confronting non-Western Societies. Prerequisite: SOC 100 or consent of instructor.

SOC 330 – Perspectives On Deviance (3 hours)

Analysis of the concept and nature of deviance and its various forms, with emphasis on various theoretical perspectives on nature and causation of deviance. Prerequisite: SOC 100 or SOC 111

SOC 331 – Correctional Policies and Society (3 hours)

Analysis of theoretical and practical aspects of corrections, concepts of punishment and treatment, and their variations in practice. Includes analysis and evaluation of specific alternatives: prisons, probation, treatment centers, and sentencing. Prerequisite: SOC 100 or SOC 111.

SOC 332 – Juvenile Delinquency (3 hours)

Core Curr. MI

Analysis of the nature and origin of juvenile delinquency within an historical and theoretical context with emphasis on causation of delinquency and evaluation of different responses to it. Prerequisite: SOC 100 or SOC 111.

SOC 333 – Sociology of Violence (3 hours)

Sociological analysis of the concept and nature of violence in a macro and micro setting, its various manifestations, and evaluation of responses to it. Prerequisite: SOC 100 or SOC 111.

SOC 334 – Crime and Society (3 hours)

Analysis of the concept and nature of crime, the relationship between social structures, social institutions, and crime with a focus on social forces and social controls involved in the creation of crime. Prerequisite: SOC 100 or SOC 111.

SOC 341 – Medical Sociology (3 hours)

Application of a critical perspective to the institution of medicine. Focus on epidemiology, the social construction of illness, and current healthcare trends. Prerequisite: SOC 100 or SOC 111, or ANT 101, or consent of instructor.

SOC 343 – Sociology of Mental Health (3 hours)

Emphasis on social, cultural, and political factors involved in the definition and control of mental illness. Topics include labeling theory, the impact of status characteristics and social relationships on levels of stress, and legal and ethical issues associated with current modes of treatment. Prerequisite:

SOC 344 – Social Movements (3 hours)

In some contexts, social movements have been considered legitimate political actors; in others, treacherous and subversive. Always they constitute a potential threat to those in power. When do movements emerge and how are they organized? How and when can they successfully bring about social change? We will examine key aspects of social movement theory and practice against the backdrop of a number of important American and international movements that have emerged in the last half century, such as the American civil rights, women's, environmental, and anti-war movements of the 1960s and 70s, the current "Fight for 15" and Black Lives Matter movements, and the global justice, autonomist, and Occupy movements internationally. Prerequisite:

SOC 345 – People, Power, and Politics (3 hours)

This course will introduce students to major themes, concepts, and debates in political sociology. Focus is on the relations of power between the State and other collective actors in society (e.g. interest groups, political parties, social classes, and social movements), with an emphasis on key axes of contention in US politics today, such as: the political power of corporations; the separation of church and state; political parties, polarization, and congressional gridlock; the trade-off between liberty and equality in free market, socialist, and social democratic systems; taxation and the role of the State in addressing social inequality; and the tension between national security and civil/human rights. Prerequisite:

SOC 346 – Sociology of Education (3 hours)

Focus on the institution of education and its relationship to the broader society within which it is situated. Emphasis on the ways in which schools reproduce and challenge prevailing economic, social and political relationships; the link between schools and societal stratification; and sociological perspectives on contemporary educational reform. Prerequisite: SOC 100 or consent of instructor.

SOC 390 – Topics in Sociology (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for maximum of 9 hrs. credit. Prerequisite: SOC 100, SOC 101, or consent of instructor.

SOC 391 – Internship in Applied Sociology (3 hours)

Supervised work in applied settings; study of practical problems from the perspective of the discipline. Prerequisite: Prior arrangement, and consent of Instructor.

SOC 490 – Directed Readings (1-3 hours)

Special study on topics with faculty supervision. Prerequisite: Consent of instructor.

SOC 491 – Directed Research (1-3 hours)

Empirical research with faculty supervision. Prerequisite: 3.5 GPA in Sociology and consent of instructor.

SOC 492 – Advanced Research Colloquium (1-3 hours)

Students will synthesize and integrate perspectives from their sociology courses and apply these perspectives to the empirical investigation of real-world social problems. Prerequisite: 3.5 GPA in major, completion of SOC 240, completion of SOC 490 or 491, approved proposal, and consent of instructor.

ANT 101 – The Anthropological Perspective (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Introduction to field of cultural anthropology and its unique perspective for the study of human culture and societies. Examines modes of social organization and dimensions of culture worldwide. Students are introduced to the diversity of human cultures and to anthropological theories and methods through ethnographic examples drawn from a variety of non-Western cultures. Focuses on processes and institutions of enculturation, including linguistic, economic, kinship, religious, political, and aesthetic practices. Considers the processes of culture change and the effects of colonialism and globalization on these processes.

ANT 102 – Introduction to Physical Anthropology (3 hours)

Examines fundamental aspects of the physical nature of humans and human variability. Selectively reviews the long record of human biological adaptations that have existed from the appearance of the earliest hominids up to the development of anatomically modern forms. Topics include principles and mechanisms of evolution, human variation and adaptability, non-human primate behavior,

ANT 303 – Culture & Belief: Magic, Witchcraft, Religion (3 hours)

Gen. Ed. NW

Introduces students to the anthropology of religion, examining the relationship between culture and belief in a cross-cultural perspective and exploring a variety of religious experiences from different cultures around the world, with an emphasis on small-scale and non-Western societies. The course also examines beliefs in magic, witchcraft, and sorcery; animism; ritual; possession and trance; the intersection of belief and healing; religious syncretism and the impact of colonialism on religious belief. Prerequisite: SOC 100 or SOC 101 or ANT 101.

ANT 305 – Peoples and Cultures of the World (3 hours)

Gen. Ed. NW

Core Curr. MI

Examines the cultural and structural features of a particular region of the globe or a specific cultural group. Students will develop a deeper understanding of the processes and institutions of enculturation, and examine the effects of colonialism and globalization on the processes of cultural change. Topics will vary by semester and will be stated in the semester schedule of classes. Geographic foci will include, among others, Asia, Latin America, and indigenous Australia. Repeatable to a maximum of 9 semester hours. Prerequisite: SOC 100 or SOC 111 or ANT 101.

ANT 306 – Illness and Healing in Cross-Cultural Perspective (3 hours)

Introduces medical anthropology and the social aspects of health, illness, and healing in different cultures. Considers the interaction between 'traditional' healing systems and biomedicine in developing nations and among transnational populations. Prerequisite: SOC 100 or SOC 111 or ANT 101.

ANT 314 – Indigenous Peoples (3 hours)

Gen. Ed. NW

Core Curr. GP WC,MI WI

Analysis of the experiences of indigenous peoples around the world. Focus on social, cultural and historical patterns, with an examination of the effects of colonialism and globalization. Prerequisite: SOC 100 or SOC 111 or ANT 101; or consent of instructor.

ANT 402 – Ethnographic and Qualitative Methods (3 hours)

The purpose of this class is to learn what ethnographic and qualitative research is and how ethnographers and qualitative researchers work. Students will read and discuss a variety of texts on methodological issues; read and critique ethnographic texts; and engage in qualitative research by designing a mini-research project, carrying it out, analyzing data, and writing it up. Topics covered include research questions and design, ethics and informed consent, ethnographic representation and responsibility, theoretical and practical concerns about fieldwork and participant observation, fieldnotes, interviews and life histories, processing and analyzing data, and writing up research results. Prerequisite: SOC 101 or ANT 101; and Anthropology minor or Sociology major

ANT 403 – Anthropology Senior Project (1-3 hours)

Special study of individual topics in anthropology with faculty supervision. Prerequisite: Anthropology minor and ANT 101 and instructor consent.

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Asian Studies



Asian Studies

FACULTY Coordinating Committee: Gates (History) chair; Foley (International Business); Getz (Philosophy & Religious Studies); Hogan (Sociology); Iyer (International Business); Kerr (Accounting); Kim (International Studies); Palakeel (English); Zaborowski (Philosophy & Religious Studies).

The program in Asian Studies is designed to provide a broad understanding of the political, social, economic and cultural forces that have influenced and continue to shape Asia. The geographic and cultural areas examined under the Asian Studies minor include East, Southeast, South and Inner Asia, the Middle East and the Asian diaspora. Students with an interest in Asia, particularly those majoring in international studies, international business, and relevant liberal arts disciplines, will especially benefit from this program.

Minor In Asian Studies

A minor in Asian studies will require completion of 18 credit hours from the list of approved courses. There are six hours of required courses. The remaining twelve hours will be taken from approved elective courses, with no more than six elective hours taken from any one discipline. Courses in Asian languages are recommended, and a student may transfer up to six semester hours in an approved Asian language. Students are strongly encouraged to take advantage of Asian study abroad programs through Bradley University's International Programs.

Required Courses – 6 hrs.

Choose two courses:

- HIS 336 Early Non-Western History
- IS 182 Fundamentals of Contemporary East Asian Civilization
- RLS 331 Religions of the Eastern World

Electives – 12 hrs.

Choose four courses (with no more than 6 hours from a single discipline):

- ART 243 Non-Western Art
- ENG 381 Literatures of Asia
- HIS 207 Non-Western Civilization: Modern Japan, 1860-Present
- HIS 314 Non-Western Civilization: Japan and WW II
- HIS 324 Barbarians in History

- HIS 334 Non-Western History: Social (with approval of Asian Studies Chair)
- HIS 337 Modern Non-Western History
- IB 204 Business in Chinese Culture
- IB 205 Business in Indian Culture
- IS 285 East Asia in the Modern World
- IS 363 Middle East Nations in International Affairs
- IS 373 South and Southeast Asian Nations in International Affairs
- IS 381 East Asian International Relations
- IS 385 Issues of Contemporary Asia
- RLS 121 Islamic Civilization
- RLS 321 Islam and the West: Clash of Civilizations?
- RLS 336 Buddhism and Asian Civilizations
- RLS 338 China: Religion and Culture
- RLS 340 Japan: Religion and Culture
- SOC 311 Comparative Family Systems

Students may include an independent study and/or topics course (one to three hours of credit) on any topic with an Asian focus, contingent upon the approval of the Asian Studies chair. Study Abroad credit will also require the approval of the Asian Studies chair.

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Astronomy Courses



Astronomy Courses

AST 300 – Astronomy: Our Glimpse of the Cosmos (3 hours)

Gen. Ed. TS

Core Curr. NS

Various scientific views of the cosmos; how modern astronomy has enlightened and broadened these views. Relationships between man, technology, and the universe through scientific knowledge of planets, stars, galaxies, and the cosmos will be investigated. Experimental discoveries in astronomy are examined, analyzed, and discussed. Prerequisite: Junior or senior standing, or sophomores with permission of the instructor or department chair.

AST 310 – Astronomy and Astrophysics (3 hours)

Study of a broad range of astrophysical topics: overview of the universe, planetary systems and subsystems, stars, galaxies, and super clusters of galaxies. Presentations of special topics: stellar evolution, quasi-stellar objects, and black holes. Scientific-technical elective for science and engineering majors. Prerequisite: Junior standing; one year of calculus; one year of calculus-based physics or permission of the department chair

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Biology



Biology

FACULTY Professors Johnson, McConnaughay, Morris, Stabenau; Associate Professors Cady, Faulkner (chair), Jost, Marino, Stover; Assistant Professors Deshwal, Lipovsky; Lecturers Beanblossom, Edgcomb-Friday, Fleming; Visiting Assistant Professor Ball-Kell; Instructor in Residence Moon; Electronics Technician Kahila

Biology Major

The Department of Biology offers a biology major leading to a baccalaureate degree with the possibility of receiving a concentration in cell and molecular biology, ecology and evolutionary biology, secondary teaching, or medical technology. The major is designed for students interested in cell and molecular biology, ecology and evolutionary biology, environmental biology, biology education, medicine, dentistry, veterinary medicine, or medical technology. Separate specific majors for students interested in environmental science and medical laboratory science are described elsewhere in this catalog. The Department of Biology offers an accelerated 4+1 program (B.S./M.S.) and Master of Science degrees in Biology and a minor in biology.

Undergraduate Course Requirements

All students majoring in biology, and those students desiring additional focus in one of the department's concentrations, must earn a grade of C or better in all required biology courses. All biology students must take the following core courses:

- BIO 150, 151, 152, 250, 251, 252, 260, 261, 310, 311, 490
- CHM 110, 111, 116, 117, 252, 253 (CHM 256 and 257 are required for students in the cell and molecular biology concentration and recommended for others)
- MTH 115 (MTH 116 highly recommended)
- PHY 107 and 108

At the completion of 90 semester hours, the student must have credit for BIO 150, 151, 152, 250, 251, 252, 260 and 261; CHM 110, 111, 116, 117, 252, 253; and one semester of calculus. Students not meeting these requirements will not be allowed to enroll in other biology courses until requirements are met. Students with more than 30 semester hours transferring into biology programs from other Bradley majors must have a GPA of 2.25 or greater and must have completed at least one semester each of introductory biology, introductory chemistry, and calculus. Students with 30 or fewer hours will be assessed on a case-by-case basis.

In addition to the above requirements, each student must complete the requirements below with a grade of C or better in each biology course taken to graduate with a baccalaureate degree in Biology.

Students will choose a minimum of one course (with required laboratory) from each of the following categories.

- **Sub-Organismal**
BIO 312, 314, 381, 464, 468, 484, 503, 564, 568
- **Organismal**
BIO 323, 324, 334, 361, 371, 406, 408, 417, 419, 506, 508, 517, 519, 530
- **Supra-Organismal**
BIO 420, 423, 450, 460, 463, 520, 550, 563
- In addition, students must also take two additional courses (3-4 credit hours; lab is optional) from any course in the following list: BIO 312, 314, 323, 324, 334, 361, 371, 381, 406, 408, 417, 419, 420, 423, 440, 450, 460, 463, 464, 468, 475, 482, 484, 502, 503, 505, 506, 508, 509, 517, 519, 520, 525, 526, 527, 530, 540, 550, 563, 564, 568, 575. Students may take 3 hours of BIO 485 in lieu of one of these required courses.

The Biology Department offers the opportunity for a student to receive one of several concentrations that will allow students to concentrate or specialize in various areas that will better prepare them for their post-graduate careers. Specifically, the department offers concentrations in cell and molecular biology, ecology and evolutionary biology, secondary teaching, and medical technology. The requirements for each concentration are described below.

Biology Education (9-12) Concentration

In addition to the requirements described above for the Biology major, to receive a secondary grades (9-12) teaching endorsement in the State of Illinois, students must complete the degree requirements shown above for the Biology major and also all the education requirements as mandated by the Illinois State Board of Education, which includes 44 hours of course work in the Teacher Education – High School Education program.

For more information, see Teacher Education – High School Education program in the College of Education and Health Sciences section of this catalog.

Cell and Molecular Biology Concentration

In addition to the requirements described above for the Biology major, to receive the cell and molecular biology concentration, students must have a GPA \geq 3.2 in the Biology major. Moreover, students must take three additional courses from the list below, or two additional courses from the list below plus 3 hours of research at the level of BIO 485. Finally, students must complete a year-long cell and molecular biology research project. To complete the year-long research requirement, students will take 6 research hours, 3 hours of BIO 385 and 3 hours of BIO 485. Prior to graduation, the Biology Department's Curriculum Committee will review the completed research project to ensure that the students have conducted research appropriate for the concentration. Students in the cell and molecular biology concentration will also be required to have the second semester of Organic Chemistry (CHM 256 and 257).

For the concentration, students must choose three courses from the following list or two courses from the list and research. The courses used for the concentration cannot have been used to fulfill the requirements for the major.

BIO 312, 314, 361, 381, 406, 408, 464, 468, 482, 484, 502, 503, 506, 508, 509, 525, 564, 568

Ecology and Evolutionary Biology Concentration

In addition to the requirements described above for the Biology major, to receive the ecology and evolutionary biology (EEB) concentration, students must have a GPA \geq 3.2 in the Biology major. Moreover, students must take three additional courses from the following list of courses, or two additional courses from the following list and three hours of research at the level of BIO 485. Finally, students must complete a year-long EEB related research project. To complete the year-long research requirement, students will take 6 research hours, 3 hours of BIO 385 and 3 hours of BIO 485 or 6 hours of BIO 485. Prior to graduation, the Biology Department's Curriculum Committee will review the completed research project to ensure that the students have conducted research appropriate for the concentration.

For the concentration, students must choose three courses from the following list or two courses from the list and research. The courses used for the concentration cannot have been used to fulfill the requirements for the major.

BIO 323, 324, 334, 371, 419, 420, 440, 450, 460, 463, 502, 510, 519, 520, 530, 540, 550, 563, 565

Medical Technology Concentration

In addition to the requirements described above for the Biology major, to receive the medical technology concentration a minimum of 12 hours must be taken; in order to be eligible for entrance to any post-graduate medical technology program, students must take Introduction to Medical Technology (BIO 141/CHM 122 – 1 hour), Organic Chemistry (CHM 256/257 – 4 hours), Immunology (3 hours or 4 hours with laboratory), Physiology (BIO 381 or BIO 384 – 3 or 4 hours depending on whether the student takes a course with laboratory), and Microbiology (4 hours, must be taken with laboratory to meet Medical Technology Program requirements). The courses used for the concentration cannot have been used to fulfill the requirements for the major. Students with a Biology degree with a

Medical Technology concentration would be able to apply to any Medical Technology Clinical Program (most are 10-month programs) around the country and sit for national certification exams upon the culmination of the clinical practicum.

Note that the Biology/Chemistry departments offer a Medical Laboratory Science major rather than a Biology major with a concentration in Medical Technology. The requirements for the Medical Laboratory Science major are described elsewhere in this catalog.

Biomedical Science Major

The Department of Biology offers a Biomedical Science Major leading to a baccalaureate degree with the possibility of receiving a concentration in Pre-Med, Veterinary Science, or Biomedical Science Research and Development (R&D). The major is designed to prepare students interested in a career in medicine or other health professions, including dentistry, veterinary medicine, optometry, etc., or support development of professionals for careers in the medical and biotechnology environment.

Undergraduate Course Requirements

All students majoring in Biomedical Science and those students desiring additional focus in one of the department's concentrations must earn a grade of C or better in all required Biomedical Science and Biology courses. All Biomedical Science students must take the following core courses:

- BMS 150, 320, 465*, 466*, 490
- BIO 151, 152, 250, 251, 252, 260, 261, 310, 311
- CHM 110, 111, 116, 117, 252, 253, 256, 257
- MTH 115 and 116
- PHY 107 and 108
- SOC 100
- PSY 101
- An introductory business, economics or entrepreneurship course is highly recommended.

Students must take two additional courses with a grade of C or better from the following list of elective choices: **BIO 312, 361, 406, 408, 419, 440, 464, 468, 482, 484, 503, 505, 509, 525, 526, 527, or CHM 360**. Three hours of BIO 485 will count for one of these courses and is highly recommended.

* Students may substitute BIO 323 and BIO 381 for BMS 466 and BMS 465 respectively.

At the completion of 90 semester hours, the student must have credit for BIO 151, 152, 250, 251, 252, 260, and 261; CHM 110, 111, 116, 117, 252, 253; and two semesters of calculus. Students not meeting these requirements will not be allowed to enroll in other biology courses until requirements are met. Students with more than 30 semester hours transferring into biology programs from other Bradley majors must have a GPA of 2.50 or greater and must have completed at least one semester each of introductory biology, introductory chemistry, and calculus. Students with 30 or fewer hours will be assessed on a case-by-case basis.

The Biomedical Science major is a stand-alone major for students who are not yet clear what area of medicine they want to specialize. The broad range of content areas and skills provided will serve these students well. However, students who have a career path may wish to choose a concentration. Concentrations in Pre-Med, Veterinary Science, and Biomedical Research and Development (R&D) are available. The requirements for each concentration are described below.

Pre-Med Concentration

In addition to the requirements described above for the Biomedical Science major, to receive the Pre-Med concentration, students must take BMS 465, BMS 466, CHM 360, and two courses from the following list as their elective choices: BIO 406, 464, 482, 484, 485 (3 hrs.), 505.

Veterinary Science Concentration

In addition to the requirements described above for the Biomedical Science major, to receive the Veterinary Science concentration, students must take BIO 323, BIO 381, CHM 360, and two courses from the following list as their elective choices: BIO 406, 419, 484, 485 (3 hrs.), 505.

Biomedical Science Research and Development (R&D) Concentration

In addition to the requirements described above for the Biomedical Science major, to receive the Biomedical Science Research and Development (R&D) Concentration, students must take two courses from the following list: BIO 406, 464, 505, 509, CHM 360; they are also required to have six hours of BIO 485. Students in this concentration must complete a year-long research project. Prior to graduation, the Biology Department's Curriculum Committee will review the completed research project to ensure that the students have conducted research appropriate for the concentration. A course from the following list is also recommended as part of their BCC experience: ENT 381, ECO 100, or ECO 221.

Environmental Science Major

Described elsewhere in this catalog.

Medical Laboratory Science Major

Described elsewhere in this catalog.

BS And MS In Biology

The Department of Biology offers an integrated Bachelor's (BS) and Master of Science degree in Biology, which allows undergraduates to complete their bachelor's degree, transfer seamlessly to the master's degree, and finish both programs in five years. Nomination to the program will be based on grades, progress through the curriculum, and progress on a specific research project. A research mentor must nominate a student to the program based on the belief that the student can complete a research project and write and defend a thesis by the end of the fifth year. Students are nominated during the spring of their junior year. Nominations will be accepted the fall of the senior year given a reasonable need for accommodation. After nomination, the student must follow the application procedures consistent with application to Graduate Education and Biology Graduate Program, with the following exceptions: student does not need to have completed the bachelor's degree; and the GRE score will be waived. Students must have a 3.2 GPA overall and in Biology; have completed 85 hours at time of admission to the program (99 hours if admitted at beginning of senior year); and have a thesis advisor. See the Bradley University Graduate Catalog for more information.

Curriculum

The department is characterized by a faculty of teacher-scholars, completely modern facilities and equipment in Olin Hall of Science, and a curriculum emphasizing undergraduate preparation for careers in the life sciences and the health professions. Independent study and research participation are a regular part of the curricular pattern for qualified students.

Each student is assigned a faculty advisor upon enrollment and should consult the advisor on matters of course scheduling and career goals. Cooperative education assignments are also available.

The following sequence of courses is suggested for the first two years of the undergraduate curriculum.

First Year

First Semester

- BIO/BMS 150 – 2 hrs.
- CHM 110 – 3 hrs.
- CHM 111 – 1 hr.
- MTH 115 – 4 hrs.
- ENG 101 or COM 103 – 3 hrs.

13 hours

Second Semester

- BIO 151 – 3 hrs.
- BIO 152 – 1 hr.
- CHM 116 – 3 hrs.
- CHM 117 – 1 hr.
- BIO 260 – 1 hr.
- MTH 116 (depending on major) – 3 hrs.
- ENG 101 or COM 103 – 3 hrs.

12-15 hours

Sophomore Year

First Semester

- BIO 251 – 3 hrs.
- BIO 252 – 1 hr.
- BIO 261 – 2 hrs.

- CHM 252 and 253 – 5 hrs.
- Electives – 3-5 hrs.

14-16 hours

Second Semester

- BIO 250 – 4 hrs.
- CHM 256 and 257 (depending on major) – 4 hrs.
- Electives – 6-8 hrs.

14-16 hours

Biology Minor

Students desiring a minor in Biology should plan to take a minimum of 23-26 hours. The required hours must be distributed as follows (each course must be completed with a C or better):

1. BIO 111/BIO 113 and BIO 112/114, or equivalent – 8 hrs.
2. Statistics: select one course from BIO 260/261, PSY 205, MTH 111, or ENC 310 – 3 hrs.
3. Additional hours in biology at the 300 – 400 level meeting the following criteria: 12-16 hrs.
 - a. A minimum of four courses
 - b. One course at the 300-400 level must have a lab
 - c. Three hours of research (BIO 385/485) may be substituted for one course
4. Only one of the following may be used to satisfy one non-lab course in 3 above: BIO 230, BIO 250, or an approved general education course (BIO 300, BIO 301, or BIO 303).

Total hours 23-26 hours

Neuroscience Minor

Neuroscience is the scientific study of neural processes, structures, and behavior. It is excellent preparation for students considering medical and health-related professions, for those interested in working in biomedical research, and/or for students planning to pursue graduate studies in the biological sciences.

For more information, see Neuroscience Minor.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Biology Courses



Biology Courses

BMS 150 – Introduction to Biomedical Science (2 hours)

Introduces Biomedical Science majors to critical concepts in biomedical science fields focusing first on broad science topics such as hypothesis testing, library research, and ethics in science. The course then explores important topic areas in biomedical sciences including the definition and history of medicine, function of research in protecting human health and curing disease, and role of biotechnology. Prerequisite: BMS major or consent of chair

BMS 320 – Environment and Human Health (3 hours)

Introduces Biomedical Science majors to critical concepts in ecology and evolutionary biology. The health of any organism is impacted by its biotic and abiotic environment. The course will focus on investigating the environmental controls on human health and development, how environment controls virulence and spread of disease, and how health and agents of disease are impacted by evolution. Prerequisite: C or better in BIO 151 and BIO 251; BMS, BIO or ENS major; or consent of instructor.

BMS 465 – Medical Physiology (3 hours)

Introduces students to critical clinical concepts in human medical physiology. The course is not designed as a survey course of the eleven organ systems in the human body. Rather, the focus is on complete coverage and student understanding of a few specific systems, including cardiovascular, respiratory, renal, and muscular systems. The focus will be on understanding the physiology of the systems and how system dysfunction leads to disease states. Treatment options for various pathological conditions will be discussed. Prerequisite: C or better in BIO 250; or consent of instructor.

BMS 466 – Human Anatomy (4 hours)

Introduces students to cadaveric dissection and the study of the human musculoskeletal, nervous, and cardiovascular systems, with additional coverage of the other abdominal and thoracic systems. The focus of the course will be on application of anatomical knowledge to normal physiologic function and disease processes. Prerequisite: B or better in BMS 465 or B or better in BIO 310; or consent of instructor.

BMS 490 – Biomedical Science Capstone (1 hour)

Core Curr. EL

Students will apply the skills and knowledge developed in the Biomedical Science major to complete collaborative projects with guidance from a team of faculty. Required for all Biomedical Science majors. Prerequisite: Senior standing (junior standing with consent of chair).

BIO 101 – Diseases of Life (3 hours)

Gen. Ed. FS

Core Curr. NS

Explores the science behind disease including the underlying biology, impact on students daily lives, and accuracy of media coverage.

BIO 103 – The Biology of Sex (3 hours)**Core Curr. NS**

Introduces the concept of sex as it relates to reproduction, gender, and evolution. Focus will include impact on students' daily lives, and accuracy of media coverage.

BIO 111 – Introduction to Cell Biology (3 hours)

Introduces the concept of biological molecules and discusses the role of these molecules in the genetics and cell biology of the organism. Prerequisite: Education majors and allied health majors such as nursing, health science and dietetics. Biology minors can also enroll in this course with an approved Course Reserve Form.

BIO 112 – Introduction to Ecology and Evolution (3 hours)

Basic principles of evolutionary and ecological processes.

BIO 113 – Introduction to Cell Biology Laboratory (1 hour)

Emphasizes the concept of biological molecules and discusses the role of these molecules in the genetics and cell biology of the organism through inquiry based laboratory exercises. Prerequisite: Allied health majors such as nursing, health science and dietetics. Biology minors can also enroll in this course with an approved Course Reserve Form.

BIO 114 – Introduction to Ecology and Evolution Laboratory (1 hour)

Emphasizes the basic principles of evolutionary and ecological processes through inquiry based laboratory exercises. CoRequisite: BIO 112

BIO 150 – Introduction to Biology (2 hours)

Introduces Biology majors to critical concepts in biological sciences on broad topics such as hypothesis testing, ethics in science, and use of humans and animals in research. Exposes students to faculty research in the Department of Biology, as well as provides exposure to invited research seminars. Prerequisite: Biology major.

BIO 151 – Molecules to Cells (3 hours)

Introduces the concept of biological molecules and discusses the role of these molecules in the genetics and cell biology of the organism. Prerequisite: Biology, chemistry or LSM major; permission of the instructor. Credit will not be given for both BIO 151 and BIO 111. Corequisite: BIO 152 Molecules to Cells laboratory.

BIO 152 – Molecules to Cells Laboratory (1 hour)**Core Curr. WI**

Emphasizes the concept of biological molecules and discusses the role of these molecules in the genetics and cell biology of the organism through inquiry based laboratory exercises. Prerequisite: Biology, chemistry, or LSM major, or permission of instructor. Corequisite: BIO 151

BIO 153 – Introduction to Research Immersion (1 hour)

Emphasizes the skills and concepts required to be successful in research immersion in biology core courses. Designed for students that are transferring into the biology curriculum. Prerequisite: Biology major

BIO 155 – Integration of Biological Concepts (1 hour)

An inquiry-based approach will be used to expose students to the skills necessary to integrate biological concepts across key content in sub-cellular and cellular biology. Prerequisite: Biology, Biomedical Science or Environmental Science Major.

BIO 190 – Biology Freshman Scholars (1 hour)

Students that are invited to participate in this program will examine the unique and integrated nature of sub-organismal, organismal and supra-organismal sub-disciplines of the field of biology through discussions and demonstrations of the scientific method and experimental approaches used across breadth of biology. In the second semester students will continue discussion as a group and will begin to explore hands on research through research experiences with faculty mentors in their research lab. Prerequisite: ACT score greater than or equal to 30, SAT score greater than or equal to 1340, or consent of chair.

BIO 202 – Microbiology and Immunology (4 hours)**Gen. Ed. FS****Core Curr. NS**

Basic bacteriology, parasitology, virology, genetics, and principles of infection and immune response. Emphasis on application to health and disease.

BIO 204 – Pathophysiology (3 hours)

Provides an understanding of human pathophysiology including dysfunction of the cardiovascular, respiratory, renal, and immune systems. The focus will be on understanding the abnormal physiology of the systems and how system dysfunction leads to disease states. Treatment options for various pathological conditions will be discussed. Prerequisite: Transfer credit for BIO 230 and BIO 232. This course is for transfer students only.

BIO 230 – Human Anatomy and Physiology I (Lecture) (3 hours)

A comprehensive survey of human physiology and pathophysiology of the major organ systems of the body from a molecular and cellular perspective. To provide students with a combined understanding of all organ systems of the body and their integration in supporting homeostasis while providing insight into the disease process and how it disrupts normal physiology. Prerequisite: C or better in BIO 111 or permission of department chair

BIO 231 – Human Anatomy and Physiology Laboratory I (1 hour)

Covers anatomical positions and gross anatomy of skeletal muscles, selected nerves, soft anatomy (including the digestive, respiratory, urogenital, excretory, and endocrine systems), systemic, pulmonary, and cardiac circulation, the hepatic portal system, and heart anatomy. Dissected specimens and human models are used. Prerequisite: BIO 230 or concurrent enrollment

BIO 232 – Human Anatomy and Physiology II (Lecture) (3 hours)

A continuation of BIO 230 designed to provide students with a comprehensive understanding of human physiology and pathophysiology. Lectures will address the function of all major organ systems of the body from a molecular and cellular perspective. Students gain an understanding of organ system integration in supporting homeostasis and also of how the disease process interrupts physiological systems. Prerequisite: C or better in BIO 111 and BIO 230 or permission of department chair.

BIO 233 – Human Anatomy and Physiology Laboratory II (1 hour)

Covers histology and function of the following tissues: integument, blood vessels, and muscle, connective, lymphoid, respiratory, excretory, digestive, endocrine, reproductive, and nervous tissues. Content includes axial and appendicular skeletal anatomy, brain anatomy and function, cardiac function, spirometry, and origin and activity of selected hormones. Gross anatomy and anatomical features are covered or reviewed from BIO 231. Dissected specimens and human models are used. Prerequisite: BIO 230, 231, and 232 or concurrent enrollment in BIO 232

BIO 250 – Organismal Biology (4 hours)**Core Curr. WI**

Basic functions and related anatomy of a variety of organisms at various levels of organization. With laboratory. Prerequisite: CHM 110, 111; C or better in BIO 151.

BIO 251 – Ecology, Evolution and Biodiversity (3 hours)

An introduction to evolutionary and ecological processes and the diversity of life that these processes have generated. Prerequisite: C or better in BIO 151 and BIO 152.

BIO 252 – Ecology, Evolution and Biodiversity Laboratory (1 hour)

An introduction to evolutionary and ecological processes and the diversity of life through inquiry based laboratory exercises. Prerequisite: C or better in BIO 151 Corequisite: BIO 251

BIO 260 – Biological Statistics I (1 hour)

Introduction to statistics including basic skills for summarizing data, basic probability theory and probability distributions necessary to understand and evaluate variation in environmental systems. Prerequisite: Biology, Biomedical Science or Environmental Science major; Biology Minor; or consent of instructor.

BIO 261 – Biological Statistics II (2 hours)

A follow-up to Biological Statistics I introducing hypothesis testing, and the use and interpretation of statistical analyses such as the T Test and analysis of variance. Prerequisite: C or better in BIO 260; or consent of instructor.

BIO 280 – Directed Research (1-3 hours)

Individual reading and research projects for qualified underclassmen. Repeatable up to 3 semester hours. Pass/Fail. Prerequisite: Advanced Placement biology credit, department placement test credit, or consent of chair.

BIO 300 – Population, Resources and Environment (3 hours)**Gen. Ed. TS****Core Curr. MI,NS**

Introduction to the fundamental principles of how the environment functions and how people interact with their environment. The emphasis will be on populations, resource use, pollution, disease and land-use and the associated ethical, economic and political concerns. The course is designed to integrate an understanding of the way in which people interact with their environment and use resources, the consequences of this interaction and mechanisms by which the impacts can be mitigated and sustainable systems achieved. Prerequisite: Students with credit for ENS 110 may not enroll in BIO 300. Junior or senior standing, or sophomores by permission.

BIO 301 – Biotechnology and Society (3 hours)**Gen. Ed. TS****Core Curr. NS**

Various biotechnologies from medicine, agriculture, and industry; societal impacts of these technologies. Prerequisite: Junior or senior standing, or sophomores by permission.

BIO 303 – Plants and People (3 hours)**Gen. Ed. TS****Core Curr. NS**

This course examines the interdependence of humans and plants. Emphasis is on the plants that provide us with food, medicine, recreation, personal hygiene products and material goods as well as those that produce stimulating, intoxicating and psychoactive effects. Also included are the impacts of plants on human history, health and technology. Field trips will enrich the learning experience. Prerequisite: Junior or senior standing, or sophomores by permission of instructor

BIO 304 – Ecology of Place (3 hours)**Core Curr. MI,NS**

Provides a landscape level understanding of the ecological principles and environmental constraints that determine the characteristics of a specific location. Focus will also extend to the historical culture and human enterprise supported by that environment. Prerequisite: Junior or senior standing, or sophomores by permission of instructor

BIO 310 – Genetics (3 hours)

Strengthens the understanding of Mendelian genetics and introduces the topic of non-Mendelian genetics. Modern molecular genetics concepts of DNA replication, transcription, and translation, primarily in prokaryotes, will be included. An introduction to molecular genetic techniques will be provided. The laboratory will include experiments designed to characterize genetic crosses through phenotypic as well as molecular approaches in prokaryotes and eukaryotes. Prerequisite: CHM 110, CHM 111; C or better in MTH 115 or MTH 121; C or better in BIO 150, BMS 150 or CHM 292; BIO 151, BIO 152, and BIO 250; or consent of instructor.

BIO 311 – Genetics laboratory (1 hour)

The genetics laboratory will provide a demonstration of Mendelian genetics as well as an introduction into molecular genetic techniques through guided experiments as well as group research projects. Laboratory exercises will demonstrate DNA cloning, sequencing, restriction digestion and the polymerase chain reaction. Additional experiments demonstrating other aspects of genetics, gene regulation and molecular biology will be employed. Prerequisite: Enrollment in BIO 310 or consent of instructor.

BIO 312 – Developmental Biology (4 hours)

Descriptive chemical and experimental analysis of principles of development. Prerequisite: BIO 310 with a C or better.

BIO 314 – Plant Development (4 hours)

Plant development will be covered from seed germination through establishing a plant body plan, including the maturation of all organs. Examples of molecular genetic control of plant development will be included as well as discussing the role of the environment on plant development. Prerequisite: BIO 310 with a C or better.

BIO 323 – Comparative Anatomy (4 hours)

Gross anatomy; evolution of chordate structure. Prerequisite: 6 hours college-level biology.

BIO 324 – Plant Diversity (4 hours)

Structure and function of the major groups of photosynthetic organisms in the context of evolutionary history. Prerequisite: C or better in BIO 151 and 251.

BIO 334 – Reproduction and Identification of Flowering Plants (4 hours)

Evolution and ecology of flowering plant reproduction. Characteristics and identification of common flowering plant families of Illinois. Prerequisite: C or better in BIO 151, 250 and 251.

BIO 341 – Personal Genomics (3 hours)

This course will explore issues in personal genomics and genealogy. The course will discuss the methods of obtaining personal genomic information and introduce them to interpretation of the results and how to obtain more information about themselves. Students will be encouraged to obtain their personal genomic information to explore or to use available information. Priority for enrollment will be given to students in the biology minor. The course will not count towards the biology major. Prerequisite: C or better in BIO 111 or BIO 151; C or better in BIO 112 or BIO 251; C or better in BIO 260 and BIO 261, or PSY 205, or EHS 310; or consent of the instructor.

BIO 343 – Cells and Genomes (3 hours)

The Human Genome Project, completed in 2001, ushered in a new era of biological research and understanding, as the relationship between DNA sequences and cellular functions became easier to study. The first half the course provides students a general background in genome structure and function, along with an advanced look at selected topics in cell biology. This knowledge will then be used as a basis to delve into detailed explanations of important health-related topics, including immune system function, cancer, and development. Priority for enrollment will be given to students in the biology minor. The course will not count towards the biology major. Prerequisite: C or better in BIO 111, BIO 151, or equivalent; or permission from instructor.

BIO 345 – Virology (3 hours)

Provides molecular and clinical aspects of virus construction, infection, and replication in the host, transmission, evolution, etiology and epidemiology, immune response, and disease prevention and treatment. Other topics will include vaccine technology, emerging viruses, and potential bioterrorism agents. Students will coherently and thoroughly present selected viral pathogens. Priority for enrollment will

be given to students in the biology minor. The course will not count towards the biology major. Prerequisite: BIO 111 or BIO 151; Junior or senior standing; or permission of instructor.

BIO 347 – Our Microbial World (3 hours)

Microorganisms play an integral part in our daily lives. This course will explore the many ways in which microorganisms impact our everyday lives, including topics such as the impact of microorganisms on our health and infectious disease, the use of microorganisms for the fermentation of food, the impact of microorganisms on food preservation and spoilage, the use of microorganisms in biotechnology, and the impact of microorganisms on the environment and agriculture. Priority for enrollment will be given to students in the biology minor. The course will not count towards the Biology major. Prerequisite: BIO 111 or BIO 151; or consent of instructor.

BIO 351 – Human Histology (3 hours)

Students will expand upon their basic knowledge of cell structure by examining the various cell types found in the human body. Emphasis will be placed on how cell structure varies between tissue types and how structure determines function. In addition, students will understand how each tissue type develops and what occurs during tissue damage and repair. Priority for enrollment will be given to students in the biology minor. The course will not count towards the Biology major. Prerequisite: C or better in BIO 111 or BIO 151; or consent of instructor

BIO 353 – Human Physiology and Pharmacology (3 hours)

Prepares students interested in post-graduate medical or medically-affiliated programs with increased exposure to human physiology and pharmacology. Physiology, broadly defined, is the study of the functionality of cells, organs, organ systems, and the organism, and homeostatic balance. Pharmacology is defined as the study of substances that interact with living systems through chemical processes. This course will focus on the physiological effects of drugs on a variety of physiological systems. Priority for enrollment will be given to students in the biology minor. The course will not count towards the biology major. Prerequisite: C or better in BIO 230 and BIO 232, or BIO 250, or consent of instructor.

BIO 355 – Soil Biology (3 hours)

Focuses on the role of soil microbes in the structure and functioning of ecosystems. Includes discussions of the characteristics of soil microorganisms and the way in which they interact with their environment. Hands-on activities will focus on skills needed for soil sampling, identification of organisms, and determining rates of C and N processing. Soils are essential for human health through the role they play in plant production and ecosystem services. Priority for enrollment will be given to students in the biology minor. The course will not count towards the biology major. Prerequisite: C or better in BIO 112 or BIO 251 or consent of instructor.

BIO 358 – Research Exploration in Biology (1-3 hours)

Students enrolled in the class will see first-hand how biology research is conducted and how biology research informs our daily lives. Many of the decisions made in medicine, policy, law, etc. are currently being made based on the research conducted by biologists. This course will allow students insight to the realities of scientific research. Students that are seeking a biology minor or increasing their depth of understanding of research would benefit from this course. Under the direction of a faculty mentor, students will be exposed to the research processes, hypothesis formulation, data collection, analysis, interpretation, and presentation of research results. Prerequisite: 2.75 grade point average in students major and consent of instructor.

BIO 359 – Current Topics in Biology (2-8 hours)

Provides students with an understanding of a content area of Biology that they cannot experience through any course currently offered in biology at the level appropriate for the minor. The courses will be organized, taught, and graded in a manner that is consistent with the other courses offered for the Biology Minor and as consistent with the practice of the Biology Department. Priority for enrollment will be given to students in the biology minor. BIO 359 will not count towards the biology major. Prerequisite: C or better in BIO 111 and BIO 112; Biology minor or consent of instructor

BIO 361 – Microanatomy (4 hours)

Organs, tissues, and cells of animals: ultrastructure and relation to function. Prerequisite: 6 semester hours of college-level biology or two years of high school biology; physical or natural science major or consent of instructor.

BIO 371 – Invertebrate Zoology (4 hours)

Detailed biological survey of major invertebrate phyla and their evolutionary relationships. Emphasis will be placed on organism physiology and ecology. Students will gain knowledge in invertebrate morphology and classification through dissection of representative animals. Lecture and laboratory. Cross listed as GES 302. Prerequisite: C or better in BIO 151, and BIO 251 (or equivalent); or consent of instructor.

BIO 381 – Comparative Animal Physiology (3-4 hours)

Fundamental concepts of mechanisms employed by various animal groups to satisfy functional requirements for living. Physiological differences and similarities. Four hours if taken with lab. Prerequisite: CHM 116, 252, 253; C or better in BIO 250.

BIO 385 – Supervised Research (0-3 hours)

Core Curr. EL

Supervised research for qualified students in special areas of biology. May be repeated for a total of 6 credit hours. Prerequisite: 2.75 grade point average in student's major and sophomore standing; or consent of instructor

BIO 406 – General Microbiology (4 hours)

Distinguishing features of microorganisms: structure, function, and their underlying basis, genetics. Microbial growth and death. Phylogeny of microbes and horizontal gene transfer. Infectious diseases and immunity. Exploitation of microbes by humans. Lab mandatory. Cross-listed as BIO 506. Prerequisite: C or better in BIO 151 and CHM 110.

BIO 408 – Bacterial Pathogenesis (3-4 hours)

Basic bacterial cell biology and the human innate and adaptive immune systems. Focuses on and explores the cellular and molecular mechanisms used by bacterial pathogens to bypass the defenses of the body to cause infection in humans. Laboratory optional. Cross-listed as BIO 508. Prerequisite: C or better in BIO 151 and BIO 152 or BIO 111 and BIO 113.

BIO 417 – Environmental Physiology (3-4 hours)

Provides an understanding of the mechanisms that animals use to cope with environmental conditions, including extreme habitats and habitat fluctuations. Lectures will focus on the physiology of metabolism, body temperature, respiration, osmoregulation, and nervous systems in both invertebrate and vertebrate animals from a broad range of habitats. Laboratory experiments will focus on the biochemical and organismal acclimations animals use to cope with fluctuations in temperature, oxygen, and salinity. Cross-listed with BIO 517. Prerequisite: C or better in BIO 250, 251, and 252 (or equivalent); or consent of instructor.

BIO 419 – Ethology (4 hours)

Development and evolution of animal behavior in individuals and social groups from various phyla. Cross-listed as BIO 519. Prerequisite: C or better in BIO 151, BIO 250 and BIO 251.

BIO 420 – Ecosystem Ecology (4 hours)

Description of ecosystem form and function with focus on biogeochemistry, food webs, and energy transformations within natural systems. Emphasis on application of ecosystem principles to sustainable land management and current issues such as global change and nitrogen deposition. Cross-listed as BIO 520. Prerequisite: C or better in BIO 250 and BIO 251 (or equivalent); CHM 116; MTH 115 or 121; or consent of instructor.

BIO 423 – Freshwater Ecology (4 hours)

The course will explore the major types of freshwater ecosystems and the interactions among physical, chemical, and biological processes that determine ecosystem structure and function. There will be an emphasis on water as a resource and the consequences of human activities, such as species introductions and pollution, on sustainable resource use. Lab will focus on skills needed for measuring key physical, chemical, and biological characteristics of freshwater ecosystems. Cross listed as BIO 523. Prerequisite: C or better in BIO 250 and BIO 251 (or equivalent); CHM 116; MTH 115 or 121; or consent of instructor. Students with credit for BIO 523 will not be allowed to enroll in BIO 423.

BIO 430 – Soil Ecology (3 hours)

The role of soils and soil microbes in the structure and functioning of ecosystems. Focus will include current principles and best management practices for long-term sustainability. The laboratory experience will explore soil chemistry and biology as related to land use practices. Prerequisite: C or better in BIO 250, 251, and 252 (or equivalent); CHM 116; or consent of instructor.

BIO 440 – Evolution (3 hours)

Mechanisms of evolution, historical evolution, and history of evolutionary thought. Cross-listed as BIO 540. Prerequisite: C or better in BIO 151, BIO 250, BIO 251 and 310; MTH 115 or 121.

BIO 450 – Conservation Biology (3 hours)

Conservation biology is a multidisciplinary field that focuses on the preservation of biological diversity. Class work emphasizes conservation values and ethics, patterns of biodiversity, threats to biodiversity, and management strategies at the population, species, and ecosystem levels. Active learning activities include discussions of case studies, stakeholder meetings, field trips to observe local conservation issues and work, and guest presentations by conservation professionals. Cross-listed as BIO 550. Prerequisite: C or better in BIO 151, BIO 250 and BIO 251.

BIO 460 – Ecology (4 hours)

Interrelationships among animals, plants, and their environment: ecosystems, biotic communities, population changes, and applied ecology. Prerequisite: MTH 115 or 121; C or better in BIO 250 and BIO 251 (or equivalent); or consent of instructor.

BIO 463 – Plant Ecology (4 hours)

Physiological and growth responses of plants to environmental stresses, and consequences to the structure and function of communities and ecosystems. Cross-listed as BIO 563. Prerequisite: C or better in BIO 151, BIO 250 and BIO 251 (or equivalent); or consent of instructor.

BIO 464 – Cell Biology (3-4 hours)

Structural and functional organization of cells and their dynamic interactions with the environment. Methods and techniques of investigation. Cross-listed as BIO 564. Prerequisite: C or better in BIO 310, CHM 252, and CHM 253.

BIO 468 – Immunology of Host Defense (3-4 hours)

Immune response to foreign pathogens and cells; their formation, generation of diversity, and interaction within specialized tissues to mount and regulate an immune response. Contemporary and classical tools and strategies for investigating immunity and their application to other fields. Anomalous immune responses and resultant diseases. Lab optional. Cross-listed as BIO 568. Course is not open to those students with BIO 396 credit. Prerequisite: C or better in BIO 151 and CHM 110, or consent of instructor.

BIO 470 – Seminar (1 hour)

Selected topics in biological sciences. May be repeated under different topics. Repeatable to a maximum of six hours. Prerequisite: 2.0 grade point average in student's major; junior or senior standing; consent of instructor.

BIO 475 – Special Topics Biol (2-4 hours)

Selected coursework in biology. May be repeated under different topics for a total of 8 credit hours. Prerequisite: 2.75 grade point average in student's major and junior standing; or consent of instructor.

BIO 480 – Readings (1-3 hours)

Individual assignments of relevant topics in biological sciences. Prerequisite: 2.75 grade point average in student's major; junior or senior standing; consent of instructor.

BIO 482 – Endocrinology (3 hours)

Provides an understanding of how hormones control the physiological systems of the body. Lectures will include definitions of hormones and hormone types, regulation of hormones and their receptors, classes of hormones, signal transduction and regulation of intracellular messengers, growth factor receptors, and nuclear receptors. Additional lecture topics will include growth hormones, prolactin, neurotrophic factors, hematopoietic growth factors and cytokines. Cross-listed with BIO 582. Students that have credit for BIO382 or BIO582 may not enroll in BIO 482 Prerequisite: C or better in BIO 250 or consent of instructor.

BIO 483 – Stem Cell Biology and Tissue Regeneration (3 hours)

Provides an understanding of basic biology of stem cells including the role of stem cells in development and endogenous tissue regeneration. Cross-listed as BIO 583. Students that have credit for BIO 583 may not enroll in BIO 483. Prerequisite: C or better in BIO 250 (or equivalent); or consent of instructor.

BIO 484 – Neurophysiology (3-4 hours)

An introduction to the basic principles of cellular and molecular neurobiology of the nervous system. General topics include cellular, molecular and developmental biology of nerve cells, synapses and neural systems. Laboratory optional. Cross-listed with BIO 584. Students that have credit for BIO384 or BIO584 may not enroll in BIO 484. Prerequisite: C or better in BIO 250 or consent of instructor.

BIO 485 – Research (0-6 hours)

Core Curr. EL

Individual research for qualified students in special areas of biology. Prerequisite: 3.0 grade point average in student's major; either a minimum of 3 credit hours in BIO 385 or senior standing; or consent of instructor

BIO 490 – Biology Capstone (1 hour)

Core Curr. EL

Students will apply the skills and knowledge developed in the Biology major to complete collaborative projects with guidance from a team of faculty. Required for all Biology majors. Prerequisite: Senior standing (junior standing with consent of chair).

BIO 500 – Thesis Proposal Preparation (1 hour)

Designed to prepare students to write and present their graduate thesis proposal. The instructor will work with students to develop the appropriate timeline and give a general outline of relevant information for a thesis proposal and instruction on developing and giving presentations. Students will also be directed to the CITI site to complete an ethics training module. The student will work with the thesis advisor to develop and edit the thesis proposal. The course will serve as a mechanism to organize proposal development and presentation. Ultimate responsibility for student grade and confirmation of completion of the work will reside with the faculty advisor who will report to the instructor of record. It is intended that students will present their written proposal to their chosen thesis committee and present their thesis proposal orally to the committee and department at the end of the semester they are enrolled in this course. Prerequisite: Graduate standing or consent of Graduate Advisor

BIO 502 – Biometry (3 hours)

Principles of biological measurement. Topics include the nature of data, sampling, experimental design, and statistical analysis. Prerequisite: C or better in BIO 260, 261 or equivalent.

BIO 503 – Molecular Genetics (3-4 hours)

Molecular genetics is the study of the intricate control of cellular events such as DNA replication, transcription, and translation. Familiarizes students with the exciting and rapidly advancing field of molecular biology and with some of the techniques that are used by molecular biologists. Primary focus will be on eukaryotic organisms. Prerequisite: C or better in BIO 310 (Genetics); permission of instructor.

BIO 505 – Topics in Bioethics (3 hours)

Topics in Bioethics aims to enlighten students to ethical issues in modern biology. This will be done through films, readings, discussions and student writing and presentations. Topics will include eugenics, medical ethics, implications of the human genome project, and genetically modified organisms. Prerequisite: Junior standing with a GPA of 3.0 or higher. BIO 111 or BIO 151 recommended

BIO 506 – Advanced Microbiology (3 hours)

Comprehensive discussion of selected topics of current interest in microbiology, including microbial genetics, microbial growth, environmental microbiology, infectious diseases and immunity, and the exploitation of microorganisms by humans. Laboratory experiments will demonstrate and further explore techniques and ideas discussed in lecture. Students will discuss and critically analyze primary research literature that is complementary to topics discussed in lecture. Lab mandatory. Cross-listed as BIO 406. Prerequisite: four semesters of biology with laboratory; organic chemistry; or consent of instructor. Students who have credit for BIO 406 may not enroll in BIO 506.

BIO 508 – Advanced Bacterial Pathogenesis (3 hours)

Basic bacterial cell biology and the human innate and adaptive immune systems. Focuses on and explores the cellular and molecular mechanisms used by bacterial pathogens to bypass the defenses of the body to cause infection in humans. Cross-listed as BIO 408. Prerequisite: C or better in BIO 151 and BIO 152 or BIO 111 and BIO 113 or equivalent required. Junior standing in Biology or Chemistry with a GPA of 3.0 or higher or consent of instructor. Students with credit for 408 cannot enroll in 508.

BIO 509 – Human Genetics (3 hours)

Genetic theory and methodology applied to humans. Prerequisite: C or better in BIO 310 or consent of instructor

BIO 517 – Environmental Physiology (3 hours)

Provides an understanding of the mechanisms that animals use to cope with environmental conditions, including extreme habitats, and habitat fluctuations. Lectures will focus on the physiology of metabolism, body temperature, respiration, osmoregulation, and nervous systems in both invertebrate and vertebrate animals from a broad range of habitats. Laboratory experiments will focus on the biochemical and organismal acclimations animals use to cope with fluctuations in temperature, oxygen, and salinity. Crosslisted with BIO 417. Prerequisite: C or better in BIO 250, 251, and 252 (or equivalent) and senior or graduate standing; or consent of instructor. Students who have credit for BIO 417 may not enroll in BIO 517.

BIO 519 – Comparative Animal Behavior (3 hours)

Advanced content encompassing a wide variety of vertebrate and invertebrate species with emphasis on comprehension of primary literature and research. Cross-listed as BIO 419. Prerequisite: 6 hours college-level biology and senior or graduate standing. Students with credit in BIO 419 cannot enroll in BIO 519.

BIO 520 – Advanced Ecosystems Ecology (3 hours)

A comprehensive description of ecosystem form and function with focus on biogeochemistry, food webs, and energy transformations within natural systems. Emphasis on application of ecosystem principles to sustainable land management and current issues such as global change and nitrogen deposition. Understanding of the complex nature of the systems emphasized through use of primary literature, small group discussion and individual projects. Cross-listed as BIO 420. Prerequisite: C or better in BIO 250 and BIO 251 (or equivalent); CHM 116; MTH 115 or 121; graduate standing or consent of instructor. Students with credit in BIO 420 cannot enroll in BIO 520.

BIO 523 – Advanced Freshwater Ecology (3 hours)

The course will explore the major types of freshwater ecosystems and the interactions among physical, chemical, and biological processes that determine ecosystem structure and function. There will be an emphasis on water as a resource and the consequences of human activities, such as species introductions and pollution, on sustainable resource use. Lab will focus on skills needed for measuring key physical, chemical, and biological characteristics of freshwater ecosystems. Cross listed as BIO 423. Prerequisite: C or better in BIO 250 and BIO 251 (or equivalent); CHM 116; MTH 115 or 121; graduate standing or consent of instructor. Students with credit in BIO 423 cannot enroll in BIO 523.

BIO 525 – Advanced Physiology (3 hours)

Detailed study of the structure and function of animals; special reference to the human body; theories and methods of investigation mostly at organ system level; adaptational strategies to special conditions. Prerequisite: one semester of physiology or consent of instructor.

BIO 526 – Advanced Pathophysiology (3 hours)

Detailed presentation of pathological conditions in the human body, with particular focus on the cellular basis for disease in muscular, respiratory, renal, and cardiovascular systems. Prerequisite: BIO 525 or concurrent enrollment, or consent of the instructor.

BIO 527 – Physiology of Anesthesia (3 hours)

Emphasis on the pharmacokinetics and pharmacodynamics of various anesthetic agents in the human body, with particular attention on the effect of the agents on the major physiological systems. Prerequisite: BIO 525; consent of instructor.

BIO 530 – Plant Systematics (3 hours)

Evolution, classification, and characteristics of various flowering plant families. Prerequisite: 6 hours college-level biology.

BIO 540 – Evolution (3 hours)

Advanced content in evolutionary history, the mechanisms of evolution, and how evolutionary theory forms the basis for all biology. In-depth examination of selected evolutionary topics utilizing discussions, primary literature, and student presentations. Cross-listed as BIO 440. Prerequisite: Graduate standing or consent of instructor. Students who have credit for BIO 440 may not enroll in BIO 540.

BIO 550 – Conservation Biology (3 hours)

Advanced content on the preservation of biodiversity. In-depth examination of selected conservation issues utilizing case studies, field trips, discussions, primary literature, and student presentations. Cross-listed as BIO 450. Prerequisite: graduate standing or consent of instructor. Students who have credit for BIO 450 may not enroll in BIO 550.

BIO 563 – Advanced Plant Ecology (3 hours)

Physiological and growth responses of plants to environmental stresses, and consequences to the structure and function of communities and ecosystems. Cross-listed as BIO 463. Prerequisite: Graduate standing or consent of instructor. Students who have credit for BIO 463 may not enroll in BIO 563.

BIO 564 – Advanced Cell Biology (3 hours)

Structural and functional organization of cells and their dynamic interactions with the environment. Methods and techniques of investigation. Cross-listed as BIO 464. Prerequisite: C or better in BIO 310, or consent of instructor. Students who have credit for BIO 464 may not enroll in BIO 564.

BIO 568 – Cellular and Molecular Immunology (3 hours)

Interaction between foreign antigen, antigen presenting cells, B lymphocytes, and T lymphocytes to mount immune responses. Molecules responsible for immune interactions. Random generation of the diversity of the immune response, its associated problems, and natural solutions through selection and energy. Lab required. Cross-listed as BIO 468. Prerequisite: BIO 564 or equivalent, or consent of instructor. Students who have credit for BIO 396 or BIO 468 may not enroll in BIO 568.

BIO 570 – Seminar (1 hour)

Selected topics in biological sciences. May be repeated under different topics for a maximum of 3 credit hours. Prerequisite: 3.0 grade point average in student's major; senior or graduate standing; consent of instructor.

BIO 575 – Special Graduate Topics in Biology (2-3 hours)

Selected graduate-level coursework in biology. May be repeated under different topics for a total of 6 credit hours. Prerequisite: 3.0 grade point average in graduate-level biology program; or consent of instructor.

BIO 580 – Readings (1-3 hours)

Individual assignments of relevant topics in biological sciences. Prerequisite: 3.0 grade point average in student's major; senior or graduate standing; consent of instructor.

BIO 582 – Endocrinology (3 hours)

Provides an understanding of how hormones regulate physiological systems and their role in endocrine disorders. Expert guest lectures from those in the field will provide supplementary content related to advanced topics. Cross-listed with BIO 482. For cross-listed undergraduate/graduate courses, the graduate level courses will have additional academic requirements beyond those of the undergraduate course. Students that have credit for BIO 382 or BIO482 may not enroll in BIO 582. Prerequisite: C or better in BIO 250 (or equivalent); graduate standing or consent of instructor.

BIO 583 – Stem Cell Biology and Tissue Regeneration (3 hours)

Provides graduate students with an understanding of basic biology of stem cells including the role of stem cells in development and endogenous tissue regeneration. Cross-listed as BIO 483. Students that have credit for BIO 483 may not enroll in BIO 583. Prerequisite: C or better in BIO 250 (or equivalent); graduate student standing or consent of instructor.

BIO 584 – Neurophysiology (3 hours)

An introduction to the basic principles of cellular and molecular neurobiology of the nervous system. General topics include cellular, molecular and developmental biology of nerve cells, synapses and neural systems. Cross-listed as BIO 484. Students with credit in BIO384 or BIO 484 cannot enroll in BIO 584. Prerequisite: C or better in BIO 250 (or equivalent); graduate standing or consent of instructor.

BIO 585 – Research (1-6 hours)

Individual research for qualified students in special areas of biology. Prerequisite: senior-graduate standing, consent of instructor, 3.0 grade point average in the major field of study.

BIO 681 – Readings (1-6 hours)

Readings in an area of interest to the student. Prerequisite: graduate standing and consent of instructor.

BIO 683 – Research (1-6 hours)

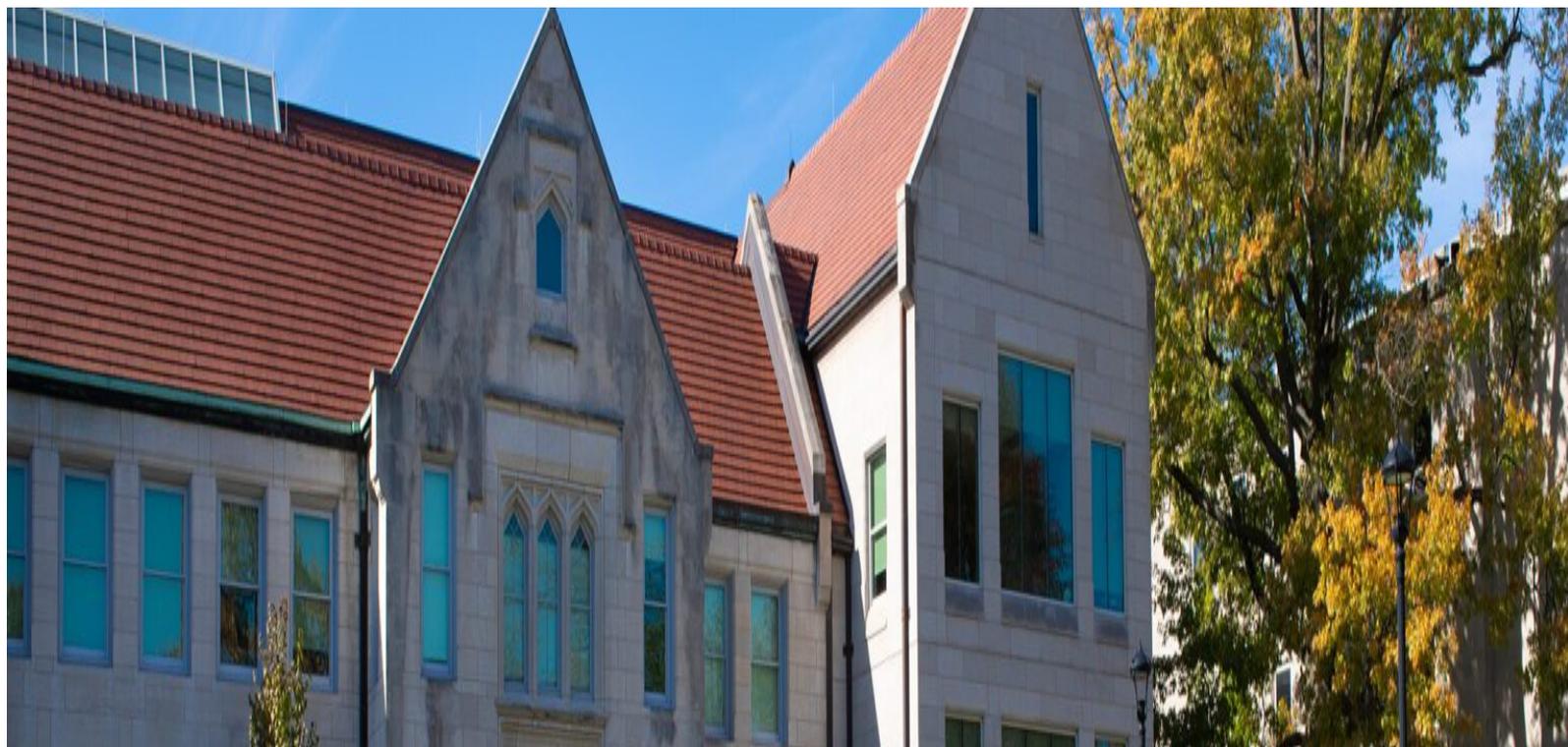
Research in an area of interest to the student. Prerequisite: graduate standing and consent of advisor.

BIO 699 – Thesis (0-6 hours)

Research and thesis preparation. Repeatable to a maximum of six hours of credit. Prerequisite: consent of program coordinator.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Chemistry and Biochemistry



Chemistry and Biochemistry

FACULTY Professors Andersh, Bosma, Campbell, Field (emeritus), Gayhart (emeritus), Glover (emeritus), McQuade, Remsen (emeritus); Associate Professors Flint, Fry, Schnupf, Sengupta; Assistant Professors Kregel; Lecturers: Moroz (emeritus), Montag; Lecturer in Residence Wentzel; Instructor in Residence: Bonich.

Chair: Fry

The Mund-Lagowski Department of Chemistry and Biochemistry faculty and students comprise a learning community dedicated to the study of science and the application of the scientific method, to solve problems from both theoretical and applied perspectives. Providing programs in a personal environment characteristic of a small college, in outstanding facilities with modern instrumentation akin to that of larger institutions affords the Department a unique stature in higher education. Our faculty is comprised of dedicated teachers who are professional chemists with active research programs. Our Chemistry major has received continuous certification by the Committee on Professional Training of the American Chemical Society since 1949.

Employers, graduate schools, and professional schools have recognized our graduates as having excellent problem-solving, critical-thinking, and communication skills, the ability to work in collaborative teams, and a broad understanding of chemistry's interdisciplinary nature. Our graduates are well prepared for careers in the chemical or educational professions, entrance into graduate programs in chemistry, biochemistry, or chemical engineering, or entrance into professional programs, including medical, dental, pharmacy, optometry, veterinary, business, or law.

Research is an integral part of the learning process and an important component of many careers in the discipline; as such, research skills are integrated into the curriculum and students are encouraged to begin independent studies early in their academic careers. Working alongside their faculty mentors, students use high-tech instrumentation to do relevant real-world research, sometimes in partnership with local laboratories or companies. Often, our students co-author scientific journal publications and present their work at national and regional conferences as well as during the Department's weekly seminar series.

Advanced Placement: Students earning a 5 on the Advanced Placement Examination will receive credit for CHM 110, 111, and 112. Those who earn a score of 4 will receive credit for CHM 110 and 111. Those who earn a score of 3 will receive credit for CHM 100 and 101.

Internal Transfer Students: Before declaring a major or minor in the Department, internal transfer students must have achieved a 2.25 overall grade point average and completed at least one course in the departmental common curriculum at Bradley, earning a C or better,

To prepare our majors to achieve their professional objectives, six curricular options leading to a Bachelor of Science or a Bachelor of Arts degree are available. The Department also offers a Minor in Chemistry and jointly sponsors a program in Medical Laboratory

Science with the Department of Biology and a program in Environmental Science—Chemistry with the Departments of Biology and Physics.

Departmental Major Requirements

All majors must meet the all-university degree requirements, departmental common curriculum requirements, and the required courses for their chosen major or concentration. Typical course sequencing schedules for departmental majors and concentrations may be found on the Department's website.

Chemistry and Biochemistry Common Curriculum Requirements

Students in all programs must successfully complete the Chemistry and Biochemistry Common Curriculum

Requirements:

- CHM 110 General Chemistry I – 3 hr.
- CHM 111 General Chemistry I Laboratory – 1 hr.
- CHM 114 Chemistry of the Elements – 1 hr.
- CHM 116 General Chemistry II – 3 hr.
- CHM 117 General Chemistry II Laboratory – 1 hr.
- CHM 252 Organic Chemistry I – 3 hr.
- CHM 253 Organic Chemistry Laboratory I – 2 hr.
- CHM 256 Organic Chemistry II – 3 hr.
- CHM 257 Organic Chemistry Laboratory II – 1 hr.
- CHM 320 Quantitative Analysis – 3 hr.
- CHM 321 Quantitative Analysis Laboratory – 1 hr.
- CHM 360 Biochemistry – 3 hr.
- CHM 380 Junior Seminar in Chemistry and Biochemistry – 1 hr.
- CHM 480 Senior Seminar in Chemistry and Biochemistry – 1 hr. or CHM 580 Literature Seminar – 1 hr.
- One semester of physical chemistry (see specific major or concentration requirements)
- BIO 151 – Molecules to Cells – 3 hr.
- Calculus (see specific major or concentration requirements)
- Physics (see specific major or concentration requirements)

A grade of C or higher must be earned in CHM 110, 111, 116, 117, 252, and 253 before continuing on to the next course in this sequence.

Biochemistry Major (BCM) – BS degree

This course of study is designed for students wishing to prepare for entrance into a graduate program, a career in biochemistry or a career in allopathic, osteopathic, or veterinary medicine. All students must complete the Chemistry and Biochemistry Common Curriculum Requirements and:

- CHM 361 Biochemistry Laboratory – 1 hr.
- CHM 470 or 570 Physical Chemistry I – 3 hr.
- BIO 152 Molecules to Cells Laboratory – 1 hr.
- BIO 310 Genetics – 3 hr.
- BIO 311 Genetics Laboratory – 1 hr.
- One year of college-level physics (PHY 110, 201, or PHY 107, 108)* – 8 hr.
- Two semesters of calculus (MTH 121, 122 or MTH 115, 116)* – 7-8 hr.
- 11-13 additional elective hours chosen from the lists below:
 - Biochemistry Elective 3 hours
 - CHM 462 or 562 Protein Structure and Function – 3 hr.
 - CHM 466 or 566 Intermediary Metabolism – 3 hr.
 - Chemistry Elective 5-6 hours
 - CHM 420 Instrumental Analysis (4 hr.) plus one CHM Lab elective *or*
 - CHM 436 Inorganic Chemistry (3 hr.) plus two CHM Lab elective options, one of which must be CHM 417/517 or CHM 499 (2 hr.)
 - CHM Lab elective options
 - CHM 412 or 512 – Molecular Modeling – 1 hr.
 - CHM 417 or 517 – Experimental Design Laboratory – 1 hr.
 - CHM 471 or CHM 571 Physical Chemistry Laboratory – 1 hr.
 - CHM 499 Directed Studies in Chemistry and Biochemistry – 2 hr.
 - Biology Electives: 3-4 hours
 - BIO 406 – General Microbiology – 4 hr.

- BIO 464 – Cell Biology – 4 hr.
- BIO 468 – Immunology of Host Defense – 3 – 4 hr.
- BIO 482 – Endocrinology – 3 hr.
- BIO 484 – Neurophysiology – 3 hr.

Total hours required for the BCM major: 65-68.

Chemistry Major – BS Degree

The specific courses and enrollment sequences taken are a function of the Chemistry Major Concentration selected. All students who are candidates for the B.S. degree in Chemistry must complete the requirements for one of the Chemistry Concentrations in addition to the Chemistry and Biochemistry Common Curriculum Requirements.

Chemistry-American Chemical Society Certified Concentration (CHM-C)

This concentration is designed for students wishing to attend graduate school in chemistry or who plan to seek immediate employment in chemistry or an allied field. Students who complete this concentration will receive an American Chemical Society Certified Degree. All students must complete the Chemistry and Biochemistry Common Curriculum Requirements, and:

- CHM 361 Biochemistry Laboratory – 1 hr.
- CHM 412 or 512 Molecular Modeling – 1 hr.
- CHM 420 or 520 Instrumental Analysis – 4 hr.
- CHM 436 or 536 Inorganic Chemistry – 3 hr.
- CHM 470 or 570 Physical Chemistry I – 3 hr.
- CHM 471 or 571 Physical Chemistry Laboratory – 1 hr.
- CHM 476 or 576 Physical Chemistry II – 3 hr.
- PHY 110 University Physics I – 4 hr.
- PHY 201 University Physics II – 4 hr.
- MTH 121 Calculus I – 4 hr.
- MTH 122 Calculus II – 4 hr.
- A minimum of six additional hours in chemistry numbered 299 or above, excluding CHM 302. At least three of the six credit hours must be selected from the list below:
 - CHM 299 Directed Studies in Chemistry and Biochemistry** – 1–4 hr.
 - CHM 417 Experimental Design Laboratory – 1 hr.
 - CHM 441 or 541 Materials Chemistry Laboratory – 1 hr.
 - CHM 499 Directed Studies in Chemistry and Biochemistry** – 1–4 hr.
 - Approved LAS 301 internship** – 1-3 hr.

**When LAS 301, CHM 299 or CHM 499 is used to complete this requirement, a well-written research paper that has been approved by the research advisor must be submitted to the department chair before study day of the final semester in residence.

Total hours required for the CHM-C concentration: 68.

Chemistry-Chemical Engineering Concentration (CHM-CE)

This concentration is designed for students wishing to attend graduate school in chemistry, chemical engineering, biochemical engineering, or biochemistry or who plan to seek immediate employment in chemistry or an allied field. All students must complete the Chemistry and Biochemistry Common Curriculum Requirements and:

- MTH 121 Calculus I – 4 hr.
- MTH 122 Calculus II – 4 hr.
- MTH 223 Calculus III – 4 hr.
- MTH 224 Differential Equations – 3 hr.
- PHY 110 University Physics I – 4 hr.
- PHY 201 University Physics II – 4 hr.
- CHE 301 Chemical Engineering Thermodynamics – 3 hr.
- CHE 302 Material and Energy Balances – 3 hr.
- CHE 321 Chemical Reaction Engineering – 3 hr.
- CHE 415 Transport Phenomena I – 3 hr.
- CHE 416 Transport Phenomena II – 3 hr.
- CHM 420 or 520 Instrumental Analysis – 4 hr.
- CHM 436 or 536 Inorganic Chemistry – 3 hr.
- CHM 470 or 570 – Physical Chemistry I – 3 hr.

- CHM 471 or 571 Physical Chemistry Laboratory – 1 hr.
- A minimum of 7 hours of electives selected from the list below.
 - CHM 361 Biochemistry Lab (1 hr)
 - CHM 416 or 516 Environmental Chemistry (3 hrs)
 - CHM 417 or 517 Experimental Design Laboratory (1 hr)
 - CHM 440 or 540 Materials Chemistry (3 hrs)
 - CHM 441 or 541 Materials Chemistry Lab (1 hr)
 - CHM 462 or 562 Proteins (3 hrs)
 - CHM 466 or 566 Metabolism (3 hrs)
 - CHM 476 or 576 Physical Chemistry II (3 hrs)
 - CHM 524 Analytical Separations (3 hrs)
 - CHM 558 Polymer Chemistry (1-3 hr)
 - M E 308 Thermodynamics of Fluid Flow (3 hrs)

Total hours required for the CHM-CE concentration: 86.

Students who complete the CHM-CE concentration are strongly encouraged to take an Economics course (ECO 100, 221, or 222) when fulfilling the Knowledge and Reasoning in the Social and Behavioral Sciences (SB) requirement in the BCC.

Chemistry-Pre-Health Professions Concentration (CHM-PM)

This concentration is designed to provide curricular flexibility to students who are interested in studying chemistry while preparing to attend medical (allopathic, osteopathic, or veterinary), pharmacy, optometry, or dental school. Students enrolled in this concentration will work closely with their departmental advisor and a University Health Professions Advisor to select elective courses that best meet their career objectives. All students must complete the Chemistry and Biochemistry Common Curriculum Requirements and:

- CHM 361 Biochemistry Laboratory – 1 hr.
- CHM 370 Principles of Physical Chemistry – 3 hr.
 - or CHM 470 Physical Chemistry I – 3 hr.
 - or CHM 570 Physical Chemistry I – 3 hr.
 - or CHM 476 Physical Chemistry II – 3 hr.
 - or CHM 576 Physical Chemistry II – 3 hr.
- CHM 436 or 536 Inorganic Chemistry- 3 hr.
- BIO 152 Molecules to Cells Laboratory – 1 hr.
- BIO 230 Human Anatomy and Physiology I – 3 hr.
- BIO 232 – Human Anatomy and Physiology II – 3 hr.
- One year of college-level physics (PHY 110, 201 or PHY 107, 108) – 8 hr.
- Two Semesters of calculus (MTH 121, 122 or MTH 115, 116) 7-8 hr.
- Statistics – 3 hr. (Options: MTH 111 Elementary Statistics, MTH 325 Probability and Statistics I, PSY 205 Quantitative Methods, or BIO 260 Biological Statistics I – 1 hr. and BIO 261 Biological Statistics II – 2 hr.)
- 19-20 additional elective hours with courses from each of the following Pools.
 - Elective Pool A (2 courses):
 - ECO 221 – Principles of Microeconomics – 3 hr. or ECO 222 Principles of Macroeconomics – 3 hr.
 - PSY 101 – Principles of Psychology – 3 hr.
 - SOC 100 – The Sociological Perspective – 3 hr.
 - Elective Pool B (1 course with lab)
 - BIO 310/311 – Genetics – 3 hr. and Genetics Lab – 1 hr.
 - BIO 406 – General Microbiology – 4 hr.
 - Elective Pool C (9-10 hours of additional CHM/BIO electives)
 - In partial fulfillment of this requirement, one of the following must be completed:
 - CHM 417 or 517 – Integrated Laboratory in Chemistry and Biochemistry – 1 hr.
 - CHM 420 or 520 – Instructional Analysis – 4 hr.
 - 2 hrs. of CHM 499 – Directed Studies in Chemistry and Biochemistry
 - The remaining hours can be additional CHM courses (numbered above CHM 301) or biology courses selected from the list below:
 - BIO 231 – Human Anatomy and Physiology Laboratory I – 1 hr.
 - BIO 233 – Human Anatomy and Physiology Laboratory II – 1 hr.
 - BIO 250 – Organismal Biology – 4 hr.
 - BIO 251 – Ecology, Evolution and Biodiversity – 3 hrs.
 - BIO 252 – Ecology, Evolution and Biodiversity – 1 hr.
 - BIO 310 – Genetics – 3 hr.
 - BIO 311 – Genetics Lab – 1 hr.
 - BIO 351 – Human Histology – 3 hr.

- BIO 406 – General Microbiology – 4 hr.
- BIO 408 – Bacterial Pathogenesis – 4 hr.
- BIO 464 – Cell Biology – 3-4 hr.
- BIO 468 – Immunology of Host Defense – 3-4 hr.
- BIO 482 – Endocrinology – 3 hr.
- BIO 484 – Neurophysiology – 3 hr.

Total hours required for the CHM-PM concentration: 81-83.

Chemistry High School Education (9-12) Concentration (CHM-T)

This concentration is designed to provide graduates with the education and training to teach chemistry at the secondary school level (grades 9-12). All students must complete the Chemistry and Biochemistry Common Curriculum Requirements and:

- The education requirements mandated by the Illinois State Board of Education. For more information, see Teacher Education – High School Education program in the College of Education and Health Sciences section of this catalog.
- BIO 152 – Molecules to Cells Laboratory- 1 hr.
- Two semesters of calculus (MTH 121, 122 or MTH 115, 116) 7-8 hr.
- One year of college-level physics (PHY 110, 201 or PHY 107, 108) – 8 hr.
- CHM 370 – Principles of Physical Chemistry I – 3 hr.
 - or CHM 470 – Physical Chemistry I – 3 hr.
 - or CHM 570 – Physical Chemistry I – 3 hr.
- CHM 471 or 571 Physical Chemistry Laboratory – 1 hr.
- Six additional hours, three from Category A and three from Category B, selected from the lists below:
 - **Category A**
 - CHM 416 or 516 Environmental Chemistry – 3 hr.
 - GES 101 Principles of Earth Science – 3 hr.
 - **Category B**
 - CHM 332 Descriptive Inorganic Chemistry – 3 hr.
 - CHM 420 or 520 Instrumental Analysis – 4 hr.
 - CHM 436 or 536 Inorganic Chemistry – 3 hr.
 - CHM 440 or 540 Materials Chemistry – 3 hr.
 - CHM 476 or 576 Physical Chemistry II – 3 hr.

Chemistry Major – BA Degree

This major is designed for students wishing to pursue a chemistry degree while providing the flexibility to pursue a second major or take more electives in another academic area. All students must complete the Chemistry and Biochemistry Common Curriculum Requirements, and:

- MTH 115 or 121 – Calculus – 4 hr.
- PHY 107 or 110 – Physics I – 4 hr.
- CHM 370 – Survey of Physical Chemistry – 3 hr.
- CHM 436 or 536 – Inorganic Chemistry – 3 hr.
- Seven hours of CHM Electives (numbered above CHM 301) with:
 - At least one course from:
 - CHM 361 Biochemistry Laboratory – 1 hr.
 - CHM 471 or 571 Physical Chemistry Laboratory – 1 hr.
 - At least one course from:
 - CHM 417 or 517 Experimental Design Laboratory – 1 hr.
 - CHM 420 or 520 Instrumental Analysis – 4 hr.
 - CHM 499 Research – 2 hr.

Total hours required for the CHM-BA major: 51

Chemistry Minor

As a natural science, chemistry is of fundamental importance to the understanding of many disciplines. Moreover, a minor in chemistry will enhance the preparation of other majors for entrance into careers in pharmaceutical sales, environmental studies, forensic science, health sciences, engineering, and the biological sciences. At least 8 hours of the departmental coursework required for the minor must be completed at Bradley and at least 6 hours of coursework must be unique from those used to fulfill requirements for other majors or concentrations.

The minor in chemistry consists of:

- CHM 110 General Chemistry I – 3 hrs.
- CHM 111 General Chemistry I Laboratory – 1 hr.
- CHM 114 Chemistry of the Elements – 1 hr.
- CHM 116 General Chemistry II – 3 hrs.
- CHM 117 General Chemistry II Laboratory – 1 hr.
- CHM 252 Organic Chemistry I – 3 hrs.
- CHM 253 Organic Chemistry Laboratory I – 2 hr.
- CHM 256 Organic Chemistry II 3 hr.
- CHM 257 Organic Chemistry Laboratory II – 1 hr.
- 6 credit hours of CHM courses numbered above 309 excluding CHM 380 and 480 (a maximum of 3 credit hour of CHM 499 may count toward the minor) – 6 hrs.

Total hours required for the minor: 24

Combined Undergraduate/Graduate Degree (4+1) Programs

The Department offers two combined Baccalaureate and Master's degree options, the B.S./M.S.-Chemistry and the B.S./M.S.-Biochemistry. These accelerated, research-intensive programs provide opportunities for students to earn both a B.S. and an M.S. degree in less time than traditionally required. B.S./M.S. graduates are very successful at finding immediate employment and have very high acceptance rates into Ph.D. or professional school programs.

Students may apply to the program after completing CHM 252. To be admitted, the student must have achieved an overall GPA of 2.50, an average GPA of 2.75 in chemistry courses, and a C or better in all chemistry, mathematics, biology, and physics courses. For both Chemistry and Biochemistry B.S./M.S. options, up to nine hours of graduate credit, taken prior to the completion of the bachelor's degree, can be counted toward both degrees.

Students are strongly encouraged to apply in their junior year, but applications from seniors who have significant research experience will also be considered. For further information, please contact the Department's graduate coordinator.

Student Organization

All students are encouraged to join the Chem Club, a Student Affiliate Chapter of the American Chemical Society. Based upon their many educational, service, and social activities, the Bradley chapter has been consistently ranked in the top tier of the approximately 900 chapters by the Society's Committee on Education. Chapter members perform chemical demonstrations at local elementary schools, judge science fairs, participate in Mole Day and National Chemistry Week, host invited lectures, and much more.

Internship And Co-Op Programs

Numerous opportunities exist in the greater Bradley area (e.g., at Caterpillar, Inc., the medical school, hospitals, USDA lab, crime lab, or environmental labs) for students to gain off-campus career-related work experiences. Students who participate in internships and co-ops typically begin their experience during their sophomore or junior year.

Study Abroad

Because advances in science are often made by international teams of individuals collaborating to reach a common goal, majors are encouraged to participate in a study abroad experience. In addition to the cultural and educational benefits, study abroad experiences will broaden the professional opportunities available to the student. The University's Study Abroad Office works in conjunction with the department in the placement of students. Majors who choose to study abroad generally do so during their junior year.

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Chemistry Courses



Chemistry Courses

CHM 100 – Fundamentals of General Chemistry (3 hours)

Gen. Ed. FS

Core Curr. NS

Introduction to fundamental chemical concepts, including measurements; basic inorganic nomenclature; atomic structure; nuclear chemistry; periodic properties; molecular structure and bonding; basic thermochemistry; types of reactions; stoichiometry; properties of gases, liquids, solids, and solutions; equilibria; acids and bases. May not be counted for credit in programs offered within the Department of Chemistry and Biochemistry; not open to students with credit in CHM 110. Prerequisite: Education majors, Engineering Technology majors, and allied health majors such as nursing and dietetics.

CHM 101 – Fundamentals of General Chemistry Lab (1 hour)

Gen. Ed. FS

Laboratory that reinforces and expands upon concepts covered in CHM 100. Topics include: measurements; stoichiometry; thermochemistry; molecular structure and bonding; properties of gases, liquids, solids, and solutions; acids and bases. Not open to students who are currently enrolled or have credit in CHM 111. Prerequisite: CHM 100 or concurrent enrollment.

CHM 102 – Chemistry and Civilization (3 hours)

Gen. Ed. TS

Core Curr. NS

A course for non-science majors that broadly surveys chemistry and its effects on civilization. May not be counted for credit in programs offered within the Department of Chemistry and Biochemistry.

CHM 104 – Essentials of General Chemistry (3 hours)

Core Curr. NS

This course is designed to prepare students for CHM 110 or to be utilized as a Bradley Core Curriculum course. Topics include: mathematical concepts used in General Chemistry; atomic structure; periodic properties; inorganic nomenclature; chemical reactions; stoichiometry; chemical bonding; basic thermochemistry. May not be counted for credit in programs offered within the Department of Chemistry and Biochemistry; not open to students with credit in CHM 110. Prerequisite: Biochemistry, Chemistry, Biology, Biomedical Science, Computer Science, Kinesiology and Health Science, Engineering, Environmental Science, Medical Laboratory Science major, or consent of instructor; mathematics placement exam score is sufficient for placement in MTH 109. Corequisite: MTH 109

CHM 110 – General Chemistry I (3 hours)

Gen. Ed. FS

Core Curr. NS

Course designed to provide chemical concepts for students majoring in the physical or biological sciences, engineering, or related disciplines. Topics include: measurements; basic inorganic nomenclature; atomic structure; stoichiometry; types of reactions;

thermochemistry; periodic properties; molecular structure and bonding; properties of gases, liquids, solids, and solutions; acids and bases. Prerequisite: The mathematics placement exam score is sufficient for placement into MTH 115.; high school chemistry or C or better in CHM 100 or CHM 104.

CHM 111 – General Chemistry I Lab (1 hour)

Gen. Ed. FS

Core Curr. NS

Laboratory that reinforces and expands upon concepts covered in CHM 110. Topics include: measurements; stoichiometry; spectrophotometry; thermochemistry; periodic properties; molecular structure and bonding; properties of gases, liquids, solids, and solutions; equilibria; acids and bases. Prerequisite: CHM 110 or concurrent enrollment.

CHM 112 – Engineering Chemistry (3 hours)

Gen. Ed. FS

Core Curr. NS

Continuation of CHM 110. For students majoring in engineering and related disciplines. Topics include: thermodynamics; equilibria; electrochemistry and corrosion; descriptive chemistry of metals and nonmetals; properties of metallic and silicon-based materials; organic and polymer chemistry; nuclear chemistry; environmental chemistry. Prerequisite: C or better in CHM 110.

CHM 114 – Chemistry of the Elements (1 hour)

Continuation of CHM 110. For students majoring in Chemistry and Biochemistry and related disciplines. Topics include the chemistry of solids, nonmetals, and metal-containing compounds. Prerequisite: C or better in CHM 110.

CHM 116 – General Chemistry II (3 hours)

Continuation of CHM 110. For students majoring in the physical or biological sciences and related disciplines. Topics include: acid-base equilibria; thermodynamics; electrochemistry; kinetics; nuclear chemistry; environmental chemistry. Prerequisite: C or better in CHM 110.

CHM 117 – General Chemistry II Laboratory (1 hour)

Laboratory that reinforces and expands upon concepts covered in CHM 116. Topics include: acid-base equilibria; spectrophotometry; complexation; electrochemistry; inorganic reaction chemistry. Prerequisite: C or better in CHM 111; CHM 116 or concurrent enrollment.

CHM 122 – Introduction to Medical Laboratory Science (1 hour)

Overview of the medical laboratory science profession, including classroom instruction to introduce students to the clinical areas of hematology, clinical chemistry, diagnostic microbiology, immunohematology, serology, and phlebotomy. Scope of practice, career opportunities, and current issues along with a tour of a large hospital laboratory will be included. Prerequisite: Medical Laboratory Science major, Biology major with Medical Technology concentration, or consent of program coordinator.

CHM 162 – Fundamentals of Organic and Biochemistry (3 hours)

Gen. Ed. FS

Structure and reactivity of organic compounds as related to biochemistry. Structure, function, and metabolism of carbohydrates, lipids, and proteins. May not be counted for credit in programs offered within the Department of Chemistry and Biochemistry. Not open to students with credit in CHM 150 and CHM 160 or with credit in CHM 360. Prerequisite: C or better in CHM 100, CHM 104, or CHM 110

CHM 163 – Fundamentals of Organic and Biochemistry Laboratory (1 hour)

Laboratory that reinforces and expands upon concepts covered in CHM 162. Introduction to synthesis, purification and identification of organic compounds. Basic analytical techniques for the characterization of biologically important compounds such as amino acids, proteins, enzymes, and lipids. May not be counted for credit in programs offered within the Department of Chemistry and Biochemistry. Not open to students who have credit in CHM 361. Prerequisite: CHM 162 or concurrent enrollment.

CHM 199 – Directed Studies in Chemistry and Biochemistry (0-3 hours)

Studies undertaken by first or second year students on a topic determined by the faculty member. Maximum of 3 hours per semester; repeatable for up to 6 hrs credit. Zero credit course graded Satisfactory/Unsatisfactory. Prerequisite: Consent of instructor

CHM 250 – Concepts in Organic Chemistry (3 hours)

A one-semester in-depth coverage of conformational analysis, stereochemistry, reaction mechanisms, and spectroscopy for students considering careers in health-related professions. Students may not receive credit for both CHM 250 and CHM 252. Prerequisite: CHM 116

CHM 252 – Organic Chemistry I (3 hours)

Systematic treatment of the structure, preparation, and properties of organic compounds, including the fundamental principles of stereochemistry and reaction mechanisms. Prerequisite: C or better in CHM 116 and CHM 117

CHM 253 – Organic Chemistry Laboratory I (2 hours)

Laboratory to accompany CHM 252 emphasizing the synthesis, purification, and identification of organic compounds. Prerequisite: Concurrent enrollment in CHM 252.

CHM 256 – Organic Chemistry II (3 hours)

Continuation of CHM 252. Prerequisite: C or better in CHM 252.

CHM 257 – Organic Chemistry Laboratory II (1 hour)

Laboratory to accompany CHM 256. Prerequisite: C or better in CHM 253 and concurrent enrollment in CHM 256.

CHM 283 – Laboratory Assistant (0 hours)**Core Curr. EL**

Working under the direct supervision of a faculty mentor, students who participate as laboratory assistants have the opportunity to gain experience in laboratory preparation, maintenance, and instruction. Course may be repeated; course graded. Satisfactory/Unsatisfactory. Prerequisite: CHM 110 and CHM 111.

CHM 299 – Directed Studies in Chemistry and Biochemistry (0-6 hours)**Core Curr. EL**

Studies undertaken by freshman or sophomore students under the guidance of faculty mentors. Maximum of 3 hours per semester; repeatable for up to 6 hrs credit. At the completion of the semester, students are required to submit a research report, describing the goals, methods, and results of the study. Zero credit course graded Satisfactory/Unsatisfactory. Prerequisite: C or better in CHM 110 and CHM 111; consent of instructor

CHM 301 – Societal Impacts of Chemistry (3 hours)**Core Curr. MI,NS**

A course for non-science majors surveying the impacts and benefits of chemistry and related sciences for human society and the environment. May not be counted for credit in programs offered within the Department of Chemistry and Biochemistry. Prerequisite: Junior Standing

CHM 302 – Medical Terminology (1 hour)

Terminology relevant to the medical and paramedical disciplines and interpreting typical medical reports. Prerequisite: CHM 116 or 162 and BIO 111 or 151

CHM 320 – Quantitative Analysis (3 hours)

Introduction to modern analytical chemistry involving aqueous equilibrium chemistry, UV-vis and atomic spectroscopy, electrochemistry and chromatography. Prerequisite: C or better in CHM 116 and CHM 117

CHM 321 – Quantitative Analysis Laboratory (1 hour)

Laboratory to accompany CHM 320 emphasizing aqueous equilibrium chemistry, spectroscopy, electrochemistry and chromatography. CoRequisite: CHM 320

CHM 332 – Descriptive Inorganic Chemistry (3 hours)

Preparation, properties, reactions and uses of the main group and transition elements and their compounds. Prerequisite: C or better in CHM 256 and CHM 320.

CHM 360 – Biochemistry (3 hours)

Survey of the structural and functional properties of the major classes of biological macromolecules (proteins, nucleic acids, carbohydrates and lipids) and their roles in biological systems. Topics include enzyme kinetics and mechanisms, selected metabolic pathways, and the role of nucleic acids in the flow of genetic information. Prerequisite: C or better in CHM 256; BIO 151 or BIO 111

CHM 361 – Biochemistry Laboratory (1 hour)**Core Curr. WI**

Techniques and methods of macromolecular purification and characterization; refining skills of record collecting, data analysis, and presentation of results in manuscript form. Prerequisite: C or better in CHM 253; CHM 360.

CHM 370 – Principles of Physical Chemistry (3 hours)

The course integrates fundamental concepts in thermodynamics, chemical kinetics, electrochemistry, quantum chemistry and molecular spectroscopy essential to understanding, explaining, predicting, and rationalizing the experimental behavior chemical/biochemical processes. Prerequisite: Grade of C or better in CHM 256, Grade of C or better in MTH 115 or MTH 121, Grade of C or better in PHY 107 or PHY 110

CHM 380 – Junior Seminar in Chemistry and Biochemistry (1 hour)

Students attend and write summaries of weekly seminars pertaining to all aspects of Chemistry. Course graded Satisfactory/Unsatisfactory. Prerequisite: CHM 256

CHM 400 – Chemical Topics (1-3 hours)

Topic stated in the current Schedule of Classes. Maximum of 3 credit hours per semester; may be repeated under different topics for a maximum of six credit hours. Cross-listed with CHM 500. Prerequisite: C or better in CHM 256

CHM 412 – Molecular Modeling (1 hour)

An introduction to computational chemistry with an emphasis on the structures and energies of organic systems. Cross listed with CHM 512. Prerequisite: C or better in CHM 256.

CHM 414 – Chemical Group Theory (1 hour)

Application of symmetry and group theory to chemical systems. Topics include point groups, character tables, spectroscopic selection rules, and molecular orbital theory. Cross listed with CHM 514. Prerequisite: C or better in CHM 256.

CHM 416 – Environmental Chemistry (3 hours)

Chemical principles applied to environmental topics such as air, water, soils, and conventional and hazardous wastes. Thermodynamic and kinetic principles, acid-base and redox chemistry, interfacial chemistry and analytical techniques. Cross-listed with CHM 516. Prerequisite: C or better in CHM 112 or CHM 116.

CHM 417 – Experimental Design Laboratory (1 hour)

Students will work under the guidance of the instructor to design and implement laboratory solutions to chemical problems. Students will analyze data, draw conclusions, and communicate the results in a written and/or oral report. Prerequisite: CHM 320 and CHM 321

CHM 420 – Instrumental Analysis (4 hours)

Theory and applications of qualitative and quantitative instrumental methods of chemical analysis. Includes laboratory; cross listed with CHM 520. Prerequisite: C or better in CHM 257, CHM 320 and CHM 321.

CHM 422 – Clinical Chemistry (2 hours)

Diagnostic laboratory testing methods in a variety of areas, including endocrinology, enzymes, acid-base balance, carbohydrates, and lipids. Cross listed with CHM 522. Prerequisite: CHM 256.

CHM 436 – Inorganic Chemistry (3 hours)

Theoretical and descriptive inorganic chemistry, including atomic structure, molecular structure, coordination chemistry, organometallic chemistry, and catalysis. Cross listed with CHM 536. Prerequisite: C or better in CHM 114 or concurrent enrollment; C or better in CHM 256.

CHM 440 – Materials Chemistry (3 hours)

Study of unit cells, band theory, and the structure, function, and characterization (diffraction, microscopy, and spectroscopy) of metals, polymers, glasses, concrete, ceramics, and biomaterials. Cross listed with CHM 540. Prerequisite: C or better in CHM 256 and CHM 257 or consent of instructor.

CHM 441 – Materials Chemistry Laboratory (1 hour)

Laboratory that reinforces and expands upon concepts covered in CHM 440. Emphasis on methods of fabrication and characterization of various types of materials. Cross listed with CHM 541. Prerequisite: C or better in CHM 440 or CHM 540 or concurrent enrollment.

CHM 462 – Protein Structure and Function (3 hours)

Investigation of the structure-function relationships of proteins, with emphasis on thermodynamics and kinetics. Topics include ligand binding, enzymatic catalysis, and the use of molecular visualization software. Cross listed with CHM 562. Prerequisite: C or better in CHM 360.

CHM 466 – Intermediary Metabolism (3 hours)

Study of the processes by which carbohydrates, lipids, proteins, and nucleic acids are synthesized, stored, or oxidized to generate biochemical energy and building blocks. Regulation of these processes will be examined. Cross listed with CHM 566. Prerequisite: C or better in CHM 360.

CHM 470 – Physical Chemistry I (3 hours)

Topics include kinetic molecular theory, thermodynamics, equilibrium, and kinetics. Cross listed with CHM 570. It is recommended that students take CHM 326 before taking this course. Prerequisite: Grade of C or better in: CHM 116 and CHM 256; MTH 116 or MTH 122; PHY 108 or PHY 201

CHM 471 – Physical Chemistry Laboratory (1 hour)

Core Curr. WI

Experimental and computational studies of the physical properties of matter. Cross listed with CHM 571. Prerequisite: C or better in CHM 370 or CHM 470, or concurrent enrollment in CHM 370 or CHM 470.

CHM 476 – Physical Chemistry II (3 hours)

Topics include quantum mechanics, spectroscopy, and statistical thermodynamics. Cross listed with CHM 576. It is recommended that students take CHM 326 before taking this course. Prerequisite: Grade of C or better in: CHM 116 and CHM 256; MTH 116 or MTH 122; PHY 108 or PHY 201

CHM 480 – Senior Seminar in Chemistry and Biochemistry (1 hour)

Each student presents a seminar under the supervision of a faculty member. Prerequisite: CHM 380

CHM 499 – Directed Studies in Chemistry and Biochemistry (0-3 hours)

Core Curr. EL

Studies undertaken by advanced students under the guidance of faculty mentors. Maximum of 3 hours per semester; repeatable for up to 6 hours credit. At the completion of the semester, students are required to submit a research report describing the goals, methods, and results of the study. Zero credit course graded Satisfactory/Unsatisfactory. Prerequisite: C or better in CHM 252 and CHM 253; consent of instructor

CHM 500 – Chemical Topics (1-3 hours)

Topic stated in the current Schedule of Classes. Maximum of 3 credit hours per semester; may be repeated under different topics for a maximum of six credit hours. Cross-listed with CHM 400. Prerequisite: C or better in CHM 256.

CHM 512 – Molecular Modeling (1 hour)

An introduction to computational chemistry with an emphasis on the structures and energies of organic systems. Cross listed with CHM 412. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 256.

CHM 514 – Chemical Group Theory (1 hour)

Application of symmetry and group theory to chemical systems. Topics include point groups, character tables, spectroscopic selection rules, and molecular orbital theory. Cross listed with CHM 414. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 256.

CHM 516 – Environmental Chemistry (3 hours)

Chemical principles applied to environmental topics such as air, water, soils, and conventional and hazardous wastes. Thermodynamic and kinetic principles, acid-base and redox chemistry, interfacial chemistry and analytical techniques are included. Cross-listed with CHM 416. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 112 or CHM 116.

CHM 520 – Instrumental Analysis (4 hours)

Theory and applications of qualitative and quantitative instrumental methods of chemical analysis. Includes laboratory. Cross listed with CHM 420. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 257 and CHM 320 and CHM 321.

CHM 522 – Clinical Chemistry (2 hours)

Diagnostic laboratory testing methods in a variety of areas, including endocrinology, enzymes, acid-base balance, carbohydrates, and lipids. Not open to students with credit in CHM 422. Prerequisite: CHM 162

CHM 524 – Fundamentals of Separation Science (3 hours)

The theory and practice of separation methods used in the analytical chemistry of chemical and biochemical systems are covered. Traditional separation methods such as extraction, precipitation, and crystallization are introduced. These techniques are compared and contrasted with chromatographic methods of separation that make up the bulk of the topics covered. Chromatographic theory and its practical application in the form of specific analytical separation methods are discussed. Prerequisite: CHM 320 or CHM 420 or CHM 470

CHM 526 – Advanced Analytical Chemistry (3 hours)

Instrumental analysis, including topics in spectroscopy, electrochemistry, chromatography, sampling, and statistics. Prerequisite: C or better in CHM 420 or CHM 520.

CHM 536 – Inorganic Chemistry (3 hours)

Theoretical and descriptive inorganic chemistry, including atomic structure, molecular structure, coordination chemistry, organometallic chemistry, and catalysis. Cross listed with CHM 436. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 114 or concurrent enrollment; C or better in CHM 256.

CHM 540 – Materials Chemistry (3 hours)

Study of unit cells, band theory, and the structure, function, and characterization (diffraction, microscopy, and spectroscopy) of metals, polymers, glasses, concrete, ceramics, and biomaterials. Cross listed with CHM 440. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 256 and CHM 257 or consent of instructor.

CHM 541 – Materials Chemistry Laboratory (1 hour)

Laboratory that reinforces and expands upon concepts covered in CHM 440/540. Emphasis on methods of fabrication and characterization of various types of materials. Cross listed with CHM 441. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 440 or CHM 540 or concurrent enrollment.

CHM 552 – Advanced Organic Chemistry (3 hours)

Topics include principles of physical organic chemistry, organometallic chemistry, and stereo- and regiochemical control in organic

synthesis. Prerequisite: CHM 256 and CHM 257.

CHM 558 – Topics in Organic Chemistry (1-6 hours)

Topic stated in the current Schedule of Classes. Maximum of 3 hours per semester; may be repeated under different topics for a maximum of six credits. Prerequisite: Consent of instructor.

CHM 560 – Principles of Biochemistry (3 hours)

Survey of the structural and functional properties of the major classes of biological macromolecules (proteins, nucleic acids, carbohydrates and lipids) and their roles in biological systems. Topics include enzyme kinetics and mechanisms, selected metabolic pathways, and the role of nucleic acids in the flow of genetic information. Prerequisite: Graduate standing and consent of instructor.

CHM 561 – Principles of Biochemistry Laboratory (1 hour)

Techniques and methods of macromolecular purification and characterization; refining skills of record collecting, data analysis, and presentation of results in manuscript form. Prerequisite: C or better in CHM 360 or CHM 560

CHM 562 – Protein Structure and Function (3 hours)

Investigation of the structure-function relationships of proteins, with emphasis on thermodynamics and kinetics. Topics include ligand binding, enzymatic catalysis, and the use of molecular visualization software. Cross listed with CHM 462. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 360 or equivalent.

CHM 564 – Biochemical Literature (1-2 hours)

Designed to foster students' ability to read and critically evaluate biochemistry papers from the primary literature. In addition, students will gain experience in giving oral presentations and writing critical summaries of the papers they present. Prerequisite: C or better in CHM 360 and consent of instructor.

CHM 566 – Intermediary Metabolism (3 hours)

Study of the processes by which carbohydrates, lipids, proteins, and nucleic acids are synthesized, stored, or oxidized to generate biochemical energy and building blocks. Regulation of these processes will be examined. Cross listed with CHM 466. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 360 or equivalent.

CHM 568 – Selected Topics in Biochemistry (1-3 hours)

Topic stated in the current Schedule of Classes. Maximum of 3 hours per semester; may be repeated under different topics for a maximum of six credits. Prerequisite: consent of instructor.

CHM 570 – Physical Chemistry I (3 hours)

Topics include kinetic molecular theory, thermodynamics, equilibrium, and kinetics. Students conduct independent projects. Cross listed with CHM 470. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Grade of C or better in: CHM 116 and CHM 256; MTH 116 or MTH 122; PHY 108 or PHY 201

CHM 571 – Physical Chemistry Laboratory (1 hour)

Experimental and computational studies of the physical properties of matter. Cross listed with CHM 471. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: C or better in CHM 470 or concurrent enrollment in CHM 570.

CHM 576 – Physical Chemistry II (3 hours)

Topics include quantum mechanics, spectroscopy, and statistical thermodynamics. Students conduct independent projects. Cross listed with CHM 476. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Grade of C or better in: CHM 116 and CHM 256; MTH 116 or MTH 122; PHY 108 or PHY 201

CHM 580 – Literature Seminar in Chemistry & Biochemistry (1 hour)

Each student presents a literature-based seminar under the supervision of a faculty member. Prerequisite: consent of instructor.

CHM 584 – Readings in Chemistry and Biochemistry (1-6 hours)

Directed reading for qualified students. Maximum of 3 hours per semester; repeatable for up to 6 hrs credit. Prerequisite: consent of instructor.

CHM 599 – Research (0-8 hours)

Core Curr. EL

Research in an area of interest to the student, repeatable for up to 8 hours credit. At the completion of the semester, students are required to submit a research report, describing the goals, methods, and results of the study. Zero-credit course graded. Satisfactory/Unsatisfactory.

CHM 686 – Literature Review (1 hour)

Each student will prepare a concise, up-to-date, well-written review paper and present a seminar to the Department on a literature topic that is chosen in consultation with the course instructor and the student's academic advisor. Prerequisite: Consent of instructor

CHM 697 – Research (0-10 hours)

Research in an area of chemistry or biochemistry of interest to the student, repeatable for up to 10 hours credit. At the completion of the semester, students are required to submit a research report, giving an update of the progress made in their research. Zero credit course graded Satisfactory/Unsatisfactory. Prerequisite: Consent of instructor

CHM 699 – Thesis (0-1 hours)

All MS students must write a thesis based on independent research and present a public seminar detailing the accomplishments of his/her thesis research. The final version of thesis must conform to the requirements outlined by the department and on the Graduate School website. Typically, students enroll in the course in the semester they intend to submit their thesis. Zero credit course graded Satisfactory/Unsatisfactory. Prerequisite: 6 hours of CHM 697 with grades of B or better.

CHE 301 – Chemical Engineering Thermodynamics (3 hours)

Review of classical engineering thermodynamics. Multicomponent systems & multicomponent phase equilibria. Equilibrium in chemically reacting systems, heterogeneous equilibrium, Gibbs phase rule Prerequisite: Minimum grade of C in CHM 110, 111; Minimum grade of C in PHY 201; Minimum grade of C in MTH 223.

CHE 302 – Material and Energy Balances (3 hours)

Material and energy balances applied to chemical systems. Introduction to chemical and physical properties. Prerequisite: Minimum grade of C in CHE 301 or ME 301

CHE 321 – Chemical Reaction Engineering (3 hours)

Kinetics of homogeneous single reactions. Ideal reactors: batch, stirred tank and plug flow systems. Conversion and yield in multiple reactions. Design and optimization of reactors. Non-isothermal reactors. Prerequisite: CHE 302 or ME 302 and CHM 250 or CHM 252 and CHM 253

CHE 415 – Transport Phenomena I (3 hours)

Energy, mass, and Momentum transport phenomena in chemical engineering. Fluid mechanics; laminar and turbulent flow; boundary layers; flow over immersed bodies. CoRequisite: CHE 321

CHE 416 – Transport Phenomena II (3 hours)

An extension and more in depth treatment of fluid mechanics, the three modes of heat transfer, and mass transfer, augmented by design applications. Emphasis is on development of analytical and specifically numerical skills needed for solving design problems involving mass, momentum, and heat transfer. Prerequisite: CHE 415 or ME 415

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Computer Science and Information Systems



Computer Science and Information Systems

FACULTY Professors Nikolopoulos Wang (Chair); Associate Professor Byerly, ; Assistant Professors Abdelfattah, Ali, Baniya, Hawkins, Khairunnesa, Li, Mahmud, Mandava, Yang; Lecturer Williams, Instructor Brennan; Assistant Professors in Residence Du, Grichnik

The department offers baccalaureate degree programs in computer science and in computer information systems, with concentrations available in a) computer game technology b) mobile computing, c) software, web, and computer security, and d) data science. Minors in computer science and information systems, data science, and computer game technology are also offered.

Computer science is the study of theoretical and algorithmic foundations used in computer systems. Students are trained to analyze requirements, design, develop, and test software systems, devise new innovations and applications in computing, and solve scientific, engineering, and business problems requiring computer applications.

Computer information systems is a discipline that focuses on information technology and its applications, i.e., on methods, technology, and tools to generate, process, modify, store, retrieve, and distribute information. Computer information systems has a wide variety of applications, but the mathematical requirements are not as rigorous as they are for computer science because there is less focus on theoretical and algorithmic foundations.

Both Computer Science and Computer Information Systems majors can take a number of elective courses, and they can specialize in a number of areas of computing including 1) software engineering, 2) intelligent systems, 3) database management systems, 4) computer systems and architecture, 5) net-centric computing, 6) Web technology, 7) computer game technology, 8) software, Web and computer security, 9) mobile computing, 10) theoretical computer science, and 11) emerging topics in computer science or computer information systems.

Computer science and computer information systems graduates are employed by a variety of industries and non-profit organizations as software engineers and/or developers, system administrators and/or developers, system analysts, network administrators, Web developers and/or technologists, software test engineers, and database administrators and/or developers.

For students not majoring in the department, we offer three minors which can be tailored to the individual's goals and needs.

Students intending to take only one course in the department should enroll in CS 100 if they desire a detailed treatment of a programming language, or CIS 300 if they desire a general discussion of computers and their impact on society.

Computer Science

The department has course offerings of sufficient breadth to allow specialization in a number of areas including software engineering, intelligent systems, database concepts, computer systems and architecture, net-centric computing, and Web development. Majors are

encouraged to choose an area of specialization based upon their career goals and to select electives, with guidance from their advisor, to support that choice. The general requirements for the computer science major are:

- Computer Science:
 - 45 semester hours including CS 101, CS 102, CS 140, CS 210, CS 215, CS 220, CS 321, CS 330, CS 370, CS 390, CS 480, CS 490, CS 491;
 - at least 24 semester hours must be 300 level or higher;
 - a grade of C or better is required in all computer science courses submitted in fulfillment of the major requirements.
- Mathematics and Science:
 - 12 semester hours of mathematics, including MTH 120, MTH 121, MTH 122, and one elective at the 200 level or higher;
 - MTH 325, or IME 311, or QM 262;
 - 8 semester hours of science: two courses, with laboratories, designated for science or engineering majors, selected from:
 - BIO 111+113, BIO 112+114, BIO 151+152, BIO 251+252, BIO 202
 - GES 101+102, GES 110+111
 - CHM 110+111, CHM 116+117
 - PHY 107, PHY 108, PHY 110, PHY 201

Computer Information Systems

The general requirements for the computer information systems major are:

- Computer Science and Computer Information Systems:
 - 45 semester hours including CS 101, CS 102, CS 140, CS 210, CS 220, CS 370, CIS 393, CS 480, CIS 430, CIS 445, CIS 475, and CIS 491.
 - Choose one course from the following list: MIS 379 or equivalent, CIS 415, CIS 435, CIS 495.
 - A grade of C or better is required in all computer information systems and computer science courses presented in fulfillment of the major requirements.
- Mathematics: MTH 120 and MTH 111; or equivalents. MTH 115 is recommended.
- Psychology: PSY 101 and PSY 320; or equivalents.
- Communication: COM 292 (recommended) or M L 354 or COM 300; or equivalents.
- English: ENG 305 or ENG 306, or equivalents.
- Management, Leadership, and Entrepreneurship: M L 350 and ENT 385 (recommended) or ENT 381 or ENT 280; or equivalents.

Concentrations

Computer Science and Computer Information Systems majors may also earn a concentration in one of the following areas: 1) Computer Game Technology, 2) Software, Web, and Computer Security, 3) Mobile Computing, or 4) Data Science.

Computer Game Technology Concentration – 12 hours

The Computer Game Technology concentration provides students with essential background, understanding, knowledge, and skills in the practice of computer game technology and software design and development. The concentration is comprised of 12 semester hours of study including 9 semester hours of required courses and 3 semester hours of elective courses as outlined below.

Required courses:

- CIS 350 Foundations of Game Programming – 3 hrs.
- CIS 450 Game Programming Design Patterns – 3 hrs.
- CIS 459 (or I M 459) Computer Game Capstone Project – 3 hrs.

Elective courses (choose one from the following) – 3 hrs.

- CIS 451 Computer Game Design or I M 288 Game Design I – 3 hrs
- I M 489 Advanced Game Capstone – 6 hrs.
- CIS 452 Computer Game Modification – 3 hrs.
- CIS 455 (or I M 455) Computer Graphics – 3 hrs.
- CIS 456 Game Engine Programming – 3 hrs.

Mobile Computing Concentration – 12 hours

The Mobile Computing concentration provides students with essential background, understanding, knowledge, and analytical and technical skills in advanced mobile technology and its applications in computer science, computer information systems, and the design and development of complex mobile software systems.

The concentration is comprised of 9 semester hours of required courses and 3 semester hours of elective semester hours of study as outlined below.

Required courses:

- CIS 433 Mobile and Wireless Networks – 3 hrs.
- CIS 446 Advanced Mobile Programming – 3 hrs.
- CS 493 Agile Software Development – 3 hrs.

Elective courses (choose one from the following):

- CIS 435 Computer Networks and System Security – 3 hrs.
- CIS 495 Software and Web Applications Security – 3 hrs.

Due to the fast-changing learning content in Mobile Computing, see the Department of Computer Science and Information Systems for possible additional elective courses in this area.

Software, Web, and Computer Security Concentration – 12 hours

The Software, Web, and Computer Security concentration provides students with essential background, understanding, knowledge, and skills in the practice of software, Web, computer networks and computer systems security technology, and secure software and Web applications design and development. The concentration is comprised of 12 required semester hours of study as outlined below.

Required courses:

- MIS 379 Information System Security, or equivalent – 3 hrs.
- CIS 415 Applied Cryptography – 3 hrs.
- CIS 435 Computer Networks and System Security – 3 hrs.
- CIS 495 Software and Web Applications Security – 3 hrs.

Data Science Concentration – 12 hours

The Data Science concentration provides students with the necessary skills to effectively use large data sets to solve problems and potentially find new insights. The concentration is comprised of 12 semester hours of study including 6 semester hours of required courses and 6 semester hours of elective courses as outlined below.

Required courses:

- CS 360 Fundamentals of Data Science- 3 hrs.
- CS 463 Knowledge Discovery and Data Mining – 3 hrs.

Elective courses (choose two out of the following three courses):

- CS 461 Artificial Intelligence – 3 hrs.
- CS 462 Machine Learning – 3 hrs.
- CS 472 Distributed Databases and Big Data – 3 hrs.

Computer Science And Information Systems Minor

The requirements for a minor in computer science and information systems are:

1. a total of 22 hours in computer science (CS) or computer information systems (CIS) courses, including CS 101, CS 102, CS 140, and CS 210 courses;
2. at least 9 of these hours must be in courses numbered 300 or above, excluding CIS 300 course.
3. MTH 120

Non-majors interested in the minor should consult the department and develop an individualized plan based on the student's area of interest.

Computer Game Technology Minor

The Computer Game Technology minor provides students with essential background, understanding, knowledge, and skills in the practice of computer game software design and development. The minor is comprised of 25 semester hours of study including 19 semester hours of required courses and 6 semester hours of elective courses as outlined below.

Required courses – 19 hrs.

- CS 101 Introduction to Programming or equivalent – 4 hrs.
- CS 102 Data Structures or equivalent – 3 hrs.
- CS 140 Advanced Programming Concepts and Languages or equivalent – 3 hrs.
- CIS 350 Foundations of Game Programming or I M 289 Game Production I or equivalent – 3 hrs.
- CIS 450 Game Programming Design Patterns – 3 hrs.
- CIS 459 Computer Game Capstone Project – 3 hrs.

Elective courses (choose two 3 hrs. courses or one 6 hrs. course) – 6 hrs.

- CIS 451 Computer Game Design or I M 288 Game Design I – 3 hrs.
- I M 489 Advanced Game Capstone – 6 hrs.
- CIS 452: Computer Game Modification – 3 hrs.
- CIS 455 (or I M 455) Computer Graphics – 3 hrs.
- CIS 456 Game Engine Programming – 3 hrs.

Data Science Minor

The Data Science minor provides students with the necessary skills to effectively use large data sets to solve problems and potentially find new insights. The minor is composed of courses covering the knowledge discovery process, i.e., students learn techniques on how to collect and understand data and its properties, such as quality and completeness, prepare data for analysis, and analyze data using models (specific machine learning and data mining algorithms or techniques) and visualize solutions. This minor, and the field of Data Science, is the confluence of several related computer science sub-disciplines, including Artificial Intelligence, Machine Learning, Databases and Information Retrieval, Statistics, and Operations Research. The minor is comprised of 25 to 26 semester hours of study as outlined below.

Required courses:

- CS 101 Introduction to Programming or equivalent – 4 hrs.
- CS 102 Data Structures or equivalent – 3 hrs.
- One three credit hour course in Statistics (Choose from: MTH 111, MTH 325, QM 262, PSY 205, ECE 302, IME 311, ENC 310, or equivalent), or two courses totaling 3 credit hours in Statistics (BIO 260 and BIO 261, or equivalent) – 3 hrs.
- One course in Discrete Math (MTH 120 or equivalent) or one course in Calculus (MTH 115 or MTH 121) – 3 or 4 hrs.
- CS 360 Fundamentals of Data Science – 3 hrs.

Electives:

- Three courses at the 300 level or above from a pool of Data Science related courses approved by the department, including CS 461, CS 462, CS 463, CS 370, CS 472, CIS 476.

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Computer Science Courses



Computer Science Courses

CS 100 – Introduction to Programming Concepts and Languages (3 hours)

Gen. Ed. FS

Core Curr. QR

An introduction to programming concepts and languages for non-Computer Science (CS) majors. Topics include the structure and design of algorithms, variables, constants, data types, arithmetic operations, selection and repetition structures, functions, input/output, arrays, structures, files, libraries. Students will design, write, test and run computer programs using a modern programming language as the development tool. Prerequisite: MTH 109 or the mathematics placement exam score is at least 61.

CS 101 – Introduction to Programming (4 hours)

Gen. Ed. FS

Core Curr. QR

Introduces the fundamental concepts of programming from an object-oriented perspective. Topics include simple data types, control structures (if-else loops, switch statements), introduction to array and string data structures, algorithms, debugging and testing techniques, and social implications of computing. The course emphasizes good software engineering principles and practices, breaking the programming process into analysis, design, implementation, and testing, with primary focus on implementation and development of fundamental programming skills. Prerequisite: MTH 109 or the mathematics placement exam score is at least 61

CS 102 – Data Structures (3 hours)

Introduction to concepts of object-oriented programming with review of control structures and data types and array processing. Introduction to the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Overview of programming principles, simple analysis of algorithms, searching and sorting techniques, and an introduction to software engineering issues. Prerequisite: A grade of C or better in CS 101.

CS 140 – Advanced Programming Concepts and Languages (3 hours)

Advanced programming concepts and languages appropriate to computer science and computer information systems. Topics include dynamic memory management, garbage collection, advanced object-oriented concepts, generic programming, exception handling, recursion, overloading. Prerequisite: A grade of C or better in CS 102

CS 141 – Introduction to Python Programming (3 hours)

An introduction to programming in Python for non-CS majors. Topics include basic conditional logic, string manipulation, functions, reading/writing with simple files and exceptions. Popular data structures like sets, tuples, lists and dictionaries will be covered. Packages like pandas and numpy will also be presented. Students will design, write, test and run computer programs using Python and within an integrated development environment.

CS 210 – Advanced Data Structures and Algorithms (3 hours)

Advanced topics in object-oriented programming with an emphasis on advanced data structures, algorithms, and software development. Prerequisite: A grade of C or better in CS 140 or equivalent; MTH 120 or equivalent.

CS 215 – Computability, Formal Languages, and Heuristics (3 hours)

Theory of computation and formal languages, grammars, computability, complexity, algorithms, heuristics, and foundations of intelligent systems. Prerequisite: CS 210 or CIS 210 or equivalents; MTH 122 or equivalent.

CS 220 – Computer Architecture (3 hours)

Basics of logic circuit design, modern processor architecture, and assembly language. Overview of principle issues of internal system architecture, including memory, buses, and peripherals. Prerequisite: CS 140 or equivalent.

CS 321 – Operating Systems (3 hours)

Fundamentals of operating systems concepts, design, and implementation. Topics include operating system components and structures, process and thread model, mutual exclusion and synchronization, scheduling algorithms, memory management, I/O controls, file systems, and security. Prerequisite: CS 220.

CS 330 – Net-Centric Computing (3 hours)

Fundamentals of data communications: data transmission, data encoding, digital data communication techniques, data link control, and multiplexing. The Web as a client-server system, building Web applications, network management and security, compression and decompression. Multimedia data technologies, wireless and mobile computing, and event-driven programming. Prerequisite: CS 210 or CIS 210 or equivalent.

CS 360 – Fundamentals of Data Science (3 hours)

Introduction to the knowledge acquisition and discovery process. Cleaning and analyzing data, building machine learning models, model validation and testing, and visualization. A number of machine learning algorithms are introduced such as regression, naive Bayes, decision trees, association rules, and clustering. Feature selection and transformation. Programming languages, popular in data science, such as Python are covered at an accelerated pace, as the course assumes as prerequisites two semesters of programming. Emphasis is on the use of such languages for data analysis and modeling. Prerequisite: CS 101 and CS 102 or equivalent; one semester of calculus; one semester of statistics. MTH 111 does not count as fulfilling the statistics requirement.

CS 370 – Database Management Systems (3 hours)

Relational database design, including entity relationship modeling and normalization. Structured query language (SQL) for creating and querying databases. Other topics include the theory of relational databases, including relational algebra, various loading and reporting utilities, and the implementation of database management systems, e.g. how query optimization works. Prerequisite: Junior Standing; CS 140 or CS 360 or equivalent; or consent of instructor.

CS 390 – Introduction to Software Engineering (3 hours)

Core Curr. EL,WI

Software life cycle and its phases, analysis, process models, design, human-computer interaction and graphic user interface development, testing, verification, validation, tools and applications, and evolution of software systems. Prerequisite: CS 210 or CIS 210 or equivalent.

CS 461 – Artificial Intelligence (3 hours)

Pattern recognition, search strategies, game playing, knowledge representation; logic programming, uncertainty, vision, natural language processing, robotics, programming in LISP and PROLOG. Advanced topics in artificial intelligence. Cross-listed with CS 561. Prerequisite: CS 210 or equivalent. Consent of instructor for all other.

CS 462 – Machine Learning (3 hours)

Machine learning and intelligent systems. Covers the major approaches to ML and IS building, including the logical (logic programming and fuzzy logic, covering ML algorithms), the biological (neural networks and deep learning, genetic algorithms), and the statistical (regression, Bayesian and belief networks, Markov models, decision trees and clustering) approaches. Students use ML to discover the knowledge base and then build complete, integrated, hybrid intelligent systems for solving problems in a variety of applications. Cross listed with CS 562. Prerequisite: CS 210; CS 360; a course in calculus-based statistics: for example, MTH 325 or IME 311 or equivalent or consent of instructor.

CS 463 – Knowledge Discovery and Data Mining (3 hours)

Brings together the latest research in statistics, databases, machine learning, and artificial intelligence that are part of the rapidly growing field of knowledge discovery and data mining. Topics covered include algorithms for the data cleansing and preprocessing phase (holes, outliers, attribute selection and transformation, etc.), selected supervised machine learning algorithms for modeling forecasting and classification, selected unsupervised machine learning algorithms, trend and deviation analysis, dependency modeling, integrated discovery and ensemble systems, meta-processing (boosting, stacking, etc.) and application case studies. Cross-listed with CS 563. Prerequisite: CS 210 or CS 360 or equivalent, and a calculus-based course in statistics, for example, IME 311 or MTH 325 or equivalent.

CS 472 – Distributed Databases and Big Data (3 hours)

Designing and building enterprise-wide data warehouses. Cover topics related to large, distributed databases, including designing

distributed databases and data, replicating data, concurrency. NoSQL, object-oriented, multimedia databases and their query languages. Next generation database systems, data warehousing, and OLAP. Applications using distributed databases like Hadoop and its associated machine learning libraries. Cross-listed with CS 572. Prerequisite: CS 370, CS 210 or CS 360 or equivalent.

CS 480 – Social and Professional Issues in Computing (2 hours)

Core Curr. WI

Introduction to the social and professional issues and practices that arise in the context of computing. Prerequisite: Reserved for CS/CIS majors and minors; Junior Standing; CS 101; or consent of instructor.

CS 481 – Professional Practicum in Computer Science (0-3 hours)

Special projects under staff supervision on professional practicum in computer science, with near-term economic benefit. Repeatable to a maximum of 3 credit hours. Prerequisite: CS or CIS junior or senior student in good standing; consent of department chair.

CS 490 – Capstone Project I (3 hours)

Core Curr. EL,WI

Applies the concepts and skills learned by undergraduate computer science majors at Bradley University. Students are required to work on a team on a significant software project. Prerequisite: Senior standing; CS 390 and CS 370 and CIS 393 recommended

CS 491 – Capstone Project II (3 hours)

Core Curr. EL

Applies the concepts and skills learned by undergraduate computer science majors at Bradley University. Students are required to work on a team on a significant software project. Prerequisite: CS 490.

CS 493 – Agile Software Development (3 hours)

Agile methodology, agile methods, and agile software engineering, including framework activities, SDLC models, requirements analysis, architectures, services, integrated development environments, testing, and quality issues. Cross listed with CS 593. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: CS 390 or equivalent; or consent of instructor.

CS 497 – Topics in Computer Science (3 hours)

Topics of special interest in computer science area which may vary each time course is offered. Repeatable under a different topic for a maximum of six semester hours. Prerequisite: Consent of instructor.

CS 498 – Directed Individual Studies in Computer Science (1-3 hours)

Individual study or research/development project under supervision of a CS&IS faculty member. May be repeated under a different topic once. Repeatable to a maximum of six semester hours. Prerequisite: Consent of instructor.

CS 502 – Advanced Programming (3 hours)

Introduces the fundamental concepts of programming from an object-oriented perspective with emphasis on advanced programming skills and good software development principles in a closed laboratory setting. Covers topics including object-oriented paradigm, design and programming, fundamental data structures and computing algorithms, and software development principles. If needed, course should be taken during first regular semester at Bradley. Credit for this course does not count towards graduation requirements in any graduate program within the Department of Computer Science and Information Systems. Prerequisite: Graduate standing in CS or CIS. Consent of graduate program coordinator; at least two semesters of programming experience.

CS 503 – Programming Methodology (3 hours)

Predicate calculus, Dijkstra's methodology of algorithm development. Algorithm development. Algorithmic language characteristics; syntax, semantics. Postconditions and preconditions. Verification of postcondition states satisfied by algorithmic programs executed from preconditions. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or a grade of C or better in both MTH 120 and CS 102.

CS 510 – Numerical Methods (3 hours)

Introduction to numerical and computational aspects of various mathematical topics: finite precision, solutions to nonlinear equations, and interpolation, approximation, linear systems of equations, and integration. Cross listed as MTH 510. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 101 and MTH 207 and MTH 223.

CS 511 – Numerical Methods II (3 hours)

Continuation of CS/MTH 510: further techniques of integration, ordinary differential equations, numerical linear algebra, nonlinear systems of equations, boundary value problems, and optimization. Cross listed as MTH 511. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS; or MTH 224 or MTH 345, and CS 510 or MTH 510.

CS 514 – Algorithms (3 hours)

Design and analysis of algorithms. Dynamic structures maintenance and hashing. Searching, sorting, and traversal. Time and space requirements; simplification; computational complexity; proof theory and testing; NP-hard and NP-complete problems. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 210 or CIS 210 or equivalent and one semester of statistics.

CS 516 – Programming Languages (3 hours)

Design concepts of high-level languages. Description languages; grammars and syntax; expressions and data structures; selection and control structures; constructs for input and output; subprograms and parameter communications. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 210 or CS 310 or equivalents.

CS 518 – Programming Language Translation (3 hours)

Overview of programming language translation with emphasis on modern compiler construction. Lexical analysis, parsing, syntax and semantic analysis, code generation, garbage collection, and optimization. Prerequisite: Grade of C or better in CS 210 or CIS 210 or equivalent.

CS 520 – Advanced Computer Architecture (3 hours)

Fundamental computer sub-systems: central processing unit; memory systems; control and input/output units. General purpose computing systems design. Examples from existing typical computers. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 220 or equivalent.

CS 531 – Web Development Technologies (3 hours)

Introduction to PERL/CGI, XHTML, XML, JavaScript and scripting languages. Web page design and layout. Client and server side development of web applications. Database connectivity, Java Database Connectivity (JDBC). Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 102 or equivalent.

CS 532 – Advanced Java Computing (3 hours)

Developing Web-based systems using J2EE Java technologies. Topics include Java Security, Java GUI development using IDE, Java Servlets and JavaServer Pages, Java Enterprise JavaBeans, XML and Java Web Services, and Java Transaction Service and Java Message Service. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 531 or equivalent.

CS 541 – Python Programming for Data Science (3 hours)

This course will cover programming constructs and features, data structures for data storage, such as sets, tuples, lists, dictionaries, trees and graphs, and algorithms for sorting, information retrieval from tree and graph data structures and search techniques such as binary tree search, depth and breadth depth first search of graphs. The programming language used is Python. Packages like pandas and numpy will also be presented. Assignments will focus on Python programming for natural language processing, machine learning, and data science applications. Students will design, write, test and run computer programs using Python and within an integrated development environment. Prerequisite: Graduate standing in Data Science and Analytics. Not for CS or CIS students. This course does not count towards graduation requirements for the MS degree in Computer Science or Computer Information Systems.

CS 560 – Fundamentals of Data Science (3 hours)

This course will combine two types of problem-solving: inferential thinking, and computational thinking applied to real-world problems. The course teaches critical concepts and skills in computer programming, at an accelerated pace, and an analysis of real-world datasets using statistical inference and a number of machine learning algorithms. The emphasis is on the use of tools and languages for data analysis and modeling. Prerequisite: Graduate students in Computer Science or Computer Information Systems or Data Science and Analytics, who have taken: one semester of calculus-based statistics (IME 511 or equivalent); two semesters of computer programming or CS 541 or CS 502.

CS 561 – Artificial Intelligence (3 hours)

Pattern recognition, search strategies, game playing, knowledge representation; logic programming, uncertainty, vision, natural language processing, robotics, programming in LISP and PROLOG. Advanced topics in artificial intelligence. Cross-listed with CS 461. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS. Consent of instructor for all other students with graduate standing.

CS 562 – Machine Learning (3 hours)

Machine learning and intelligent systems. Covers the major approaches to ML and IS building, including the logical (logic programming and fuzzy logic, covering ML algorithms), the biological (neural networks and deep learning, genetic algorithms), and the statistical (regression, Bayesian and belief networks, Markov models, decision trees and clustering) approaches. Students use ML to discover the knowledge base and then build complete, integrated, hybrid intelligent systems for solving problems in a variety of applications. Cross listed with CS 462. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate students in Computer Science or Computer Information Systems or Data Science and Analytics who have taken: CS 560 and two semesters of calculus.

CS 563 – Knowledge Discovery and Data Mining (3 hours)

Brings together the latest research in statistics, databases, machine learning, and artificial intelligence that are part of knowledge discovery and data mining. Topics include algorithms for the data cleansing and preprocessing phase, selected supervised machine learning algorithms for modeling forecasting and classification, selected unsupervised machine learning algorithms, trend and deviation analysis, dependency modeling, integrated discovery and ensemble systems, meta-processing (boosting, stacking, etc.) and application case studies. Cross-listed with CS 463. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate students in CS or CIS or

Data Science and Analytics who have taken one semester of calculus-based statistics, for example: IME 511 or equivalent.

CS 571 – Database Management Systems (3 hours)

Relational database design, including entity relationship modeling and normalization. Structured query language (SQL) for creating and querying databases. Other topics include the theory of relational databases, including relational algebra, various loading and reporting utilities, and the implementation of database management systems, e.g., how query optimization works. Cross-listed with CIS 571. Prerequisite: Graduate standing in CS or CIS or Data Science and Analytics who have taken CS 541 or two semesters of computer programming.

CS 572 – Distributed Databases and Big Data (3 hours)

Designing and building enterprise-wide data warehouses. Cover topics related to large, distributed databases, including designing distributed databases, replicating data, and concurrency. NoSQL, object-oriented, multimedia databases and their query languages. Next generation database systems, data warehousing, and OLAP. Applications using distributed databases like Hadoop and its associated machine learning libraries. Cross-listed with CS 472. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate students in CS or CIS or Data Science and Analytics who have taken: CS 571 and a calculus-based statistics course (for example, IME 511 or equivalent).

CS 590 – Fundamentals of Software Engineering (3 hours)

Software engineering: software product; prescriptive process models; system engineering; analysis modeling; design engineering; architectural design; user interface design; testing strategies and techniques; software systems' implementation; software systems' maintenance. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 390 or equivalent.

CS 591 – Software Project Management (3 hours)

Methods of PMBOK-based management of software systems design and development projects, including systems view, main project management process groups and knowledge areas, management plans, project metrics and estimates, tools for project management, project reports and documentation. Cross listed with CIS 491 and CIS 591 courses. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 390 or equivalent, or consent of instructor.

CS 592 – Requirements Development (3 hours)

Covers topics including basic concepts and principles of software requirements engineering, the requirements engineering process, requirements elicitation, requirements analysis, requirements specification, system modeling, requirements validation and requirements management, and techniques, methods, and tools for requirements engineering and software systems requirements modeling (including structured, object-oriented and formal approaches to requirements modeling and analysis). Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 210 or CIS 210 or equivalent, or consent of instructor.

CS 593 – Agile Software Development (3 hours)

Agile methodology, agile methods, and agile software engineering, including framework activities, SDLC models, requirements analysis, architectures, services, integrated development environments, testing, and quality issues. Cross listed with CS 493. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 390 or equivalent.

CS 594 – Capstone Project for Data Science (3 hours)

Applies the concepts and skills learned by Data Science and Analytics graduate students at Bradley University. Students are required to work on a team on a significant Data Science project. Prerequisite: Graduate Standing in Data Science and Analytics-Computational Data Science concentration (DSA-CD). Taken in the last semester of enrollment.

CS 612 – Automata, Computation and Complexity (3 hours)

Theory of formal languages and computability, Automata, Turing machines, grammars. Context free and context sensitive languages; parsing. Recursion theory; limits of effective computability, P and NP class of problems, NP-complete problems. Non Turing computable problems, reducibility, complexity. Prerequisite: Graduate standing in CS or CIS, or CS 502 or equivalent.

CS 614 – Parallel Algorithms (3 hours)

Parallel algorithms for multi-processor computer architectures: concurrent programming, SIMD and MIMD systems, and time complexity. Prerequisite: Graduate standing in CS or CIS, or CS 514 or equivalent.

CS 625 – Operating Systems Design (3 hours)

Advanced concepts in operating system design. Topics include process and thread management, virtual memory, interprocess communication, distributed systems, parallel and distributed file system designs, resource management, and security and protection. Prerequisite: Graduate standing in CS or CIS, or CS 321 or equivalent.

CS 635 – Data Communications and Networks (3 hours)

Fundamentals of data communication, computer network architectures and protocols, wireless networks, network programming, and network security. Emphasis on OSI, TCP/IP, ATM, and IEEE 802 LAN layered architectures, and TCP/IP network programming. Prerequisite: Graduate standing in CS or CIS, or CS 330 or equivalent.

CS 681 – Professional Practicum in Computer Science (0 hours)

Special projects under Smith Career Center supervision on student's professional practicum in corporate/business environment in computer science, with near-term economic benefit. Satisfactory/Unsatisfactory. Minimum of 5-10 hours per week required. Prerequisite: Graduate CS or CIS student in good standing; consent of department chair and graduate program director.

CS 690 – Advanced Topics in Software Engineering (3 hours)

Special software engineering research and development projects under staff supervision. Emphasis on a specific topic and emerging technologies in the software engineering area. Prerequisite: Graduate standing in CS or CIS, or CS 590 or CS 591 or equivalents, or consent of instructor.

CS 697 – Advanced Topics in Computer Science (3 hours)

Special projects under staff supervision on advanced problems in numerical or non-numerical branches of computer science. May be taken more than once under different topics for a maximum of 6 semester hours. Prerequisite: Consent of instructor.

CS 698 – Directed Individual Studies in Computer Science (1-3 hours)

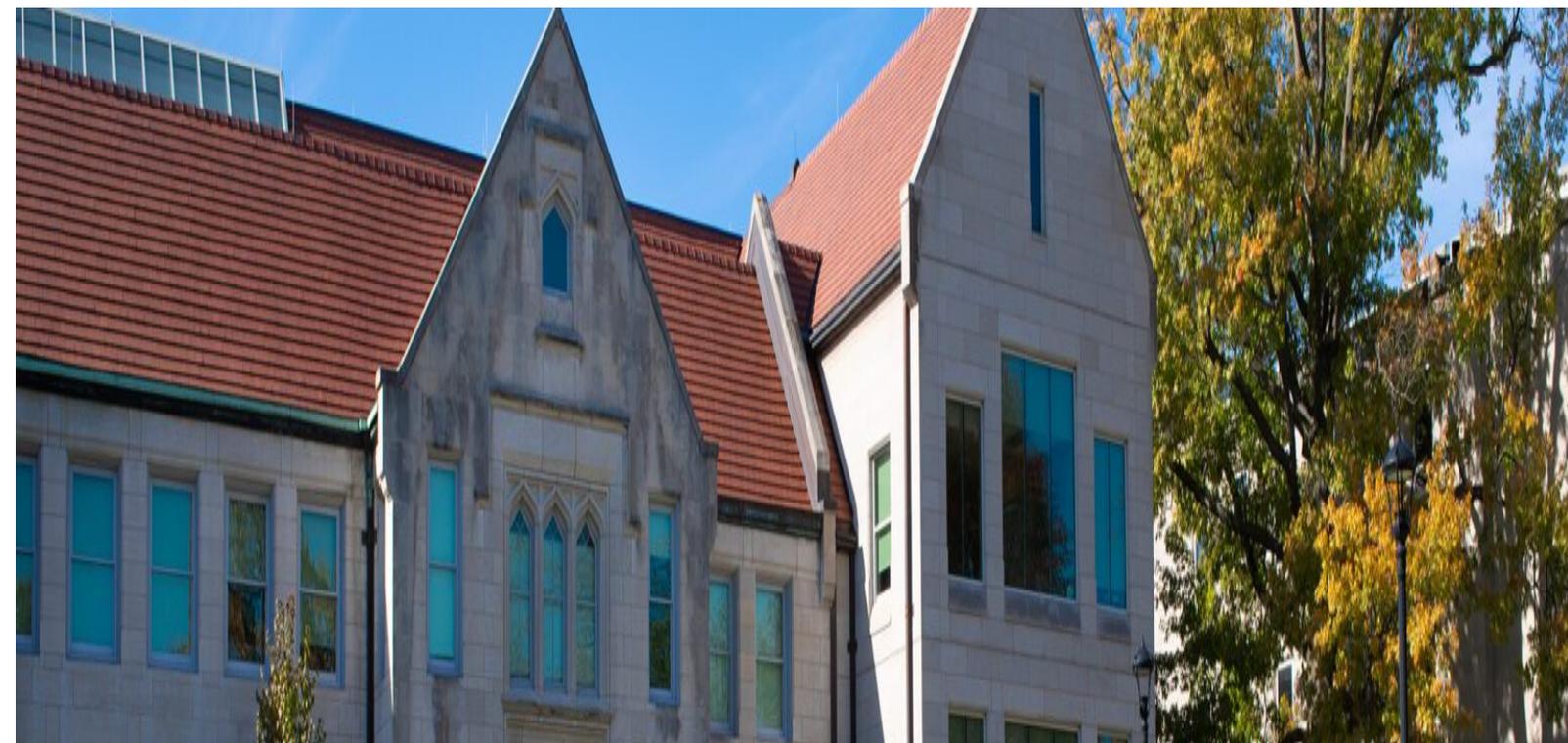
Individual study in an area of computer science relevant to the student's professional goals and not covered in a formal course offered by the department. May be repeated twice for a maximum of 6 credit hours. Prerequisite: Consent of instructor.

CS 699 – Thesis in Computer Science (0-6 hours)

For graduate students in Computer Science (CS) or Data Science and Analytics-Computational Data Science concentration (DSA-CD). Computer Science or Data Science research and thesis preparation. Required of candidates choosing the thesis option. Total of 6 semester hrs. to be taken in one or two semesters. Any semester after the six hours, the student must register for zero hours to maintain progress, after the thesis advisor's and department chair's approval. Prerequisite: Consent of department chair

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Computer Information Systems Courses



Computer Information Systems Courses

CIS 102 – Introduction to Computer Information Systems With Basic (3 hours)

Fundamental concepts of computer programming and design of algorithms. Problem solving using BASIC. Introduction to flow chart language and use of software packages. Functional limitations and capacities of computers.

CIS 210 – Applications of Data Structures & Algorithms (3 hours)

Builds on previous CS 101, CS 102, and CS 140 courses in programming and focuses on applications of data structures, graphs and trees, algorithms, proof techniques, problem solving strategies, and file structures in programming, software development, and computer information systems. Prerequisite: grade of C or better in both CS 102 and CS 140 or equivalents; MTH 120 or equivalent.

CIS 215 – Introduction to Scripting Languages (3 hours)

A non-technical introduction to the use of scripting languages in a web-based environment. An overview of current scripting languages such as Javascript, VBScript, and PERL. Prerequisite: CS 101

CIS 230 – Introduction to Computer Forensics (3 hours)

Provides an overview of computer forensics, investigation techniques, and relevant laws. Covers computer operating system architectures and disk structures and their relevance to computer forensics. Cross listed as CRM 230. Prerequisite: previous computer class or consent of instructor.

CIS 300 – Computers and Society (3 hours)

Gen. Ed. TS

Core Curr. GP GS

History of computers; their use, limitations, and impact on society; Internet and the World Wide Web; creation of Web content.

Prerequisite: Not eligible for CS or CIS majors; Reserved for non-CS/CIS majors/non-minors; Junior standing; or consent of instructor.

CIS 330 – Advanced Computer Forensics (3 hours)

Provides students an extensive look at computer forensics and formal techniques used in computer forensics in a lab environment.

Formal techniques for conducting a computer forensics investigation including record-keeping are covered. Students will conduct computer forensic exams and participate in practical computer forensic examination exercises. Cross listed as CRM 330. Prerequisite: CIS 230 or CRM 230.

CIS 350 – Foundations of Game Programming (3 hours)

Game development for programmers. Creating playable game prototypes with C# and the Unity game engine, from initial sketches and game design documents through implementation, player testing, and improvement based on testing. Topics covered include game design brainstorming, game design documents, version control with GitHub, player input and movement, physics forces, colliders, triggers, and spawning objects. Additional topics may include raycasts, executing methods over time, object-oriented programming with

C# and the Unity game engine, singletons, creating user-interfaces and menus, building 2D and 3D levels, gameplay balancing, and pathfinding. Prerequisite: CS 140 or consent of instructor

CIS 393 – Web Technologies & Systems (3 hours)

Introduction to Web technologies and systems. Emphasis on design, development, testing, implementation, and applications of Web-based systems and technologies including related software, data exchange protocols, interfaces, and tools. Prerequisite: CIS 210 or CS 210 or equivalent; or consent of instructor. CS 220 is strongly recommended.

CIS 415 – Applied Cryptography (3 hours)

Various concepts, algorithms, and systems in the area of applied cryptography. Topics include but are not limited to overview of classical cryptography, various types of cryptographic algorithms and systems, block ciphers, advanced encryption standards, key management, digital certificates, design and development of cryptographic applications. Cross-listed with CIS 515. Prerequisite: CS 210 or CIS 210 or equivalent; or consent of instructor.

CIS 430 – Information Technology Infrastructure (3 hours)

Enterprise information technology infrastructure including networking and telecommunications fundamentals, concepts, models, architectures, protocols, standards, communications, configuration, implementation, management, deployment software, firmware, hardware, distributed systems, file services, and software/hardware/network security issues. Cross-listed with CIS 530. Prerequisite: CS 220 or equivalent; or consent of instructor. CIS 393 is strongly recommended.

CIS 433 – Mobile and Wireless Networks (3 hours)

Fundamental concepts and technologies in mobile and wireless networks, medium access control, wireless LAN, PAN, and WAN, infrastructure-based mobile networks, ad hoc routing protocols, mobile transport layer, handoff in mobile and wireless networks, wireless application protocols, wireless sensor networks. Cross listed with CIS 533. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: CS 330 or CIS 430, or equivalents.

CIS 435 – Computer Networks and System Security (3 hours)

Principles, concepts, and fundamentals of computer networks and systems; and information technology infrastructure security, computer network authentication, authorization, access control, confidentiality, and data integrity. Topics of computer network security policy and management, data encryptions, protection against internal and external attacks, security evaluation and management will also be covered. Cross listed with CIS 535. Prerequisite: CS 220 or equivalent; or consent of instructor.

CIS 445 – Integrative Programming and Technology (3 hours)

Data mapping and exchange: metadata, XML, encoding schemes, data stream transformations, and data integration and exchange between computer systems. Integrative programming and technology: design patterns, interfaces, inheritance, reusability, and security practices. Computer information systems integration: architectures, socket programming, Web services, message and queuing services. Cross listed with CIS 545. Prerequisite: CS 220 or equivalent; or consent of instructor. CIS 393 is strongly recommended.

CIS 446 – Advanced Mobile Programming (3 hours)

Advanced programming concepts, languages and technology relevant to mobile software systems and mobile computing, including data structures, databases, file systems, objects, classes, I/O operations, SDKs, IDEs, services, networking and development of mobile software systems. Cross listed with CIS 546. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: CS 321 or CIS 445, or equivalents; or consent of instructor.

CIS 450 – Game Programming Design Patterns (3 hours)

Software design patterns and principles for game programming. Software design patterns are tried-and-true solutions to common object-oriented design problems. The goal of this course is to develop the skills to use design patterns effectively for game programming, guided by software design principles. Students will learn when and how to apply software design patterns through practice by designing and implementing game prototypes using Unified Modeling Language (UML) class diagrams and a game engine. Covered design patterns include Strategy, Observer, Decorator, Factory, Command, Template Method, State, Fa ade, Singleton, and Object Pooling. Cross-listed with CIS 550. Prerequisite: CIS 350 or I M 289 or consent of instructor

CIS 451 – Computer Game Design (3 hours)

Gameplay, storytelling, challenges, interface and information design, and world interaction. Construction of experiences, including rule design, play mechanics, game balancing, social game interaction, and the integration of interactive media. Playtesting and game design documentation. Cross listed with IM 451, CIS 551. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Junior standing; IM 113, IM 115, IM 285, and IM 260; or CS101, CS102, and CS140; or consent of instructor.

CIS 452 – Computer Game Modification (3 hours)

Software development and programming aspects of computer games, game engine modification, and virtual reality simulations, including event loops, execution threads, collision detection, multi-threading, performance analysis, multi-user games and networking. Cross listed with CIS 552, IM 452. Prerequisite: junior standing, CS 101, CS 102, CS 140; or consent of instructor.

CIS 453 – Concepting and Storytelling for Game Design (3 hours)

Process of narrative and interactive development. Students will work individually and in small groups learning how to write, pre-visualize, present, and produce their interactive experiences, narratives, and games. Cross listed with CIS 553. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Junior standing, or IM 113 and IM 115 and IM 160 and IM 285 and IM 260, or consent of instructor.

CIS 455 – Computer Graphics (3 hours)

Introduction to the theory and implementation of computer graphics with 2D and 3D applications in computer gaming, including 2D and 3D graphic primitives and objects, OpenGL, geometric transformations, image synthesis, rendering and lighting, and virtual environments. Cross listed with CIS 555, IM 455. Prerequisite: junior standing, CS 101, CS 102, CS 140; or consent of instructor.

CIS 456 – Game Engine Programming (3 hours)

Advanced techniques and technologies for programming computer game engines, multi-user games, virtual environments, and virtual reality simulations. Cross listed with CIS 556, IM 456. Prerequisite: junior standing, CIS 452, CIS 455; or consent of instructor.

CIS 457 – Digital Animation (3 hours)

A studio course exploring computer modeling and animation. Survey of the theory, history, and practice involved with creating quality modeling for print media, and also modeling and animation for time-based audio-visual media. Cross listed with CIS 557, IM 457. Prerequisite: junior standing, ART 105, ART 106, IM 285; or consent of instructor.

CIS 458 – Sound Design (3 hours)

Theoretical and practical sound design. Music composition, field sound recording, studio tracking, aesthetic analysis of music, electronic sound generation. Digital game technologies, 3D sound processing and generative audio structures. Mixing in non-linear environments and final mastering. Cross listed with CIS 558, IM 458. Prerequisite: junior standing, IM 113, IM 285; or consent of instructor.

CIS 459 – Computer Game Capstone Project (3 hours)**Core Curr. MI,EL**

Game development, including advanced game design, software development, and game production concepts. Integration of audio, visual, storytelling, programming, and design. Project builds within multi-disciplinary teams. Cross listed with CIS 559, IM 459. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Completion of all other coursework in game design minor or computer game technology minor; or completion of all other coursework in game design concentration or computer game technology concentration; or consent of instructor.

CIS 475 – Computer Information Systems Analysis. Design and Integration (3 hours)**Core Curr. EL,WI**

Computer information systems analysis, design and integration including enterprise computer information systems types and architecture models, sourcing, development methodologies and life cycle, requirements, analysis and design models, conceptual and logic data modeling, testing and quality assurance, validation and verification. Systems implementation, integration, deployment and maintenance, metrics and economics. Cross listed with CIS 575 course. Prerequisite: CIS 210 or CS 210 or equivalent; or consent of instructor.

CIS 476 – Data Management (3 hours)

A study of techniques and processes to help organize, access, protect, and analyze data. Describe data collection, storage, and retrieval methods. Explain data integration and interoperability, including data transfer and exchange standards. Understand why it is important to define policies and procedures for data governance, quality, standards, security, and privacy. Describe different strategies for data analysis. Topics include data warehousing, database registries, data mining, NoSQL, and other Data Science techniques. Cross-listed with CIS 576. Prerequisite: CS 210 or CS 360 or equivalent.

CIS 481 – Professional Practicum in Computer Information Systems (0-3 hours)

Special projects under staff supervision on professional practicum in computer information systems, with near-term economic benefit. Repeatable to a maximum of 3 credit hours. Prerequisite: CIS or CS junior or senior student in good standing; consent of department chair.

CIS 491 – Computer Information System Project Management (3 hours)**Core Curr. WI,EL**

Methods of PMBOK-based management of computer information software systems design and development projects, including systems view, main project management process groups and knowledge areas, management plans, project metrics and estimates, tools for project management, project reports and documentation. Cross listed with CS 591 and CIS 591 courses. Prerequisite: CIS 475 or CS 390; or consent of instructor.

CIS 495 – Software and Web Applications Security (3 hours)

Concepts, models, methods, technologies, and tools used to design, develop, test, implement, and maintain secure software and Web applications. Threats posed to software and Web applications, software security concepts and protection mechanisms, trust and threat

model, authentication and authorization, software risks assessment and management models, security management models for software and Web applications, secure programming and software development styles, tools to develop secure software and Web applications. Cross listed with CIS 595. Prerequisite: CS 390 or equivalent; or consent of instructor.

CIS 497 – Topics in Computer Information Systems (3-6 hours)

Topics of special interest in computer information systems area which may vary each time course is offered. Repeatable under a different topic for a maximum of six semester hours. Prerequisite: consent of instructor.

CIS 498 – Directed Individual Studies in Computer Information Systems (1-3 hours)

Individual study or research/development project under supervision of a CS/IS faculty member. May be repeated under a different topic once. Repeatable to a maximum of six semester hours. Prerequisite: Consent of instructor

CIS 515 – Applied Cryptography (3 hours)

Various concepts, algorithms, and systems in the area of applied cryptography. Topics include but are not limited to overview of classical cryptography, various types of cryptographic algorithms and systems, block ciphers, advanced encryption standards, key management, digital certificates, design and development of cryptographic computer and software applications. Cross listed with CIS 415. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 210 or equivalent, or consent of instructor.

CIS 530 – Information Technology Infrastructure (3 hours)

Enterprise information technology infrastructure including networking and telecommunications fundamentals, concepts, models, architectures, protocols, standards, communications, configuration, implementation, management, deployment software, firmware, hardware, distributed systems, file services, and software/hardware/network security issues. Cross listed with CIS 430. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 220 or equivalent, or consent of instructor. CIS 393 is strongly recommended.

CIS 533 – Mobile and Wireless Networks (3 hours)

Fundamental concepts and technologies in mobile and wireless networks, medium access control, wireless LAN, PAN, and WAN, infrastructure-based mobile networks, ad hoc routing protocols, mobile transport layer, handoff in mobile and wireless networks, wireless application protocols, wireless sensor networks. Cross listed with CIS 433. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 330 or CIS 530 or equivalents.

CIS 535 – Computer Networks and System Security (3 hours)

Principles, concepts, and fundamentals of computer networks and systems; and information technology infrastructure security, computer network authentication, authorization, access control, confidentiality, and data integrity. Topics of computer network security policy and management, data encryptions, protection against internal and external attacks, security evaluation and management will also be covered. Cross listed with CIS 435. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 220 or equivalent, or consent of instructor.

CIS 545 – Integrative Programming and Technology (3 hours)

Data mapping and exchange: metadata, XML, encoding schemes, data stream transformations, data integration and exchange between computer systems. Integrative programming and technology: design patterns, interfaces, inheritance, reusability, and security practices. Computer information systems integration: architectures, socket programming, Web services, and message and queuing services. Cross listed with CIS 445. For cross listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 220 or equivalent, or consent of instructor. CIS 393 or equivalent is strongly recommended.

CIS 546 – Advanced Mobile Programming (3 hours)

Advanced programming concepts, languages and technology relevant to mobile software systems and mobile computing, including data structures, databases, file systems, objects, classes, I/O operations, SDKs, IDEs, services, networking and development of mobile software systems. Cross listed with CIS 446. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 321 or CIS 545 or equivalents, or consent of instructor.

CIS 550 – Game Programming Design Patterns (3 hours)

Using design patterns effectively for game programming, guided by software design principles. Software design patterns are tried-and-true solutions to common object-oriented design problems. Students will learn when and how to apply software design patterns through practice by designing and implementing game prototypes using Unified Modeling Language (UML) class diagrams and a game engine. Covered design patterns include Strategy, Observer, Decorator, Factory, Command, Template Method, State, Facade, Singleton, and Object Pooling. Cross-listed with CIS 450. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: CIS 350 and graduate standing in CS or

CIS. Consent of instructor for all other students with graduate standing

CIS 551 – Computer Game Design (3 hours)

Gameplay, storytelling, challenges, interface and information design, and world interaction. Construction of experiences, including rule design, play mechanics, game balancing, social game interaction, and the integration of interactive media. Playtesting and game design documentation. Cross listed with CIS 451, IM 451. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or I M 113 and I M 115 and I M 285 and I M 260, or CS 101 and CS 102 and CS 140, or consent of instructor.

CIS 552 – Computer Game Modification (3 hours)

Software development and programming aspects of computer games, game engine modification, and virtual reality simulations, including event loops, execution threads, collision detection, multi-threading, performance analysis, multi-user games and networking. Cross listed with CIS 452, IM 452. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 101 and CS 102 and CS 140, or consent of instructor.

CIS 553 – Concepting and Storytelling (3 hours)

Process of narrative and interactive development. Students will work individually and in small groups learning how to write, pre-visualize, present, and produce their interactive experiences, narratives, and games. Cross listed with CIS 453. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or I M 113 and I M 115 and I M 160 and I M 285 and I M 260, or consent of instructor.

CIS 555 – Computer Graphics (3 hours)

Introduction to the theory and implementation of computer graphics with 2D and 3D applications in Computer Gaming, including 2D and 3D graphic primitives and objects, OpenGL, geometric transformations, image synthesis, rendering and lighting, and virtual environments. Cross listed with CIS 455, IM 455. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 101 and CS 102 and CS 140, or consent of instructor.

CIS 556 – Game Engine Programming (3 hours)

Advanced techniques and technologies for programming computer game engines, multi-user games, virtual environments, and virtual reality simulations. Cross listed with CIS 456, IM 456. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CIS 452 and CIS 455 or equivalents, or consent of instructor.

CIS 557 – Digital Animation (3 hours)

A studio course exploring computer modeling and animation. Survey of the theory, history, and practice involved with creating quality modeling for print media, and also modeling and animation for time-based audio-visual media. Cross listed with CIS 457, IM 457. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or ART 105 and ART 106 and IM 285, or consent of instructor.

CIS 558 – Sounds Design (3 hours)

Theoretical and practical sound design. Music composition, field sound recording, studio tracking, aesthetic analysis of music, electronic sound generation. Digital game technologies, 3D sound processing and generative audio structures. Mixing in non-linear environments and final mastering. Cross listed with CIS 458, I M 458. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or IM 113 and IM 285, or consent of instructor.

CIS 559 – Computer Game Capstone Project (3 hours)

Game development, including advanced game design, software development, and game production concepts. Integration of audio, visual, storytelling, programming, and design. Project builds within multi-disciplinary teams. Cross listed with CIS 459, IM 459. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or consent of instructor, or senior standing in CS or CIS and completion of all other coursework in game design minor or computer game technology minor, or senior standing in CS or CIS and completion of all other coursework in game design concentration or computer game technology concentration.

CIS 571 – Database Management Systems (3 hours)

Relational database design, including entity relationship modeling and normalization. Structured query language (SQL) for creating and querying databases. Other topics include the theory of relational databases, including relational algebra, various loading and reporting utilities, and the implementation of database management systems, e.g., how query optimization works. Prerequisite: Graduate standing in CIS; or consent from department chair.

CIS 572 – Computing Management: Systems, Technology, Services (3 hours)

Management of resources for computing; management of computer and information systems and technologies; planning for and management of computing services; operational considerations. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 310 or equivalent.

CIS 573 – Quality Management in Computing (3 hours)

Quality management topics relevant to advanced computing and software/hardware systems, including functional and structural quality, quality factors, McCall's triangle of quality, ISO standards, software quality assurance and management, COCOMO models, DFSS, CMMI, quality measurements and metrics. Cross listed with CIS 473. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CIS 430 and CS 390 or equivalents, or consent of instructor.

CIS 575 – Computer Information Systems Analysis, Design and Integration (3 hours)

Computer information systems analysis, design and integration including enterprise computer information systems types and architecture models, sourcing, development methodologies and life cycle, requirements, analysis and design models, conceptual and logic data modeling, testing and quality assurance, validation and verification. Systems implementation, integration, deployment and maintenance, metrics and economics. Cross listed with CIS 475 course. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 210 or CIS 210 or equivalent, or consent of instructor. CS 390 is recommended.

CIS 576 – Data Management (3 hours)

A study of techniques and processes to help organize, access, protect, and analyze data. Describe data collection, storage, and retrieval methods. Explain data integration and interoperability, including data transfer and exchange standards. Understand why it is important to define policies and procedures for data governance, quality, standards, security, and privacy. Describe different strategies for data analysis. Topics include data warehousing, database registries, data mining, NoSQL, and other Data Science techniques. Cross-listed with CIS 476. For cross-listed undergraduate/graduate courses, the graduate-level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, and CS 571 (recommended). Consent of instructor for all other students with graduate standing.

CIS 580 – Digital Society and Computer Law (3 hours)

Ethical considerations of computer scientists and computer-related security and privacy issues; copyright, patent, trademark, and trade secret issues, deceptive trade practices, computer crime, contract issues, venture capitalists, tax issues, computer torts, constitutional issues, and international trade considerations. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or one semester of computer programming or equivalent.

CIS 588 – Introduction to Expert Systems (3 hours)

Knowledge-based systems design and implementation; expert systems shells and programming environments; validation and implementation of expert systems; case studies/laboratories. Cross-listed as IME 568. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or two semesters of computer programming or equivalent and one semester of statistics, or consent of instructor.

CIS 591 – CIS and IT Project Management (3 hours)

Methods of PMBOK-based management of computer information systems and/or information technology design and development projects, including systems view, main project management process groups and knowledge areas, management plans, project metrics and esti Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 390 or equivalent; or consent of instructor.

CIS 595 – Software and Web Applications Security (3 hours)

Various security concepts, models, methods, technologies, and tools used to design, develop, test, implement, and maintain secure software and Web applications. Topics include but are not limited to threats posed to software and Web applications, software security concepts and protection mechanisms, trust and threat model, authentication and authorization, software risks assessment and management models, secure programming and software development styles and tools. Cross listed with CIS 495. For cross listed undergraduate/graduate courses, the graduate level course will have additional academic requirements beyond those of the undergraduate course. Prerequisite: Graduate standing in CS or CIS, or senior standing in CS or CIS, or CS 390 or equivalent, or consent of instructor.

CIS 607 – File Organization and Management (3 hours)

File organizations and access methods. Sort/merge operations; hashing schemes for storage and retrieval. Projects involve data validation; creation and updating of files; simulation and/or implementation of direct and indexed files. Prerequisite: Graduate standing in CS or CIS, or CS 102 or equivalent.

CIS 681 – Professional Practicum in Computer Information Systems (0 hours)

Special projects under Smith Career Center supervision on student's professional practicum in corporate/business environment in computer information systems and/or information technology, with near-term economic benefit. Satisfactory/Unsatisfactory. Minim Prerequisite: Graduate CIS or CS student in good standing; consent of department chair and graduate program director.

CIS 697 – Advanced Topics in Computer Information Systems (0-3 hours)

Special projects under staff supervision on advanced problems and emerging technologies in computer information systems. May be repeated under different topics for a maximum of 6 semester hours. Prerequisite: consent of instructor.

CIS 698 – Directed Individual Studies in Computer Information Systems (1-3 hours)

Individual study or research/development project in an area of computer information systems relevant to the student's professional goals and not covered in a formal course offered by the Department. May be repeated twice for a maximum of 6 credit hours. Prerequisite: Consent of instructor

CIS 699 – Thesis in Computer Information Systems (3 hours)

Computer information systems research and thesis preparation. Required of candidates choosing the thesis option. Repeatable to a maximum of 6 semester hours. Prerequisite: consent of department chair.

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Criminology



Criminology

FACULTY Williams (Director; Criminology), Cunningham (Criminology), Scott (History), Toxqui (History), Crawford (Sociology).

Criminology is an evolving, multidisciplinary social science which addresses the presence, causes, consequences, and prevention/control of crime in society. The Criminology program at Bradley represents a collaborative effort of the faculties of Criminology, History, Political Science, and Sociology. It is designed to foster active and critical engagement with theoretical, ethical, and practical concerns of crime and justice in human society, and to prepare students for a variety of career opportunities, as well as for graduate studies in criminology, criminal justice, law, and related fields.

Transfer Students

Transfer students who have earned the Associate of Arts degree in criminology will have fulfilled the designated CRM course work required for the degree.

Students who elect the academic exploration program or another major may change to Criminology if they have a cumulative GPA exceeding 2.0 and a GPA exceeding 2.0 in previously taken Criminology major requirements (see list).

Major Requirements (48 Hours)

Lower Division Courses (21 hours)

- CRM 110 Introduction to the Criminal Justice System – 3 hrs.
- CRM 225 Criminal Law – 3 hrs.
- CRM 250 Police Organization and Administration – 3 hrs.
- HIS 201 Violence, Crime, and Punishment in U.S. History – 3 hrs.
- PLS 105 Introduction to American Government – 3 hrs.
- PLS 202 State and Local Government – 3 hrs.
- SOC 100 The Sociological Perspective – 3 hrs.

Research Requirement (3 hours)

- PLS 209 Scope and Methods of Political Science **or**
SOC 240 Research Methods

Upper Division Courses (21 hours)

- HIS 309 History of U.S. Law Enforcement – 3 hrs.
- PLS 360 Judicial Politics- 3 hrs.
- PLS 419 Introduction to Public Administration
or PLS 420 Public Management – 3 hrs.
- SOC 330 Perspectives on Deviance – 3 hrs.
- **Two** of the following courses – 6 hours
 - SOC 331 Correctional Policies and Society
 - SOC 332 Juvenile Delinquency
 - SOC 333 Sociology of Violence
 - SOC 334 Crime and Society
 - approved SOC 390 courses.
- **One** of the following courses – 3 hours
 - SOC 302 The Sociology of Diversity
 - SOC 312 Social Inequality
 - SOC 313 Race, Ethnicity and Power
 - SOC 342 Social Policy

Internship Requirement (3 hours)

- PLS 480 Internship in Political Science or SOC 391/392 Internship in Applied Sociology

Strongly Recommended Electives (not required)*

- CRM 130 Introduction to Investigation
- CRM 230 Introduction to Computer Forensics
- CRM 330 Advanced Computer Forensics
- HIS 303 American Urban History
- PLS 440 Public Policy Analysis
- PLS 422 Urban Politics
- PLS 459 Constitutional Law
- PLS 460 Constitutional Law
- SOC 322 Self and Social Interaction
- SOC 340 Demography and Urban Studies

* Recommended electives also include any of the alternative courses noted above which were not taken as a requirement.

Please note: To graduate, CRM majors must have a cumulative GPA exceeding 2.0 for all courses numbered 200 or above in the CRM major requirement.

Minor In Criminology

The purpose of the minor in Criminology is to provide interested students the opportunity to pursue study of crime and justice in a way that supplements their major area(s) of study. A minimum of fifteen hours of coursework, at least nine of which must be at the 300-level or above, is required to complete the minor. No more than six credit hours of courses from a major course of study may be used to satisfy the requirements of the Criminology minor. Students must fulfill the following requirements:

1. CRM 110 Introduction to the Criminal Justice System – 3 hrs.
2. CRM 301 Theories of Crime and Justice – 3 hrs.
3. SOC 240 or PLS 209.

Note: This requirement may be waived for students who have taken HIS 350, SW 260, PSY 206, or similar research methods course in the social or behavioral sciences as part of their major area of study.

4. At least three (3) courses from the following:
CRM 380 (may be repeated under different topic for up to 6 hours of credit); CRM 401; HIS 309; SOC 331, 332, 333, 334 (Note: Other courses, selected in consultation with the Chair of Criminology, may be used to fulfill this requirement.)

FACULTY Williams (Director; Criminology), Curtis (Political Science), Scott (History), Toxqui (History), Zant (Sociology), Crawford (Sociology).

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Transfer Students

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Students who elect the academic exploration program or another major may change to Criminology if they have a cumulative GPA exceeding 2.0 and a GPA exceeding 2.0 in previously taken Criminology major requirements (see list).

Major Requirements (48 Hours)

Lower Division Courses (21 hours)

- CRM 110 Introduction to the Criminal Justice System – 3 hrs.
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- CRM 250 Police Organization and Administration – 3 hrs.
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- PLS 202 State and Local Government – 3 hrs.
- SOC 100 The Sociological Perspective – 3 hrs.

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- PLS 209 Scope and Methods of Political Science **or**
SOC 240 Research Methods

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- HIS 309 History of U.S. Law Enforcement – 3 hrs.
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or PLS 420 Public Management – 3 hrs.
- SOC 330 Perspectives on Deviance – 3 hrs.
- **Two** of the following courses – 6 hours
 - SOC 331 Correctional Policies and Society
 - SOC 332 Juvenile Delinquency
 - SOC 333 Sociology of Violence
 - SOC 334 Crime and Society
 - approved SOC 390 courses.
- **One** of the following courses – 3 hours
 - SOC 302 The Sociology of Diversity
 - SOC 312 Social Inequality
 - SOC 313 Race, Ethnicity and Power
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Internship Requirement (3 hours)

- PLS 480 Internship in Political Science **or** SOC 391/392 Internship in Applied Sociology

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- PLS 422 Urban Politics
- PLS 459 Constitutional Law
- PLS 460 Constitutional Law
- SOC 322 Self and Social Interaction
- SOC 340 Demography and Urban Studies

* Recommended electives also include any of the alternative courses noted above which were not taken as a requirement.

Please note: To graduate, CRM majors must have a cumulative GPA exceeding 2.0 for all courses numbered 200 or above in the CRM major requirement.

Minor In Criminology

The purpose of the minor in Criminology is to provide interested students the opportunity to pursue study of crime and justice in a way that supplements their major area(s) of study. A minimum of fifteen hours of coursework, at least nine of which must be at the 300-level or above, is required to complete the minor. No more than six credit hours of courses from a major course of study may be used to satisfy the requirements of the Criminology minor. Students must fulfill the following requirements:

1. CRM 110 Introduction to the Criminal Justice System – 3 hrs.
2. CRM 301 Theories of Crime and Justice – 3 hrs.
3. SOC 240 or PLS 209.

Note: This requirement may be waived for students who have taken HIS 350, SW 260, PSY 206, or similar research methods course in the social or behavioral sciences as part of their major area of study.

4. At least three (3) courses from the following:
CRM 380 (may be repeated under different topic for up to 6 hours of credit); CRM 401; HIS 309; SOC 331, 332, 333, 334 (Note: Other courses, selected in consultation with the Chair of Criminology, may be used to fulfill this requirement.)

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Criminology Courses



Criminology Courses

CRM 110 – Introduction to the Criminal Justice System (3 hours)

An introduction to the criminal justice systems in America, including policy making, law enforcement, prosecution, adjudication, and corrections. In addition to the institutions of the various systems, the major theoretical perspectives for explaining deviance and the societal response to deviance will be explored.

CRM 120 – Introduction to Criminology (3 hours)

This course provides an introduction to and overview of the field of criminology. Biological bases, psychological foundations, and sociological influences on crime and criminal offending will be examined, as well as data, trends, and research pertaining to crime types (e.g., crimes against the person, crimes against property, white collar and corporate crime). Links between theory and policy will be highlighted throughout the course. Prerequisite:

CRM 130 – Introduction to Investigations (3 hours)

An exploration of the principles of criminal investigation, including crime scene analysis, collection and analysis of physical evidence, the use of physical evidence in prosecution of crime, and the rules governing the introduction of physical evidence in court. Social and political issues affecting criminal investigations will also be covered.

CRM 225 – Criminal Law (3 hours)

An analysis of the history and development of the criminal law as a system of social control. Coverage includes the scope, purposes, and general principles of the criminal law as well as the elements of specific crimes. Prerequisite: CRM 110 OR CJS 110

CRM 230 – Introduction to Computer Forensics (3 hours)

Provides an overview of computer forensics, investigation techniques, and relevant laws. Covers computer operating system architectures and disk structures and their relevance to computer forensics. Cross listed as CIS 230. Prerequisite: Previous computer class or consent of instructor

CRM 250 – Police Organization and Administration (3 hours)

An introduction to the principles of organization and management of law enforcement bureaucracies, with an emphasis on the tasks faced by managers and the guiding principles used to complete these tasks. Students will consider the unique problems of managing a police bureaucracy in a democratic society. Prerequisite: CRM 110 OR CJS 110

CRM 301 – Theories of Crime and Justice (3 hours)

This course is designed to provide an introductory survey of theories of crime, law, and justice. Students will be introduced to the importance of theory in criminology and criminal justice, the philosophical foundations of criminological theory, historical developments in the field, as well as contemporary trends and issues. Prerequisite: CRM 110 OR CJS 110; junior or senior status; or consent of instructor

CRM 330 – Advanced Computer Forensics (3 hours)

Provides students an extensive look at computer forensics and formal techniques used in computer forensics in a lab environment. Formal techniques for conducting a computer forensics investigation including record-keeping are covered. Students will conduct computer forensic exams and participate in practical computer forensic examination exercises. Cross listed as CIS 330. Prerequisite: CIS 230 or CJS 230

CRM 360 – Drugs and Crime (3 hours)

Introduction to and overview of legal and illegal drugs, their use and abuse, and connection to crime and criminal justice. Particular attention is given to basic drug pharmacology, theories of drug use, the link between drugs and violence, the drug industry and law and policy pertaining to the control of drugs and drug use. Prerequisite: CRM 110 OR CJS 110; or consent of instructor

CRM 380 – Topics in Crime, Law, and Justice (3 hours)

This course challenges students to critically explore the empirical, theoretical, and/or applied elements of special topics and key issues within the study of crime, law, and justice. This course may be repeated under different topic for a maximum of 6 semester hours. Prerequisite: CRM 110 OR CJS 110; junior or senior status; or consent of instructor

CRM 401 – Ethics, Crime, and Criminal Justice (3 hours)

This course is designed to familiarize students with key theories, concepts, and principles in criminal justice ethics, their relevance for moral reasoning and decision-making, and their importance and practical value in everyday and professional contexts. Through this course students will be introduced to and asked to critically examine the relationship between ethics, crime, and criminal justice, several key challenges to ethical behavior, the ways in which morality has and does impact law and criminal justice policy, major models of ethical decision-making, and key variations of unethical behavior within police, courts, and corrections. Prerequisite: CRM 110 OR CJS 110; junior or senior status; or consent of instructor

CRM 480 – Directed Readings in Crime, Law, and Justice (1-3 hours)

Student-initiated, individualized readings and/or research to facilitate exploration or understanding of a criminological or criminal justice topic not sufficiently covered by or beyond the scope of formally developed coursework within the department. May be repeated for up to 6 hours of credit. Prerequisite: CRM 110 OR CJS 110; junior or senior status; or consent of instructor

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

English



English

FACULTY: Professors Katz, Murphy, Swafford, Vickroy, Worley; Associate Professors: Blouch, Glassmeyer, McBee-Orzulak, McQuerry, Newton, Palakeel, Prescott, Ullmann; Lecturers Bourhis, Dahlquist, Eggert; Lecturer-In-Residence Russell

Chair: Dahlquist

Associate Chair: Katz

Coordinator of Composition: Dahlquist

Coordinator of Creative Writing: Newton

Coordinator of English Education: McBee-Orzulak

Coordinator of Graduate Studies: Swafford

Coordinator of Undergraduate Studies: Palakeel

The Department of English offers a scholarly environment for writing and the study of literature. The department believes that this environment will enable students to become lifelong learners, responsible citizens, and successful professionals. The department is committed to

- developing students' skills for creative, academic, or professional purposes;
- strengthening students' critical thinking and research skills;
- increasing students' knowledge and appreciation of the literatures of diverse periods and cultures; and
- broadening students' understanding of and facility with language.

Students who major or minor in English develop their skills in preparation for careers in teaching, publishing, editing, marketing, advertising, industry, business, or service agencies; for such professional studies as law, library science, or medicine; or for graduate studies in literature, language, or creative writing.

English majors may also choose to complete a concentration in creative writing, literary studies, or professional writing.

The department also offers a major program in English Education (9-12).

The department offers minors in creative writing, literature, and professional writing.

English Major (B.A. Or B.S.)

General Requirements

English majors may earn either a B.A. or B.S. degree. English majors intending to pursue a graduate degree in English, however, are

urged to fulfill the B.A. requirements. For more on the B.A. and B.S. requirements at Bradley, please consult the “All-University Degree Requirements” section of this catalog.

In addition to fulfilling the requirements for a B.A. or B.S. degree, all English majors must complete a minimum of 36 hours in courses distributed according to the following requirements:

Requirement at the 100 level – 1 hr.

- ENG 181 Introduction to English Studies

Requirements at the 200 Level – 15 hrs.

- ENG 233 – American Literature to 1865
- ENG 235 – American Literature 1865 to Present
- ENG 237 – British Literature to 1800
- ENG 239 – British Literature 1800 to Present
- ENG 270 – Introduction to Literary Criticism and Theory

Requirements at the 300 Level – 9 hrs.

- ENG 347 – Shakespeare
- **One course in American Literature from the following list:**
 - ENG 329 – Studies in African American Literature
 - ENG 330 – Studies in Native American Literature
 - ENG 332 – Early American Literature
 - ENG 334 – 19th-Century American Literature
 - ENG 336 – 20th-Century American Literature
- **One course in British Literature from the following list:**
 - ENG 341 – Medieval English Literature
 - ENG 344 – Renaissance English Literature
 - ENG 358 – 18th-Century British Literature
 - ENG 361 – British Romantic Literature
 - ENG 363 – British Victorian Literature
 - ENG 364 – 20th-Century British Literature
 - ENG 365 – Irish Literatures

Requirements at the Senior Level – 2 hrs.

- ENG 481 – Senior Project

Elective Requirements:

If taken in addition to the required courses in the major and in addition to Bradley Core Curriculum requirements, the following courses are approved as English major electives.

Students select three of the following courses:

200-Level Course:

- ENG 207 – Introduction to Creative Writing

300-, 400-, and 500-Level Courses:

- *ENG 300 – Exposition
- *ENG 301 – Argumentative Writing
- *ENG 302 – Travel Writing
- *ENG 304 – Research in Individual Disciplines
- *ENG 305 – Technical Writing
- *ENG 306 – Business Writing
- ENG 307 – Intermediate Poetry Workshop
- ENG 308 – Intermediate Fiction Workshop
- ENG 310 – Readings for Writers

- ENG 311 – Introduction to Language
- ENG 312 – Grammar for Teaching
- ENG 313 – Grammar for Writing and Speaking
- ENG 320 – Young Adult Literature
- ENG 329 – Studies African American Literature
- ENG 330 – Studies Native American Literature
- ENG 331 – Studies in Women Writers
- ENG 332 – Early American Literature
- ENG 334 – 19th-Century American Literature
- ENG 336 – 20th-Century American Literature
- ENG 341 – Medieval English Literature
- ENG 344 – Renaissance English Literature
- ENG 358 – 18th-Century British Literature
- ENG 361 – British Romantic Literature
- ENG 363 – British Victorian Literature
- ENG 364 – 20th-Century British Literature
- ENG 365 – Irish Literatures
- ENG 368 – Science Fiction and Fantasy
- ENG 370 – Literary Criticism and Theory
- ENG 372 – Poetry as Genre
- ENG 373 – Fiction as Genre
- ENG 374 – Drama as Genre
- ENG 378 – Individual Authors
- ENG 380 – Topics in Language and Literature
- ENG 381 – Literatures of Asia
- ***ENG 385 – Literatures of Europe
- ENG 403 – Advanced Creative Nonfiction Workshop
- ENG 407 – Advanced Poetry Workshop
- ENG 408 – Advanced Fiction Workshop
- ENG 409 – Advanced Screenwriting Workshop
- ENG 492 – Practicum in English
- ENG 495 – Independent Study
- ENG 503 – Intensive Creative Nonfiction Workshop
- ENG 506 – Writing in the Professions
- ENG 507 – Intensive Poetry Workshop
- ENG 508 – Composing Hypertext
- ENG 509 – Intensive Screenwriting Workshop
- ENG 510 – Intensive Fiction Workshop
- ENG 550 – Language Theory
- ENG 560 – Writing Theory
- ENG 570 – Contemporary Literature Criticism
- ENG 580 – Methods Teaching Composition

*only if taken in addition to Core Curr. CM W2 requirement

***only if taken in addition to Core Curr. GP WC, HU requirement

Optional Concentrations

Creative Writing – 15 hrs.

The Creative Writing Concentration consists of 15 hours of workshops and courses adhering to these guidelines:

Required courses:

- ENG 207 – Introduction to Creative Writing
- ENG 310 – Readings for Creative Writers

Three writing workshops chosen from:

- ENG 307 -Intermediate Poetry Workshop
- ENG 308 -Intermediate Fiction Workshop
- ENG 403 – Advanced Creative Nonfiction Workshop
- ENG 407 – Advanced Poetry Workshop
- ENG 408 – Advanced Fiction Workshop

- ENG 409 – Advanced Screenwriting Workshop
- ENG 495 – Independent Study (creative writing projects only, with consent of department chair)
- ENG 503 – Intensive Creative Nonfiction Workshop
- ENG 507 – Intensive Poetry Workshop
- ENG 509 – Intensive Screenwriting Workshop
- ENG 510 – Intensive Fiction Workshop

(3 hrs. *must* be at the 400 level)

Literary Studies – 12 hrs.

A Literary Studies concentration consists of 12 hours:

- One genre course (ENG 320, ENG 368, ENG 372, ENG 373, ENG 374)
- One cultural literary studies course (ENG 329, ENG 330, ENG 331, ENG 365, ENG 381)
- Two additional courses at the 300-400 level (ENG 311, ENG 313, ENG 320, ENG 329, ENG 330, ENG 331, ENG 332, ENG 334, ENG 336, ENG 344, ENG 341, ENG 358, ENG 361, ENG 363, ENG 365, ENG 368, ENG 370, ENG 372, ENG 373, ENG 374, ENG 378, ENG 380, ENG 495 Independent Study (literature focus only, with consent of Chair).

Professional Writing Concentration – 12 hrs.

A Professional Writing Concentration consists of 12-hours. These must be selected from the following:

3 hours from:

- ENG 305 – Advanced Writing—Technical Writing
- ENG 306 – Advanced Writing—Business Communication

9 hours from:

- ENG 300 – Advanced Writing—Exposition
- ENG 301 – Advanced Writing—Argumentative Writing
- ENG 304 – Advanced Writing—Research in Individual Disciplines
- ENG 305 – Advanced Writing—Technical Writing
- ENG 306 – Advanced Writing—Business Communication
- ENG 311 – Introduction to Language
- ENG 313 – Grammar for Writing and Speaking
- ENG 492 – Practicum in English
- ENG 495 – Independent Study
- ENG 506 – Writing in the Professions
- ENG 508 – Composing Hypertext
- ENG 550 – Language Theory
- ENG 560 – Writing Theory

Note: ENG 492 and ENG 495 are available only by consent of the department chair and must focus on professional writing (e.g. grant writing, organizational formal reports, etc.)

Major Program In English Education (9-12) (B.A. Or B.S.)

All English Education (9-12) majors must fulfill B.A. or B.S. degree requirements. For more on the B.A. and B.S. requirements at Bradley, please consult the “All-University Degree Requirements” section of this catalog. In addition to fulfilling the requirements for a B.A. or B.S. degree, all English Education (9-12) majors must complete a minimum of forty hours in major courses:

Requirements at 100–200 level:

- ENG 180 – Intro to English Education
- ENG 233 – American Literature to 1865 or ENG 235 American Literature 1865 to Present
- ENG 237 – English Literature to 1800 or ENG 239 English Literature 1800 to Present
- ENG 270 – Introduction to Literary Criticism and Theory

Requirements at 300 level:

- ENG 311 – Introduction to Language
- ENG 312 – Grammar for Teaching

- ENG 320 – Young Adult Literature
- ENG 347 – Shakespeare
- ENG 391 – Methods of Teaching Writing
- ENG 392 – Methods of Teaching Reading and Literature

Requirement at 400 level:

- ENG 472 – Methods of Teaching Integrated Language Arts

English Secondary Education: English Electives (9 Hours)

Choose nine hours of additional English coursework (200-500 level). RESTRICTIONS APPLY:

- 200 LEVEL: No more than one 200 level course. ENG 233, 235, 237, 239, only in addition to other Major Requirements.
- 300+ LEVEL: Choose any 300-599 ENG courses offered by the department. ENG 300-306, ENG 312, ENG 313, ENG 381, or ENG 385 only if not counting for BCC Area of Inquiry Requirement or other Major Requirements, see your advisor

Required Gen. Ed. course in World Literature:

Choose one of the following – 3 hrs.

- ENG 123 – European Writers or
- ENG 140 Global Literatures or
- ENG 381 – Literatures of Asia or
- ENG 385 – Literatures of Europe

In addition to the requirements described above, to receive a secondary grades (9-12) teaching endorsement in the State of Illinois, students must also complete all the education requirements as mandated by the Illinois State Board of Education, which includes 41 hours of course work in the Teacher Education – High School Education program.

To meet the requirements of the Teacher Education – High School Education program, MTH 111 must be completed.

For more information, see Teacher Education – High School Education program in the College of Education and Health Sciences section of this catalog.

Minors In English

Minor in Creative Writing – 15 hrs.

Aimed at assisting students in becoming better writers, the Creative Writing minor provides a foundation for the study and practice of multiple genres in creative writing. Given our belief that good writers are also good readers, the minor is augmented by courses in aesthetic and literary study. These include a readings course offering writers unified study and practice in individual literary forms as well as broad literature surveys.

The Creative Writing Minor consists of 15 hours of workshops and courses adhering to these guidelines:

Required

- ENG 207 – Introduction to Creative Writing

Two* writing workshops chosen from:

- ENG 307 – Intermediate Poetry Workshop
- ENG 308 – Intermediate Fiction Workshop
- ENG 403 – Advanced Creative Nonfiction Workshop
- ENG 407 – Advanced Poetry Workshop
- ENG 408 – Advanced Fiction Workshop
- ENG 409 – Advanced Screenwriting Workshop
- ENG 495 – Independent Study (creative writing projects only, with consent of department chair)
- ENG 503 – Intensive Creative Nonfiction Workshop
- ENG 507 – Intensive Poetry Workshop
- ENG 509 – Intensive Screenwriting Workshop
- ENG 510 – Intensive Fiction Workshop

* 3 hrs. *must* be at the 400 level

Readings and Literature Courses (6 hrs.):

One course chosen from:

- ENG 233 – American Literature to 1865
- ENG 235 – American Literature 1865 to Present
- ENG 237 – British Literature to 1800
- ENG 239 – British Literature 1800 to Present
- ENG 320 – Young Adult Literature
- ENG 329 – Studies in African American Literature
- ENG 330 – Studies in Native American Literature
- ENG 331 – Studies in Women Writers
- ENG 332 – Early American Literature
- ENG 334 – 19th Century American Literature
- ENG 336 – 20th Century American Literature
- ENG 341 – Medieval English Literature
- ENG 344 – Renaissance English Literature
- ENG 347 – Shakespeare
- ENG 358 – 18th-Century British Literature
- ENG 361 – British Romantic Literature
- ENG 363 – British Victorian Literature
- ENG 364 – 20th Century British Literature
- ENG 365 – Irish Literatures
- ENG 368 – Science Fiction and Fantasy
- ENG 370 – Literary Criticism and Theory
- ENG 372 – Poetry As Genre
- ENG 373 – Fiction As Genre
- ENG 374 – Drama As Genre
- ENG 378 – Individual Authors
- ENG 380 – Topics in Language and Literature
- ENG 381 – Literatures of Asia
- ENG 495 – Independent Study (literature projects only, with consent of dept. chair)

Minor In Literature – 15 Hrs

The English minor in literature provides (1) a foundation in the historical study of literature and (2) an opportunity to construct an individual program in English, American, and other literatures, literary theory, and genre studies.

Required Courses – 9 hrs.

- ENG 233 – American Literature to 1865 **or** ENG 235 American Literature 1865 to Present
- ENG 237 – British Literature to 1800 **or** ENG 239 British Literature 1800 to Present
- ENG 270 – Introduction to Literary Criticism and Theory

Electives – 6 hrs.

Three courses from the following:

- ENG 320 – Young Adult Literature
- ENG 329 – Studies in African American Literature
- ENG 330 – Studies in Native American Literature
- ENG 331 – Studies in Women Writers
- ENG 332 – Early American Literature
- ENG 334 – 19th Century American Literature
- ENG 336 – 20th Century American Literature
- ENG 341 – Medieval English Literature
- ENG 344 – Renaissance English Literature
- ENG 347 – Shakespeare
- ENG 358 – 18th-Century British Literature
- ENG 361 – British Romantic Literature

- ENG 363 – British Victorian Literature
- ENG 364 – 20th Century British Literature
- ENG 365 – Irish Literatures
- ENG 368 – Science Fiction and Fantasy
- ENG 370 – Literary Criticism and Theory
- ENG 372 – Poetry As Genre
- ENG 373 – Fiction As Genre
- ENG 374 – Drama As Genre
- ENG 378 – Individual Authors
- ENG 380 – Topics in Language and Literature
- ENG 381 – Literatures of Asia
- ENG 495 – Independent Study (literature projects only, with consent of dept. chair)

Minor in Professional Writing – 15 hrs.

The Professional Writing minor is intended to help prepare students for writing-intensive employment in business, technical, and/or research-based enterprise.

Required course: 3 hrs.

- ENG 305 – Advanced Writing—Technical Writing **OR**
- ENG 306 – Advanced Writing—Business Communication

Four courses selected from the following categories: 12 hrs.

- ENG 207 – Creative Writing I
- ENG 300 – Advanced Writing-Exposition
- ENG 301 – Advanced Writing-Argumentative Writing
- ENG 302 – Advanced Writing—Travel Writing
- ENG 304 – Advanced Writing—Research in Individual Disciplines
- *ENG 305 – Advanced Writing—Technical Writing
- *ENG 306 – Advanced Writing—Business Communication
- ENG 311 – Introduction to Language
- ENG 313 – Grammar for Writing and Speaking
- **ENG 492 – Practicum in English
- **ENG 495 – Independent Study
- ENG 506 – Writing in the Professions
- ENG 508 – Composing Hypertext
- ENG 550 – Language Theory
- ENG 560 – Writing Theory

*ENG 305 or 306 count if not taken to fulfill the required foundational course.

**ENG 492 and 495 may be taken with the approval of the department chair. (Must focus on a professional writing project, e.g. grant writing, organizational formal reports, etc.)

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English Courses



English Courses

ENG 101 – English Composition (3 hours)

Gen. Ed. C1

Core Curr. CM W1

Principles of clear and effective writing; analysis of essays as models for writing. Required for all freshmen.

ENG 115 – Introduction to Literature (3 hours)

Gen. Ed. HL

Core Curr. HU

Elements, techniques, and forms of fiction, drama, and poetry.

ENG 123 – European Writers (3 hours)

Gen. Ed. HL

Core Curr. GP WC,HU

Study of the representation of human values in significant texts (in translation) by European writers.

ENG 124 – American Writers (3 hours)

Gen. Ed. HL

Core Curr. HU,WI

Representative works by significant writers from early periods to the present.

ENG 125 – Literatures of Identity (3 hours)

Core Curr. HU,MI

Literature about identity formation studied in a multidisciplinary context. Prerequisite:

ENG 127 – British Writers (3 hours)

Gen. Ed. HL

Core Curr. HU

Representative works by significant writers from the Middle Ages to the present.

ENG 129 – Introduction to African American Literature (3 hours)

Gen. Ed. HL

Core Curr. HU

Introduction to African American literature from the 1700's to the present.

ENG 130 – Introduction to Native American Literature (3 hours)

Gen. Ed. NW

Core Curr. GP WC,MI

Introduction to Native American literatures from oral storytelling traditions to contemporary genres.

ENG 140 – Global Literatures (3 hours)

Core Curr. MI,GP WC,HU

The study of representation of human values in literatures emerging from regions such as the Middle East, Africa, Asia, and Latin America.

ENG 180 – Introduction to English Education (2 hours)

Introduction to the curriculum, state and national standards, and professional expectations for English Education in secondary schools; registration open only to English Education majors or by consent of instructor.

ENG 181 – Introduction to English Studies (1 hour)

Introduction to the English major curriculum, professional expectations, curriculum planning (concentrations, minors, internships and practicum), and career exploration.

ENG 190 – Women in Literature (3 hours)

Gen. Ed. HL

Core Curr. HU,MI

Images of women as portrayed in literature. Readings selected from established classics, as well as more recent works by and about women. Women of diverse personalities meeting particular problems in particular environments and times. Prerequisite:

ENG 207 – Creative Writing I (3 hours)

Core Curr. WI

Introduction to imaginative writing. Writing and readings: fiction, poetry, plays. Prerequisite:

ENG 233 – American Literature to 1865 (3 hours)

Introduction to the aesthetic and cultural history and to significant texts.

ENG 235 – American Literature 1865 to Present (3 hours)

Introduction to the aesthetic and cultural history and to significant texts.

ENG 237 – British Literature to 1800 (3 hours)

Introduction to the aesthetic and cultural history and to significant texts.

ENG 239 – British Literature: 1800 to Present (3 hours)

Introduction to the aesthetic and cultural history and to significant texts.

ENG 239 – British Literature: 1800 to Present (3 hours)

Introduction to the aesthetic and cultural history and to significant texts.

ENG 239 – British Literature: 1800 to Present (3 hours)

Introduction to the aesthetic and cultural history and to significant texts.

ENG 270 – Introduction to Literary Criticism and Theory (3 hours)

Introduction to the study and practice of multiple methods of literary interpretation, criticism, and theory.

ENG 300 – Advanced Writing–Exposition (3 hours)

Gen. Ed. C2

Core Curr. CM W2

Intensive practice in major techniques of exposition. Practical writing situations. Prerequisite: ENG 101, or CIV 111 and 112

ENG 301 – Advanced Writing – Argumentative Writing (3 hours)

Gen. Ed. C2

Core Curr. CM W2

Trains ability to think critically and write persuasively; logical and emotional appeals in writing. Prerequisite: ENG 101, or CIV 111 and 112; junior standing

ENG 302 – Advanced Writing: Travel Writing (3 hours)

Core Curr. CM W2,EL

Intensive practice in travel writing techniques of narration, description, analysis, and evaluation. Prerequisite: ENG 101, or CIV 111-112; junior standing.

ENG 302 – Advanced Writing: Travel Writing (3 hours)

Core Curr. CM W2,EL

Intensive practice in travel writing techniques of narration, description, analysis, and evaluation. Prerequisite: ENG 101, or CIV 111-112;

junior standing.

ENG 302 – Advanced Writing: Travel Writing (3 hours)

Core Curr. CM W2,EL

Intensive practice in travel writing techniques of narration, description, analysis, and evaluation. Prerequisite: ENG 101, or CIV 111-112; junior standing.

ENG 304 – Advanced Writing—Research in Individual Discipline (3 hours)

Gen. Ed. C2

Core Curr. CM W2

Major research paper on a topic related to student's major. Training in a variety of writing techniques. Prerequisite: ENG 101, or CIV 111 and 112; junior standing

ENG 305 – Advanced Writing—Technical Writing (3 hours)

Gen. Ed. C2

Core Curr. CM W2

For engineering and science students: techniques of exposition and report writing. Prerequisite: ENG 101, or CIV 111 and 112; junior standing

ENG 306 – Advanced Writing—Business Communication (3 hours)

Gen. Ed. C2

Core Curr. CM W2

Principal types of business letters and reports. Prerequisite: ENG 101, or CIV 111 and 112; junior standing

ENG 307 – Intermediate Poetry Workshop (3 hours)

Intermediate-level study of the aesthetic theory and practice of writing poetry. Prerequisite: ENG 207 or consent of instructor.

ENG 308 – Intermediate Fiction Workshop (3 hours)

Intermediate-level study of the aesthetic theory and practice of writing fiction. Prerequisite: ENG 207 or consent of instructor

ENG 310 – Readings for Creative Writers (3 hours)

In-depth study of aesthetic foundations and specialized practices of literary forms such as poetry, fiction, non-fiction, and drama. Special emphasis given to the examination of texts from writerly perspectives. Prerequisite: ENG 207 or consent of instructor.

ENG 311 – Introduction to Language (3 hours)

Introduction to the study of language; its structure, acquisition, and function in society. Cross listed as WLL 311.

ENG 312 – Grammar for Teaching (3 hours)

Study of English grammatical structures. Applications of grammatical theory to written texts. Of particular value to elementary school teaching majors, middle school teaching majors, and high school English teaching majors.

ENG 313 – Grammar for Writing and Speaking (3 hours)

Study of theories of English grammar and their application to the analysis of real-world written and spoken language.

ENG 320 – Young Adult Literature (3 hours)

Intensive study and analysis of literature for young adults.

ENG 328 – Latinx Literature (3 hours)

Intensive study of Latinx Literature, and its themes, genres, and transformation in diasporic communities, to make distinctions and interconnections among diverse Latinx communities.

ENG 329 – African American Literature (3 hours)

Intensive study of selected literary works, authors, and movements in African American literature.

ENG 330 – Native American Literature (3 hours)

Intensive study of the diverse literatures of Native American peoples. Novels, short stories, poetry, literary criticism.

ENG 331 – Studies in Women Writers (3 hours)

Intensive study of literary and critical texts written by women.

ENG 332 – Early American Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 334 – 19th Century American Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 336 – 20th and 21st Century American Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 340 – Global British Literature (3 hours)

Core Curr. MI

Global British Literature combines readings and projects from literature, history, sociology and psychology to explore and explain the issues and consequences of English colonialism. Prerequisite: Jr standing or permission of instructor

ENG 341 – Medieval English Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 344 – Renaissance English Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 347 – Shakespeare (3 hours)

Core Curr. WI

Intensive study of selected plays and poetry of Shakespeare. Prerequisite: ENG 233, ENG 235, ENG 237, ENG 239, or THE 123

ENG 358 – 18th-Century British Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 361 – British Romantic Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 363 – British Victorian Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 364 – 20th and 21st Century British Literature (3 hours)

Intensive study of issues, movements, or themes characteristic of the period.

ENG 365 – Irish Literatures (3 hours)

Intensive study of issues, movements, or themes characteristic of Irish literatures.

ENG 368 – Science Fiction and Fantasy (3 hours)

Study of theories and significant examples of science fiction and fantasy.

ENG 370 – Literary Criticism and Theory (3 hours)

Survey of literary criticism and theory from classical Greece to the 20th century. Emphasis on development of philosophies of literature and literary criticisms and theories.

ENG 372 – Poetry As Genre (3 hours)

Study of theories and significant examples of poetry as genre.

ENG 373 – Fiction As Genre (3 hours)

Study of theories and significant examples of fiction as genre.

ENG 374 – Drama As Genre (3 hours)

Intensive study of movements, theories, and forms in the genre of drama.

ENG 378 – Individual Authors (3 hours)

Studies in the works of a selected author or authors. Course content of individual sections to be selected by instructor. May be repeated with a different author(s) for a maximum of nine hours, only six of which will count for English requirement.

ENG 380 – Topics in Language and Literature (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of 6 hours credit.

ENG 381 – Literatures of Asia (3 hours)

Gen. Ed. NW

Core Curr. GP WC WI,HU

Study of the cultural traditions of Asia through selected literary classics. Prerequisite: Junior Standing; or permission of instructor.

ENG 385 – Literatures of Europe (3 hours)

Gen. Ed. HL

Core Curr. GP WC,HU

Focuses on the cultural contexts of significant texts (read in translation) from Europe. Prerequisite: Junior Standing or permission of instructor

ENG 391 – Methods of Teaching Writing (3 hours)

Methods for incorporating composition and writing theory, research in writing pedagogy, and a range of writing tasks into middle and high school language arts curriculum; registration open only to English education and teacher education majors or by consent of instructor. Prerequisite: ENG 101 and ENG 180.

ENG 392 – Methods of Teaching Literature and Reading (3 hours)

Methods for incorporating literary theory, a range of literary texts, and research in reading and literary studies pedagogy into middle and high school language arts curriculum; registration open only to English education and teacher education majors or by consent of instructor. Prerequisite: ENG 180; ENG 233 or ENG 235; ENG 237 or ENG 239; ENG 270 or ENG 320; ETE 368; advancement to candidacy in teacher education.

ENG 403 – Advanced Creative Nonfiction Workshop (3 hours)

Craft and theory of creative nonfiction. Manuscript construction. Repeatable to a maximum of 6 hours. Prerequisite: ENG 207 or consent of instructor after submission of acceptable manuscript

ENG 407 – Advanced Poetry Workshop (3 hours)

Advanced study of the the aesthetic theory and practice of writing poetry. Individual projects. Emphasis on chapbook manuscript preparation. Repeatable to a maximum of 6 hours. Prerequisite: ENG 307 or ENG 308 or consent of instructor

ENG 408 – Advanced Fiction Workshop (3 hours)**Core Curr. WI**

Advanced study of the aesthetic theory and practice of writing fiction. Repeatable to a maximum of 6 hours. Prerequisite: ENG 308 or ENG 307 or consent of instructor.

ENG 409 – Advanced Screenwriting Workshop (3 hours)**Core Curr. WI**

Creative writing workshop in screenwriting taught by English faculty member in collaboration with professionals in the entertainment industry. Cross-listed with COM 409. Repeatable to a maximum of 6 hours. Prerequisite: ENG 207 and/or consent of instructor.

ENG 472 – Methods of Teaching Integrated Language Arts (3 hours)

Study of the inter-relationships among writing, reading and interpreting texts, speaking, listening, speech, and technology for diverse student populations and diverse professional contexts in middle and high school language arts instruction; registration open only to English education and teacher education majors or by consent of instructor. Prerequisite: ENG 391, ENG 392, COM 103; advancement to candidacy in teacher education.

ENG 481 – Senior Project (2 hours)

Systematic practice in research methods and development, production, and presentation of an individual project focused on students' career goals. Cannot be taken in addition to ENG 480. Prerequisite: Senior standing.

ENG 492 – Practicum/Internship in English (0-6 hours)**Core Curr. EL**

Supervised writing projects in conjunction with student service, volunteer, or work activities. Pass/Fail. May be repeated for a maximum of 6 hours credit (only 3 credit hours may be used towards the English Major requirements). Prerequisite: Completion of junior-level composition requirement; consent of Department Chair.

ENG 495 – Independent Study (1-3 hours)

Independent study and research in a specific field of English language or phase of literary production. May be repeated for a maximum of 6 hrs. credit. Prerequisite: consent of Department Chair.

ENG 500 – Theory and Practice of English (3 hours)

Overview of the practices, theories, and history of the field of English and an introduction to the Bradley program. Required of all graduate students in English. Must be taken in the first nine hours.

ENG 503 – Intensive Creative Nonfiction Workshop (3 hours)

Craft and theory of writing creative nonfiction. Manuscript construction. Repeatable to a maximum of 6 hours. Prerequisite: ENG 403 or consent of instructor after submission of acceptable manuscript

ENG 506 – Writing in the Professions (3 hours)

Study and practice of the writing conventions and rhetorical characteristics of individual professions.

ENG 507 – Intensive Poetry Workshop (3 hours)

Craft and theory of writing poetry. Manuscript construction. Course repeatable to a maximum of 6 hours. Prerequisite: Open to graduate students by consent of instructor. Open to undergraduate students with credit for ENG 407 or consent of instructor

ENG 508 – Intensive Fiction Workshop (3 hours)

Craft and theory of writing fiction. Manuscript construction. Repeatable to a maximum of 6 hours. Prerequisite: Open to graduate

students by consent of instructor. Open to undergraduate students with credit for ENG 408 or consent of instructor

ENG 509 – Intensive Screenwriting Workshop (3 hours)

Creative writing workshop in screenwriting taught by English faculty member in collaboration with professionals in the entertainment industry. Manuscript construction. Repeatable to a maximum of 6 hours. Prerequisite: Open to graduate students by consent of instructor. Open to undergraduate students with credit for ENG 307 or ENG 308 or consent of instructor

ENG 540 – Genres (3 hours)

Study of a single genre: fiction, prose, poetry, drama, or an emerging genre, or the impact of new modalities on a literary genre. May be repeated under a different genre for a maximum of six hours credit.

ENG 550 – Language Theory (3 hours)

Study of the relationships between language and writing, thinking, and society. Prerequisite: senior or graduate standing.

ENG 560 – Writing Theory (3 hours)

Theoretical approaches to the study of writing. Prerequisite: senior or graduate standing.

ENG 570 – Contemporary Literary Criticism (3 hours)

Advanced study of contemporary critical approaches to literature, including, but not limited to, feminism, semiotics, cultural criticism, poststructuralism. Study of the critical theories and applications of the criticisms to literary texts.

ENG 580 – Theories and Methods of Teaching Composition (3 hours)

Theoretical and pedagogical issues and approaches in teaching composition.

ENG 585 – Topics in Language and Literature (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under different topics for a maximum of 6 credit hours.

ENG 630 – American Periods (3 hours)

Study of selected periods or movements from the 17th century to the present. May be repeated under a different topic for a maximum of six hours credit.

ENG 640 – English Periods (3 hours)

Study of selected periods or movements from the 7th century to the present. May be repeated under a different topic for a maximum of six hours credit.

ENG 650 – Selected Authors (3 hours)

Study of one or two authors who write in English. May be repeated under different authors for a maximum of six hours credit.

ENG 680 – Advanced Topics in Writing (3 hours)

Advanced study of the theory and practice of compositional processes, with focus on a particular genre or area of writing. May be repeated for a maximum of six hours credit.

ENG 690 – Internship in Literature (3 hours)

Theory, analysis, and practice of literature within the context of an undergraduate literature course. Prerequisite: 21 hrs. English graduate courses.

ENG 691 – Internship in Writing (3 hours)

Theory, analysis, and practice of writing within the context of an undergraduate composition class. Prerequisite: 21 hrs. English graduate courses.

ENG 695 – Independent Study (1-3 hours)

Independent research in literature, writing, or theory. May be repeated for a maximum of 6 hours credit. Prerequisite: Consent of instructor, and graduate program director or department chairperson.

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Environmental Science Program



Environmental Science Program

FACULTY COORDINATING COMMITTEE Campbell (Chemistry and Biochemistry); Morris (Biology); Wang (Physics).

The interdepartmental major in environmental science is sponsored jointly by the departments of biology, chemistry, and physics. The objectives of the program are to provide the student with the necessary background for a professional career in the area of environmental science or entrance into a graduate program.

Core Requirements

A student must choose one of two concentrations: environmental science-biology or environmental science-chemistry. Each student will be assigned an advisor from the department of the chosen concentration. For all concentrations the student must take the following core courses:

- ENS 150 Introduction to Environmental Science – 2 hrs.
- BIO 151, 152 Molecules to Cells – 4 hrs.⁺
- BIO 251, 252 Ecology, Evolution, and Biodiversity – 4 hrs. ⁺
- BIO 300 Populations, Resources, and Environment – 3 hrs.
- BIO 420 Ecosystems Ecology – 4 hrs.
- ENS 470 Environmental Science Capstone – 1 hr.
- CHM 110, 111, 116, 117 General Chemistry – 8 hrs.
- CHM 252, 253 Organic Chemistry I with lab – 5 hrs.
- CHM 416 Environmental Chemistry – 3 hrs.
- GES 101, 102 Principles of Earth Science – 4 hrs. **OR**
GES 110, 111 Principles of Historical Geology – 4 hrs.
- Calculus – 8 hrs.*
- PHY 107, 108[†] General Physics – 8 hrs.
- ECO 100 Intro. to Economics, ECO 221, **OR** ECO 222 – 3 hrs[‡]

Total 58 hours

All students must have a concentration in Biology or Chemistry

**The Biology concentration requires only one semester of calculus (4 hours).*

‡ *Both Micro and Macro Economics (221 and 222) are highly recommended.*

The student must have on average a grade of C or better in all ENS core courses.

Analytical Chemistry (CHM 326) is required for ENS-C and is highly recommended for ENS-B.

Concentrations

Each concentration has the following additional requirements:

Biology Concentration

- BIO 250 Organismic Biology – 4 hrs.
- BIO 260, 261 – Biological Statistics I and II – 3 hrs.
- BIO 460 Ecology, BIO 463 Plant Ecology, **OR** BIO 450 Conservation Biology – 3 or 4 hrs.
- One additional biology course approved by the advisor – 3-4 hrs.
- BIO 385/485 research – 3 hrs.

Two of the following organismal courses: 7–8 hrs.

- BIO 323 Comparative Anatomy
- BIO 324 Plant Diversity
- BIO 334 Reproduction and Identification of Flowering Plants
- BIO 381 Comparative Animal Physiology
- BIO 406 General Microbiology
- BIO 419 Ethology

Total: 19-22* hours

*The biology concentration requires only one semester of calculus (4 hours).

The student must have a grade of C or better in all biology courses.

Chemistry Concentration

- CHM 256, 257 Organic Chemistry II with lab – 4 hrs.
- CHM 320 Quantitative Analysis – 3 hrs.
- CHM 321 Quantitative Analysis – 1 hr.
- CHM 360 Biochemistry -3 hrs.
- CHM 420 Instrumental Analysis – 4 hrs.
- CHM 470 Physical Chemistry – 3 hrs.
- MTH 111 Elementary Statistics **or** BIO 260, 261 – Biological Statistics I and II – 3 hrs.

Total: 21 hours

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Environmental Science Courses



Environmental Science Courses

ENS 105 – Introduction to Sustainability (3 hours)

Core Curr. MI

This course will introduce students to how overconsumption and overpopulation are impacting Earth's ability to support humanity and biodiversity, technologies and policies to increase sustainability, and reasons why humans behave unsustainably.

ENS 110 – Environmental Science (3 hours)

Core Curr. MI,NS

This course examines the science and social implications of environment. Emphasis will be on basic science, social, economic and political implications of human interactions with natural systems and understanding environmental issues and sustainable resource use. Prerequisite: Students with credit for BIO 300 may not enroll in ENS 110.

ENS 150 – Introduction to Environmental Science (2 hours)

Introduces Environmental Science majors to critical concepts in Environmental Science Fields focusing on broad topics such as hypothesis testing, library research, and ethics in science. Exposes students to ENS concentration areas (biology, physics and chemistry) focusing specifically on how these areas are integral to problem solving in environmental science. Prerequisite: ENS major

ENS 305 – Sustainability and Food (3 hours)

Core Curr. NS

Introduction to how the concept of sustainability and the basic principles of evolutionary and ecological processes impact food production and distribution. Prerequisite: Junior or senior standing, or sophomores by permission of instructor

ENS 307 – Science and Politics of Global Climate Change (3 hours)

Core Curr. MI

The complex problem of global climate change will be explored by connecting knowledge and perspectives from the natural and social sciences, concentrating particularly on the links between atmospheric and terrestrial sciences and international studies/political science. Cross-listed with IS 307. Prerequisite: Junior standing or permission of instructor.

ENS 470 – Environmental Science Capstone (1-3 hours)

Core Curr. EL

This course is intended primarily as a required element of the Environmental Science Major (ENS-B, ENS-C, ENS-P) program at Bradley University. Biology, Chemistry, and Physics majors with interest in environmental fields may find the content of interest. The course will be exceedingly challenging for students without a science background or the desire to engage in the primary scientific literature surrounding environmental issues. The course may be repeated up to 3 hours with different topics. Prerequisite: Junior or Senior ENS major or consent of instructor.

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Ethics Minor



Ethics Minor

FACULTY Professor Fuller; Associate Professors Getz, Greene, Kelley (Chair), Niculescu, Oliver, Zaborowski

The ethics minor at Bradley is administered by the Department of Philosophy and Religious Studies. The program in ethics is designed to provide a methodologically and theoretically grounded curriculum in ethical studies. The program will challenge students to deepen their thinking about ethics through multiple approaches drawn from philosophy and religious studies. Students electing an ethics minor will select an advisor from the participating faculty of the department of Philosophy and Religious Studies to guide them in choosing 15 credit hours of courses in ethics. Where appropriate, the curriculum will include the opportunity to study ethics in the context of a student's major.

To minor in ethics a student must:

1. complete not less than 15 semester hours, 12 of which will be in courses offered by the Department of Philosophy and Religious Studies. Courses for the minor are as follows:

Required:

- PHL 347 Ethics

Electives:

- ATG 268 Business Ethics
- BIO 505 Topics in Bioethics
- BLW 342 Legal Environment of Business
- CJS 401 Ethics, Crime, and Criminal Justice
- COM 330 Communication Law and Ethics
- NUR 510 Legal and Ethical Issues in Healthcare
- PHL 103 An Inquiry into Values
- PLS 207 Introduction to Political Thought
- RLS 101 Comparative Religion
- RLS 200 Contemporary Religion in the United States
- RLS 300 Hebrew Bible/Old Testament
- RLS 302 New Testament
- RLS 305 Monasticism

Topics courses, independent studies, and other courses in in the Department of Philosophy and Religious Studies will be recognized when the course content substantially addresses the study of ethics as determined by Philosophy and Religious Studies faculty. Three credits *may* be taken in ethics courses in the department(s) of the student's major(s), *as approved* by the Philosophy and Religious Studies faculty.

2. have a minimum grade point average of 2.0 in all courses.
3. select an advisor from the faculty in the Department of Philosophy and Religious Studies who will guide the student in choosing courses.

FACULTY Professor Fuller; Associate Professors Getz, Greene, Kelley (Chair), Niculescu, Oliver, Zaborowski

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European Studies Program



European Studies Program

FACULTY COORDINATING COMMITTEE Gobeyn (Political Science), Chair; Brown (History); C. Bukowski (International Studies).

The European Studies minor is designed to provide contemporary knowledge of the region, both past and present. The minor will expose students to the broad spectrum of economic, political, social, and cultural forces which give shape to the development of contemporary Europe and the European Union. It is meant to provide a centralizing focus and coherence to the study of the European region, while utilizing interdisciplinary and cross-disciplinary approaches. A singular concentration on a particular nation-state, national culture, or historic era is not the intent of the program. The minor should supplement or complement a student's major and help support career or graduate study objectives. To ensure coherence, students will choose part of their coursework from a list of core subjects.

Minor In European Studies

Prerequisite Course

CIV 100 (Western Civilization), or CIV 101 (Western Civilization to 1600), or CIV 102 (Western Civilization Since 1600), or CIV 111, 112 (Unified Composition and Western Civilization I, II). Any transfer work must show a substantial equivalency.

World Languages

Successful completion of one of the following: WLF, WLG, WLS 201 Intermediate French, German, Spanish or equivalent. It is recommended that students complete the foreign language requirement as early as possible.

Elective Courses

In addition to the world language requirement, the minor requires 15 hours total. Students may count toward the minor a maximum of 3 hours in their major; that is, from the courses in their major listed as part of the minor. Students may count toward the minor a maximum of 6 hours in courses from any given department. Students must complete a minimum of 9 junior-senior hours in the minor. Elective courses for the minor must be distributed in the following manner:

Social Sciences – 6 Hrs.

One 3-hour core course chosen from the following:

- HIS 340 Contemporary Europe

- IS 330 European Integration
- IS 331 European Security
- PLS 304 Governments of West Europe

One 3-hour elective chosen from the following:

- HIS 320, 323, 325, 326, 340*, 342, 343, 375, 382, 385, 451
- IS 250, 330*, 331*
- PLS 304*
- SOC 320

*Elective if not taken as part of core.

Humanities – 6 hrs.

One 3-hour core course from the following:

- PHL/PLS 307 Classical Political Philosophy
- PHL/PLS 308 Modern Political Philosophy

One 3-hour elective from the following list:

- ART 140, 142, 335
- ENG 123, 385
- MUS 109
- PHL 300, 304, 306, 311
- PHL/PLS 307*, 308*
- WLF 316 (topic must concern Europe), 321, 322
- WLG 316, 321
- WLS 306, 316 (topic must concern Europe), 321, 347

*Elective if not taken as part of core.

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General Studies



General Studies

Director: Dr. Robert Prescott, Senior Associate Dean of LAS

The General Studies Program in the College of Liberal Arts & Sciences (LAS G S) facilitates degree completion for students who have broad interests and who have already accumulated a significant amount of college course credit before matriculating to Bradley University. The student and faculty adviser design the program of study.

The program is inherently flexible and broad in scope. Students' program of study is built upon coursework that they have previously completed. The breadth ensures that students have a well-rounded perspective that compliments career and personal goals.

The LAS G S program includes an Area of Focus that is comprised of courses within or across departments. The focus, whether disciplinary or topical, ensures appropriate depth in an academic subject area.

Students who complete the program will have a broad knowledge base that includes coursework in Liberal Studies (i.e., coursework in the sciences and humanities). Students will engage in analysis, interpretation, and the application of knowledge and methods to a professional setting through a capstone experience (LAS 301).

The program offers both the B.A. and the B.S. degree.

Entrance Requirements

The general studies degree is only available for new students or students who are returning to Bradley after at least a three-year absence.

Eligibility is restricted to new or returning students who have earned at least 60 college credit hours that are transferable to Bradley.

Transferring or returning students who meet the above requirements must declare the general studies degree (a) upon transferring or returning to the university or (b) prior to completing one semester at Bradley upon their transfer or return.

Transfer Admission Policy and Credit Hours: A maximum of 66 semester hours of credit will be accepted from accredited two-year colleges. Unlimited credit may be accepted from four-year institutions.

Students are strongly encouraged to consult with a transfer admissions representative before enrolling in this degree program to ensure that is an appropriate fit.

Advising

The LAS Associate Dean of Engaged Learning is the academic advisor for students in general studies. A plan of the courses satisfying the Area of Focus requirements must be approved by the LAS Associate Dean of Engaged Learning. Departmental chair(s) will be consulted in the discipline(s) that constitute(s) the highest percentage of coursework in the Area of Focus prior to approval. The chair of the department(s) specified in the plan of courses will advise and pre-approve or assign a departmental faculty advisor who must pre-approve the Area of Focus plan of study. Departmental chairs are responsible for evaluating course transferability questions on a case-by-case basis.

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Geological Sciences Courses



Geological Sciences Courses

GES 101 – Principles of Earth Science (3 hours)

Gen. Ed. FS

Core Curr. NS

The earth in space; weather, earth materials, and geological processes that control development of the earth's surface. Prerequisite:

GES 102 – Principles of Earth Science Laboratory (1 hour)

Laboratory related to GES 101. One two-hour laboratory per week. Prerequisite: GES 101 or equivalent, or concurrent enrollment.

GES 110 – Principles of Historical Geology (3 hours)

Gen. Ed. FS

Introduction to history of the earth and its life forms; methods used by geologists to decipher earth history using rocks and fossils. Theory of evolution, origins of life, fossilization, animal and plant extinctions, mountain building, plate tectonics, and the Ice Age.

GES 111 – Principles of Historical Geology Laboratory (1 hour)

Gen. Ed. FS

Laboratory related to GES 110. Study and interpretation of topographic and geologic maps, earth history, and fossils. One two-hour laboratory per week. Prerequisite: GES 110 or equivalent, or concurrent enrollment.

GES 300 – Oceanography the Human Perspective (3 hours)

Gen. Ed. TS

Core Curr. NS,WI

Introduction to scientific oceanography and its relationship to human life. History of oceanography and its technology; crustal movements; the ocean as a source of mineral resources; the variety of ocean life such as jellyfish and sharks, and their danger; whales and the human perspective of "lower" life; sound and submarine warfare, waves and their potential energy and destructive capacity; human pollution. Prerequisite: Junior or senior standing, or sophomores by permission.

GES 302 – Invertebrate Zoology (4 hours)

Detailed biological survey of major invertebrate phyla and their evolutionary relationships. Emphasis will be placed on organism physiology and ecology. Students will gain knowledge in invertebrate morphology and classification through dissection of representative animals. Lecture and laboratory. Cross listed as BIO 371. Prerequisite: C or better in BIO 151, and 251 (or equivalent); or consent of instructor.

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History



History

FACULTY Professor Williams; Associate Professors Brown (chair), Gates, Hawkins, Nielsen, Scott, Toxqui.

The history faculty believes that students should view history as a study of human contributions from all parts of the world. For history majors, a curriculum is planned to provide an opportunity for more detailed study of human civilizations in Africa, Asia, Europe, Latin America, the Middle East, Russia, and the United States.

After college, history majors take their advanced skills and knowledge to work in many fields. For some, their degree becomes a stepping stone to jobs in the foreign service, government agencies, international business, journalism, law, library science, non-profit organizations, and a host of other positions. For others, interpreting the past for a broader public becomes an essential part of their daily life as archaeologists, archivists, curators at museums, and teachers in high schools, community colleges, or at other universities. Faculty advisors are available for conversations about career opportunities.

Major Requirements

Students desiring to earn a history degree must complete a minimum of 30 hours of history credit, 24 of which must be above the 100 level and 15 of which must be above the 200 level. Students must achieve a minimum grade point average in courses in the major of no less than 2.0 in order to graduate. Specific requirements for the history degree are as follows:

1. Successful completion of 3 hours of Western Civilization (not counted as part of the 30-hour history minimum)
2. Africa, Asia, Latin America, Middle East, or Russia (6 hours, 3 of which must be 300 level or above)
3. 6 hours of U.S. history, including either 203 or 204 and 3 hours of 300 level
4. 6 hours of European history at the 200 or 300 level, including at least 3 hours at the 300 level
5. HIS 350 Historical Methods Seminar (Prerequisite: 3 hours of history or consent of instructor.)
6. 6 hours of electives from the History Department.
7. HIS 450, 451, or 452 Research Seminar
8. Cross-cultural component. In addition to the 30 hours, all History majors must complete one of the four following options:
 - a. An approved international study experience selected from a variety of Bradley programs including international internships, Bradley Summer Semester abroad, and directed programs at selected international institutions. A minimum of 6 hours must be taken abroad. (If a student studies abroad at one of the Bradley-directed Study Abroad programs other than the Bradley European Summer Semester, the requirement of 24 hours of the last 30 hours on campus is modified to 30 of the last 60 hours. Courses taken in a Bradley-directed program during the senior year will count towards fulfilling the requirements of having 24 of the last 30 semester hours on campus).
 - b. Successful completion of the equivalent of 202 in any foreign language.
 - c. At least 6 hours drawn from the following courses: AAS 200, 300; HIS 304, 305, 316, 317, 333, 339, 375, 382;

WGS 200, ENG 129, 190, 329, 330, 331, SOC 313, 314, 315. History courses in this category may also count towards the major.

- d. History majors can fulfill this requirement by taking one of the courses listed in category c above plus three hours of international study credit.
- e. Secondary Education students can fulfill this requirement through ETE 280 and one of the approved courses in category c, or through ETE 280 and three hours of international study credit.

History majors may earn either a B.A. or B.S. degree.

History and Social Studies Education (9-12) Major

This course of study is designed to provide graduates with the education and training to teach history and social studies at the secondary school level (grades 9-12).

Students must complete a minimum of 57 hours in History and Social Studies courses as follows:

1. World History (100-200): HIS 205, 206, 207, or 208 (3 hours)
2. World History and Geography (300-400): HIS 336 and 337 (6 hours)
3. Western Civilization (100-200): CIV 100, 101, 102, 111, 112, 113, or 114 (3 hours)
4. European History (300-400): HIS 320, 321, 323, 324, 325, 326, 327, 328, 329, 338, 340, 341, 342, 343, 345, 346, 375, or 382 (3 hours)
5. History of Science and Technology (300-400): HIS 385 (3 hours)
6. U.S. History (100-200): HIS 203 and 204 (6 hours)
7. U.S. History (300-400): HIS 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 315, 316, or 317 (3 hours)
8. Historical Methods: HIS 350, 351, or 352 (3 hours)
9. Historical Research Seminar: HIS 450, 451, or 452 (3 hours)
10. Cross-Cultural Component (any one of the following options, any course may count towards other requirements in the major):
 - a. Approved international study experience outside the U.S. (6 hours; or 3 hours combined with 3 hours in any one Cross-Cultural course listed below).
 - b. Successful completion of the equivalent of two years in any language other than English: WLA 201, WLC 201, WLF 201, WLG 201, WLS 201, or higher
 - c. Cross-Cultural Courses (any of the following, 6 hours): AAS 200 or 300; ANT 101, 305, or 314; ENG 129, 190, 329, 330, or 331; ETE 280; HIS 205, 206, 207, 208, 304, 305, 314, 316, 317, 330, 331, 333, 339, 340, 375, or 382; SOC 313, 314, or 315; WGS 200; WLT 140.
11. Political Science: PLS 105
12. Political Science: PLS 311, 312, 314, 315, 360, 459, 460 (3 hours)
13. Economics: ECO 221 and 222 (6 hours)
14. Anthropology, Psychology, or Sociology: ANT 101, PSY 101, or SOC 100 (3 hours)
15. Social Studies Elective: One additional Social Science course in AAS, ANT, IS, PLS, PSY, RLS, SOC, or WGS (3 hours)

In addition to the requirements described above, to receive a secondary grades (9-12) teaching endorsement in the State of Illinois, students must also complete all the education requirements as mandated by the Illinois State Board of Education, which includes 44 hours of course work in the Teacher Education – High School Education program.

To meet the requirements of the Teacher Education – High School Education program, MTH 111 must be completed.

For more information, see Teacher Education – High School Education program in the College of Education and Health Sciences section of this catalog.

History Major – Business Minor

This program is for the student who wishes to combine a background in both history and business for the goal of immediate employment opportunities or entrance to an MBA program. In addition to the courses in history the minor requires 30 hours in the Foster College of Business in the following courses: ATG 157, 158; ECO 221/100, 222; QM 262, FIN 322, MIS 173, BLW 342, M L 350; and MTG 315. Students for the minor should also complete MTH 115. The dean of the Foster College of Business must approve students for the minor.

History Minor

This minor is designed for students who wish to pursue a coherent and balanced study of history, with equal emphasis on United States, European, and Global history. Students will find the minor to be useful in preparing for graduate school; law school, business; civil service employment; or museum, library, or archive management. The minor requires 15 hours total, including at least 6 hours at the 300+ level. Requirements are distributed in the following manner:

- One U.S. history course, 200 or 300 level—3 hrs.
- One European history course, 200 or 300 level—3 hrs.
- One Global history course, 200 or 300 level—3 hrs.
- Two elective courses, 100 to 300 level —6 hrs.

Minor Requirements: Minimum of 15 hours in history and a GPA of no less than 2.0.

U.S. History Courses (choose one) – 3 hrs.

- HIS 201: Violence, Crime, and Punishment in U.S. History – 3 hrs.
- HIS 203: American History and Global Systems to 1877 – 3 hrs.
- HIS 204: American History and Global Systems since 1877 – 3 hrs.
- HIS 300: The United States Since 1945 – 3 hrs.
- HIS 301: Topics in American History: Intellectual – 3 hrs.
- HIS 302: Topics in American History: Diplomatic – 3 hrs.
- HIS 303: American Urban History – 3 hrs.
- HIS 304: Women in American History – 3 hrs.
- HIS 305: American Indian History – 3 hrs.
- HIS 306: The United States Civil War Era – 3 hrs.
- HIS 307: History of the Early American Republic – 3 hrs.
- HIS 308: Topics in American History: Political – 3 hrs.
- HIS 309: The History of U.S. Law Enforcement – 3 hrs.
- HIS 310: America and Vietnam 1940-Present – 3 hrs.
- HIS 311: History of American Political Economy – 3 hrs.
- HIS 315: U.S. Social Movements – 3 hrs.
- HIS 316: African American History Since 1877 – 3 hrs.
- HIS 317: American Masculinities – 3 hrs.
- HIS 326: Modern Military Forces and Institutions – 3 hrs.
- HIS 353: Public History – 3 hrs.
- HIS 383: Sports, Play, and Games in History – 3 hrs.
- HIS 384: Environmental History – 3 hrs.
- HIS 385: Science, Technology, and Society – 3 hrs.
- HIS 420: Internship in Digital Humanities and Public History – 0-3 hrs.

European History Courses (choose one) – 3 hrs.

- HIS 210: History of European Film – 3 hrs.
- HIS 320: Renaissance and Reformation – 3 hrs.
- HIS 321: Topics in European History: Intellectual – 3 hrs.
- HIS 323: Ancient Greece and the Hellenistic World – 3 hrs.
- HIS 324: Barbarians in History – 3 hrs.
- HIS 325: Roman Civilization – 3 hrs.
- HIS 326: Modern Military Forces and Institutions – 3 hrs.
- HIS 327: Topics in European History: Cultural – 3 hrs.
- HIS 328: England and the American Revolution – 3 hrs.
- HIS 329: Germany 1870-Present – 3 hrs.
- HIS 340: Europe Since 1914 – 3 hrs.
- HIS 341: The French Revolution – 3 hrs.
- HIS 342: Europe, 1789-1914 – 3 hrs.
- HIS 343: The Enlightenment – 3 hrs.
- HIS 345: The History of England I – 3 hrs.
- HIS 346: The History of England II – 3 hrs.
- HIS 375: The Holocaust – 3 hrs.
- HIS 382: European Women, Gender, and Sexuality Since 1600 – 3 hrs.
- HIS 383: Sports, Play, and Games in History – 3 hrs.
- HIS 384: Environmental History – 3 hrs.
- HIS 385: Science, Technology, and Society – 3 hrs.

Global History Courses (choose one) – 3 hrs.

- HIS 205: Latin America – 3 hrs.
- HIS 206: The Middle East since Muhammad – 3 hrs.
- HIS 207: Modern Japan, 1860-Present – 3 hrs.
- HIS 208: Russian History – 3 hrs.

- HIS 209: History of Africa – 3 hrs.
- HIS 314: Japan and World War II – 3 hrs.
- HIS 322: Ancient Egypt and the Near East – 3 hrs.
- HIS 330: Modern China – 3 hrs.
- HIS 331: Samurai in Japanese History – 3 hrs.
- HIS 332: Topics in Modern Latin American History – 3 hrs.
- HIS 333: Cross-Cultural Contacts – 3 hrs.
- HIS 334: Global History: Social – 3 hrs.
- HIS 335: Modern Mexico – 3 hrs.
- HIS 336: Early Global History and Geography – 3 hrs.
- HIS 337: Modern Global History and Geography – 3 hrs.
- HIS 338: Russia Since 1917 – 3 hrs.
- HIS 339: Women in Global Perspective – 3 hrs.
- HIS 383: Sports, Play, and Games in History – 3 hrs.
- HIS 384: Environmental History – 3 hrs.

Elective Courses (choose two) – 6 hrs.

- CIV 100, 101, 102, 111, 112, 113, or 114: Western Civilization – 3 hrs.
- HIS 201: Violence, Crime, and Punishment in U.S. History – 3 hrs.
- HIS 203: American History and Global Systems to 1877 – 3 hrs.
- HIS 204: American History and Global Systems since 1877 – 3 hrs.
- HIS 205: Latin America – 3 hrs.
- HIS 206: The Middle East Since Muhammad – 3 hrs.
- HIS 207: Modern Japan, 1860-Present – 3 hrs.
- HIS 208: Russian History – 3 hrs.
- HIS 209: History of Africa – 3 hrs.
- HIS 210: History of European Film – 3 hrs.
- HIS 300: The United States Since 1945 – 3 hrs.
- HIS 301: Topics in American History: Intellectual – 3 hrs.
- HIS 302: Topics in American History: Diplomatic – 3 hrs.
- HIS 303: American Urban History – 3 hrs.
- HIS 304: Women in American History – 3 hrs.
- HIS 305: American Indian History – 3 hrs.
- HIS 306: The United States Civil War Era – 3 hrs.
- HIS 307: History of the Early American Republic – 3 hrs.
- HIS 308: Topics in American History: Political – 3 hrs.
- HIS 309: The History of U.S. Law Enforcement – 3 hrs.
- HIS 310: America and Vietnam 1940-Present – 3 hrs.
- HIS 311: History of American Political Economy – 3 hrs.
- HIS 314: Japan and World War II – 3 hrs.
- HIS 315: U.S. Social Movements – 3 hrs.
- HIS 316: African American History Since 1877 – 3 hrs.
- HIS 317: American Masculinities – 3 hrs.
- HIS 320: Renaissance and Reformation – 3 hrs.
- HIS 321: Topics in European History: Intellectual – 3 hrs.
- HIS 322: Ancient Egypt and the Near East – 3 hrs.
- HIS 323: Ancient Greece and the Hellenistic World – 3 hrs.
- HIS 324: Barbarians in History – 3 hrs.
- HIS 325: Roman Civilization – 3 hrs.
- HIS 326: Modern Military Forces and Institutions – 3 hrs.
- HIS 327: Topics in European History: Cultural – 3 hrs.
- HIS 328: England and the American Revolution – 3 hrs.
- HIS 329: Germany 1870-Present – 3 hrs.
- HIS 330: Modern China – 3 hrs.
- HIS 331: Samurai in Japanese History – 3 hrs.
- HIS 332: Topics in Modern Latin American History – 3 hrs.
- HIS 333: Cross-Cultural Contacts – 3 hrs.
- HIS 334: Global History: Social – 3 hrs.
- HIS 335: Modern Mexico – 3 hrs.
- HIS 336: Early Global History and Geography – 3 hrs.
- HIS 337: Modern Global History and Geography – 3 hrs.
- HIS 338: Russia Since 1917 – 3 hrs.
- HIS 339: Women in Global Perspective – 3 hrs.

- HIS 340: Europe Since 1914 – 3 hrs.
- HIS 341: The French Revolution – 3 hrs.
- HIS 342: Europe, 1789-1914 – 3 hrs.
- HIS 343: The Enlightenment – 3 hrs.
- HIS 345: The History of England I – 3 hrs.
- HIS 346: The History of England II – 3 hrs.
- HIS 350: Historical Methods Seminar – 3 hrs.
- HIS 351: Topics in Historical Methods – 0-3 hrs.
- HIS 352: Introduction to Digital Humanities – 3 hrs.
- HIS 353: Public History – 3 hrs.
- HIS 375: The Holocaust – 3 hrs.
- HIS 382: European Women, Gender, and Sexuality Since 1600 – 3 hrs.
- HIS 383: Sports, Play, and Games in History – 3 hrs.
- HIS 384: Environmental History – 3 hrs.
- HIS 385: Science, Technology, and Society – 3 hrs.
- HIS 405: Independent Reading in History – 1-3 hrs.
- HIS 406: Individual Study in History – 1-3 hrs.
- HIS 420: Internship in Digital Humanities and Public History – 0-3 hrs.
- HIS 450: US History Research Seminar – 3 hrs.
- HIS 451: European History Research Seminar – 3 hrs.
- HIS 452: World History Research Seminar – 3 hrs.

Optional Concentrations for HIS and HSS T Majors

Digital Humanities and Public History (15 hours)

The concentration in Digital Humanities and Public History consists of 15 hours of courses adhering to the following guidelines:

Category 1:

3 hours from the following list of courses:

- HIS 352: Introduction to Digital Humanities (3)
- HIS 353: Public History (3)

Category 2: Information Science

3 hours from the following list of courses:

- CS 100: Introduction to Programming Concepts
- CS 101: Introduction to Programming or equivalent
- CS 102: Data Structures or equivalent

Category 3: Media Arts

3 hours from the following list of courses:

- IM113: Introduction to Interactive Media
- IM 150: Intro to Interactive Design
- IM 161: Intro to Web Design

Electives:

3 hours from the following list of courses:

- HIS 352: Digital Humanities
- HIS 353: Public History
- HIS 303: American Urban History
- HIS 314: Japan & World War II
- AAS 401: Community Engagement in African American Studies
- HIS 405: Independent Reading in History
- WGS 400: Directed Research in Women's & Gender Studies
- Other courses that center digital history and/or public history methodologies/readings/assignments.

Capstone Requirement (3 hours)

The following courses are eligible for the capstone requirement:

- HIS 450, 451, or 452 capstone that applies research methodologies of digital humanities, history, and/or public history.
- HIS 406 course that applies multidisciplinary methodologies of digital humanities, history, and/or public history.

- HIS 420: Internship in Digital Humanities & Public History

Difference, Identity and Power (15 hours)

The concentration in Difference, Identity, and Power consists of 15 hours of courses adhering to the following guidelines:

Category 1: Historical and Interdisciplinary Approaches to Gender and Sexuality

Up to 6 hours from the following list of courses:

- HIS 304: Women in American History
- HIS 315: U.S. Social Movements
- HIS 317: American Masculinities
- HIS 339: Women in Global Perspective
- HIS 382: European Women, Gender, and Sexuality Since 1500
- WGS 200: Intro to Women's & Gender Studies

Up to 3 hours from the following list of courses:

- COM 386: Media, Race, and Gender
- ENG 190: Women in Literature
- ENG 331: Studies in Women Writers
- ETE 280: Exploring Diversity
- ENG 125: Literatures of Identity (with approval of advisor)
- SOC 311: Comparative Family Systems
- SOC 313: Race, Ethnicity, and Power
- SOC 315: Gender & Society

Category 2: History of Race and Ethnicity

Up to 6 hours from the following list of courses:

- AAS 200: Introduction to African American Studies
- AAS 300: Advanced Topics in African American Studies
- HIS 205: History of Latin America
- HIS 305: American Indian History
- HIS 315: U.S. Social Movements
- HIS 316: African American History Since 1877
- HIS 332: Topics in Modern Latin American History
- HIS 335: Modern Mexico
- HIS 375: The Holocaust

Up to 3 hours from the following list of courses:

- COM 386: Media, Race, and Gender
- ENG 125: Literatures of Identity (with approval of advisor)
- ENG 129: Intro to African American Lit
- ENG 329: African American Lit
- ENG 330 Native American Literature
- ETE 280: Exploring Diversity
- SOC 312: Social Inequality
- SOC 313: Race, Ethnicity, and Power

Capstone Requirement

This concentration requires students to complete a capstone seminar or learning experience on gender, sexuality, race, or ethnicity that applies the multidisciplinary integration of methods, approaches, and theories rooted in the discipline of history and/or African American Studies, Asian Studies, Latin American Studies, and Women's & Gender Studies. The following courses are eligible for the capstone requirement:

- HIS 450, 451, 452: History Research Seminar
- HIS 406: Individual Study in History (by instructor approval)
- AAS 400: Directed Research in African-American Studies
- WGS 300: Internship in Women's & Gender Studies
- WGS 400: Directed Research in Women's & Gender Studies

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

History Courses



History Courses

HIS 201 – Violence, Crime, and Punishment in U.S. History (3 hours)

Core Curr. GP GS,HU

This course explores the social, political, and cultural history of violence, crime, criminal law, policing, and punishment in the United States from the Colonial period to the present.

HIS 203 – American History and Global Systems to 1877 (3 hours)

Core Curr. GP GS,HU

Surveys the transnational history of the Americas and the United States to 1877. Emphasizes globally significant trends and systems such as colonialism, mercantilism, nationalism, and the slave trade. Investigates the relevance of systems and their supporting beliefs to the growth and limits of democracy.

HIS 204 – American History and Global Systems since 1877 (3 hours)

Core Curr. GP GS,HU

Surveys the transnational history of the Americas and the United States since 1877. Emphasizes globally-significant trends and systems such as migration, imperialism, liberalism, progressivism, and consumption economies. Investigates the relevance of systems and their supporting beliefs to the growth and limits of democracy.

HIS 205 – Latin America (3 hours)

Gen. Ed. NW

Core Curr. GP WC WI,HU

Overview of the history of Latin America from ancient cultures (2000 BCE) to the present. It explores the major institutions and forces that have shaped the region and common experiences in the Americas such as European colonization, African slavery, wars of independence, political exclusion of groups of color and women, regionalism vs. nationalism, neocolonialism, industrialization, and the ongoing fight for social justice.

HIS 206 – The Middle East Since Muhammad (3 hours)

Gen. Ed. NW

History of the Middle East from the time of the prophet Muhammad to the present. Pre-modern, modern, and contemporary Middle East.

HIS 207 – Modern Japan, 1860-Present (3 hours)

Gen. Ed. NW

The rise of modern Japan: The growth of Japanese power and its influence in the world economy.

HIS 208 – Russian History (3 hours)

Gen. Ed. NW

Core Curr. GP WC,HU,WI

Russian and Soviet history from its origins to the present. Major features of pre-modern, modern, and contemporary Russian civilization.

HIS 209 – History of Africa (3 hours)

Core Curr. GP WC

The course examines the history of the African continent from antiquity to modernity within an interregional and global context. Africa spans the northern and southern hemispheres, and includes a diversity of geographical zones that shaped associated varying political and economic organization. Focus will be on regional developments, interregional interactions across Africa, and global interactions in the Indian, Mediterranean, and Atlantic Worlds, culminating in European colonization and the challenges African nation states face post-independence in a post-colonial world.

HIS 210 – History of European Film (3 hours)

Core Curr. MI

Explores the relationship between filmmaking and political, social, and intellectual history from the invention of the cinema in the 1890s to the present day. Students gain a better understanding of film as both an art form and as a reflection of broader historical concerns.

HIS 300 – The United States Since 1945 (3 hours)

Social-cultural, political, economic, and diplomatic aspects of U.S. history since 1945.

HIS 301 – Topics in American History: Intellectual (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 301 – Topics in American History: Intellectual (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 301 – Topics in American History: Intellectual (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 302 – Topics in American History: Diplomatic (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 302 – Topics in American History: Diplomatic (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 302 – Topics in American History: Diplomatic (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 303 – American Urban History (3 hours)

Growth and development of American cities in historical context.

HIS 304 – Women in American History (3 hours)

Political, economic, and social status of women in American society since Colonial times. Reasons for the changing role of women; major problems confronting women in the 20th century.

HIS 305 – American Indian History (3 hours)

History of the first Americans; Indian-White relations since 1492. Origins and varied cultures of American Indians.

HIS 306 – The United States Civil War Era (3 hours)

U.S. history 1830-1877: events and developments leading to civil war, the war itself, and efforts to reconstruct the Union after 1865.

HIS 307 – History of the Early American Republic (3 hours)

Explores the evolution of early national and state governments and the various attempts at practicing democracy in a nation that incorporated chattel slavery and limited suffrage. Investigates how individuals and groups employed democratic ideals to gain access to power. Analyzes civic ideals and practices with particular attention to Native Americans, African Americans, and women. Contextualizes the coming of the Civil War.

HIS 308 – Topics in American History: Political (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 308 – Topics in American History: Political (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 308 – Topics in American History: Political (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 308 – Topics in American History: Political (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 309 – The History of U.S. Law Enforcement (3 hours)**Core Curr. HU,MI**

Historical roots of American law enforcement; establishment of an organized police in the U.S.; historical efforts to improve American police work.

HIS 310 – America and Vietnam 1940-Present (3 hours)

The Vietnam War: America's role in it and its legacies for both nations.

HIS 311 – History of American Political Economy (3 hours)**Gen. Ed. SF**

Analyzes the economic history of the United States, stressing the influence of government policy on economic development.

HIS 314 – Japan & World War II (3 hours)**Gen. Ed. NW****Core Curr. GP WC,HU**

Analyzes Japanese militarism and expansionism and examines the significance of Japan's World War II defeat and its impact on the Asian/Pacific world.

HIS 315 – U.S. Social Movements (3 hours)**Core Curr. HU**

Explores the major social movements of recent U.S. history. Study of the labor movement, the civil rights movement, Chicano and American Indian movements, campus and counterculture radicalism, anti-war protests, women's rights, gay and lesbian rights, environmentalism, and the nuclear freeze movement, with an examination of how activists crafted a politics of protest as they fought for greater equality and justice. Analyzes the roles that social movements played in strengthening democratic ideals and practices by expanding the role of the citizen in the community, the nation, and the world.

HIS 316 – African American History Since 1877 (3 hours)**Gen. Ed. SF****Core Curr. GP WC,HU**

Explores the integral place of African Americans in American history and culture from Reconstruction to the present. Analyzes historical achievements of African Americans, as well as social changes and cultural perspectives on race, class, gender, sexuality, and nation that have shaped the black experience. Topics include Reconstruction, Jim Crow, the Great Migration, black protest organizations, labor, the Harlem and Chicago Renaissances, art and cultural production, the Civil Rights and Black Power movements, and historical and contemporary American racial politics.

HIS 317 – American Masculinities (3 hours)**Gen. Ed. CD****Core Curr. HU,MI**

Investigates the historical development, change, and expression of gender ideals that Americans have labeled manhood, manliness, or masculinity. Incorporates methodologies from history, gender studies, literary studies, and the social sciences to explore how disparate gender ideals have articulated with distinctions of race, class, gender, sexuality, and nation. Applies an interdisciplinary approach to provide students with an awareness of the historically and culturally contingent nature of masculinity and how notions of masculine ideality have reinforced or challenged structures of privilege and exclusion. Develops skills of interdisciplinary gender analysis in the study of historical documents and artifacts.

HIS 320 – Renaissance and Reformation (3 hours)**Core Curr. HU,MI**

An in-depth exploration of the changes in Europe from 1350 to 1600 that signified an epochal transition from the Middle Ages to early modernity. Reading and discussion-based, multidisciplinary approach to the humanistic philosophy, artistic innovation, and socio-political transformations that constituted the Renaissance; the causes and consequences of the Protestant and Catholic Reformations; and the cross-cultural encounters between European societies and those of Islam, Africa, and the "New World."

HIS 321 – Topics in European History: Intellectual (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 321 – Topics in European History: Intellectual (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 321 – Topics in European History: Intellectual (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 321 – Topics in European History: Intellectual (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 322 – Ancient Egypt and the Near East (3 hours)

Core Curr. HU

The civilizations of ancient Egypt, Mesopotamia, Anatolia, and the Levant were foundational to the later cultures of the Middle East, Africa, and Europe. The region witnessed the earliest occurrences of the Neolithic revolution, the invention of writing, the first cities, the first complex regional states, the first empires, and intellectual traditions that shaped the ethical monotheism of Judaism, Christianity, and Islam and informed the philosophical and scientific traditions that emerged in classical Greece.

HIS 323 – Ancient Greece and the Hellenistic World (3 hours)

Core Curr. HU

An examination of ancient Greek and Hellenistic societies, politics, and cultures from circa 1200 to 30 BCE. Introduces the Minoan and Mycenaean precursors before exploring the Archaic and Classical eras in detail. Follows Alexander's conquests and investigates cross-cultural influences and everyday lives in the Hellenistic nation-states. Prerequisite:

HIS 325 – Roman Civilization (3 hours)

Core Curr. HU

Values and institutions of Roman society during Kingship, Republic, and Empire periods. Emphasis on the Republic at its peak, Rome's imperialism, and complex issues involved in Rome's fall; also impact of Roman values and practices on Western civilization.

Prerequisite:

HIS 326 – Modern Military Forces and Institutions (3 hours)

Gen. Ed. SF

European and American military experiences: 1700 to present.

HIS 327 – Topics in European History: Cultural (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 328 – England and the American Revolution (3 hours)

American Revolution from the perspective of the common Anglo-Saxon cultural, political, economic, intellectual, and social heritage.

HIS 329 – Modern Germany 1870-Present (3 hours)

Core Curr. GP WC,HU

A reading and discussion-intensive exploration of German history in the modern era of unification, imperialism, war and revolution, Weimar democracy, Nazi racial dictatorship, World War II and genocide, Cold War division, reunification, and contemporary developments to the present.

HIS 330 – Modern China (3 hours)

Gen. Ed. NW

Core Curr. GP WC,HU

The People's Republic of China is the most populous nation in the world, and for more than a decade it has had one of the largest and fastest growing economies. The last two centuries, however, have seen a succession of states and governments rise and fall in China, tremendous prosperity as well as great poverty, periods of relative social stability and of extreme unrest, continuous and yet changing involvement with the outside world, and fluctuations in what it has meant to be Chinese. This course will examine China's rich history since the 17th century in order to foster greater understanding of one of the most complex and vibrant countries in world history.

HIS 331 – Samurai in Japanese History (3 hours)

Core Curr. GP WC,HU,WI

Describes the rise and fall of Japan's warrior class and the bushido ethos. The long history of the samurai begins in the 8th century and continues to the present. Focus on two interrelated themes: the historical reality of the samurai and the construction of mythology in both Japanese popular culture and the Western imagination. Topics include warfare, training, values, literature, and family life. Visual sources, including film, are used extensively. Prerequisite:

HIS 332 – Topics in Modern Latin American History (3 hours)

Offers a deeper understanding of Latin American societies by focusing on one region or country and highlighting events, changes, and important achievements in their broader world context. Emphasizes social changes and cultural perspectives on race, class, gender, religion, sexuality, nation, social justice, ideology, reform, protest, revolution, and poverty. Broad topics include independence movements, regionalism vs. nationalism, neocolonialism, industrialization, politics and the state, the influence of the United States, migration, and globalization.

HIS 333 – Cross-Cultural Contacts (3 hours)**Gen. Ed. NW**

Cross-cultural encounters inspire societies to look more closely at themselves and sometimes to change in significant ways. In some cases, contact created enduring conflict and misunderstanding. In other cases, contact led to mutually beneficial achievements. This course investigates examples of cross-cultural contacts in world history.

HIS 334 – Global History: Social (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit.

HIS 335 – Modern Mexico (3 hours)**Gen. Ed. NW****Core Curr. GP WC,HU,WI**

Social, economic, and political development of Mexico since independence. Contemporary problems facing a developing country which has already experienced one social revolution.

HIS 336 – Early Global History and Geography (3 hours)**Gen. Ed. NW****Core Curr. GP WC,HU**

Analytical and comparative survey of the formative stages of early non-Western civilizations in five geographical regions. The basic cultural patterns and geographical patterns that emerged between approximately 3500 BCE and 1500 CE will be studied, compared, and related to present developments.

HIS 337 – Modern Global History and Geography (3 hours)**Gen. Ed. NW****Core Curr. GP WC,HU**

Growth and development of African and Asian (West, South, Southeast, and East) civilizations since c. 1500 CE in their geographical contexts. Reactions of indigenous peoples and cultural patterns to Western penetration and imperialism. Present development and practices. Prerequisite:

HIS 338 – Russia Since 1917 (3 hours)**Gen. Ed. NW**

History of Russia from the Bolshevik Revolution to the present. Political, social, economic, and cultural development and theories.

HIS 339 – Women in Global Perspective (3 hours)

The changing status of women in light of global economic, social, and political changes in different regions of the world. How women have participated in and contributed to 20th century transformations of the family, community, workplace, social organization, and politics.

HIS 340 – Europe Since 1914 (3 hours)**Gen. Ed. SF****Core Curr. GP WC,HU**

A reading and discussion-intensive exploration of European history since 1914. Focuses on the First World War and its effects; the rise of fascist, communist, and conservative dictatorships in the 1920s and 1930s; the Second World War and Nazi genocide; major institutions and problems during the Cold War division of Europe; revolutions of 1989-91 and their aftermath; contemporary developments up to the present day.

HIS 341 – The French Revolution (3 hours)

An introduction to the varied origins, tumultuous events, international ramifications, and debated aftermaths of the French Revolution

HIS 342 – Europe, 1789-1914 (3 hours)**Core Curr. HU,MI**

A reading and discussion-intensive exploration of the "long 19th century" from the French Revolution to the First World War, with an emphasis on social, political, cultural, and artistic change. Subjects discussed include the following: the political agenda established by the French Revolution, and ideological responses to it (liberalism, conservatism, nationalism, and socialism); the rise of industrial capitalism and its attendant social and political divisions; competing ways of building and controlling the nation-state; democratizing movements of labor and feminism; everyday family life, gender relations, and sexuality; nationalism/imperialism; cultural and artistic movements from Romanticism to Realism to Modernism.

HIS 343 – The Enlightenment (3 hours)

The development and influence of the European Enlightenment between the late 17th and early 19th centuries. The social, cultural, political, economic, and religious contexts for intellectual transformation. The legacies of the Enlightenment in the present, and contemporary culture in light of the past.

HIS 345 – The History of England I (3 hours)

The history of England from the earliest times to 1660.

HIS 346 – The History of England II (3 hours)

The history of England from 1660 to the present.

HIS 350 – Historical Methods Seminar (3 hours)**Core Curr. EL**

Exploration of historical arguments and debates; methods of interpreting primary sources. Prerequisite: History major or consent of instructor.

HIS 351 – Topics in Historical Methods (0-3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit. Prerequisite:

HIS 352 – Introduction to Digital Humanities (3 hours)**Core Curr. MI EL,HU**

Digital Humanities (DH) is the application and creation of computing and digital tools and formats to and for questions and problems in the humanities disciplines. Students will approach the field through an introduction to its historical development and an examination and evaluation of current projects within the field that demonstrate how the humanities can utilize and shape digital media.

HIS 353 – Public History (3 hours)**Core Curr. HU,MI,WI**

Public history takes place outside the traditional classroom intending to make history relevant and useful to the public. Explore the conventional and unconventional ways that the general public consumes history. Examine how public history creates narratives of identity and how to make these narratives meaningful, accessible, representative, equitable, and inclusive.

HIS 375 – The Holocaust (3 hours)

Origins and course of Nazi genocide against Europe's Jews during the Second World War. Discussion of the Nazis' five million other victims. Survival and resistance. Comparisons with other examples of modern genocide.

HIS 382 – European Women, Gender, and Sexuality Since 1600 (3 hours)

Explores through intensive reading and discussion the changing everyday lives, gender relations, and sexualities in Europe from the seventeenth century to the present. Shows how a gender approach increases our understanding of modern cultures, arts, and societies; the Scientific Revolution; the Enlightenment; the age of political and industrial revolutions; cultural Romanticism, Realism, and Modernism; the evolution of liberalism, nationalism, socialism, and feminism; and dictatorships, total wars, and democracies in the 20th and 21st centuries.

HIS 383 – Sports, Play, and Games in History (3 hours)**Core Curr. GP WC,HU,MI**

Introduction to the study of play, games, and sports around the world and throughout history with an emphasis on theoretical approaches, comparative examples, and social contexts for contemporary and recurring issues of identity and inequality in relation to ableism, colonialism, drugs, gender, nationalism, money, race, religion, science, sexuality, and technology.

HIS 384 – Environmental History (3 hours)

Introduction to the study of the history of human ecology, cultural traditions of ecological consciousness, and social contexts for understanding recurring conflicts. Discussion of grand narratives and microhistories with an emphasis on theoretical approaches, comparative examples, and timely issues (such as: climate change, colonialism, conservation, foodways, gender, inequality, invasive species, justice, nature, pollution, public health, race, rights, sustainability, and urban-rural connections).

HIS 385 – Science, Technology, and Society (3 hours)**Gen. Ed. SF****Core Curr. WI**

An analysis of the interaction between science, technology, and society since the 1600s. The first part addresses the Scientific Revolution, the second the Industrial Revolution, and the third the contemporary scientific and industrial revolutions. In the third part of the course, the examples of the earlier scientific and industrial revolutions, insofar as they affected religious views, daily living conditions, and the meaning of philosophy and science, provide material for comparison as a means of understanding the contemporary situation. Particular attention is given to how social values and assumptions determine the direction of scientific and technological developments. Prerequisite:

HIS 405 – Independent Reading in History (1-3 hours)

Directed reading by qualified students with faculty guidance. For history majors primarily. May be repeated for maximum of 6 hrs. credit. Prerequisite: History major or consent of department chair.

HIS 406 – Individual Study in History (1-3 hours)

Special study of individual topics in history with faculty supervision. For history majors primarily. May be repeated for maximum of 6 hrs. credit. Prerequisite: History major or consent of department chair.

HIS 420 – Internship in Digital Humanities and Public History (0-3 hours)

HIS 420 provides students with an opportunity to gain supervised work experience in digital humanities and public history (0-3 credit hours). Prerequisite:

HIS 450 – US History Research Seminar (3 hours)**Core Curr. EL,WI**

Research paper required employing primary sources in U.S. history. May be repeated under different topic for a maximum of 6 hours. Prerequisite: HIS 203 or 204; HIS 350; and history major; or consent of instructor.

HIS 451 – European History Research Seminar (3 hours)**Core Curr. EL**

Research paper required employing primary sources in European history. May be repeated under different topic for maximum of 6 hours. Prerequisite: HIS 350; a 300-level European history course; and history major; or consent of instructor.

HIS 452 – Area Studies Research Seminar (3 hours)**Core Curr. WI,EL**

Research paper required employing primary sources in African, Asian, Latin American, Middle Eastern, or Russian history. May be repeated under different topic for a maximum of six hours. Prerequisite: HIS 205, 206, 207, or 208, or 300-level course in Area Studies; HIS 350; and history major; or consent of instructor.

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Interdisciplinary Major Program



Interdisciplinary Major Program

Director Dr. Robert Prescott, Senior Associate Dean of LAS

The Interdisciplinary Major Program (IMP) is a self-designed course of study for students interested in experiences that fall outside or between existing academic programs. The program of study is designed by the student and IMP faculty adviser to utilize two or more departments to gain educational experiences that bridge each department while directing the student towards a unique professional goal. The coursework should be focused on achieving a specific aim through the use of existing courses and faculty expertise. Through the IMP, the student should gain a multi-disciplinary education that is not currently available as an interdisciplinary major in the College of Liberal Arts and Sciences.

Students without definite academic plans should register in academic exploration rather than in the Interdisciplinary Major Program.

The Interdisciplinary Major cannot duplicate any existing major in fact or principle; generally, the Interdisciplinary Major is more rigorous than existing majors. The Interdisciplinary Major Program committee is chaired by the associate dean of Liberal Arts and Sciences and constituted by three faculty members representing humanities and natural and social sciences. Committee members are advisors to Interdisciplinary Major Program students within their academic domain.

Students must write a proposal for the Interdisciplinary Major Program course of study that clarifies their specific intellectual ideals and goals, indicates their proposed list of courses, and demonstrates that their program does not duplicate existing majors. Approved programs of study in the Interdisciplinary Major Program typically require 55–70 hours of a cohesive plan of study, with an acceptable majority of those hours from courses within College of Liberal Arts and Sciences. Thirty hours must be at or above the 300 level. An Interdisciplinary Major Program of study must contain a minimum of 15 hours of coursework unique from any existing major. Student's course selections must be integrated around the focus as articulated in their proposal. The committee strongly encourages an internship or capstone experience as part of the program of study. The proposed program should specify the departments that would participate in the major and include a list of the courses from each of those departments. Two of the departments included should contribute a significant number of courses (two-thirds), and two departments must be in the College of Liberal Arts and Sciences. Transferred courses can be used. Students graduating in this major must have a 3.0 overall grade point average. The entire Interdisciplinary Major Program committee and the chairs of all included departments must approve the proposal. Proposals meeting the requirements above are not guaranteed acceptance, but will be reviewed by the program committee.

Students are strongly encouraged to consult with a representative from the program committee and chairs or advisors from those departments contributing the majority of the courses in the proposed curriculum of study early in the proposal development process.

After consulting with the appropriate IMP and departmental representatives, students should submit the following to the College of Liberal Arts and Sciences Dean's Office:

1. An official record of their past and present courses.
2. A written, detailed statement of their intellectual ideals and career goals.
3. A detailed plan of the courses from the course catalog the student plans to take as part of the Interdisciplinary Major Program.
4. A rationale explaining how these courses facilitate the proposed course of study and the achievement of the student's ideals and goals.

The program offers both the B.A. and the B.S. degree. Those seeking the B.A. must complete two years of college-level study of a foreign language, or the equivalent of such study.

Eligibility: Students are eligible for the program if they are at least second-semester freshmen, have fewer than 70 hours completed and/or in progress, and have a Bradley University grade point average of 3.0.

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International Studies Courses



International Studies Courses

I S 100 – Contemporary World Forces (3 hours)

Gen. Ed. SF

Core Curr. GP GS

Great international forces influencing the contemporary world: secular and religious nationalism, global terrorism, international conflict and cooperation, poverty, and climatic changes. Understanding and evaluating the impact of these forces on national society and world affairs.

I S 103 – Fundamentals of International Studies: Global Analysis (3 hours)

Core Curr. GP GS

Overview of principal macro-level phenomena in discipline of international studies; addresses matters with worldwide coverage such as power relationships, war, and globalization.

I S 104 – Fundamentals of International Studies: Area Analysis (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Overview of discipline of international studies at micro-level; focus on major states or groups of states.

I S 182 – Fundamentals of Contemporary East Asian Civilization (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Civilization and traditional cultures of East Asia; origins of fundamental values in indigenous East Asian ways of life.

I S 275 – Political Economy of the Developing World (3 hours)

Gen. Ed. SF

Core Curr. MI

Survey of political, economic, social, and cultural aspects of development. Theories of development, relations between industrial and developing states, impact of domestic institutions and conditions, globalization, and international institutions on the developing world.

I S 295 – Research Design and Qualitative Methods for International Studies (3 hours)

Core Curr. WI

Design of research and qualitative research methods for international studies. Prerequisite: IS 103; IS 104; or consent of instructor.

I S 305 – Diplomacy in International Affairs (3 hours)

Core Curr. GP GS

Evolution of modern diplomacy, fundamentals of diplomacy theory, and contemporary use of diplomacy. Negotiation game for

application of student's new knowledge of diplomatic practice. Prerequisite: IS 103 or 104 or consent of instructor.

IS 306 – Intelligence in International Affairs (3 hours)

Gen. Ed. SF

Core Curr. GP GS

Development of secret intelligence practice; contemporary operations of selected intelligence organizations. Emphasis on US capabilities, counterterrorism, management and control, and tension between secrecy and democracy.

IS 307 – Science and Politics of Global Climate Change (3 hours)

Core Curr. MI

The complex problem of global climate change will be explored by connecting knowledge and perspectives from the natural and social sciences, concentrating particularly on the links between atmospheric and terrestrial sciences and international studies/political science. Cross-listed with ENS 307. Prerequisite: junior standing or permission of instructor

IS 312 – American Foreign Policy (3 hours)

Gen. Ed. SF

Core Curr. SB

Survey of factors and forces shaping the formulation and practice of American foreign policy. Impact of domestic political factors—public opinion, the media, interest groups, and Congress—on presidential foreign policy decisions; special emphasis on contemporary issues and problems.

IS 318 – United States-East Asian Relations (3 hours)

Core Curr. GP GS

Critical studies of US relations with China, Japan, Korea, and other selected countries of East Asia since World War II.

IS 322 – Latin America in the International System (3 hours)

Core Curr. GP WC,WI

Critical analysis of the role of Latin America in world affairs and the impact of external forces on politics, society, and interstate relations. Topics include: colonialism, revolutionary change and regional stability, transition to democratic rule, impact of foreign intervention, and role of Latin America in the global political economy.

IS 330 – European Integration (3 hours)

Core Curr. GP GS,MI

Focus on phenomenon of integration, the movement toward political, economic, and social cooperation and unity on the European continent; examination of history, evolution, current and future development of the European Communities/Union.

IS 353 – Russian Foreign Policy (3 hours)

Core Curr. GP WC

Evolution of major elements of Russian foreign policy, impact of communist past, current post-communist attitudes and policies toward the world, analysis of foreign policies of other post-Soviet Slavic states.

IS 363 – Middle East Nations in International Affairs (3 hours)

Gen. Ed. NW

Core Curr. GP WC,GP GS

Introduction to the modern politics of the Middle East. Examination of Arab-Israeli conflict, politics of OPEC, inter-Arab rivalries, terrorism, and the impact of these issues on the role of the Middle East in international affairs. Impact of the end of the Cold War and the Gulf Wars.

IS 373 – South and Southeast Asian Nations in International Affairs (3 hours)

Core Curr. GP WC

International relations of the south Asian subcontinent and Southeast Asia. Legacy of colonization, religious conflict, territorial disputes, and the nuclear threat. Also the regional political economy and terrorism.

IS 381 – East Asian International Relations (3 hours)

East Asian international relations (China, Japan, Korea, and East Asia in general) from ancient times to the present.

IS 385 – Issues of Contemporary Asia (3 hours)

Core Curr. GP WC

Critical studies of new issues and problems in contemporary Asia: tensions between traditional Asian cultures and modern Western ideologies, Asian leadership styles, political institutions, and economic development.

IS 410 – Globalization in World Affairs (3 hours)

Core Curr. GP GS

Present trends in globalization; challenges presented to nation-states in an increasingly complex international environment. Issues include economic and cultural globalization, global and regional governance. Prerequisite:

I S 475 – Contemporary Issues in International Studies (1-3 hours)

In-depth study of selected problems in world affairs. May be repeated for a maximum of 6 hrs. credit provided a different topic is taken each term.

I S 490 – Directed Study and Travel Abroad: Selected Region (0-3 hours)**Core Curr. EL**

Provides academic credit to students participating in designated, short-term programs abroad. Student must participate in the designated travel program in order to receive credit for this course. Course may be repeated once providing the student participates in a different travel program.

I S 495 – Advanced Seminar in International Studies (3 hours)**Core Curr. EL,WI**

Relationship of empirical theory to the practice of international studies; completion of a baccalaureate thesis. Prerequisite: IS 295; junior or senior standing in International Studies

I S 498 – Department of State Internship (0-12 hours)**Core Curr. EL**

For majors planning careers in the foreign service: 3 months of work-study at the junior officer level in the Department of State or in a United States embassy. Qualified students should contact the IS director six months in advance to allow for clearance and acceptance. Prerequisite: Senior standing; approval of IS director

I S 499 – Research in International Relations (1-3 hours)**Core Curr. EL**

Special projects in IS for qualified students. May be repeated for a maximum of 6 hrs. credit provided a different project is undertaken each term.

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Latin American Studies



Latin American Studies

Faculty Advisor: Aurea Toxqui (history)

The Latin American studies minor, which is open to all students, helps you understand the cultural, economic, religious and social forces that have shaped Latin Americans' experiences. With cross-cultural knowledge, you're equipped to understand and effectively work with people from different cultural backgrounds. You study abroad in the region for a semester as part of the minor requirements.

Minor In Latin American Studies

Curriculum and Requirements

This minor requires 18 semester hours, 6 hours of which must be completed in an approved study abroad program. Students must complete WLS 202 or the equivalent. It is recommended that this language requirement must be fulfilled before the study abroad experience. No WLS 100 or 200-level courses may be used to satisfy the 18 semester hours required for this minor.

The course work completed in residence at Bradley must include 9 hours of required coursework in Latin American history and Spanish as foreign language. At least one of these courses must be completed at Bradley prior to study abroad. Students must also complete 3 hours of elective courses. A grade point average of at least 2.0 is required for course taken for the minor.

In order to guarantee a successful study abroad experience in Latin America, students must have their Latin American Studies program (Bradley and study abroad courses) approved by the director of the program. The study abroad portion of the requirement must be taken at a Bradley-approved site in Latin America. Such coursework can be taken in Spanish or English.

• Required Courses (9 hrs)

- HIS 205 Non-Western Civilization: Latin America
- WLS 322 Latin America Civilization and Culture
- HIS 332 Modern Latin American History or HIS 335 Modern Mexico

• Elective Courses (3 hrs)

- ECO 351 Economic Development
- HIS 334 Non-Western History: Social
- HIS 405 Independent Reading in History
- HIS 406 Individual Study in History

- HIS 452 Area Studies Research Seminar
 - IB 400 Topics in International Business
 - IS 275 Political Economy of the Developing World
 - IS 322 Latin America in the International System
 - IS 323 Problems in Latin American Development
 - IS 475 Contemporary Issues in International Studies
 - IS 490 Directed Study and Travel Abroad
 - IS 499 Research in International Relations
 - WLS 316 Topics in Hispanic Language and Literature
 - WLS 342 Survey of Hispanic-American Literature I
 - WLS 343 Survey of Hispanic American Literature II
 - WLS 490 Topics in Hispanic Language or Literature
 - WLS 492 Practicum in Spanish
 - WLS 495 Independent Study
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Mathematics



Mathematics

FACULTY Professors Mou, Nanyes (Chair), Timm, Xue; Associate Professors Bedenikovic, Carty, Goldman, Lang; Assistant Professors Ahanda and Yee; Lecturer and Director of the Math Success Center Davis.

A student considering a career that requires mathematics, statistics, or related areas should realize that emphasis in mathematics and statistics courses will change as the individual progresses through his or her academic program. The initial concern for solving problems is later dominated by the more important objectives of formulating problems in mathematical and statistical language and dealing with mathematical structures and abstract ideas. It should be stressed that an effective mathematician or statistician should be a well-educated person, possessing not only the technical background of mathematics or statistics but also knowledge and skills developed through a selection of courses from other disciplines.

Advanced Placement in Mathematics

Students scoring a 5, 4 or 3 on the Advanced Placement (AP) program mathematics examination administered by the College Entrance Examination Board may receive up to eight semester hours of credit for MTH 121 Calculus I and MTH 122 Calculus II.

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Mathematics Courses



Mathematics Courses

NOTE: Not more than 9 semester hours of credit may be earned from the following courses: MTH 101, 105, 109, and 111. Credit will not be given for MTH 101, 105, or 109 to students with credit for MTH 112 or 115. Credit will not be given for MTH 101, 105, 109, 112, or 115 to students with credit for MTH 119 or MTH 121. Credit will not be given for both MTH 116 and MTH 122. Students majoring in departments in the Foster College of Business and the Caterpillar College of Engineering and Technology are advised to check college requirements for additional restrictions and limitations.

MTH 101 – The Art of Mathematical Thinking (3 hours)

Gen. Ed. MA

Core Curr. QR

Encouraging audience appreciation of mathematics by investigating some of the great ideas of mathematical history, seeing contemporary applications, and getting a feel for the way mathematicians think. Prerequisite:

MTH 109 – College Algebra (3 hours)

For students who need to strengthen their algebra skills: factoring polynomials; solving quadratic and other equations; exponents, logarithms, and graphing. Prerequisite: The mathematics placement exam score is at least 46.

MTH 111 – Elementary Statistics (3 hours)

Gen. Ed. MA

Core Curr. QR

Data collection processes (observational studies, experimental design, sampling techniques, bias), descriptive methods using quantitative and qualitative data, bivariate data, correlation, and least-squares regression, basic probability theory, probability distributions (normal distributions and normal curve, binomial distribution), confidence intervals and hypothesis tests using p-values and selected applications. Additionally, statistical software will be used with an emphasis on interpretation and evaluation of statistical results. Prerequisite:

MTH 112 – Precalculus (4 hours)

For students needing further background in mathematics before enrolling in calculus (especially MTH 121). Thorough study of algebraic, transcendental, and trigonometric functions; emphasis on graphing and use of algebra. Prerequisite: Grade of C or better in MTH 109; or the mathematics placement exam score is at least 61.

MTH 114 – Applied Finite Mathematics (3 hours)

Core Curr. QR

A survey of the most common mathematical techniques used in business. Topics include: linear functions, non-linear functions (polynomials, exponentials, logarithms), systems of linear equations, linear programming, sets and probability, introduction to basic statistics. Prerequisite: Grade of C or better in MTH 109 or 112; or the mathematics placement exam score is at least 61.

MTH 115 – Brief Calculus With Applications I (4 hours)**Gen. Ed. MA****Core Curr. QR**

Differential and integral calculus with emphasis on understanding through graphs. Topics in analytic geometry, limits, derivatives, antiderivatives, definite integrals, exponential and logarithmic functions, and partial derivatives. Prerequisite: Grade of C or better in MTH 109 or 112; or the mathematics placement exam score is at least 61.

MTH 116 – Brief Calculus With Applications II (3 hours)**Gen. Ed. MA****Core Curr. QR**

Continuation of MTH 115. Includes trig functions, integration techniques, series, differential equations, and multivariable calculus. Prerequisite: C or better in MTH 115.

MTH 118 – Calculus With Review A (4 hours)

Topics in analytic geometry, limits, continuity, derivative, and pertinent algebra review. Prerequisite: The sum of the mathematics ACT score and the mathematics placement exam score is at least 45

MTH 119 – Calculus With Review B (4 hours)**Gen. Ed. MA****Core Curr. QR**

Continuation of MTH 118. Topics in analytic geometry, definite integral, Fundamental Theorem of Calculus, and pertinent algebra review. Prerequisite: grade of C or better in MTH 118.

MTH 120 – Discrete Mathematics (3 hours)

Introduction to graph theory, Boolean algebra, mathematical induction, and elementary combinatorics. Prerequisite: Grade of C or better in MTH 112; or the mathematics placement exam score is at least 68.

MTH 121 – Calculus I (4 hours)**Gen. Ed. MA****Core Curr. QR**

Topics for this first course in calculus include functions, limits, continuity, the derivative, differentiation of algebraic, trigonometric, logarithmic and exponential functions with applications including curve sketching, anti-differentiation and applications of integrals, the Riemann sum, and the Fundamental Theorem of Calculus. Prerequisite: Grade of C or better in MTH 112; or the mathematics placement exam score is at least 76.

MTH 122 – Calculus II (4 hours)**Gen. Ed. MA****Core Curr. QR**

Topics for this second course in calculus include techniques of integration, applications of the definite integral, infinite series, Taylor series, polar coordinates, and parametrized curves in the plane. Prerequisite: Grade of C or better in MTH 119 or MTH 121 or its equivalent.

MTH 190 – Topics in Mathematics for Middle School Teachers (3 hours)

Topics for middle school math teachers which may vary each time course is offered, rotating among: analytic geometry, problem solving, linear programming. May be repeated under different topics for a maximum of 6 hours credit. Prerequisite: C or better in MTH111 and C or better in one of MTH115, 119, or 121 and permission of the Chair.

MTH 207 – Elementary Linear Algebra With Applications (3 hours)

Matrix algebra, determinants, theory of simultaneous equations, vector spaces, bases, Gram-Schmidt orthogonalization, eigenvalues, eigenvectors, transformations, and applications. Prerequisite: MTH 122, or consent of instructor.

MTH 223 – Calculus III (4 hours)**Core Curr. QR**

Topics for this third course in calculus including vector analysis of three-dimensional Euclidean space, functions of several variables, partial differentiation, multiple integrals, line integrals and surface integrals, the integral theorems of vector calculus. Prerequisite: Grade of C or better in MTH 122.

MTH 224 – Elementary Differential Equations (3 hours)

Solutions of limited classes of first order equations; second order linear equations; Laplace transform methods; numerical methods; autonomous systems, including linear systems of two variables. Prerequisite: MTH 223

MTH 300 – Topics for Middle School Math Teachers (3 hours)

Topics of special interest which may vary each time course is offered, rotating among geometry, algebra/number theory, and problem-solving. Historical motivations will be provided within each topic. For middle school teacher certification; does not count toward a math major or math minor. May be repeated under different topics for a maximum of 9 hours credit. Prerequisite: C or better in MTH 111 and

C or better in one of MTH 115, 119, or 121 and permission of the Chair.

MTH 301 – Combinatorics (3 hours)

Combinatorial analysis, recurrence relations, generating functions, and finite-state machines. Prerequisite: MTH 120, 122; or MTH 223.

MTH 302 – Introduction to Graph Theory (3 hours)

Theory and applications of graphs, including historical motivations. Fundamental properties of graphs, circuits, cycles, trees, and graph algorithms; planarity and coloring. Prerequisite: MTH 120, 122; or MTH 223.

MTH 305 – Modern Geometry (3 hours)

Introduction to properties of formal axiom systems. Study of finite geometries, Euclidean and non-Euclidean geometries, including historical motivations. Topics will be explored using appropriate dynamic software. Prerequisite: MTH 223.

MTH 307 – Linear Algebra (3 hours)

Vector spaces, linear transformations, inner product spaces, Jordan canonical forms, spectral theorems, and selected topics. Prerequisite: MTH 207.

MTH 310 – Introduction to Number Theory (3 hours)

Historical development of number theory; primes and their distribution; divisibility; unique factorization of integers; congruences; Diophantine equations; number theoretic functions; and a subset of more advanced topics such as Fermat's Theorem or Euler's Theorem. Prerequisite: MTH 223.

MTH 325 – Probability and Statistics I (3 hours)

An upper-level treatment of fundamental concepts in probability theory and statistics: discrete and continuous random variables; particular probability distributions of each type; multivariate probability distributions; conditional and marginal probabilities; moment-generating functions; Central Limit Theorem. Prerequisite: MTH 223

MTH 326 – Probability and Statistics II (3 hours)

A continuation of MTH 325 which focuses on statistical inference by way of confidence intervals, hypothesis tests, least-squares regression models, and analysis of variance. Key concepts also include: measures of goodness for point estimators, minimum-variance unbiased estimators, uniformly most powerful tests, maximum likelihood estimators. Prerequisite: MTH 325

MTH 335 – Topics in Actuarial Science (3 hours)

Core Curr. EL

Topics may vary each time course is offered, rotating among compound interest, mathematics of life contingencies, and actuarial mathematics. Some topics will coincide with those on actuarial exams. May be repeated under different topics for a maximum of 9 hours credit. Prerequisite: MTH 207, MTH 223; or consent of instructor.

MTH 345 – Differential Equations (3 hours)

First-order equations; higher-order linear equations; systems of linear equations; existence and uniqueness theorems; qualitative analysis of nonlinear systems; and a subset of more advanced topics such as Sturm-Liouville theory, bifurcation analysis, series solutions methods, or difference equations. Prerequisite: MTH 207, 223; or consent of instructor.

MTH 371 – History of Mathematics (3 hours)

A survey of the historical development of mathematics from antiquity to the twentieth century. Emphasis will be on the interrelations between the various areas of mathematics as well as the mathematical content itself. Prerequisite: MTH 207 and 3 semester hours from courses numbered MTH 301 or above; or consent of instructor.

MTH 390 – Mathematical Modeling (3 hours)

Introduction to constructing and evaluating mathematical models for describing and analyzing real world phenomena. Continuous and/or discrete models. Prerequisite: MTH 223; consent of instructor.

MTH 403 – Complex Variables I (3 hours)

Introduction to complex calculus: analytic functions, integration, Cauchy's formula, Laurent series, the residue theorem and its applications; and a subset of more advanced topics such as conformal mapping, the Riemann mapping theorem, harmonic functions, and analytic continuation. Prerequisite: MTH 207, 223; or MTH 224.

MTH 404 – Modern Algebra I (3 hours)

Basic theory of groups, rings, and fields with an emphasis on groups and rings, including the Fundamental Theorem of Homomorphisms. Prerequisite: MTH 207, 223.

MTH 405 – Modern Algebra II (3 hours)

Advanced theory of groups, rings, and fields with an emphasis on fields and field extensions. Other topics may include Galois theory and classical problems of insolvability. Prerequisite: MTH 404.

MTH 406 – Elementary Topology (3 hours)

Introduction to rudiments of point set topology. Concepts of compactness, connectedness, and continuity, in context of general

topological spaces and metric spaces. Prerequisite: MTH 207, 223; or consent of instructor

MTH 410 – Numerical Methods I (3 hours)

Introduction to numerical and computational aspects of various mathematical topics: finite precision, solutions of non-linear equations, interpolation, approximation, linear systems of equations, and integration. Prerequisite: CS 100 or 101; MTH 207 and 223.

MTH 411 – Numerical Methods II (3 hours)

Continuation of MTH 410: further techniques of integration, ordinary differential equations, numerical linear algebra, nonlinear systems of equations, boundary value problems, and optimization. Prerequisite: MTH 224 or 345; MTH 410.

MTH 414 – Partial Differential Equations (3 hours)

Theory of, and solution techniques for, partial differential equations of first and second order, including the heat equation, wave equation and Laplace equation in rectangular, cylindrical, and spherical coordinates. Topics include classification of PDE in terms of order, linearity, and homogeneity; solution techniques include separation of variables, Fourier series, and integral operators; and a subset of more advanced topics such as transform methods and numerical methods. Credit will be given for only one of MTH 414, MTH 514. Prerequisite: MTH 224 or MTH 345

MTH 420 – Introduction to Analysis (3 hours)

Real number system and functions of real variables: sequences, limits, continuity, differentiation, series, uniform convergence, and the Riemann-Stieltjes integral. Prerequisite: MTH 207, 223.

MTH 421 – Advanced Calculus (3 hours)

Functions of several variables. Calculus of transformations, implicit and inverse function theorems, line and surface integrals, Fourier analysis, fixed point theorems, and applications. Prerequisite: MTH 420 or consent of instructor.

MTH 427 – Applied Statistical Methods (3 hours)

Regression analysis, time series analysis, and forecasting Prerequisite: MTH325; MTH326 or consent of instructor.

MTH 428 – Topics in Applied Statistics (3 hours)

A continuation of Math 427 to include further studies in statistics such as Bayesian statistics, statistical computing, or multivariate methods. May be repeated under different topics for a maximum of 6 hours credit. Prerequisite: Math 325; Math 326 or consent of instructor.

MTH 435 – Stochastic Processes (3 hours)

Conditional probability and expectation, probability models, Markov chains, Poisson process, renewal theory, Brownian motion processes. Prerequisite: MTH 325 and MTH 207

MTH 490 – Topics in Mathematics (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. Prerequisite: consent of instructor.

MTH 491 – Directed Individual Studies in Mathematics (1-16 hours)

Individual work in special areas of mathematics for advanced, qualified undergraduate students. May register for more than 6 hrs. credit only if enrolled in an approved special off campus program. Prerequisite: consent of Department Chair.

MTH 494 – Senior Project in Mathematics I (0 hours)

Topics in mathematics selected, studied, and discussed by students under faculty guidance. Each student explores an area of mathematics and selects a topic in which he or she has a particular interest. Prerequisite: Senior standing (junior standing with consent of instructor).

MTH 495 – Senior Project in Mathematics II (3 hours)

Core Curr. EL,WI

A selected topic in mathematics is studied by a student under faculty guidance. Each student writes a paper and gives a presentation on his or her topic. Prerequisite: MTH 494; senior standing.

MTH 510 – Numerical Methods I (3 hours)

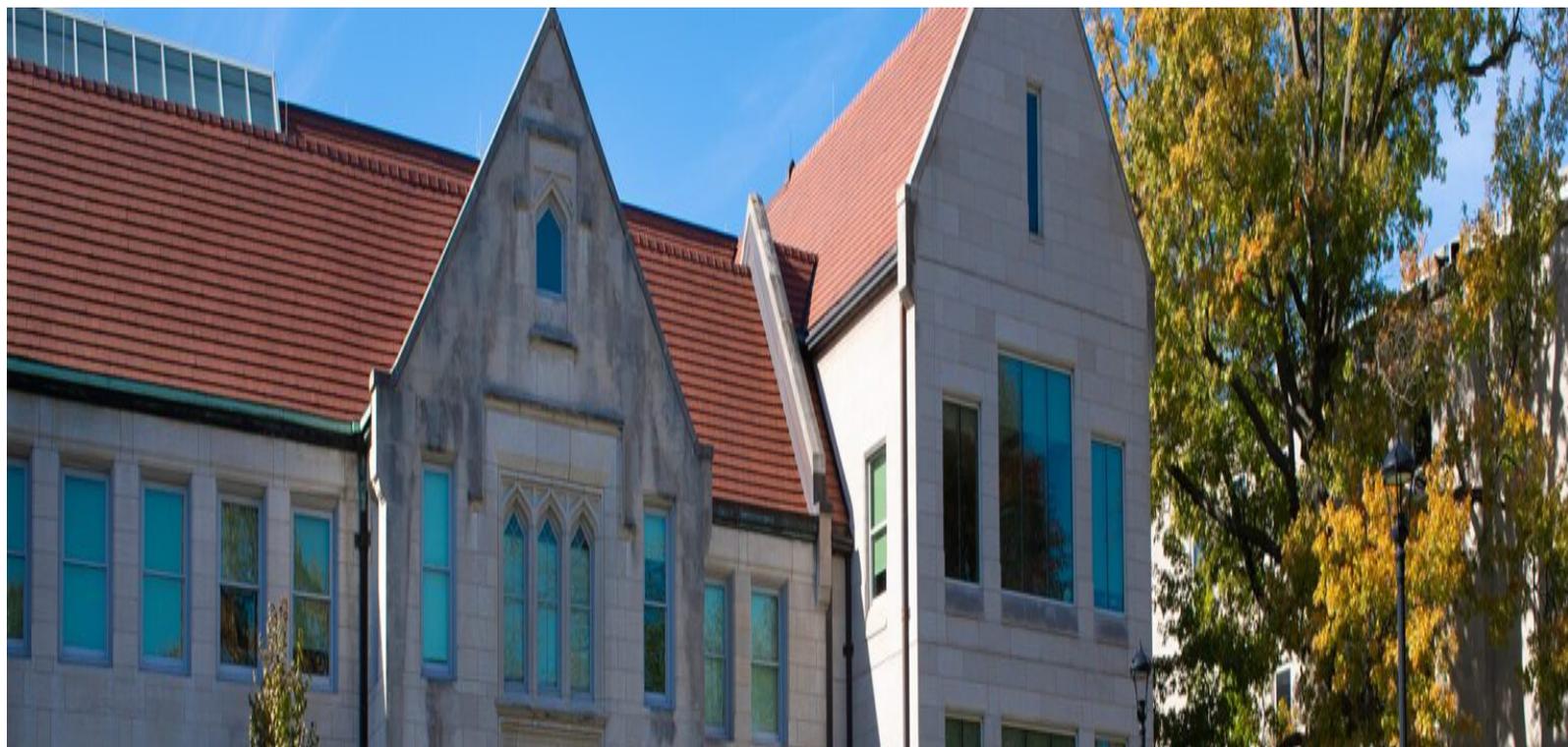
Introduction to numerical and computational aspects of various mathematical topics: finite precision, solutions of non-linear equations, interpolation, approximation, linear systems of equations, and integration. Cross listed as CS 510. Prerequisite: CS 101; MTH 207 and 223.

MTH 514 – Partial Differential Equations (3 hours)

Theory of, and solution techniques for, partial differential equations of first and second order, including the heat equation, wave equation and Laplace equation in rectangular, cylindrical, and spherical coordinates. Topics include classification of PDE in terms of order, linearity, and homogeneity; solution techniques include separation of variables, Fourier series, and integral operators; and a subset of more advanced topics such as transform methods and numerical methods. Prerequisite: MTH 224 or 345.

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Medical Laboratory Science Program



Medical Laboratory Science Program

FACULTY COORDINATING COMMITTEE Campbell (Chemistry and Biochemistry), Morris (Biology), Stover (Biology), Fry (Chemistry and Biochemistry, Chair)

ADJUNCT FACULTY Affiliate Instructors Carlson and Jobst.

Medical Laboratory Science is an interdepartmental major jointly sponsored by Department of Biology and the Department of Chemistry and Biochemistry. The objective of the program is to provide the student with the appropriate background for admission to an accredited medical laboratory science hospital program. Students electing the Medical Laboratory Science program will be assigned an advisor in the Department of Chemistry and Biochemistry and must complete either the Clinical or General concentrations to fulfill the program requirements.

Students must submit a petition to advance to candidacy in the program following completion of Introduction to Medical Laboratory Science (CHM122), Statistics (MTH111), Molecules to Cells and its associated laboratory (BIO151 and BIO152), Anatomy and Physiology II and its associated laboratory (BIO232 and BIO233), and Organic Chemistry II and its associated laboratory (CHM252 and CHM253) with a C or better. At the completion of 60 hours of coursework, a 3.0 cumulative gpa and a 3.0 science gpa are required for advancement to candidacy in the Medical Laboratory Science -Clinical concentration. Majors who are eligible for the Clinical concentration (a 3+1 program) usually complete their University coursework in the third year and spend their final year in a clinical internship at an affiliated hospital program. Students in this concentration traditionally apply to one or more of the affiliated hospital practicum programs by December 1st of their junior year. Admission to the clinical practicum is competitive and determined by a selection committee external to Bradley. Continuation in the Clinical concentration of the Medical Laboratory Science program is contingent upon acceptance into an affiliated hospital clinical practicum. All affiliated clinical programs are accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS) After successful completion of a clinical practicum, the student will be granted a bachelor's degree from Bradley. Upon receipt of the B.S., graduates are eligible to sit for the national certification exams in Medical Laboratory Science.

Students who are not selected for a senior year clinical practicum are eligible to transition into the Medical Laboratory Science-General concentration. In addition, students may elect the General concentration instead of the Clinical concentration to fulfill the Medical Laboratory Science program requirements. After successful completion of the General concentration coursework and all University requirements, the student will be granted a bachelor's degree from Bradley.

Students may also opt for a 4+1 program by completing a four-year degree at the University to allow them to apply to any accredited medical laboratory science clinical practicum in the nation. Majors in Chemistry, Biochemistry, Biology, Medical Laboratory Science-General concentration or the Liberal Arts and Sciences Individualized Major program are the most suitable for this program. Upon receipt of the baccalaureate degree and successful completion of the hospital clinical practicum, graduates are eligible to sit for the national certification exams in Medical Laboratory Science.

Students desiring a major in medical laboratory science will be required to complete a minimum of 45 hours of science and math courses distributed as follows: 19 hours of biology, 20 hours of chemistry, 3 hours of bio/chm elective, and 3 hours of elementary statistics. Descriptions of biology, chemistry, and math courses required for the degree in medical laboratory science are listed under regular departmental offerings. These requirements are met by taking the following courses:

- BIO 151 Molecules to Cells – 3 hrs.
- BIO 152 Molecules to Cells Laboratory – 1 hr.
- BIO 230 Human Anatomy and Physiology I – 3 hrs.
- BIO 232 Human Anatomy and Physiology II – 3 hrs.
- BIO 231 Human Anatomy and Physiology I Lab – 1 hr.
- BIO 233 Human Anatomy and Physiology II Lab – 1 hr.
- BIO 406 General Microbiology – 4 hrs.
- BIO 468 Immunology of Host Defense – 3–4 hrs.

19-20 required BIO hours

- CHM 122 Introduction to Medical Laboratory Science – 1 hr.
- CHM 110, 111 General Chemistry I – 4 hrs.
- CHM 116, 117 General Chemistry II – 4 hrs.
- CHM 252 and 253 Organic Chemistry – 5 hrs.
- CHM 256 and 257 Organic Chemistry II – 4 hrs.
- CHM 422 Clinical Chemistry – 2 hrs.

20 required CHM hours

CHM/BIO elective:

- CHM 360 Biochemistry or BIO 310 Genetics – 3 hrs.
- MTH 111 Elem. Statistics – 3 hrs.

Required math and science hours (minimum) in the Medical Laboratory Science major- 45 hrs.

In addition, majors must complete either the Clinical (32 hrs) or General (21 to 22 hrs) concentrations

Total required math and science hours (minimum) in the Medical Laboratory Science program – 68 to 79 hrs.

Note: Those students who have not attained an overall grade point average and a science gpa of at least 3.0 after completion of 60 semester hours will complete the General concentration to fulfill the major requirement.

The following schedule of courses is suggested for the first year.

First Semester (16 hrs.)

- CHM 110 General Chemistry – 3 hrs.
- CHM 111 General Chemistry Lab – 1 hr.
- MTH 111 Elementary Statistics – 3 hrs.
- ENG 101 English Composition **or** COM 103 The Oral Communication Process. – 3 hrs.
- Core Curriculum Electives – 6 hrs.

Second Semester (15 hrs.)

- BIO 151 Molecules to Cells – 3 hrs.
- BIO 152 Molecules to Cells Laboratory – 1 hr.
- CHM 116 General Chemistry II – 3 hrs.
- CHM 117 General Chemistry II Lab – 1 hr.
- CHM 122 Introduction to Medical Lab Science – 1 hr.
- COM 103 The Oral Communication Process **or** ENG 101 English Composition. – 3 hrs.
- Core Curriculum Elective – 3 hrs.

The hours required for a major in Medical Laboratory Science are distributed as follows:

Biology – 19 to 23 hrs.

Chemistry – 20 to 23 hrs.

Statistics – 3 hrs.

English – 6 hrs.

Speech Communication – 3 hrs.

Core Curriculum Electives– 21 hrs.

Concentration (Clinical or General)-21 to 32 hrs.

Total (minimum) – 120 hrs.

Clinical Concentration

Students in the Clinical concentration of the Medical Laboratory Science program must successfully complete the 32 hours off-campus Clinical Practicum (OCP388) at one of the affiliated hospital programs. The clinical year will include the following courses taken at an affiliated hospital program. The student registers at Bradley for OCP 388. A one-time fee of \$100 is charged for OCP 388.

Clinical Chemistry I 4-6 hrs.

Theory and practice of analytical biochemistry as applied to pathologic states, methodology, and instrumentation. Statistics as applied to reagent preparation, result determination, and quality control.

Clinical Chemistry II 2-4 hrs.

Theory and practice of analytical biochemistry as applied to specialized tests for drugs, endocrine function, and urine and body fluid analysis.

Clinical Hematology 5 hrs.

Study of the origin, development, morphology, physiology, and pathophysiology of the formed elements of the blood and bone marrow. Manual and automated methods of cell counting, differentiation, and other special hematological procedures on blood and body fluids used in disease diagnosis are included.

Clinical Hemostasis 1 hr.

Study of the platelet, vascular, coagulation, and fibrinolytic systems. Testing procedures and the application of the principles of hemostasis as related to disease states and therapeutic monitoring are also included.

Clinical Immunohematology 4 hrs.

Study of red cell antigen-antibody systems, antibody screening and identification, compatibility testing, and immunopathologic conditions. Also included are donor requirements and blood component preparation and therapy.

Clinical Immunology 3 hrs.

Study of the principles of the protective and adverse aspects of the cellular and humoral immune responses. Theory and performance of test procedures based on antigen-antibody reactions and clinical significance of test results are included.

Clinical Microbiology I 4-6 hrs.

Theory and practice of the isolation and identification of pathogenic bacteria and mycobacteria in clinical specimens through cultures, morphology, biochemical, and/or serological reactions and their drug susceptibility. The relation of clinical testing to disease states is also included.

Clinical Microbiology II 2-4 hrs.

Theory and practice of the isolation and identification of fungi, parasites, rickettsia, and viruses utilizing morphological, cultural, biochemical, and serologic methods. The relation of clinical testing to disease states and epidemiology as it applied to microbiology is also included.

Special Topics in Clinical Laboratory Science 1 hr.

An overview of medical ethics, patient approach, the theory and practice of phlebotomy techniques, laboratory safety, applications of laboratory computer systems, and independent clinical research and development.

Clinical Management and Education 1 hr.

A basic introduction to the principles and theory of management and education as related to the clinical laboratory. The special job responsibilities of the medical laboratory scientist in management and education are addressed.

General Concentration

Students in the General concentration must complete 21 to 22 additional science hours as delineated below;

- CHM 320 Quantitative Analysis – 3 hrs.
- CHM 321 Quantitative Analysis Laboratory – 3 hrs.
- CHM 380 Junior Seminar in Chemistry and Biochemistry- 1 hr.
- CHM 480 Senior Seminar in Chemistry and Biochemistry – 1 hr.

- CHM 420 Instrumental Analysis-4 hrs.
 - CHM 416 Environmental Chemistry or BIO 420 Ecosystem Ecology 3 or 4 hrs.
 - BIO 251 and BIO 252 Ecology, Evolution and Biodiversity- 4 hrs.
 - PHY 107 Physics I- 4 hrs.
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Neuroscience Minor



Neuroscience Minor

Program Co-Directors: Cady, Koeltzow

The purpose of the neuroscience minor is to encourage and recognize in-depth study of neuroscience for students majoring in other subject areas. Coursework incorporates the interdisciplinary nature of the field and will provide students with a foundation in cellular and molecular neurobiology and in behavioral neuroscience. Completion of the minor requires at least 28 credit hours, 12 of which cannot also be used for completion of a student's major. Students seeking to minor in neuroscience should complete PSY 201 during the first year as this course is a requirement of the application process, which will occur during the fall of each applicant's sophomore year. For application and additional information see Neuroscience. Admission decisions will occur prior to registration for spring courses.

Required Neuroscience Core (15 Hours)

- PSY 201 Brain and Behavior – 3 hrs. *Note: Must be successfully completed to apply for the minor.*
- PSY 206 Experimental Psychology 4 hrs.
- PSY 364 Behavioral Neuroscience – 3 hrs.
- NEU 470 Neuroscience Seminar – 1 hr.
- BIO 484 Neurobiology – 3-4 hrs.

Students must also complete at least one laboratory course by registering for 4 hours in BIO 384 (with consent of instructor) or by enrolling in PSY 365 (Behavioral Neuroscience Laboratory) concurrently with PSY 364.

Required Foundations In Science (7 Hours)

Students must complete one of the following introductory biology classes:

- BIO 111/113 Introduction to Cell Biology with lab – 4 hrs. **or**
- BIO 151/152 Molecules to Cells with lab – 4 hrs.

Students must complete a 3-credit-hour statistics sequence:

- BIO 260 Biological Statistics I – 1 hr. **and**
- BIO 261 Biological Statistics II – 2 hrs. **or**
- PSY 205 Quantitative Methods – 3 hrs.

Electives Courses (6-8 Hours; At Least One Course Must Be In Biology)

- BIO 310 Genetics – 3 hrs.
- BIO 381 Comparative Animal Physiology 3-4 hrs.
- BIO 419 Ethology – 4 hrs.
- NEU 490 Independent Research in Neuroscience – 1–3 hrs.
- PSY 360 Psychology of Learning – 3 hrs.
- PSY 366 Sensation and Perception – 3 hrs.
- PSY 405 Social Affective Neuroscience – 3 hrs.
- PSY 420 Psychology of Addiction – 3 hrs.

Course Sequence

First Year

- PSY 201 – 3 hrs.*

Sophomore

- BIO 111/113 **or** 151/152 – 4 hrs.
- PSY 205 **or** BIO 260/261 – 3 hrs.

Junior

- BIO 384 – 3-4 hrs.
- PSY 206 – 4 hrs.
- PSY 364/365 – 3–4 hrs.

Senior

- NEU 470 – 1–2 hrs.
- 2 electives – 6–8 hrs.

*Under BCC, all science and math courses (including those used for NS, QR) taken count toward the 15 Bachelor of Science hours.

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Neuroscience Courses



Neuroscience Courses

NEU 405 – Social Affective Neuroscience (3 hours)

Delves into current insights, debates, and research on social and emotional behavior and its neural basis. Course goals include providing an introduction to the theoretical, methodological, and intellectual challenges that influence these fields and their growth. Additionally, the course is designed to give a broad overview of current research and theory in the social and affective neurosciences, particularly where these two domains intersect, and explore how knowledge of neural systems, neuroendocrine function, functional neuro-anatomy, and neurochemistry can or cannot provide insights into social and emotional behavior. Cross-listed with PSY 405. Prerequisite: PSY 201, PSY 206; or instructor consent.

NEU 470 – Seminar in Neuroscience (1-3 hours)

Introduces students to a specialization within the field of neuroscience, with a focus on surveying the primary scientific literature. May focus on the application of specific techniques, current knowledge in specialized areas, or an analysis of neuroscience in contemporary media. Course may be repeated no more than 3 times. Prerequisite: Neuroscience minor or consent of instructor.

NEU 490 – Independent Research in Neuroscience (1-3 hours)

Directed research for qualified students in specialized areas of neuroscience. May be repeated for a total of 3 credit hours. Prerequisite: BIO 261 or PSY 205; Neuroscience minor or consent of instructor.

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Philosophy



Philosophy

PHILOSOPHY FACULTY Associate Professor Kelley (chair), Niculescu; Assistant Professors Greene.

Philosophy courses are designed to serve a variety of academic needs by providing a confrontation with the principal thinkers and the fundamental issues that have shaped humankind's intellectual heritage, by providing a philosophical perspective of several other fields, and by providing – as preparation for advanced study – a solid grounding in the chief figures, methods, division, and problems of philosophy. Regardless of the students' vocational interests, academic major program, or plans for graduate work, our courses seek to stimulate their intellectual involvement in the continuing re-exploration of basic and meaningful questions. Philosophy courses emphasize that the student demonstrate the ability to communicate effectively and acceptably in both written and oral English.

Ethics Minor

The Department of Philosophy and Religious Studies offers a minor in ethics. For more information, see Ethics Minor.

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Philosophy Courses



Philosophy Courses

PHL 103 – An Inquiry Into Values (3 hours)

Gen. Ed. HP

Core Curr. HU

Major value issues addressed by the world's most influential philosophers.

PHL 130 – The Three Teachings: An Introduction to the Chinese Traditions (3 hours)

Core Curr. GP WC,HU

Introduction to the three great intellectual and spiritual traditions of China: Confucianism, Daoism, and Buddhism. Examination of values, ethical reflection, modes of moral and spiritual cultivation, and metaphysical reasoning presented in the foundational sources of these traditions.

PHL 201 – Philosophy Proseminar I (3 hours)

An overview of the history of philosophy from Thales to William of Ockham. An introduction to doing philosophical research and writing.

Prerequisite: Philosophy major or minor; or permission of the instructor.

PHL 202 – Philosophy Proseminar II (3 hours)

Core Curr. WI

An overview of the history of philosophy from Francis Bacon to recent thought. A workshop for cultivating philosophical writing and research skills. Prerequisite: Philosophy majors or minors or consent of instructor.

PHL 203 – Logic (3 hours)

Develop skills in analysis and evaluation of reasoning in everyday situations; improves insights into argument construction and exact methods of proof.

PHL 300 – Ancient and Medieval Philosophy (3 hours)

Development of ideas having a significant influence on Western thought during ancient and medieval times.

PHL 304 – Renaissance and Modern Philosophy (3 hours)

Development of ideas having a significant influence on Western thought during the Renaissance and modern periods, terminating with the philosophy of Hegel.

PHL 306 – Recent Philosophy (3 hours)

Development of ideas having a significant influence on Western thought during the 19th and 20th centuries.

PHL 307 – Classical Political Philosophy (3 hours)

Gen. Ed. HP

Systematic political thought in Western philosophy during ancient and medieval times. Cross listed as PLS 307. Prerequisite: junior standing.

PHL 308 – Modern Political Philosophy (3 hours)**Gen. Ed. HP**

From the beginning of the modern period through the 19th century. Cross listed as PLS 308. Prerequisite: junior standing.

PHL 311 – Existentialism (3 hours)

Philosophical meaning of existentialism and its relation to literature, theology, psychology, and psychiatry. Prerequisite: 3 hours of philosophy or religious studies, or consent of instructor.

PHL 320 – Symbolic Logic (3 hours)

Logical systems: propositional and predicate calculi. Truth tables, proofs, tautologies, principles of inference, Boolean algebra, DeMorgan's Laws, quantifiers, representations, and set theory. Cross-listed as CS 320. Prerequisite: MTH 120.

PHL 344 – Philosophy of Religion (3 hours)

Nature of religion; function and validity of religious concepts in the modern world. Cross listed as RLS 344. Prerequisite: 3 hours of religious studies or philosophy.

PHL 347 – Ethics (3 hours)**Gen. Ed. HP****Core Curr. HU**

Major ethical theories as they provide insights into our existence as moral beings; how we exhibit this in moral decision and behavior.

PHL 350 – Art in Human Experience (3 hours)**Gen. Ed. FA****Core Curr. FA**

Detailed examination and explanation of various forms of visual, musical, literary, and dramatic arts; function of artistic creation in offering direct experience and appreciation of the essence of human feeling. Background in the arts recommended.

PHL 360 – Topics in Philosophy (3-6 hours)

A specific philosophical theme or broader topic of multidisciplinary interest will be addressed. May be repeated to a maximum of 6 semester hours. Prerequisite: 3 hours of philosophy or consent of the instructor

PHL 403 – Seminar in Philosophy (3 hours)

Advanced study of a particular thinker, system, work, or movement in philosophy. Repeatable to 9 semester hours. Prerequisite: 6 hrs. in philosophy or consent of instructor.

PHL 551 – Reading in Philosophy (1-3 hours)

Directed individual study. Prerequisite: 6 hours in philosophy; senior or graduate standing; consent of department chair.

PHL 552 – Reading in Philosophy (1-3 hours)

Directed individual study. Prerequisite: 6 hours in philosophy; senior or graduate standing; consent of department chair.

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Physics



Physics

FACULTY Associate Professor Lozano (chair); Professor Wang; Associate Professor Kimberlin; Visiting Assistant Professors Satterfield; Electronics Technician Kahila.

The Department of Physics has designed its courses in physics and astronomy with two principal objectives in mind. First, for citizens to lead productive lives individuals need to be scientifically and technologically literate. Therefore, the department offers physics courses that are accessible to all of the university's students. Several of our courses have been especially tailored for the nonscientist. Second, a technological society has need for teachers, scientists, and engineers who have a broad and deep understanding of the basic physical laws. The department has courses designed for students majoring in scientific and technical areas that will prepare them for professional careers or advanced study in these areas.

The Department of Physics offers introductory courses that cover the entire range of preparation in science and mathematics found at the university. Some require little or no science or mathematics preparation. Examples of such courses are PHY 100, PHY 123, and AST 300. Most of the other courses offered by the department require some prior exposure to science and mathematics. Therefore, students wishing to study physics will find entry-level courses appropriate to their abilities and preparation.

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Physics Courses



Physics Courses

PHY 100 – Fundamental Physics Concepts (4 hours)

Gen. Ed. FS

Core Curr. NS

Algebra-based course for students with minimal physics background. Topics introduced include Newton's laws of motion, electromagnetism, thermodynamics, optics, and atomic theory. Emphasis is on basic physical principles. Includes laboratory.

PHY 107 – General Physics I (4 hours)

Gen. Ed. FS

Core Curr. NS

Algebra- and trigonometry-based introductory physics course which covers Newtonian mechanics and conservation laws; fluid statics and dynamics; vibrations, waves, and sound; laws of thermodynamics. Includes laboratory. Prerequisite: High school physics or PHY 100.

PHY 108 – General Physics II (4 hours)

Gen. Ed. FS

Core Curr. NS

Continuation of PHY 107. Electric and magnetic fields; electromagnetic induction; electromagnetic waves; geometrical and physical optics; the special theory of relativity; quantum theory, atomic physics, and nuclear and particle physics. Includes laboratory. Prerequisite: PHY 107; MTH 115.

PHY 110 – University Physics I (4 hours)

Gen. Ed. FS

Core Curr. NS

A calculus-based introductory physics course for scientists and engineers that covers Newton's laws of motion; conservation laws for momentum, energy, and rotational motion; oscillatory motion. Includes laboratory. Prerequisite: High school physics or PHY 100; MTH 119 or MTH 121.

PHY 123 – Physical Science, the Basis for A Technical Society (3 hours)

Gen. Ed. FS

Core Curr. NS

A course for non-science students with minimal preparation in mathematics and science. Emphasizes basic concepts from the physical sciences and their significance for a scientifically literate society. Topics in physics, chemistry, computing, energy, and astronomy will be covered from an applications perspective. Students with prior college physics courses may not register for this course.

PHY 130 – University Physics I for Scientists (4 hours)

Core Curr. NS

A calculus-based introductory physics course for scientists and honors students that covers Newton's laws of motion; conservation laws for momentum, energy, and angular momentum, oscillatory motion, fluids, and thermodynamics. Includes laboratory. Prerequisite: High school physics or PHY 100; MATH 119 or MTH 121

PHY 140 – Physics of the Small World: Nanophysics and Applications (3 hours)**Gen. Ed. FS**

The objective of this course is to educate students with all academic backgrounds in the field of nanoscience and technology, starting with discussing the basic principles and definitions associated with the nano world, the basic ideas of quantum mechanics, and the wide variety of applications of nanotechnology. Offered at the 100 level as an introduction to nanophysics and nanotechnology with the goal of introducing the general public to these topics and their applications.

PHY 167 – Introduction to Fluids and Thermodynamics (2 hours)

A calculus-based introductory physics course for scientists and engineers that covers elasticity, fluid mechanics, and thermal physics. Calculus used throughout. This course meets twice/week and includes a small lab component consisting of 4-5 lab sessions. Prerequisite: High school physics or PHY 100; MTH 119 or MTH 121 Corequisite: PHY 110

PHY 199 – Physics Seminar for New Physics Majors (1 hour)

Orientation for students interested in a physics career.

PHY 201 – University Physics II (4 hours)**Gen. Ed. FS****Core Curr. NS**

Continuation of PHY 110 covering electric fields and DC circuits; magnetic fields; electromagnetic induction and AC circuits; Maxwell's equations; electromagnetic waves; and geometrical and physical optics. Includes laboratory. Prerequisite: PHY 110. Corequisite: MTH 223.

PHY 202 – Applied Quantum Physics (3 hours)**Gen. Ed. FS**

An introduction to relativity and relativistic mechanics; quantum theory with applications to atomic and molecular physics; condensed matter physics; nuclear and particle physics. Prerequisite: PHY 201. Corequisite: MTH 223.

PHY 320 – Optics (4 hours)

Geometrical optics: matrix methods, mirrors, lenses, fibers, thick optics, optical instruments; physical optics including interference, diffraction, polarization, lasers, and holography. Includes lab component. Prerequisite: PHY 202 or 303

PHY 330 – Classical Mechanics (3 hours)

Particle kinematics; Newtonian mechanics; classical gravitation; Lagrangian and Hamiltonian dynamics; linear oscillations; nonlinear oscillations; central force and planetary motion; collisions between particles; motion in noninertial systems. Prerequisite: PHY 201; MTH 224.

PHY 355 – Independent Readings (1-3 hours)

Individually assigned reading assignments of relevant topics in physics or astronomy. Prerequisite: Junior standing; background appropriate to the study; consent of instructor.

PHY 360 – Electricity and Magnetism (3 hours)

Vector calculus, electric field, Gauss' law, scalar potential, magnetic fields, Ampere's and Faraday's Laws, electromagnetic energy, dipole fields, currents, boundary conditions, and Maxwell's equations. Prerequisite: PHY 201; MTH 224.

PHY 367 – Statistical and Thermal Physics (3 hours)

A theoretical treatment of classical thermodynamics with applications of the first and second laws, and an introduction to statistical mechanics, including quantum statistics, canonical and grand canonical ensembles, general properties of the partition function, applications of statistical mechanics to fluid and solid systems, and the Ising model. Prerequisite: PHY 330; PHY 202 or 380.

PHY 380 – Quantum Physics (3 hours)

Foundations of quantum theory: deBroglie's postulate, Bohr model of the atom, and the Schrodinger equation; applications of quantum theory to atoms, solids, nuclei, and particles; relativity. Prerequisite: PHY 201.

PHY 381 – Quantum Physics Laboratory (2 hours)

Laboratory: experiments designed to investigate quantum physics phenomena. CoRequisite: PHY 202 or PHY 380

PHY 399 – Special Problems in Physics (1-3 hours)

Qualified students work on an individually assigned problem and prepare oral and written reports on the problem solution. Approved for off-campus programs when required. May be repeated for a maximum of 6 hrs. credit. Prerequisite: Physics preparation sufficient for the problem; consent of instructor and Department Chair.

PHY 440 – Advanced Nanophysics (3 hours)

Covers the fundamental principles of quantum scales and the consequences of scale reduction and limitations; quantum mechanical effects of nanostructures and their impacts on the macro world; nanoscale phenomena and applications based on magnetism, spin, and superconductivity; fabrication of nanostructures; introduction to characterization techniques; silicon-based nanoelectronics; latest and future nanoscience and nanotechnological advances and challenges. Prerequisite: PHY 202 or PHY 380, MTH 223

PHY 441 – Advanced Nanophysics Laboratory (2 hours)

Experiments associated with synthesis and characterization of nano-scaled structures: fabrication methods; diffraction techniques; electron spectroscopies; electron microscopy; atomic force microscopy. Prerequisite: PHY 202 or PHY 380.

PHY 460 – Advanced Electricity and Magnetism (3 hours)

Solution to Laplace's equation, method of images, boundary value problems, plane electromagnetic waves in vacuum, magnetic materials, and conductors; reflection and refraction, guided waves, and radiation of electromagnetic waves. Prerequisite: PHY 360
Corequisite: MTH 414 or a 500-level MTH course

PHY 480 – Quantum Mechanics I (3 hours)

Inadequacies of classical physics when applied to problems in atomic and nuclear physics. Development of mathematical formalism used in basic quantum theory, with applications to simple models of physical systems. Prerequisite: PHY 330; PHY 202 or 380, 306 or consent of instructor. MTH 207 recommended.

PHY 482 – Quantum Mechanics II (3 hours)

The mathematical formalism of quantum mechanics with applications to problems of electron spin and many-particle systems will be studied along with the development of approximation techniques with applications to complex physical systems. Prerequisite: PHY 480.

PHY 568 – Condensed Matter Physics (3 hours)

Introduction to the physics of the solid state and other condensed matter especially for students of physics, materials science, and engineering; structure of crystals; molecular binding in solids, thermal properties, introduction to energy band structure and its relation to charge transport in solids, semiconductors, superconductivity. Prerequisite: Physics majors: PHY 330, 202 or 380; PHY 305. Other majors need instructor consent.

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Political Science



Political Science

FACULTY Professor Jones; Associate Professor, Reed (chair), and Rimmel; Assistant Professors Davis and Estes.

The undergraduate major is designed to maximize students' capacity to analyze and interpret the significance and dynamics of political events and governmental processes be they at the global level or at the local community level. Students build an excellent foundation for numerous careers by mastering the accumulated basic general knowledge of political science and developing the related analytical skills. Political science majors most frequently pursue careers in law, business, governmental service, private political organizations, journalism, and academic political science. Many students with yet other career aspirations major in political science so they can understand not only how government affects them, but also how they can affect government.

Major in Political Science

A major in political science consists of a minimum of ten political science courses and satisfaction of the requirements for either the B.A. or B.S. degree.

Political Science Course Requirements

The political science requirements are: (1) A core of four courses to provide a grounding in the traditional sub-fields of the discipline: PLS 105, American politics; PLS 205, comparative politics; PLS 207, political theory; and PLS 208, international relations; (2) PLS 209, scope and methods of political science; (3) four upper-level (300-400) courses from the following list of courses, with a minimum of one course in three separate sub-fields; and (4) a senior seminar (PLS 491, 492, 493, or 494) designed to be a culminating experience. Upper-division sub-field course work is distributed as follows:

- **American politics:** PLS 301, 310, 311, 312, 314, 315, 360, 419, 420, 421, 422, 459, 460, 494
- **Comparative politics:** PLS 303, 304, 305, 491
- **International relations:** PLS 302, 317, 318, 319, 492; IS 312, IS 410
- **Political theory:** PLS 300, 307, 308, 309, 407, 493

The Political Science Department maintains a policy of close supervision of its majors and urges them to consult regularly with their faculty advisor. In planning their academic program, students intending to major in political science are encouraged to complete the core courses (PLS 105, 205, 207, 208) as early as practicable. Students should complete PLS 209 prior to enrolling in a senior seminar.

Major Requirements

Required Courses – 15 hrs.

- PLS 105: Introduction to American Government – 3 hrs.
- PLS 205: Introduction to Comparative Politics – 3 hrs.
- PLS 207: Introduction to Political Thought – 3 hrs.
- PLS 208: Fundamentals of International Relations – 3 hrs.
- PLS 209: Scope and Methods of Political Science – 3 hrs.

In addition to the above required courses, students must take four courses from the following list of elective courses, with a minimum of one course in each of three separate sub-fields.

American Politics

- PLS 301: Topics in American Politics – 3 hrs.
- PLS 310: Political Behavior – 3 hrs.
- PLS 311: Political Parties Electorate and Politics – 3 hrs.
- PLS 312: State and Local Government – 3 hrs.
- PLS 314: The U.S. Congress – 3 hrs.
- PLS 315: The U.S. Presidency – 3 hrs.
- PLS 360: Judicial Politics – 3 hrs.
- PLS 419: Introduction to Public Administration – 3 hrs.
- PLS 420: Public Personnel Administration – 3 hrs.
- PLS 421: The Politics of Regulation – 3 hrs.
- PLS 422: Urban Politics – 3 hrs.
- PLS 459: Constitutional Law – 3 hrs.
- PLS 460: Constitutional Law – 3 hrs.
- PLS 494: Seminar in American Politics – 3 hrs.

Comparative Politics

- PLS 303: Sub-Saharan African Politics – 3 hrs.
- PLS 304: Governments of West Europe – 3 hrs.
- PLS 305: Topics in Comparative Government – 3 hrs.
- PLS 306: Comparative Public Policy – 3 hrs.
- PLS 491: Seminar in Comparative Politics – 3 hrs.

International Relations

- PLS 302: Topics in International Relations – 3 hrs.
- PLS 317: International Law – 3 hrs.
- PLS 318: International Organization – 3 hrs.
- PLS 319: International Political Economy – 3 hrs.
- PLS 492: Seminar in International Relations – 3 hrs.
- IS 312: American Foreign Policy – 3 hrs.
- IS 410: Globalization in World Affairs – 3 hrs.

Political Theory

- PLS 300: Topics in Political Thought – 3 hrs.
- PLS 307: Classical Political Philosophy – 3 hrs.
- PLS 308: Modern Political Philosophy – 3 hrs.
- PLS 309: Gender and Sexuality in Political Thought – 3 hrs.
- PLS 407: American Political Thought – 3 hrs.
- PLS 493: Seminar in Political Theory – 3 hrs.

Finally, students are required to take one senior seminar designed to be a capstone experience.

- PLS 491: Seminar in Comparative Politics – 3 hrs.
- PLS 492: Seminar in International Relations – 3 hrs.
- PLS 493: Seminar in Political Theory – 3 hrs.
- PLS 494: Seminar in American Politics – 3 hrs.

Bachelor of Arts Degree Requirements

Two years or its equivalent of college-level foreign language. (This means that a student must complete 201 or higher, or a 300-level language course. Whenever that has been completed, the requirement has been met.)

Bachelor of Science Degree Requirements

Students must complete the university requirements for the Bachelor of Science degree. When selecting courses to satisfy the B.S. requirements, students are strongly encouraged to select from mathematics, computer science, statistics, or quantitative methods.

Minor In Political Science

The minor is to provide students with a flexible, coherent, and guided study of political science as it relates to their specific academic major or personal interests. The minor requires a minimum of 15 hours in political science of which 9 hours must be taken in junior-senior level courses. A maximum of 3 hours of junior-senior level courses may be used to satisfy the requirements of another major or minor.

All minors must take PLS 105. Minors must also take one of the following courses: PLS 205; PLS 207; or PLS 208. Minors must also take 9 hours of junior-senior level courses. The department's policy is that coursework used to complete the minor must be drawn from its regularly scheduled, subfield-specific course offerings; use of internship, reading, or research courses (PLS 380, 480, 483, 484, 485) to complete the minor requires prior approval by both the student's Political Science Department faculty advisor and department chairperson.

Minor Requirements

Required Course – 3 hrs.

- PLS 105: Introduction to American Government – 3 hrs.

Elective Courses (choose one) – 3 hrs.

- PLS 205: Introduction to Comparative Politics – 3 hrs.
- PLS 207: Introduction to Political Thought – 3 hrs.
- PLS 208: Fundamentals of International Relations – 3 hrs.

Minors must also take 9 hours of junior senior-level courses.

Off-Campus Programs

Political science majors are urged to consider the many off-campus programs available. Bradley annually sends students to the various Washington Semester programs (through American University in Washington, D.C.). The University also participates in many programs of study abroad. Students are also urged to consider participating in either the department's internship program or in the University's Cooperative Education/Internship Program (see the Cooperative Education/Internship section of this catalog). Bradley students are eligible to do internships through the Washington Center for Internships. The Center seeks to utilize the resources of the nation's capital to provide participatory learning experiences in order to enhance students' academic, civic, and professional development. All of these programs provide students with practical experience while they are pursuing academic goals.

Minor In International Studies

The minor is designed to enhance the educational experience of the student by adding a global perspective to his/her major field of study. Completion of the minor includes three required courses (IS 103, IS 104, and IS 275) and three elective International Studies courses offered at the 300 or 400 level. A candidate for the minor is expected to work closely with his/her advisor to choose elective courses that are appropriate to the concentration desired by the student. Successful completion of the minor requires a grade point average of 2.0 or higher in International Studies coursework.

Pre-Law

A statement on pre-law curricula is given at the beginning of the College of Liberal Arts and Sciences section of this catalog. The college also offers pre-law courses.

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and graduation requirements for particular degree programs.

Political Science Courses



Political Science Courses

PLS 105 – Introduction to American Government (3 hours)

Gen. Ed. SF

Core Curr. SB

The American political system: constitutional principles, political processes, and governmental policy making.

PLS 205 – Governments Around the Globe (3 hours)

Gen. Ed. SF

Core Curr. SB,GP WC

Comparative analysis of selected political systems.

PLS 207 – Introduction to Political Thought (3 hours)

Gen. Ed. HP

Core Curr. HU

Recurrent concepts or issues in political thought and ways they have been treated by classic and contemporary writers. Obligation and the social contract, liberty, justice and equality, property, representation.

PLS 208 – Fundamentals of International Relations (3 hours)

Gen. Ed. SF

Core Curr. GP GS

Fundamental issues and problems that have contributed to structuring current patterns of international relations.

PLS 209 – Scope and Methods of Political Science (3 hours)

Core Curr. WI

Introduction to political inquiry; research methods necessary for in-depth research. Prerequisite: PLS 105

PLS 300 – Topics in Political Thought (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum 6 hours credit. Prerequisite: PLS 207.

PLS 301 – Topics in American Politics (3 hours)

Analysis of research, concepts, institutions, theories, and literature. Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit. Prerequisite: PLS 105.

PLS 302 – Topics in International Relations (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit. Prerequisite: 3 hours of political science.

PLS 303 – Sub-Saharan African Politics (3 hours)

Focuses on Sub-Saharan African politics through examination of the influence of: historical factors such as pre-colonial governance and European colonization; social factors including gender, class, religion, and ethnicity; economic factors involving natural resources and corruption; health factors including malaria, HIV, and climate change; and political factors including political parties, personal rule, and military rule. Course does not presume any preexisting knowledge of Sub-Saharan Africa specifically but does require basic knowledge of comparative politics broadly. Prerequisite: PLS 205 or consent of instructor

PLS 304 – Governments of West Europe (3 hours)

Governmental structures, public policies, policy making processes, ideological foundations, and dynamics of political and economic change in the parliamentary democracies of West Europe; emphasis on Britain, France, Germany, the Netherlands, and Sweden. Prerequisite: PLS 205.

PLS 305 – Topics in Comparative Government (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit. Prerequisite: PLS 205.

PLS 307 – Classical Political Philosophy (3 hours)

Gen. Ed. HP

Core Curr. HU

Systematic political thought in Western philosophy during ancient and medieval times. Cross listed as PHL 307. Prerequisite: Junior standing.

PLS 308 – Modern Political Philosophy (3 hours)

Gen. Ed. HP

Core Curr. HU

From the beginning of the modern period through the 19th century. Cross listed as PHL 308. Prerequisite: Junior standing.

PLS 309 – Gender and Sexuality in Political Thought (3 hours)

This course considers the concepts of gender and sexuality as they relate to various theories of politics. Spanning more than two millennia of western political thought from ancient Greece to modern Britain to contemporary America, the course presents a variety of perspectives including (but not limited to) Platonism, liberal feminism, utilitarianism, and Nussbaum's capabilities approach. By the end of the course, students should have a grasp of the historical significance of both gender and sexuality in political thought, as well as a sense of the different ways in which those concepts have been understood and treated in different eras and philosophical traditions.

PLS 310 – Political Behavior (3 hours)

Formation of opinion, perception of political events, voting behavior, and political participation; significance for democratic government. Prerequisite: PLS 105.

PLS 311 – Political Parties (3 hours)

Organization and activities of modern political parties, forces shaping partisan organization and activities, and development of public policy. Emphasis on party politics in contemporary America, with attention to American political history and comparative party systems. Prerequisite: PLS 105

PLS 312 – State and Local Politics (3 hours)

Political processes through which rapidly growing problems of the state and local governments are identified, fought over, and resolved. Prerequisite: PLS 105

PLS 314 – The U.S. Congress (3 hours)

Provides an advanced understanding of the American Congress and its members within the framework of social science. Discusses congressional rules and procedures, member behavior and motivation, and the role of parties and leaders. Addresses debates about the modern Congress including lack of competition for seats, polarization, redistricting, the filibuster and pork-barrel politics. Prerequisite: PLS 105

PLS 315 – The U.S. Presidency (3 hours)

Provides a comprehensive, theoretical, and logical framework to analyze the presidency. Examines the institutional presidency, formal powers, and the president's role in a separated system. Explores the development of the president's power over time, and changes in vetoes, signing statements, bureaucratic management, and relationship with Congress and the courts. Prerequisite: PLS 105

PLS 317 – International Law (3 hours)

Core Curr. GP GS

Nature, sources, and development of international law as it has been invoked in diplomatic practices, international adjudications, and national courts. Prerequisite:

PLS 318 – International Organization (3 hours)

The analysis of major international problems of a character requiring the concerted efforts of international organization in their solutions. Prerequisite: PLS 208 or consent of instructor.

PLS 319 – International Political Economy (3 hours)**Core Curr. WI**

Overview of theories and issues in international political economy affecting relations among advanced industrialized countries. Development of the international political economy; institutions for its management; emerging issues and future prospects. Prerequisite: PLS 208 or consent of instructor.

PLS 360 – Judicial Politics (3 hours)**Gen. Ed. SF**

Political behavior of American trial courts and variables connecting them to the larger political system. Examples from criminal procedure and civil justice cases. Emphasis on police and prosecutorial discretion; recruitment of judges; juries; and social function of judgments and punishments. Prerequisite: PLS 105 or consent of instructor.

PLS 380 – Washington Center Seminar (3 hours)

Provides credit for students participating in the seminar component of the Washington Center program in Washington, D.C. Prerequisite: consent of instructor.

PLS 407 – American Political Thought (3 hours)

Systematic political thought in American philosophy from colonial times to the present. Prerequisite: PLS 207 or consent of instructor.

PLS 419 – Introduction to Public Administration (3 hours)**Core Curr. WI**

Public administration in a democratic setting: history of American PA, organization theory, public personnel, budgeting, intergovernmental relations, decision making and policy analysis, the regulatory process, and ethics in government. Prerequisite: PLS 105 or 202.

PLS 420 – Public Personnel Administration (3 hours)**Core Curr. WI**

A study of the basic issues and techniques of public personnel administration: focus on the distinctive setting in which public managers function, theories of motivation in the work place, and the tasks commonly faced by human resource managers in the public sector. Prerequisite: junior standing.

PLS 421 – The Politics of Regulation (3 hours)

An examination of the modern administrative state through an in-depth study of the federal regulatory process; administrative law and procedure; the politics involved in the development and reform of the federal regulatory bureaucracy. Prerequisite: PLS 105; junior standing.

PLS 422 – Urban Politics (3 hours)

Study of selected problems in metropolitan areas: political forms, ethnic politics, education, housing, poverty, corrections; theories dealing with these problems. Prerequisite: PLS 105; junior standing.

PLS 459 – Constitutional Law: Institutional Powers and Constraints (3 hours)

Position of the Supreme Court in American system of government as both symbol and instrument of power. Case method. Prerequisite: PLS 105; junior standing.

PLS 460 – Constitutional Law: Civil Rights and Civil Liberties (3 hours)

Supreme Court as one of the policy making agencies of the federal government. Relationship between citizen and government in civil, property, and political rights. Prerequisite: PLS 105; junior standing.

PLS 480 – Internship in Political Science (1-6 hours)**Core Curr. EL**

Students work with selected political agencies, to study practical political problems from the perspective of the discipline. Course may be repeated for a maximum of six credit hours. Pass/Fail. Prerequisite: consent of the instructor.

PLS 483 – Reading in Political Science (1-6 hours)

Individual in-depth work on a subject approved and supervised by a PLS faculty member. For highly qualified students. May be repeated for a maximum of six credit hours Prerequisite: Junior/senior standing and consent of instructor

PLS 484 – Reading in Political Science II (1-3 hours)

Individual in-depth work on a subject approved and supervised by a PLS faculty member. For highly qualified students. Prerequisite: Junior/senior standing and consent of instructor

PLS 485 – Research (1-6 hours)

Core Curr. EL

Individual research for qualified students. May be repeated for a maximum of 6 hours credit. Prerequisite: 3.2 average in student's major; junior/senior standing; consent of instructor.

PLS 491 – Seminar in Comparative Politics (3 hours)**Core Curr. WI**

Seminar in Comparative Politics Prerequisite: Senior standing; major or minor in political science. No political science major may take more than two courses in the 490 sequence.

PLS 492 – Seminar in International Relations (3 hours)

Prerequisite: senior standing; major or minor in political science. No political science major may take more than two courses in the 490 sequence.

PLS 493 – Seminar in Political Theory (3 hours)**Core Curr. WI**

Seminar in Political Theory Prerequisite: Senior standing; major or minor in political science. No political science major may take more than two courses in the 490 sequence.

PLS 494 – Seminar in American Politics (3 hours)**Core Curr. WI**

Seminar in American Politics Prerequisite: senior standing; major or minor in political science. No political science major may take more than two courses in the 490 sequence.

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Legal Studies Minor



Legal Studies Minor

The legal studies minor is to provide students with a curriculum devoted to the development of research and communication skills unique to the legal profession. The minor embraces the ethical dilemmas and responsibilities faced by lawyers.

The minor is open to any student in any college and any major.

The minor will be comprised of a total of 15 hours and require the following:

- PLW 101 Introduction to the Legal Profession (1 hour)
- PLW 102 Introduction to Legal Research (2 hours)
- PLW 325 Legal Ethics (3 hours)
- PLW 400 Capstone Senior Experience (3 hours)

Six hours from the following:

- ENG 306 Business Communication (3 hours)
- COM 330 Communication Law and Ethics (3 hours)
- PLS 460 Constitutional Law (3 hours)
- PLW 295 Introduction to Trial Advocacy (3 hours)
- HIS 307 History of the Early American Republic (3 hours)
- BLW 342 Legal Environment of Business (3 hours)
- BLW 347 Law and the Entrepreneur (3 hours)
- BLW 360 Business & Intellectual Property (3 hours)
- BLW 395 Real Estate Law (3 hours)

At least one course must come from the BLW list of courses.

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Pre-Law Courses



Pre-Law Courses

PLW 101 – Introduction to the Legal Profession (1 hour)

Survey course introducing students to various aspects of the legal profession. Intended for students with potential interest in a legal career. Prerequisite:

PLW 102 – Introduction to Legal Research (2 hours)

Students learn to identify and utilize legal research resources to answer the legal issues presented by different factual scenarios and present the results in legal documents. Prerequisite:

PLW 295 – Introduction to Trial Advocacy (3 hours)

Develop the critical thinking and communication skills utilized in trials in the United States; experiential learning by presentations judged by local lawyers and attorneys. Prerequisite:

PLW 300 – Pre-Law Internship (0-6 hours)

Core Curr. EL

Students considering law school work in a legal office setting, either private or public sector, to learn what the practice of law is like. Actual tasks are determined by the site supervisor. Placement is determined by the director of the Center for Legal Studies. Course may be repeated for a maximum of 6 credit hours. Satisfactory/Unsatisfactory. Prerequisite: Consent of the instructor, sophomore standing and 3.0 cumulative GPA.

PLW 325 – Legal Ethics (3 hours)

Explore fundamental ethical issues presented to lawyers in United States created by the paradox of the adversarial system and the pursuit of truth. Prerequisite: Junior standing

PLW 400 – Capstone Experience (3 hours)

The focus will be upon critical thinking utilizing advanced legal advocacy and writing skills. Experiential learning will be an integral part of each seminar specifically utilizing members of the legal community. Prerequisite: PLW 101, PLW 102, PLW 325, or consent of the instructor

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and graduation requirements for particular degree programs.

Psychology



Psychology

FACULTY Professors Hermann (chair), D.E. Montgomery; Associate Professors Bacon, Beckes, Koeltzow, D.A. Montgomery, Roberts, Schweigert; Assistant Professors Harris, San Juan.

Psychology is the scientific study of behavior. Its subject matter encompasses the thought and behavior, both typical and pathological, of adults, children, and even other species. The scientific method is the unifying thread of the discipline as psychologists utilize it to systematically answer the questions raised by human behavior.

The undergraduate degree in psychology provides the foundation for a variety of positions in social service, medical, and business settings and also serves as preparation for advanced study leading to master's and doctoral degrees.

Facilities for students include a computer lab, a neuroscience teaching lab, laboratories for mentored research (including Bar Lab, Cognitive Development Lab, eeg Lab), and a student community resource room.

Students transferring into psychology from other Bradley majors must have a GPA of 2.5 or greater.

The department offers a Psychology Major and an interdisciplinary Neuroscience Minor.

Psychology Major

To major in psychology the student must complete a minimum of 34 hours that will include:

1. Foundation (13 hrs.)

Students must take all four Foundation courses.

Content:

- PSY 101 Principles of Psychology (3 hrs.) (with a grade of C or better)
- PSY 201 Brain and Behavior (3 hrs.)

Methodological:

- PSY 205 Quantitative Methods (3 hrs.) (with a grade of C or better)
- PSY 206 Experimental Psychology (4 hrs.)

2. Core Distribution (9 hrs.)

Students must take 9 semester hours of Core Distribution courses, at least one course in each category. PSY 206 is a prerequisite for all courses in Categories A and B.

Category A:

- PSY 350 Developmental Psychology
- PSY 352 Personality Psychology
- PSY 354 Social Psychology
- PSY 356 Abnormal Psychology

Category B:

- PSY 360 Psychology of Learning
- PSY 362 Cognitive Psychology
- PSY 364 Behavioral Neuroscience
- PSY 366 Sensation and Perception

3. Breadth: Electives (9 hrs.)

- Nine additional semester hours from any of the psychology course offerings.
- A course satisfying the Elective requirement cannot also count toward satisfying another requirement (Foundation, Core Distribution, and/or Advanced).
- Only three hours of individual study courses (PSY 341, PSY 342, PSY 481, PSY 491) will count toward satisfying the Elective category.

4. Advanced (3 hrs.)

Any 400-level course (except PSY 481, PSY 491, or PSY 495)

5. Senior Exit Exam

Completion of Psychology Department senior exit exam within the final semester at Bradley as an undergraduate.

Note about transfer courses

Only Junior-Senior courses may be transferred from other institutions as Core Distribution or Advanced requirements.

Neuroscience Minor

Neuroscience is the scientific study of neural processes, structures, and behavior. It is excellent preparation for students considering medical and health-related professions, for those interested in working in biomedical research, and/or for students planning to pursue clinical or experimental psychology graduate degrees.

For more information, see Neuroscience Minor.

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Psychology Courses



Psychology Courses

PSY 101 – Principles of Psychology (3 hours)

Gen. Ed. SF

Core Curr. SB

Introduction to the scientific investigation of human behavior and the psychological concepts, theories, and evidence underlying behavior. Students will also learn to apply psychological concepts to self and society.

PSY 201 – Brain and Behavior (3 hours)

Gen. Ed. FS

Core Curr. NS

An introduction to the scientific study of the nervous system and its relation to behavior. The underlying biology of learning, memory, language, sensation, emotion, reproductive behavior, psychopathology, and other topics.

PSY 205 – Quantitative Methods (3 hours)

Introduction to applied statistical analysis: data reduction and representation; frequency distributions and their measures; probability; sampling theory; significance testing. Descriptive and inferential analyses are presented in the context of psychological research. Not open to non-majors with credit in QM 262 and QM 263. Prerequisite: Course is open to PSY majors and NEU minors; others require consent of instructor.

PSY 206 – Research Methods in Psychology (4 hours)

Core Curr. WI

Basic principles of research design and interpretation; emphasis on experimental method. Laboratory work. Prerequisite: PSY 205 or consent of instructor. Course is open to PSY majors and NEU minors; others require consent of instructor.

PSY 245 – Stress and Resilience (3 hours)

Analysis of psychological stress and its impact. Application of strategies to foster resilience and adaptation to adversity. Prerequisite: PSY 101 or equivalent

PSY 250 – Environmental Psychology (3 hours)

Environmental Psychology scientifically investigates how people interact with the space around them. Topics include environmental perception and cognition, environmental attitudes and appraisals, personality and environment, personal space, territoriality, crowding, privacy, residences, urban/suburban/rural environments, institutional and work environments, natural environments and sustainability. Prerequisite: PSY 101.

PSY 280 – Psychology of Religion (3 hours)

An overview of both theory and method in the psychological study of religion. Emphasis will be on understanding the biological and

psychological underpinnings of religious belief, behavior, and experience. Cross listed as RLS 280. Prerequisite: PSY 101.

PSY 295 – Fundamentals of Directed Research (0-3 hours)

Core Curr. EL

Students acquire skills to conduct basic research tasks within a research team or laboratory. Prerequisite: PSY 205 or equivalent; concurrent enrollment in PSY 481 or PSY 491; consent of instructor

PSY 299 – Special Topics (1-3 hours)

Introduction to the study of special issues related to applied and/or theoretical psychology, which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit. Prerequisite: PSY 101 or equivalent; or instructor consent.

PSY 300 – Psychology of Women (3 hours)

Gen. Ed. CD

Women and their behavior: influence of psychological, social, and biological factors. Prerequisite: PSY 101.

PSY 303 – Lifespan Developmental Psychology (3 hours)

A survey of cognitive, physical, and social development extending from infancy to advanced adulthood. Prerequisite: PSY 101. Course is not open to psychology majors.

PSY 309 – Human Sexuality (3 hours)

Current knowledge concerning human sexuality. Prerequisite: 6 hours of psychology or consent of instructor.

PSY 311 – Principles of Abnormal Psychology (3 hours)

Survey of psychological disorders including psychotic, affective, anxiety, substance-related, and personality disorders. Current knowledge of symptoms, prevalence, course, etiology, treatment, and prevention. Prerequisite: PSY 101. Course is not open to psychology majors.

PSY 313 – Health Psychology (3 hours)

Biological, psychological, and social interactions that influence an individual's state of health and illness. Stress, pain, cardiovascular risk, cancer, chronic illness, addictive behaviors. Prerequisite: 6 hours of psychology and 3 hours of biology.

PSY 314 – Adult Development and Aging (3 hours)

Introduction to conceptual issues, research methods, and available data in adult development and aging. Note: This course is not open to students who have completed PSY 303 (Lifespan Developmental Psychology). Prerequisite: PSY 101

PSY 315 – Child Psychopathology (3 hours)

Psychological disturbances of childhood, including intellectual disabilities, autism, depression, anxiety, conduct disorder, and attention deficit disorders. Current knowledge of symptoms, prevalence, course, etiology, treatment, and prevention. Prerequisite: PSY 303 or PSY 350; PSY 311 or PSY 356.

PSY 319 – Positive Psychology (3 hours)

The scientific study of human psychological strengths and virtues. Empirical analysis and application of the experiences that allow persons to thrive and flourish. Prerequisite: PSY 101 or equivalent

PSY 320 – Human Factors Psychology (3 hours)

Introduction to psychological concepts and methods relevant to human-machine system design. Emphasis on issues related to human sensory, perceptual, cognitive, and motor performance. Survey of current areas of application. Prerequisite: PSY 101; PSY 205, MTH 111, or equivalent

PSY 321 – Industrial and Organizational Psychology (3 hours)

Job analysis, psychological testing, interviewing, performance appraisal, employment law, leadership, motivation, training, job satisfaction, organizational theory, and research methods. Prerequisite: PSY 101 or equivalent.

PSY 341 – Undergraduate Practicum: Child Study Center (1-3 hours)

Core Curr. EL

Supervised work in the applied setting of a preschool classroom. A maximum of 6 hours of practicum coursework (PSY 341 and PSY 342) is allowed. Prerequisite: PSY 350 or PSY 303.

PSY 342 – Undergraduate Practicum: Community Agency (1-3 hours)

Core Curr. EL

Supervised work in applied settings such as mental health clinics and counseling centers. A maximum of 6 hours practicum coursework (PSY 341 and 342) is allowed. Prerequisite: Junior standing in psychology and consent of instructor.

PSY 350 – Developmental Psychology (3 hours)

Critical examination of research and theory on cognitive, physical, and social development from prenatal through late childhood periods. Note: This course is not open to students who have completed PSY 303. Prerequisite: PSY 101 (C or better) and PSY 206; or consent

of instructor.

PSY 352 – Personality Psychology (3 hours)

Critical examination of modern personality science, including major personality theories and contemporary personality research. The study of personality in relation to assessment, social behavior, environmental influences, culture, gender, cognition, physiology, behavioral genetics, and other topics. Prerequisite: PSY 101 (C or better) and PSY 206; or consent of instructor.

PSY 354 – Social Psychology (3 hours)

Theories, research findings, and methods of social psychology. Topics include person perception, attitude change, interpersonal attraction, aggression, competition, group processes, and leadership. Prerequisite: PSY 101 (C or better) and PSY 206; or consent of instructor.

PSY 356 – Abnormal Psychology (3 hours)

Critical examination of research and theory in psychopathology and behavior disorders including the etiology, assessment, and treatment of major forms of psychological disorders. Note: This course is not open to students who have completed PSY 311. Prerequisite: PSY 101 (C or better) and PSY 206; or consent of instructor.

PSY 360 – Psychology of Learning (3 hours)

Variables and conditions that affect the learning process; theories of learning. Prerequisite: PSY 101 (C or better) and PSY 206; or consent of instructor.

PSY 362 – Cognitive Psychology (3 hours)

Attention, memory, language use, problem solving, and artificial intelligence. Prerequisite: PSY 101 (C or better) and PSY 206; or consent of instructor.

PSY 364 – Behavioral Neuroscience (3 hours)

Physiological bases of behavior; emphasis on the neural structure and functional concomitants of receptor and effector processes, motivation, emotion, and learning. Prerequisite: PSY 101 (C or better), PSY 201, and PSY 206; or consent of instructor.

PSY 365 – Behavioral Neuroscience Laboratory (1 hour)

Optional laboratory course for students concurrently enrolled in PSY 364. Includes sheep brain dissection. Prerequisite: Concurrent enrollment in PSY 364.

PSY 366 – Sensation & Perception (3 hours)

Physiology of the senses; processes by which sensory stimulation produces perceptual experiences. Prerequisite: PSY 101 (C or better), PSY 201, and PSY 206; or consent of instructor.

PSY 400 – Honors Research (3 hours)

Core Curr. WI

Completion of an honors thesis proposal in psychology. Topics include preparing a literature review, design and methods in psychology, hypothesis testing using statistical analyses, ethics in research, and professional issues pertaining to psychological research. Prerequisite: PSY 206; junior standing; honors program participant or instructor consent.

PSY 405 – Social Affective Neuroscience (3 hours)

Delves into current insights, debates, and research on social and emotional behavior and its neural basis. Course goals include providing an introduction to the theoretical, methodological, and intellectual challenges that influence these fields and their growth. Additionally, the course is designed to give a broad overview of current research and theory in the social and affective neurosciences, particularly where these two domains intersect, and explore how knowledge of neural systems, neuroendocrine function, functional neuro-anatomy, and neurochemistry can or cannot provide insights into social and emotional behavior. Cross-listed with NEU 405. Prerequisite: PSY 201, PSY 206; or instructor consent.

PSY 411 – Tests and Measurement (3 hours)

Core Curr. WI

Types of psychological tests, psychometric properties of tests, development and analysis of test items. Prerequisite: PSY 205 or equivalent; PSY 206; junior/senior standing.

PSY 414 – Cognitive Development (3 hours)

Provides an overview of cognitive change during childhood. Theoretical perspectives and research findings in major areas such as infant cognition, memory, language, concept formation, number, problem-solving, and social cognition. Applied issues pertaining to developmental disabilities and education will also be considered. Prerequisite: PSY 350 or ETE 225; PSY 206; 9 hours of psychology.

PSY 417 – Clinical Psychology (3 hours)

Issues in psychological assessment and psychotherapy, with an emphasis on empirical support of theories, techniques, and outcomes. Prerequisite: PSY 206; PSY 356 or equivalent.

PSY 420 – Psychology of Addiction (3 hours)

Drug use and abuse will be explored from psychological, biological, and treatment perspectives. Students will gain an understanding of the history of drug use and drug policy, and will be encouraged to identify sociological factors that promote abuse and incarceration. Students will be introduced to advanced pharmacological principles, neuroanatomy, and the neuroscientific basis of drug abuse. Theories of addiction and contemporary treatment and prevention paradigms will be explored. Prerequisite: PSY 201, PSY 206

PSY 424 – Intermediate Statistics for Psychology (3 hours)

Conceptual foundations of hypothesis testing, introduction to data analytic techniques, exploration of multiple regression/correlation and applications such as factor analysis. Prerequisite: PSY 205 or both QM 262 and QM 263 or equivalent.

PSY 439 – History of Psychology (3 hours)

Core Curr. WI

Conceptual origins, problems and controversies, and ideas that gave rise to modern psychology. Prerequisite: 15 hours of psychology or consent of instructor; PSY 206.

PSY 452 – Personality Theories and Theorists (3 hours)

Comprehensive survey of views on structure and function of personality, contemporary research, and methods of assessment. Prerequisite: PSY 206; PSY 356 or consent of instructor.

PSY 474 – Cross-Cultural Psychology (3 hours)

Major theories, research methods, and empirical findings in cross-cultural psychology. The role of culture in understanding and explaining mental health, interpersonal relationships, personality, cognition, sexual functioning, emotion, and other topics. Prerequisite: PSY 206; or consent of instructor.

PSY 481 – Reading (0-3 hours)

Directed reading by qualified students, with faculty guidance. May be repeated for a maximum of 6 hrs. credit. Prerequisite: PSY 206; consent of instructor.

PSY 491 – Research (0-3 hours)

Directed research by qualified students, with faculty guidance. May be repeated for a maximum of 6 hours credit. Prerequisite: PSY 206; consent of instructor.

PSY 495 – Directed Research Experience (0-3 hours)

Core Curr. EL

Students conduct psychological research, which may include reviewing literature, designing studies, collecting and analyzing data, and communicating results in a scientific presentation or paper. May be repeated for a maximum of 6 hours credit. Prerequisite: PSY 206 or equivalent; concurrent enrollment in PSY 481 or PSY 491; consent of instructor

PSY 499 – Advanced Special Topics (1-3 hours)

Advanced study of special issues related to applied and/or theoretical psychology, which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for a maximum of 6 hours credit. Prerequisite: 9 hours of psychology or consent of instructor; PSY 206

PSY 681 – Readings I (1-3 hours)

Readings in area selected by student. Prerequisite: graduate standing and prearrangement with instructor.

PSY 682 – Readings II (1-3 hours)

Readings in area selected by student. Prerequisite: graduate standing and prearrangement with instructor.

PSY 691 – Research I (0-3 hours)

Research in area selected by student. May be repeated for a maximum of 12 hours of credit. Prerequisite: graduate standing and prearrangement with instructor.

PSY 692 – Research II (1-3 hours)

Research in area selected by student. Prerequisite: graduate standing and prearrangement with instructor.

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Religious Studies



Religious Studies

FACULTY Associate Professor Getz, Kelley (chair), Oliver, Zaborowski

The primary concern of Religious Studies is for the undergraduate student who would elect study in this significant area of human culture and life. A comprehensive and non-sectarian array of courses is provided to meet the special interests and needs of all students.

Ethics Minor

The Department of Philosophy and Religious Studies offers a minor in ethics. For more information, see Ethics Minor.

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Religious Studies Courses



Religious Studies Courses

RLS 101 – Comparative Religion (3 hours)

Gen. Ed. HP

Core Curr. HU

Survey of human values and religious experiences found in major religions of the world.

RLS 105 – Church History (3 hours)

Core Curr. GP WC,HU

A comprehensive introduction to the major divisions of Christian churches throughout history. The course explores Eastern Orthodoxy, Oriental Orthodoxy, Roman Catholicism, and many forms of Protestantism through three historical periods: ancient, medieval, and modern. Prerequisite:

RLS 114 – Introduction to Judaism (3 hours)

Core Curr. GP WC,HU

An introductory course on the history, beliefs, ethics, rituals, and practices of Judaism. The course also examines modern forms of Judaism, particularly in the United States and Israel. Prerequisite:

RLS 121 – Islamic Civilization (3 hours)

Gen. Ed. NW

Core Curr. GP WC,HU

Introduction to the Islamic Civilization of the Middle East, including primary literature produced by Muslims and members of other religious communities living under the aegis of Islam, from the seventh century to the present.

RLS 200 – Contemporary Religion in the United States (3 hours)

Gen. Ed. HP

Core Curr. HU

Analysis of religious faith, worship, and practice in an age of transition. Emphasis on challenges that confront a person's faith. Survey of major American religious denominations.

RLS 225 – Arabic Christianity (3 hours)

Core Curr. GP WC,HU,WI

Examines the history of various Arabic Christian communities from pre-Islamic times to modernity, giving special attention to the relationship between Arab Churches and Muslim society. Teaches students ways to interpret primary source literature of Arab Christians, enabling students to understand Christianity in the light of Christians living as minorities in the Islamic world.

RLS 280 – Psychology of Religion (3 hours)

An overview of both theory and method in the psychological study of religion. Emphasis will be on understanding the biological and psychological underpinnings of religious belief, behavior, and experience. Cross listed as PSY 280. Prerequisite: PSY 101

RLS 300 – Hebrew Bible/Old Testament (3 hours)

Gen. Ed. HP

Core Curr. GP WC,HU

Human values relevant to contemporary life found in ancient writings of Judaism and Christianity.

RLS 302 – New Testament (3 hours)

Gen. Ed. HP

Core Curr. HU

Human values in the early Christian experience as reflected in its scriptures.

RLS 305 – Early Christianity: Monasticism (3 hours)

Gen. Ed. HP

Core Curr. GP WC,HU

Academic study of Christian asceticism from the fourth to the seventh centuries. This course analyzes the earliest literature of the Christian monastic movements, primarily located in Egypt and the eastern Mediterranean lands. The course gives particular attention to understanding moral values developed in monasticism that influenced Western civilization. Prerequisite:

RLS 313 – Introduction to Rabbinic Judaism (3 hours)

Core Curr. GP WC,HU

The course introduces students to the writings that comprise rabbinic literature, particularly the Talmud, the single most influential document in the history of Judaism. Rabbinic texts are set within a broader cultural, historical, and religious context as the values, beliefs, and practices of the first rabbis are analyzed and appreciated.

RLS 320 – Muslim-Christian Relations (3 hours)

Gen. Ed. SF

Core Curr. GP WC,HU,WI

Historical and theoretical analysis of relationships between Muslims and Christians, including a careful examination of the Middle Eastern Christian communities at the time of Muhammad, and after. Explores the ways Muslims and Christians have developed theological and social categories for characterizing each other.

RLS 321 – Islam & the West: Clash of Civilizations? (3 hours)

Gen. Ed. SF

Core Curr. GP GS,SB,WI

Historical and theoretical analysis of the modern crisis in relations between the Arab Islamic world and the West. Examines the modern rise of nation-states, Western imperialism, and Islamic “undamentalism” in the Middle East. Prerequisite:

RLS 330 – The Human Condition (3 hours)

Core Curr. MI

Multidisciplinary examination of the limits and possibilities of human nature. Evolutionary biology, developmental psychology, philosophical ethics, and contemporary religious thought. Prerequisite: junior/senior standing.

RLS 331 – Eastern World Religions (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical and cultural study of the religions of India, Southeast Asia, and China. Prerequisite:

RLS 332 – Western World Religions (3 hours)

Gen. Ed. HP

Core Curr. GP WC,HU

Historical and literary study of Judaism, Christianity, and Islam.

RLS 336 – Buddhism and Asian Civilizations (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical survey of the development of Buddhism in the civilizations of India, Southeast Asia, East Asia, and Tibet. Origins of the Buddhist tradition and the development of its basic beliefs, practices, and institutions within the context of Asian civilizations.

RLS 338 – China: Religion and Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical and cultural survey of Chinese religions. Development of Chinese religion and philosophy from ancient times until the present. Major traditions of Confucianism, Taoism, and Buddhism, as well as popular belief and culture.

RLS 338 – China: Religion and Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical and cultural survey of Chinese religions. Development of Chinese religion and philosophy from ancient times until the present. Major traditions of Confucianism, Taoism, and Buddhism, as well as popular belief and culture.

RLS 338 – China: Religion and Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical and cultural survey of Chinese religions. Development of Chinese religion and philosophy from ancient times until the present. Major traditions of Confucianism, Taoism, and Buddhism, as well as popular belief and culture.

RLS 340 – Japan: Religion and Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical and cultural survey of religion in Japan, primarily Buddhism and Shinto. Folk religion, Chinese influences, and the New Religions. Prerequisite:

RLS 340 – Japan: Religion and Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical and cultural survey of religion in Japan, primarily Buddhism and Shinto. Folk religion, Chinese influences, and the New Religions. Prerequisite:

RLS 340 – Japan: Religion and Culture (3 hours)

Gen. Ed. NW

Core Curr. GP WC

Historical and cultural survey of religion in Japan, primarily Buddhism and Shinto. Folk religion, Chinese influences, and the New Religions. Prerequisite:

RLS 344 – Philosophy of Religion (3 hours)

Nature of religion; function and validity of religious concepts in the modern world. Cross listed as PHL 344. Prerequisite: 3 hours of religious studies or philosophy.

RLS 350 – Topics in Religious Studies (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes.

RLS 497 – Problems in Religious Studies (1-3 hours)

Primarily for undergraduate RLS majors: comprehensive and integrated survey of the discipline at an advanced level; projects in special areas. Prerequisite: Consent of instructor.

RLS 498 – Problems in Religious Studies (1-3 hours)

Primarily for undergraduate RLS majors: comprehensive and integrated survey of the discipline at an advanced level; projects in special areas. Prerequisite: consent of instructor.

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Sociology



Sociology

FACULTY Professors Crawford, Hogan, and Saleeby (Chair); Associate Professor Whetstone; Assistant Professor Shannon King (Cunningham); Assistant Professor in Residence Conrad

The Department of Sociology offers a variety of courses useful to students with diverse professional goals. Sociology is a popular major for students planning careers in such professions as law, business, journalism, health care, education, politics, criminal justice, social work, or public administration. It provides a solid body of knowledge on the nature and problems of human relations and a distinctive way of looking at the world. The courses offer a range of research techniques and perspectives which can be applied in a variety of fields such as administration, criminal justice, health care, counseling, and social work. In addition, exposure to theoretical and methodological issues and to historical, cross-cultural, and critical analyses provides students with a firm foundation for graduate work in sociology, anthropology, or related fields.

The department offers a major and a minor in sociology, a minor in anthropology, and a major in social work. For social work major see Social Work Program.

Major In Sociology

Major Requirements – 30 hours

Required Courses – 9 hrs.

- SOC 100: The Sociological Perspective – 3 hrs. **or** SOC 111: Social Problems – 3 hrs.
- SOC 240: Research Methods – 3 hrs.
- SOC 320: Social Theory – 3 hrs.

Distributed Elective Courses – 21 hrs.

Students are required to complete 21 hours of distributed electives, including at least one course from each Cluster:

Cluster A

- SOC 300 Gender in Cross-cultural Perspective – 3 hrs.
- SOC 310 Sociology of Families – 3 hrs.
- SOC 311 Families in Cross-cultural Perspective – 3 hrs.
- SOC 315 Gender & Society – 3 hrs.

Cluster B

- SOC 312 Social Inequality – 3 hrs.
- SOC 313 Race, Ethnicity & Power – 3 hrs.
- ANT 314 Indigenous Peoples- 3 hrs.
- SOC 322 Self & Social Interaction – 3 hrs.

Cluster C

- SOC 308 Immigration: People, Place & Power – 3 hrs.
- SOC 316 Work & Occupations – 3 hrs.
- SOC 325 Environmental Sociology – 3 hrs.
- SOC 326 Sociology of Globalization – 3 hrs.
- SOC 330 Perspectives on Deviance – 3 hrs.
- SOC 331 Correctional Policies & Society – 3 hrs.
- SOC 332 Juvenile Delinquency – 3 hrs.
- SOC 333 Sociology of Violence – 3 hrs.
- SOC 334 Crime & Society – 3 hrs.
- SOC 341 Medical Sociology – 3 hrs.
- SOC 343 Sociology of Mental Health – 3 hrs.
- SOC 344 Social Movements – 3 hrs.
- SOC 345 People, Power, Politics – 3 hrs.
- SOC 346 Sociology of Education – 3 hrs.
- SOC 347 Drugs & Society – 3 hrs.
- SOC 390 Topics in Sociology – 3 hrs.
- ANT 303 Culture & Belief: Magic, Witchcraft & Religion – 3 hrs.
- ANT 305 Peoples & Cultures of the World – 3 hrs.
- ANT 306 Illness & Healing in Cross-cultural Perspective- 3 hrs.
- SW 310 Child Welfare – 3 hrs.
- SW 355 Soc Welfare Policy – 3 hrs.

Up to 6 semester hours of individual research or internship courses (SOC 391, 490, 491, 492) may be counted toward overall elective hours.

Advanced Research Track Requirements (33-36 hrs.)

Required Courses – 9 hrs.

- SOC 100: The Sociological Perspective – 3 hrs. **or** SOC 111: Social Problems – 3 hrs.
- SOC 240: Research Methods – 3 hrs.
- SOC 320: Social Theory – 3 hrs.

Distributed Elective Courses – 18 hrs.

Students are required to complete 18 hours of distributed electives, including at least one course from each Cluster:

Cluster A

- SOC 300 Gender in Cross-cultural Perspective – 3 hrs.
- SOC 310 Sociology of Families – 3 hrs.
- SOC 311 Families in Cross-cultural Perspective – 3 hrs.
- SOC 315 Gender & Society – 3 hrs.

Cluster B

- SOC 312 Social Inequality – 3 hrs.
- SOC 313 Race, Ethnicity & Power – 3 hrs.
- ANT 314 Indigenous Peoples- 3 hrs.
- SOC 322 Self & Social Interaction – 3 hrs.

Cluster C

- SOC 308 Immigration: People, Place & Power – 3 hrs.

- SOC 316 Work & Occupations – 3 hrs.
- SOC 325 Environmental Sociology – 3 hrs.
- SOC 326 Sociology of Globalization – 3 hrs.
- SOC 330 Perspectives on Deviance – 3 hrs.
- SOC 331 Correctional Policies & Society – 3 hrs.
- SOC 332 Juvenile Delinquency – 3 hrs.
- SOC 333 Sociology of Violence – 3 hrs.
- SOC 334 Crime & Society – 3 hrs.
- SOC 341 Medical Sociology – 3 hrs.
- SOC 343 Sociology of Mental Health – 3 hrs.
- SOC 344 Social Movements – 3 hrs.
- SOC 345 People, Power, Politics – 3 hrs. SOC 346 Sociology of Education – 3 hrs.
- SOC 347 Drugs & Society – 3 hrs.
- SOC 390 Topics in Sociology – 3 hrs.
- ANT 303 Culture & Belief: Magic, Witchcraft & Religion – 3 hrs.
- ANT 305 Peoples & Cultures of the World – 3 hrs.
- ANT 306 Illness & Healing in Cross-cultural Perspective- 3 hrs.
- SW 310 Child Welfare – 3 hrs.
- SW 355 Soc Welfare Policy – 3 hrs.

Up to 3 semester hours of SOC 391 may be counted toward overall elective hours.

Required Advanced Research Courses (6-9 hrs.)

- SOC 490 Directed Readings – 3 hrs. **and/or** SOC 491 Directed Research -3 hrs.
- SOC 492 Advanced Research Colloquium – 3 hrs.

Sociology Minor

Minor Requirements

Required Courses – 6 hrs.

- SOC 100: The Sociological Perspective- 3 hrs. **or** SOC 111: Social Problems – 3 hrs.
- SOC 240: Research Methods – 3 hrs.
or SOC 320: Social Theory – 3 hrs.

Elective Courses (choose three) – 9 hrs.

- ANT 303: Culture and Belief: Magic, Witchcraft, Religion – 3 hrs.
- ANT 305: Peoples and Cultures of the World – 3 hrs.
- ANT 306: Illness and Healing in Cross-Cultural Perspective – 3 hrs.
- ANT 314: Native Americans – 3 hrs.
- SOC 310: Sociology of Families – 3 hrs.
- SOC 300: Gender in Cross-Cultural Perspective – 3 hrs.
- SOC 311: Families in Cross-Cultural Perspective – 3 hrs.
- SOC 308: Immigration -3 hrs.
- SOC 312: Social Inequality – 3 hrs.
- SOC 313: Race, Ethnicity, and Power – 3 hrs.
- SOC 315: Gender and Society – 3 hrs.
- SOC 316: Work & Occupations – 3 hrs.
- SOC 322: Self and Social Interaction – 3 hrs.
- SOC 325: Environmental Sociology – 3 hrs.
- SOC 326: Sociology of Globalization – 3 hrs.
- SOC 330: Perspectives on Deviance – 3 hrs.
- SOC 331: Correctional Policies and Society – 3 hrs.
- SOC 332: Juvenile Delinquency – 3 hrs.
- SOC 333: Sociology of Violence – 3 hrs.
- SOC 334: Crime and Society – 3 hrs.
- SOC 341: Medical Sociology – 3 hrs.
- SOC 343: Sociology of Mental Health – 3 hrs.
- SOC 344: Social Movements – 3 hrs.
- SOC 345: People, Power and Politics – 3 hrs.
- SOC 346: Sociology of Education – 3 hrs.

- SOC 347: Drugs and Society – 3 hrs.
- SOC 390: Topics in Sociology – 3 hrs.

Note: At least 9 of the 15 hours must be at the 300 level or above. 2.0 GPA in Minor required.

Anthropology Minor

A minor in anthropology will consist of a minimum of 15 semester hours in anthropology and related disciplines including the following required core courses:

- ANT 101 The Anthropological Perspective
- ANT 305 Peoples and Cultures of the Non-Western World

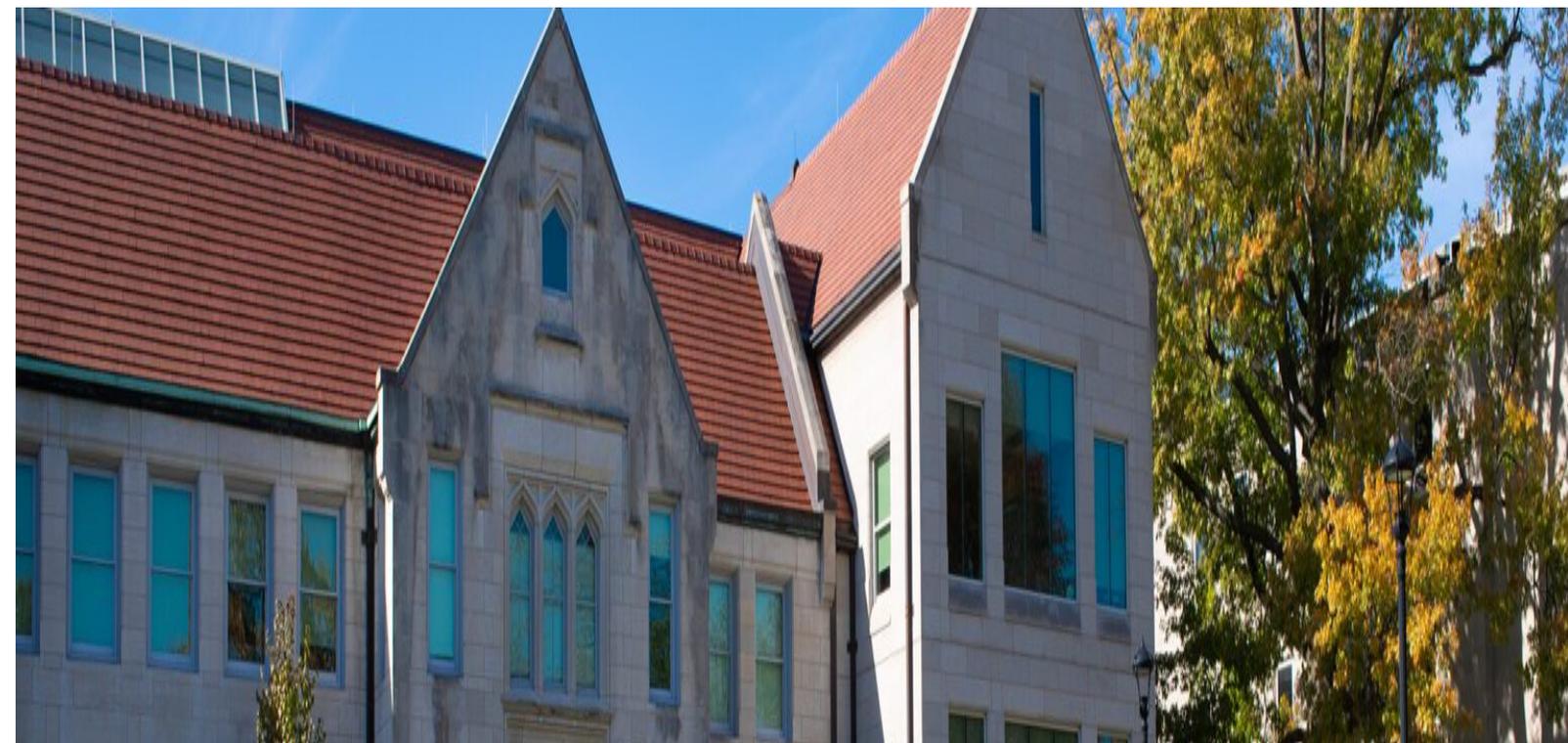
In addition, anthropology minors will complete 9 hours of electives from among the courses below. (No more than one HIS course and one RLS course will count toward the elective requirement. Special topics courses and other coursework will be considered for elective credit with the approval of the director of the anthropology program.):

- ANT 102 Physical Anthropology
- ANT 303 Culture and Belief: Magic, Witchcraft, Religion
- ANT 306 Illness and Healing in Cross-Cultural Perspective
- ANT 314 Native Americans
- ANT 402 Qualitative Methods
- ANT 403 Anthropology Senior Project
- HIS 205 Latin America
- HIS 206 Middle East since Muhammad
- HIS 207 Modern Japan 1860-present
- HIS 305 American Indian History
- HIS 330 Modern China
- HIS 333 Cross-Cultural Contacts
- HIS 335 Modern Mexico
- HIS 339 Women in Global Perspective
- RLS 121 Islamic Civilization
- RLS 331 Religions of the East
- RLS 338 China: Religion and Culture
- RLS 340 Japanese Religion
- SOC 300 Cross-Cultural Perspectives on Gender
- SOC 311 Comparative Family Systems

Sociology majors wishing to minor in anthropology may not choose Global Studies as the focus area for their SOC major. A minimum of 2.25 grade point average in courses taken for the minor is required for successful completion of the anthropology minor.

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Social Work



Social Work

FACULTY Associate Professor Saleeby (Chair and Director); Professor Hogan; Assistant Professor Amos; Instructor in Residence Tarter.

Bradley offers a BA or BS in social work. The program is accredited by the Council on Social Work Education.

The mission of the Bradley Social Work Program is to prepare students with a commitment to the Social Work values of service, social justice, the dignity and worth of the person, the importance of human relationships, integrity, competence, human rights and scientific inquiry; and to provide students with the knowledge base and skills necessary for beginning generalist practice in social work settings. The program seeks further to provide an educational foundation for students to pursue graduate study in social work and other helping professions. The program prepares students for competent and effective generalist practice in a globalized environment. The program emphasizes critical thinking and scientific inquiry to prepare students for social work practice in multiple environments with diverse populations and at multiple systems levels (individuals, families, groups, organizations, and communities).

Built on a liberal arts foundation, the Social Work Program offers courses in social welfare policy, human behavior theories, social work research, social work practice skills and an intensive field practicum. These courses integrate the CSWE competencies and dimensions (knowledge, skills, values, cognitive and affective processes). With this foundation, students may pursue advanced placement in Master of Social Work programs throughout the country.

The curriculum requires majors to complete 69 credit hours, including 21 hours of liberal arts requirements, 42 hours of social work requirements, and 6 hours of electives. A student may declare a social work major when admitted to Bradley; however, in order to progress to the professional practice component of the curriculum, a formal admission is required during the junior year. No credit for life experiences or previous work experience will be given in lieu of courses in the social work curriculum. Courses in the practice sequence, human behavior in the social environment sequence, and from field practicum can only be transferred in from CSWE accredited programs.

The professional practice component includes practice courses and a field practicum. Students will complete a minimum of 420 field hours in an approved community agency.

It is important for students to consult with their social work advisor each semester to ensure that the requirements for the major are scheduled in the proper sequence. An overall grade point average of 2.25 is needed to graduate with a B.A. or B.S. in social work. A student must attain at least a "C" in all required social work courses.

Requirements

Liberal Arts Courses (21 hrs.)

- BIO 101 Life Science I
- ECO 100 Intro to Economics **or** ECO 221 Microeconomics **and** ECO 222 Macroeconomics
- MTH 111 Elementary Statistics **or** PSY 205 Quantitative Methods
- PLS 105 Introduction to American Government
- PSY 101 Principles of Psychology
- SOC 100 The Sociological Perspective
- SOC 212 Sociology of Diversity **or** SOC 313 Race, Ethnicity, and Power **or** ETE 280 Exploring Diversity: Learners, Families, and Communities

Social Work Core Requirements (42 hrs.)

• Social Welfare Policy and Services – 6 hrs.

- SW 250 Introduction to Social Welfare
- SW 355 Social Welfare Policy

• Human Behavior & the Social Environment – 9 hrs.

- PSY 356 Abnormal Psychology **or** PSY 311 Principles of Abnormal Psychology
- SW 354 Human Behavior in the Social Environment I
- SW 358 Human Behavior in the Social Environment II

• Research – 3 hrs.

- SW 260 Research Methods

• Social Work Practice 12 hrs.

- SW 350 Foundations for Social Work Practice
- SW 351, 352, 353 Social Work Practice I, II, III

• Field Practicums – 12 hrs.

- SW 393 Social Work Practicum
- SW 395 Social Work Seminar

• Electives – 6 hrs.

- AAS 200 Intro. to African-American Studies
- ANT 314 Indigenous Peoples
- SW 310 Child Welfare I
- NUR 221 Substance Abuse
- SOC 211 Contemporary Social Problems
- SOC 311 Comparative Family Systems
- SOC 312 Social Inequality
- SOC 315 Gender and Society
- SOC 321 Individual and Society
- SOC 325 Environmental Sociology
- SOC 332 Juvenile Delinquency
- SOC 333 Sociology of Violence
- SOC 341 Medical Sociology
- SOC 343 Sociology of Mental Health
- SW 320 Child Welfare II
- SW 356 Topics in Social Work
- SW 490 Individual Study in Social Work
- SW 499 Honors Colloquium

Students should consult the Social Work Student Handbook for recommendations regarding Bradley Core Curriculum selections, electives, and BA/BS requirements, and for sample course plans.

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Social Work Courses



Social Work Courses

S W 250 – Introduction to Social Welfare (3 hours)

Overview of historical development and contemporary forces shaping the social welfare system in the U.S. Examines social policies, social conditions affecting vulnerable populations, and service delivery systems in which social work is practiced. Includes community agency contact.

S W 260 – Research Methods (3 hours)

Social research methods: research design and models of observation, including single subject and program evaluation, quantitative and qualitative methods, sampling techniques, questionnaire construction, types of surveys, measurement problems, and data analysis. Prerequisite: Sociology or social work major or consent of instructor; MTH 111 or PSY 205.

S W 310 – Child Welfare I (3 hours)

Examines the theory and knowledge associated with practice in the field of child welfare. This course covers the areas of policy, normative child development, disruptions in child development, and the continuum of services for children in society.

S W 350 – Foundations for Social Work Practice (3 hours)

Historical development of social work. Introduction of generalist social work practice; systems perspective; knowledge, skills, values, and ethics required for practice; communication skills and the helping relationship as foundation for the problem-solving process. Overview of fields of practice. Includes required volunteer experience. Prerequisite: S W 250.

S W 351 – Social Work Practice I (3 hours)

Core Curr. WI

Assessment, planning, intervention, evaluation, termination, and follow-up phases of the problem-solving process. Students develop interviewing skills and apply knowledge of social systems, human development, diversity, and ethics with focus on the micro level. Prerequisite: S W 350, social work major or consent of social work program director.

S W 352 – Social Work Practice II (3 hours)

Generalist practice with focus on families and groups as well as individuals in group contexts. Includes required volunteer experience in group setting. Prerequisite: S W 350; social work major or consent of social work program director.

S W 353 – Social Work Practice III (3 hours)

Generalist practice with focus on organizations, communities, and large social systems. Assessment, planning, intervention, and evaluation skills for macro-level practice. Emphasis on issues of diversity, discrimination, and oppression. Prerequisite: S W 350; social work major or consent of social work program director.

S W 354 – Human Behavior in the Social Environment I (3 hours)

Current research and theory concerning interaction of environment with individual behavior. Life span development, strengths, approach, and issues of diversity as influences on individual development.

S W 355 – Social Welfare Policy (3 hours)

Analysis of social welfare policy from the social work perspective. Impact of social policy on recipients and constituents of social welfare programs. Institutional responses to social problems, social justice, and human needs. Analysis and evaluation of policy at the organizational, community, and legislative levels. Prerequisite: ECO 100; PLS 105; S W 250.

S W 356 – Topics in SW (3 hours)

Core Curr. EL

Topics of special interest which may vary each time the course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for maximum of 6 hours credit. Prerequisite:

S W 358 – Human Behavior in the Social Environment II (3 hours)

Current research and theory concerning interaction of environment with families, groups, organizations, and communities. Social and cultural causes and impact of diversity, discrimination, and oppression. Prerequisite: S W 354.

S W 393 – Social Work Practicum (9 hours)

Core Curr. EL

Supervised experience in an approved community agency; use of knowledge and skills common to generalist practice; 420 field hours required. Pass/fail. Prerequisite: S W 351; social work major. Corequisite: S W 395.

S W 395 – Social Work Seminar (3 hours)

Core Curr. WI,EL

Seminar that integrates theory and principles learned in academic courses with field and practice experience. Prerequisite: S W 351; social work major. Corequisite: S W 393.

S W 490 – Individual Study in Social Work (1-3 hours)

Special study on topics with faculty supervision. For social work majors; non-majors require approval of Department Chair. May be repeated under a different topic up to a maximum of 3 credit hours. Prerequisite: Consent of director of social work program.

S W 499 – Honors Colloquium (3 hours)

Special study or project conducted under faculty supervision. Oral presentation before a faculty committee. Prerequisite: 3.5 GPA in social work major and consent of department chair.

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Sustainability Minor



Sustainability Minor

FACULTY Professors Maillacheruvu, Morris (Chair), O'Brien, Associate Professors Bukowski, LeJeune, Olds.

The Sustainability minor at Bradley is administered by an interdisciplinary group of faculty representing each of the colleges. The program is designed to introduce students to the importance of employing sustainable practices in their everyday lives. Our planet is governed by life support systems such as water, oxygen, and carbon cycles. These systems are robust but become degraded under human impact. Sustainability, the ability to protect and maintain natural resources for future generations, requires scholarship to provide a firm understanding of the scientific, economic, political and social factors governing those resources. This scholarship must also be employed to derive solutions and practices that will support and protect the life support systems afforded to humans by our planet, now and long into the future. By its very nature, sustainability requires a multidisciplinary approach, drawing on academic fields including, but not limited to, the natural, social, political, economic, and health sciences, engineering and humanities, and must draw insights from historical and current business and governmental practice.

To minor in sustainability, a student must complete a minimum of 21 hours: 9 hours of required courses and 12 hours of electives. At least 9 hours of the total must be at the upper level, Each course must be completed with a C or better to count towards the minor

Required Courses (9 hours)

- ENS 105 Introduction to Sustainability or CE 383 Ethics and Sustainability and CE 393 Sustainability and Public Policy – 3 hrs
- ENS 110 Environmental Science or BIO 300 Populations, Resources and Environment – 3 hrs
- SOC 325 Environmental Sociology or ECO 240 Environmental Economics and Sustainability (3 hrs); both SOC 325 and ECO 240 are highly recommended.

Elective Courses (12 hours)

- ART 323 – Art and The Environment
- BIO 303 – Plants and People
- BIO 304 – Ecology of Place
- BIO 355 – Soil Biology
- BIO 420 – Ecosystem Ecology
- BIO 430 – Soil Ecology
- BIO 450 – Conservation Biology
- BIO 460 – Ecology
- C E 360 – Introduction to Environmental Engineering
- C E 430 – Water Supply and Hydraulic Engineering

- C E 465 – Surface Water Hydrology
- C E 541 – Pollution Modeling
- C E 542 – Advanced Water Treatment
- C E 543 – Advanced Wastewater Treatment
- C E 546 – Groundwater Hydrology
- C E 555 – Sustainability and Environmental Regulations
- C E 558 – Solid Waste Management
- CHM 300 – Chemistry and Civilization
- CHM 416 – Environmental Chemistry
- CON 352 – Sustainable Urban Environment
- CON 430 – Commercial Construction
- CON 452 – Green Construction and LEED
- ECO 240 – Environmental Economics and Sustainability
- ENC 200 – Introduction to Leadership Studies
- ENS 305 – Sustainability and Food
- ENS 307 – Science and Politics of Global Climate Change
- ENT 386 – Social Entrepreneurship
- ETE 280 – Exploring Diversity: Learners, Families, and Communities
- FCS 272 – Hospitality Facilities Management
- GES 300 – Oceanography the Human Perspective
- H S 220 – Consumer Issues in Health Care
- HIS 315 – U.S. Social Movements
- HIS 385 – Science, Technology, and Society
- IME 301 – Engineering Economy 1
- IME 331 – Fundamentals of Material Science
- IME 422 – Manufacturing Quality Control
- I S 307- Science and Politics of Global Climate Change
- M E 351 – Engineering Material Science 1
- M E 536 – Industrial Pollution Prevention
- M E 537 – Building Energy Management
- NUR 372 – Safety and Emergency Care
- PHL 347 – Ethics
- PLS 421 – The Politics of Regulation
- PSY 250 – Environmental Psychology
- SCI 301 – Science through Inquiry II: Environmental Science
- SCI 302 – Science through Inquiry II: Ecosystems
- SOC 312 – Social Inequality
- SOC 325 Environmental Sociology
- SOC 326 – Sociology of Globalization
- SOC 344 – Social Movements

Total hours: 21

Up to three credit hours of an approved internship, research or study abroad experience may be substituted for one of the additional courses.

Special topics courses if applicable may be approved by the program chair to count for a course.

Only 9 credit hours of the Sustainability minor may also be part of the student's major course of study.

Optional Tracks – Take four courses from one of these tracks-

Policy, Socioeconomics and Sustainability: BIO 304, CHM 300, ECO 240, ENC 200, ENS 307, ENT 386, FCS 272, HIS 315, I S 307, PHL 347, PSY 250, SOC 325, SOC 344.

STEM applications and Sustainability: BIO 303, 304, 420, 430, 450, 460, C E 360, 465, 541, 555, CHM 300, 316, CON 352, 452, ENS 305, ENS 307, PHL 347.

Arts and Humanities: ART 323, ENT 386, HIS 315, HIS 385, PHL 347, SOC 312, SOC 325, SOC 326, SOC 344.

students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u. Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Western Civilization Courses



Western Civilization Courses

CIV 100 – Western Civilization (3 hours)

Gen. Ed. WC

Core Curr. MI

Required for all students. Team taught by instructors from a variety of disciplines. Emphasis on conceptual approach to intellectual, cultural, political, economic, social, and technological issues that have formed the spirit of the various ages from ancient Greece to the present. Readings from original sources; lecture and small discussion groups.

CIV 101 – Western Civilization to 1600 (3 hours)

Gen. Ed. WC

Core Curr. MI

Emphasis on conceptual approach to intellectual, cultural, political, economic, social, and technological issues that have formed the spirit of the various ages from classical Greece to 1600.

CIV 102 – Western Civilization Since 1600 (3 hours)

Gen. Ed. WC

Core Curr. MI

Emphasis on conceptual approach to intellectual, cultural, political, economic, social, and technological issues that have formed the spirit of the various ages from 1600 to present.

CIV 111 – Unified Composition and Western Civilization I (3 hours)

Core Curr. CM W1,MI

Integration of ENG 101 and CIV 101. Emphasis on clear and effective writing, with analysis of essays as models for writing, using subject matter of Western Civilization. Taught by faculty from a variety of disciplines. Students must take both semesters of the sequence (CIV 111 and 112) to satisfy requirements in both Communication-Writing 1 and Multidisciplinary Integration.

CIV 112 – Unified Composition and Western Civilization II (3 hours)

Core Curr. CM W1,MI

Integration of ENG 101 and CIV 102. Emphasis on clear and effective writing, with analysis of essays as models for writing, using subject matter of Western Civilization. Taught by faculty from a variety of disciplines. Students must take both semesters of the sequence CIV 111 and 112 to satisfy requirements in both Communication-Writing 1 and Multidisciplinary Integration.

CIV 113 – Unified Fine Arts and Western Civilization I (3 hours)

Core Curr. FA,MI,HU

Western Civilization to the Renaissance, including the contributions of fine arts and literature from their ancient foundations to early modern expressions. Students must take both semesters (113 and 114) to satisfy University Core Curriculum requirements in Fine Arts

and either Multidisciplinary Integration or Humanities.

CIV 114 – Unified Fine Arts and Western Civilization II (3 hours)

Core Curr. FA,MI,HU,WI

Western Civilization since the Renaissance, including the contributions of fine arts and literature. Students must take both semesters (113 and 114) to satisfy University Core Curriculum requirements in Fine Arts and either Multidisciplinary Integration or Humanities. Some sections may offer WI credit. Prerequisite:

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Women's and Gender Studies Program



Women's and Gender Studies Program

FACULTY Scott (Director), Adams, Blouch, Browne, Etaugh (emeritus), Fry, Gabor, Glassmeyer, Glover, Hawkins, Herbert, Hogan, Jipson, Keist, Lalama, Lambie, Linn, Marcum, McQuerry, Netzley, Portocarrero, Reed, Robin, Russell, San Juan, Schifeling, Swanson, Toxqui, Vickroy, Whetstone, Wilhoit, Williams, Worley.

The Women's and Gender Studies minor is an interdisciplinary program which takes gender as its central category of analysis in the examination of social, cultural, economic, and aesthetic systems. Course work focuses on the social construction of gender identity, gender relations, and gender systems, and helps students to think about how gender intersects with multiple and complex categories of identity, including race, ethnicity, class, sexuality, nationality, and ability. It is the mission of the program to provide undergraduate research opportunities in our capstone seminar, to provide both on-campus and off-campus opportunities for advocacy, networking, internships, and professional activities around issues of intersectional gender justice. Finally, the Our community is guided by the following curricular elements and learning objectives, as a pathway to achieving greater equality:

1. to integrate knowledge about women and gender into the scholarship of various disciplines and professions across the university by promoting student engagement with feminist discourses and practices;
2. to understand that gender is foundational to the functioning of social, cultural, economic, and aesthetic systems;
3. to understand that gender always intersects with multiple and complex categories of identity, including race, ethnicity, class, sexuality, nationality and ability;
4. to understand representations and realities of gender in local, national, and global contexts;
5. to promote intersectional gender justice in WGS classrooms, on campus, and in the community through internships and other engaged learning opportunities.
6. to learn and practice intergroup dialogue methodologies and facilitation skills.
7. to learn and practice critical social research methodologies.
8. to complete an undergraduate research project in the field of WGS.

Minor In Women's And Gender Studies

Required Courses (6 hours)

- WGS 200 Introduction to Women's and Gender Studies – 3 hrs.
- WGS 400 Directed Research in Women's and Gender Studies – 3 hrs.

Electives (9 hours)

- ART 490 Art Seminar (Gender in Art) – 3 hrs.

- ART 490 Art Seminar (Women in Art) – 3 hrs.
- BLW 446 Employment Law – 3 hrs.
- COM 386 Media, Race, and Gender – 3 hrs.
- EHC 381-Seminar in Leadership (Topics: Advocacy, Servant Leadership, or Gender and Leadership) – 1 hr.
- ENG 129 African American Literature – 3 hrs.
- ENG 190 Women in Literature – 3 hrs.
- ENG 331 Studies in Women Writers – 3 hrs.
- ENG 347 Shakespeare – 3 hrs.
- HIS 304 Women in American History – 3 hrs.
- HIS 315 Social Movements in U.S. History – 3 hrs.
- HIS 317 American Masculinities – 3 hrs.
- HIS 334 Women in Developing Nations – 3 hrs.
- HIS 339 Women in Global Perspective – 3 hrs.
- HIS 382 European Women and Gender Since the Renaissance – 3 hrs.
- NUR 217 Men's Health Issues – 2 hrs.
- NUR 219 Women and Health – 3 hrs.
- NUR 263 Introduction to Personal and Community Health – 3 hrs.
- NUR 376 Advanced Concepts in Health – 3 hrs.
- PLS 493 Seminar in Political Theory: Equality, Diversity, and Citizenship – 3 hrs.
- PSY 300 Psychology of Women – 3 hrs.
- PSY 309 Human Sexuality – 3 hrs.
- SOC 210 Sociology of Families – 3 hrs.
- SOC 300 Cross-cultural Perspectives on Gender – 3 hrs.
- SOC 311 Comparative Family Systems – 3 hrs.
- SOC 313 Race, Ethnicity, and Power – 3 hrs.
- SOC 315 Gender and Society – 3 hrs.
- WGS 300 Internship in Women's and Gender Studies – 0-3 hrs.
- WLS 345 Women's Voices of Latin America – 3 hrs.
- WLS 346 Women's Voices of Spain – 3 hrs.

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Women's and Gender Studies Courses



Women's and Gender Studies Courses

WGS 200 – Introduction to Women's and Gender Studies (3 hours)

Gen. Ed. SF

Core Curr. GP WC,MI,EL

Provides students with an overview of the perspectives, debates, and scholarship within the interdisciplinary field of Women's and Gender Studies. We will study the social construction of gender and feminist critiques of essentialism, the women's movement since the nineteenth century, women and labor, manhood, body image and the media, women and sports, reproductive justice, violence against women, global activism for gender equality. WGS 200 emphasizes that gendered experiences are diverse due to differences in race, ethnicity, class, sexuality, nationality, age, etc., and helps students develop the ability to analyze gendered systems and read gender in texts and visual media. Approved for General Education.

WGS 300 – Internship in Women's and Gender Studies (0-3 hours)

Core Curr. EL

WGS 300 provides students with an opportunity to gain supervised work experience in campus, local, state, national, or international businesses, agencies, institutions, or organizations focusing on gender, sexuality, or women's issues. Prerequisite: WGS 200; sophomore standing; and 2.5 GPA in WGS

WGS 400 – Directed Research in Women's and Gender Studies (3 hours)

Core Curr. WI,EL

Directed readings or research for a paper which analyzes, synthesizes, and interprets an area of women's and gender studies. Prerequisite: WGS 200; 9 hrs. of Women's Studies elective courses; or consent of instructor.

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World Languages and Cultures



World Languages and Cultures

FACULTY Professor Hertich (chair); Associate Professors Cisneros (emeritus), Courtad, Harris (emeritus), Portocarrero; Assistant Professor Kessler.

The Department of World Languages and Cultures offers courses in Arabic, Chinese, French, German, Japanese, and Spanish. In addition to elementary, intermediate, and advanced language classes, the department offers courses on a variety of topics including culture, linguistics, translation, literature, film, and business. Many students elect a double major/minor with other disciplines in order to enhance capabilities and marketability for careers in international business or industry, cultural or social services, and education.

Students who wish to continue the same language at the university level that they studied in high school must take the departmental placement exam. The test should be taken prior to course enrollment and is administered online.

Language Requirements For The B.A. Degree

All candidates for the Bachelor of Arts degree must complete three semesters of college-level foreign language study or its equivalent. This requirement may be met in several ways: 1) Completion of a three-semester sequence (101-102-201) or higher in one language; 2) Completion of 102 or higher course in one language plus one course in another language; 3) Transfer of similar credits from another institution; 4) By proficiency examination (AP or CLEP); 5) By departmental examination in languages offered by the World Languages and Cultures Department. Option 5 is only available to non-native speakers. See department chair for details.

Students who have taken a foreign language in high school and wish to continue studies in the same language must take a placement examination. If a student places in 201 or higher the student will need to take only one course to fulfill the requirements for the B.A. degree. If a student places at the 102 level the student will need to take two courses to fulfill the requirements for the B.A. degree.

Students completing foreign language at the 202 level may also receive one GP in the Bradley Core Curriculum.

Credit by Examination

Advanced Placement Credit (AP)

Credit is given for scores of 3 or above. Specific information on the type of credit awarded can be obtained from the Undergraduate Admission Office or visit bradley.edu/admissions/freshman/apguides.

International Baccalaureate Program (IB)

Credit is given for International Baccalaureate scores of 4 or higher on Language B HL exams. Specific information can be obtained from the Undergraduate Admission Office or visit bradley.edu/admissions/freshman/apguides.

Retroactive Credit

Students who place in a language at the 102 level or higher and take a course in the same language in the World Languages and Cultures Department at Bradley University will receive retroactive credit (“retrocredits”). See Retroactive Credit for more information.

Illinois State Seal of Biliteracy

Credit is given to students who have received the Illinois State Seal of Biliteracy. Students receive 3 100-level elective credits in the language for which they have the State Seal.

AAPPL

Credit is given to students who have taken the *entire* AAPPL (Assessment of Performance towards Proficiency in Languages) exam according to the following scale. Note that all four areas (Interpersonal listening and speaking, interpretive reading, interpretive listening, and presentational writing) must be completed in order to receive credit. An average of individual area scores will be used to determine credit granted.

- Novice (score of N-1 or N-2) = no credit
- Novice High (score of N-3 or N-4) = 101 credit
- Intermediate Low (score of I-1 or I-2) = 102 credit
- Intermediate Mid (score of I-3 or I-4) = 201 credit
- Intermediate High (score of I-5 or higher) = 202 credit

Language Majors and Minors

The department offers majors in Spanish, and Spanish Education (PreK-12) and minors in French, Spanish, and Spanish for Business.

Major Requirements

Spanish

Students majoring in Spanish must complete a minimum of 27 hours of credit in Spanish at the 202 level or above, in consultation with their Spanish advisor. Spanish courses must include the following:

- WLS 303 Composition
- WLS 304 Conversation*
- WLS 315 Introduction to Literature
- Six Electives

In addition, students must earn a grade of C or better in all Spanish courses, with the exception of WLS 492, in which they must receive a P. Twelve hours of credit must be taken at Bradley, three of which must be taken during the final year. Study abroad is also highly recommended.

- This course is designed for non-native and non-near-native speakers. Students with native or near-native proficiency must substitute another 300-level Spanish class.
-

Spanish Education (PreK-12)

The world languages program prepares you for the State of Illinois Professional Educator’s License in Spanish Education, which qualifies you to teach world languages in pre-kindergarten through 12th grade classrooms.

Major Requirements

Required Mathematics BCC course

- MTH 101: The Art of Mathematical Thinking or MTH 111: Elementary Statistics – 3 hrs.

Professional Education Requirements – 50 hrs

- ETE 100: Technology Applications – 1 hr.
- ETE 115: The History of Education in the United States – 3 hrs.
- ETE 116: Field Experiences: Schools and Schooling in American Society – 1 hr.
- ETE 210: Human Development from Birth to Young Adulthood – 3 hrs.
- ETE 215: Strategies for Effective Teaching – 3 hrs. **OR**
- ETE 216: Effective Planning and Instruction for Teaching – 3 hrs.
- ETE 230: Adapting Curriculum to Support Inclusive Environments – 3 hrs **OR**
- ETE 232: Meeting the Needs of All Students within the Disciplines – 2 hrs.
- ETE 235: Methods of Teaching ELLs – 3 hours
- ETE 270: Physical Development and Health – 1 hour
- ETE 280: Exploring Diversity – 3 hours
- ETE 304: Novice Teaching Experience in World Languages – 3 hrs.
- ETE 310: Teacher Performance Assessment – 1 hr.
- ETE 313: Methods of Literacy I – 3 hours **OR**
- ETE 315: Methods of Literacy II – 3 hours
- ETE 345: Guiding Learners: Creating Safe, Inclusive Learning Environments – 3 hrs.
- ETE 368: Content Reading for All Students – 2 hrs.
- ETE 369: Assessing All Students – 2 hours
- ETE 387: Methods of Teaching PreK-12 World Language – 3 hrs.
- ETE 493: Student Teaching in World Languages – 12 hrs.

Spanish Major Core Requirements – 27 hours

- WLS 303: Composition – 3 hrs.
- WLS 304: Conversation – 3 hrs.
- WLS 315: Introduction to Hispanic Literature – 3 hrs.
- One Linguistics Course: WLL 311, 320, 360, 370, or 402 – 3 hrs.
- One Peninsular Literature Course: WLS 340, 341, 346, or 347 – 3 hrs.
- One Latin American Literature Course: WLS 342, 343, 345, 347, 380, 385, or 425 – 3 hrs.
- One Civilization Course: WLS 305, 306, 307, 321, 322, 330, 401, or 410 – 3 hrs.
- Two elective courses – 6 hrs.

Minor Requirements

French

For the French minor, requirements are a minimum of 18 hours of credit in French at the 202 level or above, with at least nine of the hours to be taken at Bradley, and approval by the foreign language advisor. In addition, students must earn a grade of C or better in all French courses, with the exception of WLF 492, in which they must receive a P.

Spanish

Students minoring in Spanish must complete a minimum of 18 hours of credit in Spanish at the 202 level or above, in consultation with their Spanish advisor. Spanish courses must include the following:

- WLS 303 Composition
- WLS 304 Conversation*
- WLS 315 Introduction to Literature
- Three electives within the WLS course inventory

In addition, students must earn a grade of C or better in all Spanish courses, with the exception of WLS 492, in which they must receive a P. Twelve hours of credit must be taken at Bradley, three of which must be taken during the final year. Study abroad is also highly recommended.

*This course is designed for non-native and non-near-native speakers. Students with native or near-native proficiency must substitute another 300-level Spanish course.

Spanish Minor with a Business Concentration

For the Spanish minor with a Business Concentration, requirements are a minimum of 15 hours of credit in Spanish at the 300 level or above. Nine of those credit hours must be taken at Bradley; at least three credit hours and a three credit hour placement in a Spanish-

language based internship program must be taken in a study abroad program; and students will complete IB 206. All courses should be approved by the World Languages and Cultures Department advisor. The Spanish courses must include the following:

- WLS 303 Composition*
- WLS 304 Conversation**
- WLS 334 Commercial Spanish ^^
- One 3-credit study abroad course concerning international business, marketing, economics, or related field taught in Spanish

- WLS 495 – Independent Study to include the 3-credit Placement in a Spanish-language based internship program

Students must also take IB 206 Introduction to International Business taught at Bradley.

In addition, students must earn a grade of C or better in all courses

*Students who receive AP credit for WLS 303 must take another 300-level Spanish elective course.

**This course is designed for non-native and non-near-native speakers. Students with native or near-native proficiency must substitute another 300-level Spanish course.

^^ WLS 334 is highly recommended before completing courses abroad, but could be taken during the study abroad portion of the minor

Study Abroad

For students interested in studying at a foreign university, programs are available at selected sites abroad. For further information contact the International Programs and Study Abroad Office.

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World Languages Courses



World Languages Courses

WLA 101 – Elementary Arabic I (4 hours)

Introduction to basic grammatical structures and vocabulary of Modern Standard Arabic. Acquisition of language skills of listening, speaking, reading, and writing, with emphasis on fundamentals of pronunciation and writing. Laboratory included.

WLA 102 – Elementary Arabic II (4 hours)

Introduction to basic grammatical structures and vocabulary of Modern Standard Arabic. Acquisition of language skills of listening, speaking, reading, and writing, with emphasis on fundamentals of pronunciation and writing. Laboratory included. Prerequisite: WLA 101

WLA 201 – Intermediate Arabic I (4 hours)

Continuation and review of basic grammatical structures and vocabulary of Modern Standard Arabic. Emphasis on further development of the four language skills through oral and written practice and short readings in literature, culture, and civilization. Prerequisite: WLA 102

WLA 202 – Intermediate Arabic II (3 hours)

Continuation and review of basic grammatical structures and vocabulary of Modern Standard Arabic. Emphasis on further development of the four language skills through oral and written practice and short readings in literature, culture, and civilization. Prerequisite: WLA 201

WLC 101 – Elementary Chinese (4 hours)

Elementary Chinese. Introduction to basic grammatical structures and vocabulary of Mandarin. Acquisition of language skills of listening, speaking, reading, and writing, with emphasis on fundamentals of pronunciation and writing. Laboratory included.

WLC 102 – Elementary Chinese (4 hours)

Elementary Chinese. Introduction to basic grammatical structures and vocabulary of Mandarin. Acquisition of language skills of listening, speaking, reading, and writing, with emphasis on fundamentals of pronunciation and writing. Laboratory included. Prerequisite: WLC 101

WLC 201 – Intermediate Chinese I (4 hours)

Continuation and review of basic grammatical structures and vocabulary of Mandarin. Emphasis on further development of the four language skills through oral and written practice and short readings in literature, culture, and civilization. Prerequisite: WLC 102

WLC 202 – Intermediate Chinese II (3 hours)

Continuation and review of basic grammatical structures and vocabulary of Mandarin. Emphasis on further development of the four language skills through oral and written practice and short readings in literature, culture, and civilization. Prerequisite: WLC 201

WLF 101 – Elementary French 1 (4 hours)

Development of communication skills (listening, speaking, reading and writing) in French. Emphasis on the practice of vocabulary and grammatical structures in meaningful communicative tasks and authentic cultural contexts. Laboratory included. First course in three-course sequence.

WLF 102 – Elementary French 2 (4 hours)

Continued emphasis on the development of listening, speaking, reading, and writing in French. Focus on the practice of vocabulary and grammatical structures in meaningful communicative tasks and authentic cultural contexts. Laboratory included. Second course in three-course sequence. Prerequisite: WLF 101 or equivalent is prerequisite for WLF 102.

WLF 201 – Intermediate French 1 (4 hours)

Further refinement of listening, speaking, reading, and writing skills in meaningful communicative tasks and authentic cultural contexts. Oral and written practice closely linked to cultural and literary readings and videos. Laboratory included. Third course in three-course sequence. Prerequisite: WLF 102 or equivalent; WLF 201 is a prerequisite for WLF 202.

WLF 202 – Intermediate French 2 (3 hours)**Core Curr. GP WC**

A transition course between elementary language and advanced content courses. Emphasis on contemporary culture with an increased focus on reading and writing. Continuation and refinement of grammatical structures and vocabulary as well as the development of speaking and listening skills in a content-based classroom. Prerequisite: WLF 201 or equivalent.

WLF 301 – Paris (3 hours)**Core Curr. EL**

Explores the French capital from its founding to the present, examining its role in French history, culture, and literature. This course is only offered in Paris. Prerequisite: WLF 202 or equivalent.

WLF 306 – Composition and Conversation (3 hours)

Expands writing and speaking skills through the exploration of cultural issues in the French-speaking world. Students study topical subjects such as technology, globalization, immigration, and cultural identity while reviewing advanced grammar topics in context. Prerequisite: WLF 202

WLF 308 – Advanced Conversation (3 hours)

Advanced work in oral French, with emphasis on developing vocabulary, idioms, listening comprehension, and general fluency in formal and informal situations. Students will discuss a variety of topics and read contemporary articles pulled from the Francophone press. Prerequisite: WLF 306 or instructor consent

WLF 315 – Introduction to French Literature (3 hours)**Gen. Ed. HL****Core Curr. HU**

Principles and methods for studying literature. Selected works of French fiction, drama, and poetry. Prerequisite: WLF 303, WLF 306, or instructor consent

WLF 316 – Topics in French Language and Literature (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for maximum of 9 hrs. credit. Prerequisite: WLF 303 or WLF 306

WLF 320 – French Phonetics (3 hours)

French phonetic elements in isolation as well as in normal speech patterns. Practice in correct pronunciation of individual sounds, words, phrases, and sentences. Individual and class work with recordings. Prerequisite: WLF 202 or instructor consent; WLF 303 or 306 recommended.

WLF 321 – French Culture and Civilization (3 hours)

An introduction to the culture and civilization of France, including the history, geography, politics, literature, arts, and daily life from Prehistory to the end of the Colonial Empire (1960's). Prerequisite: WLF 303 or WLF 306.

WLF 322 – Contemporary France (3 hours)

Examines social, political, and cultural aspects of modern France, including education, immigration, government, family, and work, as well as France's relationship to Europe and the world. Sources include texts, articles, and newscasts. Prerequisite: WLF 303 or WLF 306.

WLF 334 – Commercial French (3 hours)

Introduction to language skills for commercial communication with French speaking countries. Emphasis on written and oral activities dealing with banks, sales, freight, insurances, advertisement, export, trade, and unions. Prerequisite: WLF 303, WLF 306, or consent of instructor.

WLF 340 – French Literature I (3 hours)

An historical survey of French literature from the Middle Ages through the eighteenth century, examining the major authors of the period in their cultural and literary context. Prerequisite: WLF 303 or WLF 306.

WLF 341 – French Literature II (3 hours)**Core Curr. HU**

An historical survey of French literature from the nineteenth century to the present, examining the major authors of the period in their cultural and literary context. Prerequisite: WLF 303 or WLF 306.

WLF 351 – Cinema Francais (3 hours)**Core Curr. WI,FA**

Survey of the history of French cinema from the 1930s to the present, highlighting the major films, directors, and artistic movements. In addition to an emphasis on the aesthetic qualities of the films, students will explore how French history and culture are presented in films from various eras. Students will learn the basics of film theory, including the necessary critical vocabulary, so that they may better understand, interpret and analyze film. The course will be taught in English; coursework will be in French. Cross listed with WLT 151. Prerequisite: WLF 303, or WLF 306.

WLF 370 – Francophone Identities (3 hours)**Core Curr. GP WC**

An exploration of the French-speaking world outside of France through film and literature. Areas covered may include Canada, the Caribbean, Sub-Saharan Africa, and Northern Africa. Students examine the relationship between group and individual identity, language and self, including post-colonial theory. Prerequisite: WLF 303 or WLF 306.

WLF 430 – Introduction to Translation (3 hours)

Methods and procedures for translating from French to English and from English to French, with particular focus on specific problems of translation and how to deal with them in short practical exercises. The course will include the translation of literary, technical, business, and historical texts. Prerequisite: WLF 303 or WLF 306 and one other French course at the 300 or 400 level.

WLF 490 – Advanced Topics in French and Francophone Literature and C Culture (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated for a maximum of nine credits. Prerequisite: WLF 303 or WLF 306 and one other French course at the 300 or 400 level

WLF 492 – Practicum in French (1-3 hours)

Supervised work study in community service activities involving use of the foreign language. Pass/Fail. Prerequisite: consent of department chair.

WLF 495 – Independent Study (1-3 hours)

Independent study and research in a specific field of French language or phase of literary production. May be repeated for maximum of 6 hrs. credit. Prerequisite: junior or senior standing; consent of department chair

WLG 101 – Elementary German 1 (4 hours)

Development of communication skills (listening, speaking, reading, and writing) in German. Emphasis on the practice of vocabulary and grammatical structures in meaningful communicative tasks and authentic cultural contexts. Laboratory included. First course in three-course sequence.

WLG 102 – Elementary German 2 (4 hours)

Continued emphasis on the development of listening, speaking, reading, and writing in German. Focus on the practice of vocabulary and grammatical structures in meaningful communicative tasks and authentic cultural contexts. Laboratory included. Second course in three-course sequence. Prerequisite: WLG 101 or equivalent is prerequisite for WLG 102.

WLG 201 – Intermediate German 1 (4 hours)

Further refinement of listening, speaking, reading, and writing skills in meaningful communicative tasks and authentic cultural contexts. Oral and written practice closely linked to cultural and literary readings and videos. Laboratory included. Third course in three-course sequence. Prerequisite: WLG 102 or equivalent;

WLG 202 – Intermediate German 2 (3 hours)**Core Curr. GP WC**

A transition course between elementary language and advanced content courses. Emphasis on contemporary culture with an increased focus on reading and writing. Continuation and refinement of grammatical structures and vocabulary as well as the development of speaking and listening skills in a content-based classroom. Prerequisite: WLG 201 or equivalent.

WLG 303 – Composition (3 hours)

Development of ability to write with ease and accuracy in the German language: creative, business, technical, and expository writing. Translation skills. Thorough grammar review. Prerequisite: WLG 202 or equivalent.

WLG 304 – Conversation (3 hours)

Emphasis on improving listening comprehension and speaking proficiency through free and controlled conversation, oral reports, and small discussion groups. Emphasis on correct idiomatic use of the German language in everyday situations. Prerequisite: WLG 202 or equivalent.

WLG 306 – Composition and Conversation (3 hours)

Expands writing and speaking skills through the exploration of cultural issues in modern Germany. Prerequisite: WLG 202 or equivalent.

WLG 315 – Introduction to German Literature (3 hours)**Gen. Ed. HL**

Critical analysis of different forms, movements, and themes in fiction, drama, essay, and poetry of German-speaking lands.

Prerequisite: WLG 202 or equivalent.

WLG 316 – Topics in German Language and Literature (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated under a different topic for maximum of 9 hrs. credit. Prerequisite: WLG 202 or equivalent.

WLG 321 – Survey of German Culture and Civilization (3 hours)**Core Curr. GP WC**

Major periods in the culture and civilization of Germany and German-speaking countries from the Medieval Period to the present.

Taught in German. Prerequisite: WLG 202 (FLG 202) or equivalent.

WLG 334 – Commercial German (3 hours)

Advanced level communicative competence in the four language skills of listening, speaking, reading, and writing as they pertain to business situations. Emphasis on development of cultural awareness and sensitivity to cultural differences. Prerequisite: WLG 202 or equivalent.

WLG 352 – Deutsches Kino (3 hours)**Core Curr. FA**

Survey of the history of German cinema from the 1920s to the present, highlighting major films, directors, and artistic movements. In addition to the emphasis on aesthetic qualities of the film, students explore how German history and culture are presented in films from various eras. Topics include: transition from silent to sound, expressionism, propaganda and film as a forum for working through Germany's past, the reunification of Germany and its minority cultures. Students also learn the basics of film theory, including the critical vocabulary, so that they may better understand, interpret and analyze film. Films are shown with subtitles. Coursework in German.

Course taught in English. Prerequisite: WLG 202 or equivalent.

WLG 492 – Practicum in German (1-3 hours)

Supervised work study in community service activities involving use of the foreign language. Pass/Fail. Prerequisite: Consent of department chair.

WLG 495 – Independent Study (1-3 hours)

Independent study and research in a specific field of German language or phase of literary production. May be repeated for maximum of 6 hrs. credit. Prerequisite: Junior or senior standing; consent of department chair.

WLL 101 – Elementary Foreign Language 1 (4 hours)

Development of communication skills (listening, speaking, reading and writing) in foreign language. Emphasis on the practice of vocabulary and grammatical structures in meaningful communicative tasks and authentic cultural contexts. Laboratory included. May be repeated under different topic for a total of 8 credit hours. Prerequisite:

WLL 311 – Introduction to Language (3 hours)

Introduction to the study of language; its structure, acquisition, and function in society. Cross listed as ENG 311.

WLS 101 – Elementary Spanish 1 (4 hours)

Development of communication skills (listening, speaking, reading, and writing) in Spanish. Emphasis on the practice of vocabulary and grammatical structures in meaningful communicative tasks and authentic cultural contexts. Laboratory included. First course in three-course sequence.

WLS 102 – Elementary Spanish 2 (4 hours)

Continued emphasis on the development of listening, speaking, reading, and writing in Spanish. Focus on the practice of vocabulary and grammatical structures in meaningful communicative tasks and authentic cultural contexts. Laboratory included. Second course in three-course sequence. Prerequisite: WLS 101 or equivalent

WLS 131 – Introduction to Spanish for Healthcare (3 hours)

Introduces students to specialized vocabulary, functional grammar, and cultural concepts to facilitate effective communication in various medical settings at a basic level. Students will apply this material in interactive classroom activities focusing on oral and listening skills.

This course will also examine cultural issues relating to enhancing understanding and communication between healthcare providers and patients. No prior knowledge of Spanish is required for this course. Prerequisite:

WLS 201 – Intermediate Spanish 1 (4 hours)

Further refinement of listening, speaking, reading and writing skills in meaningful communicative tasks and authentic cultural contexts. Oral and written practice closely linked to cultural and literary readings and videos. Laboratory included. Third course in three-course sequence. Prerequisite: WLS 102 or equivalent.

WLS 202 – Intermediate Spanish 2 (3 hours)

Core Curr. GP WC

A transition course between elementary language and advanced content courses. Emphasis on contemporary culture with an increased focus on reading and writing. Continuation and refinement of grammatical structures and vocabulary as well as the development of speaking and listening skills in a content-based classroom. Prerequisite: WLS 201 or equivalent.

WLS 222 – Spanish for Heritage Speakers (3 hours)

Core Curr. GP WC

Provides an overview of language, social and cultural themes, and literature from the Spanish-speaking world for Heritage speakers of Spanish. Students will develop their writing and critical thinking abilities by reading, analyzing, and responding to texts while also working on common grammar and spelling issues. Prerequisite: Consent of instructor

WLS 232 – Introduction to Spanish for Social Work (3 hours)

Introduces students to specialized vocabulary, grammar, and cultural concepts to facilitate essential communication between social workers and Spanish-speaking clients. Instruction focuses on conversational skills to perform everyday professional tasks such as gathering information, explaining the role of the social worker, and providing information on community services.

WLS 303 – Composition (3 hours)

Emphasis on improving written proficiency. Thorough grammar review, translation exercises, and writing various types of prose. Emphasis on correct, idiomatic use of Spanish in everyday situations. Prerequisite: WLS 202 or WLS 222 or equivalent

WLS 304 – Conversation (3 hours)

Emphasis on improving speaking proficiency and listening comprehension through free conversation and oral presentations. Emphasis on correct, idiomatic use of Spanish in everyday situations. This course is designed for non-native and non-near-native speakers. Students with native or near-native proficiency may not take this course. See department for details. Prerequisite: WLS 202 or equivalent

WLS 305 – Peru Interim: Andean Cultures (3 hours)

Exposes students to Peruvian culture with a two-week stay in Peru. Focuses on the different cultural aspects of Peruvian art, history, architecture, politics, and economics. An emphasis on Peruvian history and sociopolitical changes of the last 50 years will be an important element in the course so students will understand the world they will be immersed in for two weeks. During their stay in Peru students will visit numerous museums, churches, archaeological and historical sites as well as cultural and artistic centers. Prerequisite: WLS 303 and 304, or consent of instructor.

WLS 306 – Topics in Spanish History and Culture (3-9 hours)

Core Curr. EL

Exposes students to Spanish culture with a two-week stay in Spain. Students primarily study the development of the Spanish transition to democracy after forty years of dictatorship, and different aspects of the contemporary Spanish civilization, and culture. To achieve this goal students will learn about Spanish history, politics, culture, and social changes. The site will change between major cities such as: Madrid, Barcelona, Granada, Seville, Cordoba, Bilbao, San Sebastian, etc. Topics may vary each time the course is offered. Students can retake this course for additional credit as long as the content of the course has changed. Prerequisite: WLS 303 and 304, or consent of instructor.

WLS 307 – Costa Rica Interim: A Contemporary Perspective (3 hours)

Core Curr. EL

Provides students with an overview of different aspects of contemporary Costa Rican society within a historical framework. Topics such as geography, pre-Columbian cultures, colonization, independence, immigration, the economy, politics, health care, education, and language and culture will be covered. During the two weeks in Costa Rica, students will visit numerous museums, churches, historical sites, and national parks. Prerequisite: WLS 303 and 304, or permission of instructor.

WLS 315 – Introduction to Hispanic Literature (3 hours)

Gen. Ed. HL

Core Curr. HU

Elements, techniques, and forms of Hispanic fiction, drama, and poetry. Readings in Peninsular and Spanish American literature. Prerequisite: WLS 303, 304; or consent of instructor.

WLS 316 – Topics in Hispanic Language and Literature (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated

under a different topic for maximum of 9 hrs. credit. Prerequisite: WLS 315 or consent of instructor

WLS 320 – Spanish Phonetics (3 hours)

Spanish phonetic elements in isolation as well as in normal speech patterns. Practice in correct pronunciation of individual sounds, words, phrases, and sentences. Individual and class work with tape recordings. Prerequisite: WLS 303 or consent of instructor.

WLS 321 – Peninsular Spanish Civilization and Culture (3 hours)

Core Curr. GP WC

An integrated survey of civilization and culture of the Iberian Peninsula from prehistoric times to the present. Survey concentrates on Spanish arts and intellectual achievements. Prerequisite: WLS 303 or consent of instructor

WLS 322 – Latin-American Civilization and Culture (3 hours)

Core Curr. GP WC

An integrated survey of Latin-American civilization and culture from pre-Columbian times to the present. Survey concentrates on Latin-American arts and intellectual achievements. Prerequisite: WLS 303 or consent of instructor.

WLS 330 – Hispanic Cultural History (3 hours)

Study of a specific period in the history of the Hispanic world that showcased an intense amount of cultural productivity. Topics may vary each time the course is offered, and examples of historical periods might be the Generation of 1898 in Spain, the Dirty War period of Argentina's dictatorship, the Mexican Revolution of 1910, etc. Students will have the opportunity to examine how the social, political, and historical events of a determined era helped create cultural activity that has had an effect on the Hispanic world since. Students can retake this course for additional credit as long as the content of the course has changed. Prerequisite: WLS 303 or consent of instructor.

WLS 331 – Spanish for Healthcare Professionals (3 hours)

Provides students with specialized vocabulary, functional grammar, and cultural information to facilitate effective communication in different medical contexts. Students will apply the material in interactive classroom activities, as well as in community service experiences. Class activities involving videos, podcasts, and articles in Spanish will further develop listening and reading comprehension skills. This course will also examine cultural issues relating to healthcare to enhance understanding and communication between healthcare providers and patients. Prerequisite: WLS 202, WLS 222, or equivalent. Students who have taken WLS 131 or 301 may not take this course.

WLS 334 – Commercial Spanish (3 hours)

Core Curr. GP GS

Introduction to language skills for commercial communication and Hispanic business practices. Prerequisite: WLS 303, 304; or consent of instructor.

WLS 340 – Spanish Literature I (3 hours)

Gen. Ed. HL

Analysis of human values in representing works of major Iberian writers of Medieval, Renaissance, and Baroque periods. Prerequisite: WLS 315 or consent of instructor. WLS 321 recommended.

WLS 341 – Spanish Literature II (3 hours)

Values-based analysis of representative works of major Iberian authors from Neo-classical, Romantic, and Realist-Naturalist periods. Prerequisite: WLS 315 or consent of instructor; WLS 321, 340 recommended.

WLS 342 – Survey of Hispanic American Literature I (3 hours)

Gen. Ed. NW

Core Curr. GP WC,HU

Analysis of Hispanic-American literature from its roots in the indigenous pre-Columbian civilizations to Modernism. Prerequisite: WLS 315 or consent of instructor. WLS 322 recommended

WLS 343 – Survey of Hispanic American Literature II (3 hours)

Gen. Ed. NW

Core Curr. GP WC,HU

Analysis of non-Western cultures and traditions in representative works by major authors of Hispanic-America from 1910 to present. Prerequisite: WLS 315 or consent of instructor. WLS 322, 342 recommended.

WLS 345 – Women's Voices of Latin America (3 hours)

Examines how female writers differ from their male counterparts and how they have created a very distinct literary corpus. Emphasizes how history, political events, and social expectations shape literary production. Furthermore, female writers challenge social norms to produce a literature that speaks with a universal and yet very personal voice conveying a Latin American reality to probe the very nature of the human condition. Prerequisite: WLS 315 or consent of instructor

WLS 346 – Women's Voices of Spain (3 hours)

Examine how Spanish female writers differ from their male counterparts and how they have created a very distinct literary corpus. This course emphasizes how history, political events and social expectations shape literary production. Furthermore, female writers

challenge social norms to produce a literature that speaks with a universal and yet very personal voice conveying a Spanish, and even pan-European, reality to probe the very nature of the human condition. Prerequisite: WLS 315 or consent of instructor

WLS 347 – Images and Texts in the Hispanic World (3 hours)

Gen. Ed. HL

Compares classical images from Hispanic artists with literary texts that treat the same themes and ideas. Challenges students to consider what exactly constitutes 'text' and all ideas associated with the concept: how do visual images transmit a message and Prerequisite: WLS 315 or consent of instructor

WLS 360 – Spanish in the United States (3 hours)

Gen. Ed. CD

Core Curr. GP WC

Provides an introduction to the varieties of Spanish spoken in the United States as well as the Spanish-speaking communities throughout the United States, including the Southwest, Florida, the Northeast, Louisiana, and the Midwest. Additionally, students will focus on the social issues surrounding the use of Spanish in the United States, such as language attitudes and ideologies, language policy, and bilingualism. Prerequisite: WLS 320, WLL 311, ENG 311, or consent of instructor

WLS 370 – Dialectology (3 hours)

Introduces undergraduates to the study of dialectology through both theoretical and applied perspectives. Students examine geographical and language contact features that influence language variation, as well as internal and external historical factors. The students will characterize the phonological, morphosyntactic, pragmatic, and lexical differences among Spanish dialects in both Latin America and Spain. Students will receive hands-on experience in collecting and analyzing naturally-occurring language data in written and oral forms. Active participation in class discussions (in Spanish) is both expected and encouraged. Prerequisite: WLS 320, WLL 311, ENG 311, or consent of instructor

WLS 380 – Hispanic American Short Story (3 hours)

Provides an overview of the Hispanic American short story from its earliest manifestations in the twentieth century to the present day through the reading, discussion, and analysis of literary texts. We will study the development of the short story as a literary genre, examining its specific characteristics and manifestations, its particular themes as well as its cultural and literary contexts. Hispanic American literary production offers a rich body of short stories such as the regionalist short story, fantastic short story, detective short story, and magical realist short story. Prerequisite: WLS 315 or consent of instructor

WLS 385 – Poetry of Latin America (3 hours)

Presents a survey of Latin American poetry from the twentieth century to the present. Introduces students to the basics of poem analysis for content, themes, and poetic structure. In addition to the study of versification and aesthetics, emphasis will be placed on the socio-historical context in which the works were produced. Prerequisite: WLS 315 or equivalent.

WLS 401 – Hispanic Cinema: Texts & Contexts (3 hours)

Uses the techniques of literary and film analysis to focus on the relationship between Hispanic film and literature, as well as other narrative forms such as: personal testimonies, historical documents, documentaries, and media. Students will examine the adaptation of literary texts into films and analyze both works for plot structure. They will also discuss current events portrayed in films and in the media, as well as study themes and cultural and political issues presented in films and narratives. Prerequisite: WLS 315 or equivalent.

WLS 402 – Introduction to Sociolinguistics (3 hours)

Introduces undergraduates to the study of linguistic variation in the Spanish language. Students will study geographical and social factors in language variation, and phonological and syntactic variation. Examines specific cases of variation and change in present-day Spanish dialects in both Latin America and Spain, as well as language contact between Spanish and other languages. Students will receive hands-on experience in collecting and analyzing naturally-occurring language data. Active participation in class discussions (in Spanish) is both expected and encouraged. Prerequisite: WLS 320, WLL 311, ENG 311, or consent of instructor

WLS 403 – Advanced Conversation & Composition (3 hours)

Core Curr. WI

Advanced course in speaking and writing. Prerequisite: WLS 303; WLS 304; 3 additional credits of WLS at the 300 level or above

WLS 410 – Life from the Bottom of the World: the Culture of Argentina, Chile and Uruguay (3 hours)

Examines the countries in the Southern Cone of Latin America (Argentina, Chile and Uruguay) from a cultural, literary and political point of view. Exposes students to the music, literature, film, testimonials, and art from this part of the Americas in order to gain a better understanding of its social realities. In addition to the discussion of contemporary issues, the course will also cover much of the history of these countries in order to provide a context for the included readings. Prerequisite: WLS 315 or consent of instructor

WLS 425 – Contemporary Hispanic American Novels (3 hours)

Through the study, research, and discussion of a variety of novels the students gain an insight into the most important features of Latin American culture, and circumstances faced by its people. The students read works of recognized writers including Nobel prize winners such as: Gabriel García Márquez and Mario Vargas Llosa. Includes political writings, gender issues, reflections of historical periods, and social commentaries. Prerequisite: WLS 315 or consent of instructor

WLS 430 – Introduction to Translation (3 hours)

Methods and procedures for translating from Spanish to English and from English to Spanish, with particular focus on specific problems of translation and how to deal with them in short practical exercises. The course will include the translation of technical, business, legal, medical, and literary texts. Prerequisite: WLS 315

WLS 440 – Historical Memory in Post Franco Spain (3 hours)

An examination of Spanish culture, literature, history and politics from the beginning of the Spanish Civil War to the transition to democracy. The goal of the course is to enrich student knowledge of this important period in Spain through documentaries, television programs, music, films and literature, so they will be able to learn about Spanish history, culture and literature. Prerequisite: WLS 315 or consent of instructor

WLS 490 – Topics in Hispanic Language and Literature (3 hours)

Topics of special interest which may vary each time course is offered. Topic stated in current Schedule of Classes. May be repeated for maximum of 9 hrs. credit. Prerequisite: WLS 315 or consent of instructor

WLS 492 – Practicum in Spanish (1-3 hours)

Supervised work study in community service activities involving use of the foreign language. Pass/Fail. Prerequisite: consent of department chair.

WLS 495 – Independent Study (1-3 hours)

Independent study and research in a specific field or phase of Spanish language or literary production. May be repeated for maximum of 6 hrs. credit. Prerequisite: junior or senior standing; consent of department chair.

WLT 140 – Global Literatures in Translation (3 hours)**Core Curr. GP WC,HU**

Study of representation of human values and cultures in literatures emerging from regions such as Africa, Asia, the Caribbean, Europe, the Middle East, and Latin America. Prerequisite:

WLT 152 – German Cinema (3 hours)**Core Curr. FA,WI**

Survey of the history of German cinema from the 1920s to the present, highlighting major films, directors, and artistic movements. In addition to the emphasis on aesthetic qualities of the film, students explore how German history and culture are presented in films from various eras. Topics include: transition from silent to sound, expressionism, propaganda and film as a forum for working through Germany's past, the reunification of Germany and its minority cultures. Students also learn the basics of film theory, including the critical vocabulary, so that they may better understand, interpret and analyze film. Films are shown with subtitles. Course taught in English. Prerequisite: Consent of instructor

WLT 251 – French Cinema (3 hours)**Core Curr. WI,FA**

Survey of the history of French cinema from the 1930s to the present, highlighting the major films, directors, and artistic movements. In addition to an emphasis on the aesthetic qualities of the films, students will explore how French history and culture are presented in films from various eras. Students will learn the basics of film theory, including the necessary critical vocabulary, so that they may better understand, interpret and analyze film. All films will have subtitles. The course will be taught in English. Cross listed with WLF 351. Prerequisite: ENG 101 recommended

WLT 340 – Topics in Global Literatures (3 hours)**Core Curr. GP WC,HU**

Exploration of a movement, author, or theme focusing on human values and representations of culture in literatures from regions such as Africa, Asia, the Caribbean, Europe, the Middle East, and Latin America. Prerequisite: Junior standing or permission of instructor

This is the official catalog for the 2024-2025 academic year. This catalog serves as a contract between a student and Bradley University. Should changes in a program of study become necessary prior to the next academic year every effort will be made to keep students advised of any such changes via the Dean of the College or Chair of the Department concerned, the Registrar's Office, u.Achieve degree audit system, and the Schedule of Classes. It is the responsibility of each student to be aware of the current program and graduation requirements for particular degree programs.

Turner School of Entrepreneurship and Innovation



Turner School of Entrepreneurship and Innovation

Innovative Minds, Different Majors

Our Mission

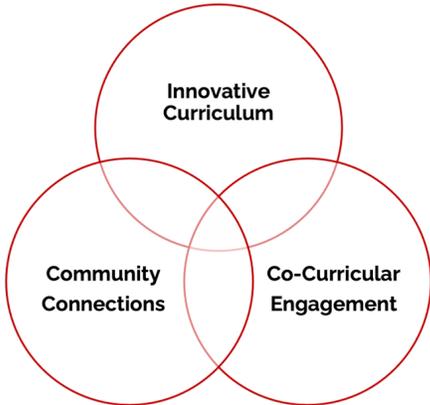
Through innovative curriculum, co-curricular engagements, and community connections, we facilitate learning adventures to conquer challenges with innovative thinking and ingenuity.

You've found the place to nurture your entrepreneurial spirit and elevate your ideas to achieve success. We accomplish our mission by focusing on three areas: Curriculum, Co-Curricular Engagement, and Community Connections. Reach out to us to learn more!

Curricular Initiatives: Whether through the Interdisciplinary Innovation (SEI INV) degree completion program, a minor in entrepreneurship and innovation (SEI) or a transcript distinction from the Entrepreneurial Scholar Program, the Turner School of Entrepreneurship and Innovation seeks to ensure an academically rich environment for all Bradley students to build the necessary entrepreneurial skills and innovative thinking for a successful career.

Co-Curricular Engagement: Vital learning also happens outside the classroom. We provide this through: Brave Pitch, Social Impact Challenge, Big Idea student-venture competition, entrepreneurial internships, mentoring connections, the Collegiate Entrepreneurs' Organization (C.E.O) student club, and much more!

Community Connections: Build your network from across campus, the community or around the world, all with our support. The Turner School of Entrepreneurship and Innovation provides ongoing opportunities to immerse yourself in the entrepreneurial innovation ecosystem by connecting you with entrepreneurs and experts while you pursue your innovative ideas and passions.



The Turner School mission, mantra, and values, presented below, directly align with the Bradley University Strategic Imperatives and Plan developed in 2021 that guide campus activities.

Our Mantra: Dream, Design, Develop your ideas

- **Dream: Leverage your creativity for a better tomorrow.**

Be-creative, Be-innovative, Be-You. The Turner School community fosters creativity and innovation. Join us to nurture your entrepreneurial spirit and bring your ideas to fruition.

- **Design: Map your ideas through hands-on action.**

Be-brave, Be-collaborative, Be-involved. At the Turner School you'll find coaching and an engaging curriculum to advance you from ideas to workable solutions.

- **Develop: Build a scaling framework for success.**

Be-courageous, Be-confident, Be-limitless. Turning your ideas into action is what the Turner School is all about. Overcoming challenges with ingenuity and flair prepares you to evolve yourself and your idea from problem solving to impactful solution.

Our Values

Innovative

- We invite students to don their thinking caps, mix in a bit of imagination, and join others to make cool stuff happen!
- We define “*innovative*” as the ability to tackle challenges, problems, and opportunities with a creative and forward-looking mindset, it is our DNA.
- We commit to offering curricular and co-curricular pathways that encourage students to converge and merge while applying creative thinking to solve problems and drive toward executable outcomes.

Inclusive

- Be-You.
- We believe that when everyone is welcome, excellence thrives.
- We commit to creating an environment through our language and actions – in our courses and activities – where all feel valued and empowered to succeed.

Interdisciplinary

- *Innovative Minds, Different Majors.*
- We believe that to blaze your trail, you need diverse knowledge and a flexible mindset, and that discoveries evolve from a comprehensive understanding of topics from various disciplinary perspectives.
- We commit to connecting different areas of study in meaningful ways in our approach to teaching and programming.

Entrepreneurship And Innovation Minor

The interdisciplinary minor in entrepreneurship and innovation guides students to dream, design, and develop their innovative ideas into opportunities. The 21st century problem solving skills developed within the SEI minor are required for successful entrepreneurial endeavors and are in demand by large corporations, small businesses, family businesses, startups, nonprofit entities and social ventures. With the minor, students will engage in experiential learning and have the opportunity to develop competencies, including:

- Dreaming new ideas into realistic opportunities
- Harnessing resources to design for success
- Overcoming challenges to advance ideas
- Assessing possibilities to solve business, societal, and environmental problems
- Commercializing products and services
- Networking with diverse groups
- Showcasing innovative thoughts

The 15-hour minor includes required courses in entrepreneurial creativity, new venture creation, and entrepreneurial growth, plus an additional 6 hours in electives. The requirements for the minor are outlined below. Students must have at least 12 hours in courses that are unique from those used to fulfill their major requirements.

The following courses are required for the minor:

- ENT 280 – Entrepreneurial Creativity
- ENT 381 – Entrepreneurship for Non-Business Students OR ENT 382 Entrepreneurship
- SEI 305 – Innovation Journey

Approved Elective Courses (6 hours)

- BLW 347 – Law and the Entrepreneur
- BUS 362 – Innovation in Organizations
- COM 305 – The Persuasive Process

- COM 388 – Social Media Communication
- COM 394 – Communication and Conflict Management
- ENT 281 – The Entrepreneurial Career
- ENT 383 – Managing Entrepreneurial Growth
- ENT 384 – Entrepreneurial Finance
- ENT 385 – Technology Entrepreneurship
- ENT 386 – Social Entrepreneurship
- ENT 387 – Family Business
- ENT 389 – Advanced Topics in Entrepreneurship
- ENT 482 – The Entrepreneurial Experience
- ENT 488 – Entrepreneurship Internship
- ENT 499 – Independent Study in Entrepreneurship
- FCS 170 – Hospitality Leadership I
- FCS 270 – Special Event Planning
- I M 113 – Introduction to Interactive Media
- I M 450 – Issues in New Media Theory
- MUS 101 – Introduction to Music Business
- MUS 304 – Music Licensing and Contracts
- SEI 200 and/or SEI 300 – Topics in Entrepreneurship & Innovation
- SEI 210 and/or SEI 310 – Practicum in Entrepreneurship & Innovation
- SEI 330 – Intellectual Capital Management
- THE 223 – Theatrical Producing
- Or consent of the TSEI Academic Director

Entrepreneurial Scholar

The interdisciplinary Entrepreneurial Scholar program is an engaging way for students of any major to elevate their ability to discover, evaluate, and pursue opportunities with a focus on experiential activities. Students who complete this program will earn the Entrepreneurial Scholar designation on their transcript, signaling to potential employers that they possess special skills and an entrepreneurial mindset. Entrepreneurial Scholars will be prepared to pursue growth opportunities in any type of organization, whether their own business, a nonprofit organization, or a social enterprise.

Entrepreneurial Scholars develop competencies through coursework and experiential activities, including, but not limited to the Turner School's co-curricular activities and community engagements throughout their time at Bradley. The program requires the completion of 3 hours of required coursework (ENT 280), 6 hours of approved electives, and 12 experiential activity points.

Student Entrepreneurship and Innovation Co-Curricular Opportunities

Dream, Design, and Develop your entrepreneurial spirit and innovative thinking by participating in these and other Bradley co-curricular activities. Contact the Turner School (turnerschool@bradley.edu) for more details.

Brave Pitch

Looking for a quick easy way to share your idea or innovation with peers and experts? The Brave Pitch is for you! Whether you have a business idea, product, service, app, or non-profit idea, Brave Pitch is for you! You don't need to have a full business plan, and no entrepreneurial or business experience is necessary! It's simple. Create and upload a 1-3 minute video describing your idea. [Click here](#) for more information.

Social Impact Challenge

Calling all students and recent alums to develop their ideas to change lives, strengthen communities, and make a difference. Show off your innovative spirit to a panel of experts and potential investors, learn from experienced mentors, connect with like-minded peers from different majors, and earn recognition for your courage and creativity in the Social Impact Challenge. [Click here](#) for more information.

BIG IDEA Student Venture Competition

The Big Idea Competition is a chance for you – Bradley students and recent alumni – to pitch and develop an innovative idea, product, service, or new business. Demonstrate your creativity by presenting your entrepreneurial ideas to a panel of judges and potential investors. Join the Big Idea Student Venture Competition to gain knowledge on the processes of turning ideas into opportunities, incorporating feedback to iterate, and developing networks. All this increases the likelihood of success, while gaining exposure to potential investors. [Click here](#) for more information.

Distinguished Entrepreneurship Speaker Series

The Turner School of Entrepreneurship and Innovation is where dreamers become doers. We team up with world-renowned entrepreneurs to create an event that's all about exploring innovative and entrepreneurial paths. Picture yourself as a trailblazer and uncover potential avenues to success. Come be a part of the vibrant, innovative Peoria entrepreneurial ecosystem. Participate in the free public event or dive deeper in our small group student discussions and events. [Click here for more information.](#)

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Interdisciplinary Innovation



Interdisciplinary Innovation

The Interdisciplinary Innovation Degree Completion program gives students the opportunity to combine their completed coursework with courses in creativity, innovation and entrepreneurship, to develop an individualized program of study and a meaningful degree that incorporates interdisciplinary convergence of knowledge and skills in the context of their career goals. Students may be recommended for this program by an academic advisor from one of Bradley's 5 colleges or the Academic Exploration program upon completion of 90 credit hours. .

Students admitted into the Interdisciplinary Innovation Degree Completion program work with the Turner School SEI academic advisor to construct a meaningful course of study, from which they will develop a proposal explaining how this course of study meets their academic and career objectives. The Turner School SEI academic advisor and the Executive and Academic Director, who comprise the Turner School Curriculum Committee, review and approve curriculum proposals.

Interdisciplinary Innovation Degree Completion Requirements

Bradley Core Curriculum (BCC) (36 hours) is a set of twelve diverse courses required of every student at the university, courses selected from eight categories known as "Areas of Inquiry." In addition to the Areas of Inquiry, the BCC experience includes a set of two "Core Practices": Writing Intensive (WI) courses and Experiential Learning (EL) Experiences. To learn about please visit <https://www.bradley.edu/sites/bcc/>. The SEI academic advisor works with students, depending on their catalog year of entry into Bradley, to select courses that meet BCC requirements and align with the meaningful interdisciplinary course of study proposal.

In addition to the BCC requirements, students must complete 64 hours of electives from the Bradley catalog.

Meaningful program of study (24 hours, 12 of which must be at the 300-level or above) – Students work with their SEI advisor to develop a meaningful interdisciplinary course of study proposal that meets that academic and career objectives, including how innovation is needed to solve problems in their current and future career goals. This proposal will be presented to the Turner School Curriculum Committee for approval.

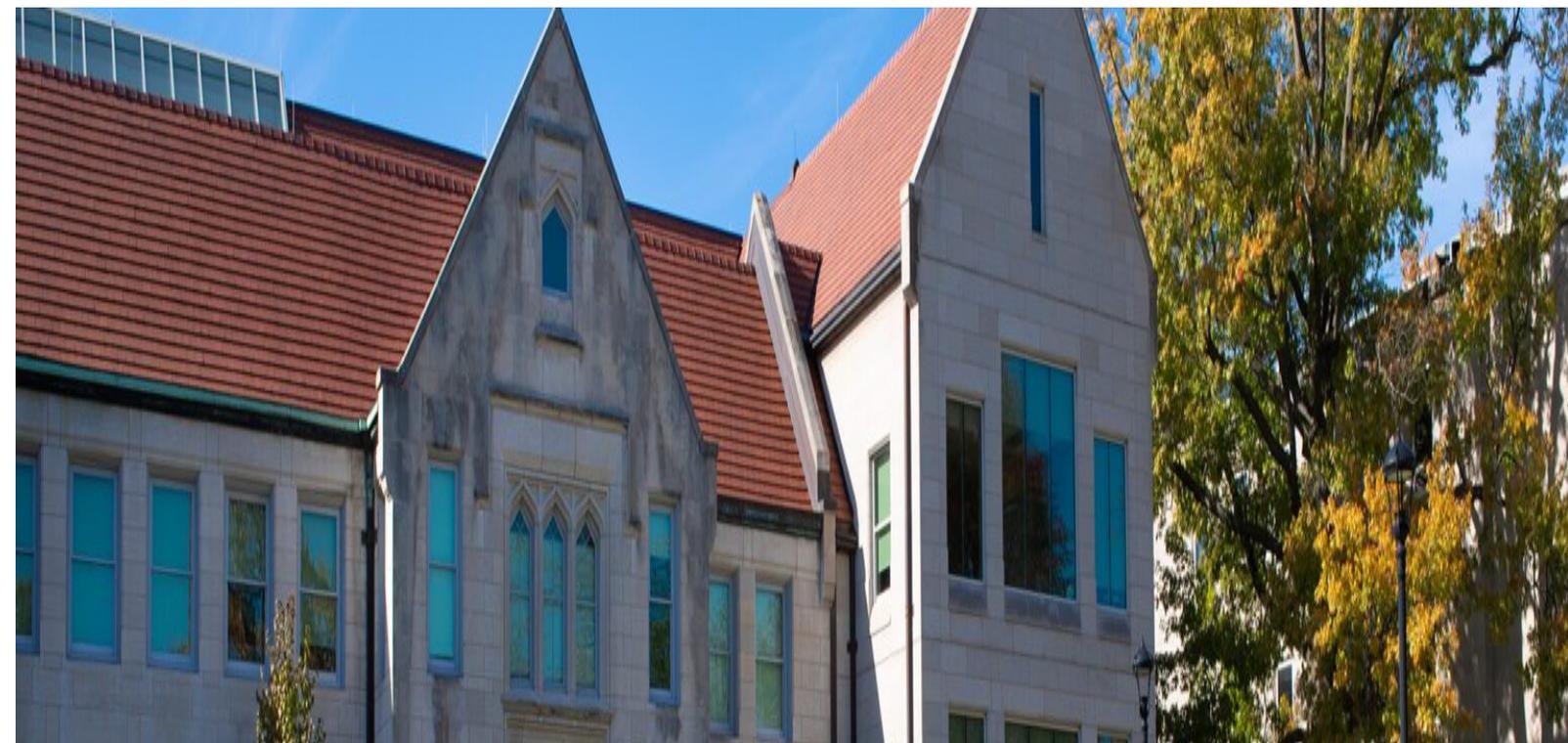
As part of this program of study, student are required to complete two entrepreneurship courses (6 hours of the 24 noted above)

- ENT 280 – Entrepreneurial Creativity – a course designed to teach idea and opportunity generation, recognition, and evaluation..
- ENT 482 – The Entrepreneurial Experience – our capstone course that gives students practical experiential learning

Students must meet a minimum of a 2.00 GPA in their approved program of study and a minimum cumulative grade point average of 2.00 based upon hours taken at Bradley to graduate.

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Turner School of Entrepreneurship and Innovation Courses



Turner School of Entrepreneurship and Innovation Courses

SEI 200 – Topics in Entrepreneurship & Innovation (1-3 hours)

Conceptual treatment of topics important to entrepreneurship and innovation. 1-3 hours, may be repeated up to 6 hours under different titles/topics.

SEI 210 – Practicum in Entrepreneurship and Innovation (1-3 hours)

Variety of experiential activities related to entrepreneurship and/or innovation. 1-3 hours, may be repeated up to 6 hours under different titles/topics.

SEI 300 – Topics in Entrepreneurship & Innovation (1-3 hours)

Conceptual treatment of topics important to entrepreneurship and innovation. 1-3 hours, may be repeated up to 6 hours under different titles/topics. Prerequisite: Junior Standing

SEI 305 – Innovation Journey (3 hours)

The Innovation Journey provides historical context and trajectories of where thought leaders predict our technological revolutions are headed. Learn about: innovations that propelled societal progress, legendary inventors, communities of innovators, environmental challenges in need of innovative solutions, entrepreneurial creativity, sustainability oriented innovation, the dangers of dark innovation, the Ten Types of Innovation and other processes. Also learn how to read a patent and an innovative negotiation strategy through the lens of Intellectual Capital Management. This course includes an introductory review to six other courses that deepen understanding of your potential to generate innovation. Prerequisite: Junior standing

SEI 310 – Practicum in Entrepreneurship and Innovation (1-3 hours)

Variety of experiential activities related to entrepreneurship and/or innovation. 1-3 hours, may be repeated up to 6 hours under different titles/topics. Prerequisite: Junior standing.

SEI 330 – Intellectual Capital Mgmt Primer (3 hours)

This course is an introductory overview of Intellectual Capital Management (ICM) as it applies to organizations, inventors, and creatives. It utilizes a “flipped classroom” approach that enables 100% of the classroom time to be used for collaborative group work and interactive student discussions. The course takes an interdisciplinary view of Lean Innovation. Students with their own intellectual property will gain a working knowledge of how to approach licensing contracts that protect their creative works. Aspects of protecting and managing intellectual property (patents, copyrights, and trade secrets) are explored. Students will learn how and when to use non-disclosure agreements (NDA) and how to read a patent. Prerequisite: Junior Standing

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Other Courses Approved for B.S. Credit



Other Courses Approved for B.S. Credit

MIS 173 – Information Systems and Business Applications (3 hours) (effective since 15FA)

Application of spreadsheet software to solve business problems. Use of linking functionality between varied applications to create integrated presentations. Brief introduction to the data analysis functions of spreadsheet software and specialized statistical analysis software. Business use of information systems in organizations; electronic commerce and the Internet. The impact of information systems on organizations; system development; ethical and legal issues; data and knowledge management; information security. Prerequisite: business major or minor or consent of department chair.

M L 353 – Operations Management in Organizations (3 hours) (effective since 15FA)

Survey of issues and methods related to designing, implementing, and controlling the production and delivery of goods and services. Topics include waiting line management, forecasting, project management, JIT and lean operations, supply chain management, Six Sigma quality management, and strategic importance of operations management. Prerequisite: Q M 263; M L 350

ECO 319 – Introduction to Econometrics (3 hours)

Techniques and procedures of application of statistical tools to economic research problems; selected methods for investigating the empirical validity of economic theory. Prerequisite: ECO 100 or 221; ECO 222; QM 263 or equivalent; junior/senior standing.

FCS 303 – Nutrition (3 hours)

Human energy and nutrient requirements and utilization throughout the life cycle in performance, disease prevention, and health promotion; dietary assessment and intervention; evidence-based decision making. Prerequisite: CHM 150 and CHM 160 or equivalent; BIO 230.

Q M 262 – Quantitative Analysis I (3 hours)

Data presentation and computation of descriptive measures. Probability theory, probability distributions, expectations, variance, covariance, correlation coefficient. Sampling, central limit theorem, statistical estimation, one or two sample tests of hypotheses. Prerequisite: MTH 109 or MTH 115 or higher.

Q M 263 – Quantitative Analysis II (3 hours)

Linear and multiple regression, correlation, analysis of variance, contingency tables, time series, decision theory, and non-parametric methods. Data analysis using statistical computer packages. Prerequisite: Q M 262; MTH 115 or 121; MIS 173

PSY 424 – Intermediate Statistics for Psychology (3 hours)

Conceptual foundations of hypothesis testing, introduction to data analytic techniques, exploration of multiple regression/correlation and applications such as factor analysis. Prerequisite: PSY 205 or both QM 262 and QM 263 or equivalent.

Foster College of Business Core Courses



Foster College of Business Core Courses

- BUS 100 Contemporary Business – 3 hrs.
- ATG 157 Accounting Principles – Financial – 3 hrs.
- ATG 158 Accounting Principles – Managerial – 3 hrs.
- MIS 173 Information Systems Business Applications – 3 hrs.
- ECO 221 Principles of Microeconomics – 3 hrs.
- ECO 222 Principles of Macroeconomics – 3 hrs.
- QM 262 Quantitative Analysis I – 3 hrs.
- MTG 315 Principles of Marketing – 3 hrs.
- FIN 322 Business Finance – 3 hrs.
- BLW 342 Legal Environment of Business – 3 hrs.
- M L 350 Managing for Results in Organizations – 3 hrs.
- BUS 400 Business Capstone Client Consulting Project – 2 hrs.
- M L 452 Strategic Management and Business Policy – 2 hrs.
- Quantitative Skill Building – 3 hrs.
 - QM 263 Quantitative Analysis II – 3 hrs.
 - ECO 335 Managerial Economics – 3 hrs.
 - M L 353 Operations Management – 3 hrs.
- *Foster College of Business Core Electives – 6 hrs.

* Foster College of Business Core Electives include any business course beyond the student's first major.

College of Liberal Arts & Sciences Capstone Courses & Independent/Directed Studies



College of Liberal Arts & Sciences Capstone Courses & Independent/Directed Studies

Course List

Departmental Capstone Courses in LAS

- ANT 403: Anthropology Senior Project – 1-3 hrs.
- AAS 400: Directed Research in African-American Studies – 3 hrs.
- BIO 490: Biology Capstone – 1 hr.
- CHM 480: Seminar III in Chemistry and Biochemistry – .5 hrs.
- CS 490: Capstone Project I – 3 hrs.
- CS 491: Capstone Project II – 1-3 hrs.
- ENS 470: Environmental Science Capstone – 1-3 hrs.
- HIS 450: US History Research Seminar – 3 hrs.
- HIS 451: Global Hist Colloquium – 3 hrs.
- HIS 452: Area Studies Research Seminar – 3 hrs.
- IS 495: Advanced Seminar in International Studies – 3 hrs.
- MTH 494: Senior Project in Mathematics I – 0 hrs.
- MTH 495: Senior Project in Mathematics II – 3 hrs.
- PHL 403: Seminar in Philosophy – 3 hrs.
- PHY 399: Special Problems in Physics – 1-3 hrs.
- PLS 491: Seminar in Comparative Politics – 3 hrs.
- PLS 492: Seminar in International Relations – 3 hrs.
- PLS 493: Seminar in Political Theory – 3 hrs.
- PLS 494: Seminar in American Politics – 3 hrs.
- PSY 400: Honors Research – 3 hrs.
- RLS 497: Problems in Religious Studies – 1-3 hrs.
- RLS 498: Problems in Religious Studies – 1-3 hrs.
- SOC 450: Senior Seminar in Sociology – 3 hrs.
- SW 393: Social Work Practicum – 9 hrs.
- SW 395: Social Work Seminar – 3 hrs.

Other

- ENG 304: Advanced Writing–Research in Individual Discipline – 3 hrs.

LAS Independent/Directed Studies

- BIO 385: Supervised Research – 1-3 hrs.
- BIO 480: Readings – 1-3 hrs.
- BIO 485: Research – 1-6 hrs.
- CHM 499: Directed Studies in Chemistry and Biochemistry – 0-6 hrs.
- CS 498: Directed Individual Studies in Computer Science – 1-3 hrs.
- CIS 498: Directed Individual Studies in Computer Information Systems – 1-3 hrs.
- CJS 480: Directed Readings in Crime, Law, and Justice – 1-3 hrs.
- ENG 495: Independent Study – 1-3 hrs.
- HIS 406: Individual Study in History – 1-3 hrs.
- I S 499: Research in International Relations – 1-3 hrs.
- MTH 491: Directed Individual Studies in Mathematics – 1-16 hrs.
- NEU 490: Independent Research in Neuroscience – 1-3 hrs.
- PHL 551: Reading in Philosophy – 1-3 hrs.
- PHL 552: Reading in Philosophy – 1-3 hrs.
- PHY 399: Special Problems in Physics – 1-3 hrs.
- PLS 485: Research – 1-6 hrs.
- PSY 481: Reading – 1-3 hrs.
- PSY 491: Research – 1-3 hrs.
- SOC 491: Directed Research I – 1-3 hrs.
- SOC 492: Directed Research II – 1-3 hrs.
- SW 490: Individual Study in Social Work – 1-3 hrs.
- SW 499: Honors Colloquium – 3 hrs.
- WLF 495: Independent Study (French) – 1-3 hrs.
- WLG 495: Independent Study (German) – 1-3 hrs.
- WLS 495: Independent Study (Spanish) – 1-3 hrs.

Note: Enrollment in these courses can only satisfy Global Scholars capstone requirements with faculty and Global Scholars approval.