

2007-2009 CATALOG

JOHN BROWN UNIVERSITY

Published by John Brown University
Siloam Springs, Arkansas
Spring 2007

This Catalog contains policies and guidelines for the purpose of aiding students in planning their educational curriculum and is not to be considered a contractual agreement.

Program requirements, course content, and other regulations are subject to change at the discretion of the controlling entities within the University.

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UNIVERSITY CALENDAR

Traditional Undergraduate Studies

FALL 2007

W 8/15 — F 8/17International Student OrientationW 8/20 — F 8/22
 F 8/17 — Sa 8/18New Student Move-InF 8/22 — Sa 8/23
 Sa 8/18 — T 8/21New Student OrientationSa 8/23 — T 8/26
 M 8/20New Student RegistrationSa 8/23
 W 8/22Classes BeginW 8/27
 M 9/3Labor Day HolidayM 9/1
 W 9/5Last Day for New EnrollmentsW 9/10
 W 9/5Last Day to Add a CourseW 9/10
 M 10/15Midsemester Grades DueF 10/17
 M 10/1 — T 10/2Fall BreakM 10/20 — T 10/21
 F 9/28Last Day to Drop a CourseF 10/24
 M 10/29 — W 11/14Registration for Spring TermM 11/3 — M 11/17
 W 11/21 — F 11/23Thanksgiving HolidaysW 11/26 — F 11/28
 M 12/10 — R 12/13Examination WeekM 12/15 — R 12/18
 Sa 12/15Commencement ExercisesSa 12/20

FALL 2008

SPRING 2008

M 1/7New Student Move-InM 1/12
 M 1/7 — T 1/8New Student OrientationM 1/12 — T 1/13
 M 1/7New Student RegistrationM 1/12
 W 1/9Classes BeginW 1/14
 T 1/22Last Day for New EnrollmentsT 1/27
 T 1/22Last Day to Add a CourseT 1/27
 M 3/3Midsemester Grades DueM 3/9
 F 3/7Last Day to Drop a CourseF 3/13
 M 3/17 — F 3/21Spring BreakM 3/23 — F 3/27
 M 3/24 — W 4/9Registration for Fall TermM 3/30 — M 4/13
 F 3/21Good Friday HolidayF 4/10
 M 4/7 — F 4/25Registration for Summer TermsM 4/20 — F 4/24
 M 4/28 — R 5/1Examination WeekM 5/4 — R 5/7
 Sa 5/3Traditional UG Commencement ExercisesSa 5/9
 Sa 5/10Professional Studies and Graduate Commencement ExercisesSa 5/16

SPRING 2009

SUMMER 2008

M 5/5Classes BeginM 5/11
 W 5/7Last Day to Add a CourseW 5/13
 W 5/14Last Day to Drop a CourseW 5/20
 F 5/30End of TermF 6/5

SUMMER 2009

UNIVERSITY PROFILE

The Mission of the University

The faculty and board of trustees have accepted the following statement as being an accurate expression of the University basic mission:

John Brown University provides Christ-centered education that prepares people to honor God and serve others by developing their intellectual, spiritual, and professional lives.

Statement of Faith

The doctrinal position of the institution is contained in the following Articles of Faith which have been adopted by the National Association of Christian Schools:

1. We believe the Bible to be the inspired, the only infallible, authoritative word of God.
2. We believe that there is one God, eternally existent in three persons: Father, Son, and Holy Spirit.
3. We believe in the deity of our Lord Jesus Christ, in His virgin birth, in His sinless life, in His miracles, in His vicarious and atoning death through His shed blood, in His bodily resurrection, in His ascension to the right hand of the Father, and in His personal return in power and glory.
4. We believe that for the salvation of lost and sinful man regeneration by the Holy Spirit is absolutely essential.
5. We believe in the resurrection of both the saved and the lost: they that are saved unto the resurrection of life and they that are lost unto the resurrection of damnation.
6. We believe in the spiritual unity of believers in our Lord Jesus Christ.
7. We believe in the present ministry of the Holy Spirit by whose indwelling the Christian is enabled to live a godly life.

Educational Philosophy

The Faculty has expressed its purpose as sending forth graduates

Whose lives reflect the love of Christ

- Through reverence toward God.
- Through consecration to Christ and His Church.
- Through knowledge of the Bible and appreciation of its principles.
- Through participation in Christian activities with talents, means, and time.
- Through tolerance, humility, and helpfulness to others.

Who possess intellectual integrity and an enthusiasm for continuing self-development

- Through use of mental processes which lead to intelligent decisions.
- Through familiarization with sources of information.
- Through utilization of knowledge.
- Through mastery of means of communication of ideas.

Who are able to function effectively in a multi-cultural world

- Through a heightened awareness of diverse cultural contexts and values.
- Through development of skills and attitudes necessary to interact, work, and minister with people of other cultures.
- Through understanding the inclusiveness of God's Kingdom and the equality of all people before God.
- Through formation of a Christian perspective of the world.

Who are eager and able to perform a share of the world's work

- Through their willing response to God's unique plan.
- Through working in chosen vocations with skill, efficiency, and dedication.
- Through a cooperative and understanding attitude toward fellow workers.

Who make worthy contributions to their communities

- Through active cooperation with other people toward general community improvement.
- Through promoting wholesome entertainment, adequate educational programs, and other phases of community welfare.
- Through exercising their political privileges in the spirit of Christ.
- Through practicing the high ideals of love and justice toward all people.

History

John Brown University's rich history began with an enthusiastic author, educator, radio broadcaster, and evangelist, John E. Brown, who recognized the need for an academic institution that would prepare young people to serve Christ. In 1919, with a goal of educating the "Head, Heart, and Hand," John Brown laid the foundation for the institution that would later be called John Brown University. The vision of JBU has been carried through its eighty-eight year history by the leadership of the founder, his son, John Brown Jr., his grandson, John Brown III, and Presidents George Ford, Lee Balzer, and now Charles Pollard.

Head

The University offers an education based on a liberal arts core curriculum and 44 undergraduate majors. Also available at JBU are academic opportunities for professionals and graduates. The JBU Advance Program was established in 1993 to meet the needs of working adults and allows them to complete their undergraduate degree. The Graduate Studies Program, established in 1995, offers master's degrees in School Counseling, Community Counseling, Marriage and Family Therapy, Business Administration, Leadership and Ethics, and Ministry.

Heart

Since its founding, JBU has sought to nourish the spiritual life of its students. Professors and students work together to integrate a Christian worldview with their understanding and practice of academic disciplines. Professors and staff also make themselves available to guide and mentor students in the faith.

Within the JBU community, there are a variety of opportunities for students to deepen and live out their faith. Chapel services are held three times a week and feature dynamic worship and gifted guest speakers. Over 50 ministry opportunities are offered to students through the office of Christian Formation.

Hand

Students also gain valuable professional and personal life-skills that equip them to serve in business, education, industry, ministry, the arts, and a variety of other fields. Students and graduates are encouraged to integrate faith in the workplace and in every area of their lives.

While the scope of JBU's mission has grown over the last 85 years, the central direction of that mission has remained the same: "Christ Over All."

Location

John Brown University is located in Siloam Springs, in the economically vigorous region of Northwest Arkansas. Nearby lakes and parks, such as Lake Wedington and Devil's Den State Park, provide ample opportunity for outdoor recreation. Urban activities are easily available as well. Fayetteville and Bentonville, Arkansas, only 30 miles away, and Tulsa, Oklahoma, 80 miles away, offer shopping, dining, and a variety of cultural events.

Accreditation

John Brown University is accredited by the Higher Learning Commission and is a member of the North Central Association of Colleges and Schools, <http://ncahigherlearningcommission.org> (800-621-7440), and is approved by the Arkansas State Department of Education and accredited by the National Council for the Accreditation of Teacher Education (NCATE), <http://ncate.org> (202-466-7496), for the preparation of teachers. The Bachelor of Science in Engineering program, including electrical/computer or mechanical concentration, is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700, <http://www.abet.org>. John Brown University's Construction Management degree is accredited by the American Council for Construction Education (ACCE), <http://www.acce-hq.org> (210-495-6161). All bachelor's and master's degree programs of the Division of Business are accredited by the International Assembly for Collegiate Business Education, <http://www.iacbe.org> (913-631-3009). The United States Department of Justice has approved John Brown University for the education of foreign students.

Council for Christian Colleges and Universities

John Brown University is a charter member of the Council for Christian Colleges and Universities (formerly the Christian College Coalition), a resource- and information-sharing association of 100 Christ-centered colleges and universities of the liberal arts and sciences. Member schools, which must be accredited four-year institutions, are committed to maintaining the highest academic standards within an environment which fosters moral and spiritual development in individuals and communities. Incorporated in 1982, the CCCU includes schools representing more than 30 denominations and offers numerous interchange programs in academics and assessment. Headquarters are at 329 Eighth Street NE, Washington, DC 20002. Telephone: 202-546-8913. FAX: 202-546-8713.

Academic Year

John Brown University's school year comprises two semesters, with the fall term completed before the December holiday break. Each semester consists of 73 days of instruction followed by a one-week examination period. Commencement exercises follow each semester, scheduled on the Saturday after final examination week.

In addition to the fall and spring semesters, John Brown University offers traditional undergraduate courses in a four-week term starting on the Monday following Spring Commencement. Most offerings meet requirements in the University Core Curriculum. Graduate courses are available in two 7-8 week summer sessions.

The Student Body

The student body of approximately 1200 in John Brown University's traditional programs represents more than 40 states and more than 40 nations. Approximately 14% of the students have primary citizenship in countries other than the United States. This international group includes many members of families involved in Christian missionary work. Most of the students identify themselves as church members; the largest numbers belong to evangelical congregations.

Approximately 500 additional students participate in University's *Advance* degree completion program for adult learners.

Graduate programs in Counseling, Leadership and Ethics, Business Administration, and various Ministry areas include nearly 400 enrollees.

The Soderquist Center for Leadership and Ethics

The Soderquist Center for Leadership and Ethics is a not-for-profit organization founded in 1998 in affiliation with John Brown University's Division of Business and Graduate Business Studies. Located in Siloam Springs, Arkansas, the Center is a global resource equipping people in the corporate and non-profit world with the transforming power of ethical leadership. The Center was named for Don Soderquist, Executive in Residence and former COO and Senior Vice-Chairman of Wal-Mart Stores, Inc.

The Center's energies are focused on delivering customized leadership programs that meet specific needs of organizations and individuals. Customers include companies and corporations, not-for-profit organizations, and emerging leaders in graduate and undergraduate programs. The Center's distinctive is a focus on ethical leadership, from the Ethical Leadership Summit for senior executives, the Milestone program for middle managers, and team building programs on our adventure learning courses.

The Center offers Soderquist Fellowships to top applicants of John Brown University's Master of Business Administration (MBA) and Master of Science in Leadership and Ethics (MSLE) programs. While working 35 hours per week at the Center, Soderquist Fellows receive full tuition and an hourly stipend for a two-year experience, completing graduate degrees, contributing to the Center's mission, and working alongside veteran business leaders. For more information, visit www.soderquist.org.

The Center for Relationship Enrichment

CRE Mission Statement

The Center for Relationship Enrichment equips people for healthy relationships through biblically-based consulting, education, enrichment, resources, research, and assessment.

CRE Goals

1. Provide informational and training events designed to instill Christ-centered principles of relationships, with an emphasis on marriages and families, in the JBU community and at a local, regional, national, and international level.
2. Consult with Christian colleges and universities, churches, and organizations to assess and strengthen existing relationship curricula, ministries, and programs, help develop new programs, equip leaders to facilitate the implementation of those programs, and conduct relationship-related research.
3. Maintain a resource center comprised of training materials related to Christian counseling, marriage and family development, relationship enrichment programs and relevant research, and provide support for the JBU master's degree program in Marriage and Family Counseling.
4. Provide relationship coaching that will enable individuals to strengthen and enrich existing relationships and to help those whose marriages and families may be at risk.

Resources for Learning

John Brown University Library

The two-story John Brown University Library—also known as the Arutunoff Learning Resource Center—is the central location for library resources supporting the research needs of the John Brown University community. The JBU Library is an important part of the academic program at JBU and functions as a partner in the teaching/learning process. The main collection consists of over 120,000 items, including books, ebooks, microforms, sound recordings, DVD and video recordings, curriculum media, computer software, and archival materials. In addition, the library subscribes to more than 6,000 periodical titles that appear in online, paper, microform, or CD-ROM formats. The library also subscribes to 57 electronic databases (full-text periodicals, online reference resources, indexes, and abstracts). The professional library staff provides research and reference services to both individuals and groups, and efficient interlibrary loan to the JBU community. The library facility includes study rooms, meeting rooms, DVD/video or microform viewing rooms, and a computer lab for student use.

In addition to resources in the main library, a number of materials are housed in five library branches. The Music Library, located on the lower level of the Cathedral, contains music sound recordings, scores, and appropriate listening equipment. The Career Development Center Library, on the first floor of the Walker Student Center, houses materials related to vocational counseling and graduate school opportunities. The Center for Relationship Enhancement, on the second floor of the Walker Student Center, holds materials that relate to counseling. The Construction Management Library, in the Engineering Building, houses books and periodicals related to that discipline. The Soderquist Library is located in the Soderquist Center, and contains materials relevant to business and ethics.

The gateway to the JBU Library is its website, www.jbu.edu/library, where information about all library collections and services may be obtained. The library website features an online catalog that can be accessed from any computer with an Internet connection. Students can connect to electronic databases through the campus network and via remote access. Reference questions and interlibrary loan requests can be made using online forms found at the website, and questions about library resources or services can be directed to library@jbu.edu.

The JBU Library belongs to several networks and consortia. To provide its users with efficient interlibrary loan services, the library is a member of the Online Computer Library Center (OCLC), which gives our users borrowing privileges to over 75 million items held in over 12,000 member libraries worldwide. The library belongs to ARKLink (a consortium of 47 academic

libraries in Arkansas) and AMIGOS (a regional resource-sharing network). The library is a charter member of the Christian Librarian Association Network.

Special collections in the JBU Library include archival, audio, and published materials of the school's founder, John E. Brown, Sr., materials of radio evangelist J. Vernon McGee, and collections from other friends of the university. In addition, the JBU Archives houses an extensive collection of artifacts related to the history of the university.

Computing Resources

John Brown University has many information technology resources available for students. All campus buildings are interconnected with a high-speed fiber optic network, allowing internal network and external Internet access from classrooms, laboratories, offices and residence halls. Wireless networking also extends accessibility in many common meeting and study areas all over campus.

There are two general classroom laboratories that are equipped with computers and instructional technology to be used for hands-on instruction. These labs are available for general use when class is not in session. Additionally, the Walker Student Center and the Library have general purpose computer labs dedicated for student use and are available days and evenings throughout the week. Draft and laser printing are available in the labs for a small fee.

In addition to the general purpose computer labs, each Residence Hall provides a 24-hour computer lab for student use and there are other specialized computer labs housed in specific academic departments. These include Art and Design, Chemistry, Computer Science, Construction Management, Digital Media Arts, Engineering, Music, Physics, and the Writing Center.

Students who bring their own computer to campus may connect it to the EagleNET campus network from their Residence Hall room. This may require the purchase of an inexpensive Ethernet interface. Once connected, students may access the Internet, email, class-related resources, references, and other University services.

More complete and current information about computing services at John Brown University may be found through the World Wide Web via the EagleNET home page at <http://eagle.jbu.edu>.

Office of Academic Assistance

Students may contact the Director of Academic Assistance for assistance in further developing their academic skills. This includes such areas as study

skills, note-taking skills, time management, test-taking skills, and other skills that help students succeed academically. Computer programs that help improve reading, writing, and math are available at minimal cost. Study skills videos are available. The class-tutoring program is funded by and coordinated through this office. The director will help a student engage an individual tutor, but payment is the responsibility of the student.

Student Support Services

Student Support Services is a Federal grant-funded TRIO program designed to promote retention and graduation for traditional undergraduate students through intensive academic support. Students who have disabilities, are first-generation college students, or who meet federal income guidelines are qualified for participation in SSS. Services include instruction in a variety of study skills, group and individual tutoring, academic counseling, cultural events, academic workshops, and referrals to other campus services. Scholarship funds are also available to qualified students. In order to qualify for a scholarship, a student must be an active participant in SSS, have less than 60 credit hours accumulated at the end of fall semester of the year applying, be Pell Grant-eligible, and meet program-set GPA requirements.

Services for Students with Disabilities

It is the goal of John Brown University that all enrolled students be given equal opportunity to succeed in their quest for a higher education that is based upon our "Christ Over All" philosophy and that integrates the educational principles of "Head, Heart, and Hand." In accordance with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, John Brown University is committed to providing reasonable accommodations to students who are disabled. There is a Director of Disability Services on staff who works with students and instructors to arrange appropriate assistance in learning and physical access. Students having documented disabilities are encouraged to contact the Director at 524-7471, 524-7271, or BLambert@jbu.edu, or to stop by the Office of Disability Services located in the Learning Resource Center, Room 147.

Resources for Service

At the heart of JBU's commitment to servanthood are the many opportunities offered on campus for student participation. Among the most notable are the Student Government Association (SGA) and CAUSE Student Ministries. Those involved in SGA serve as the student voice to the faculty and administration. In addition, they are the initiators and planners of a large number of all-campus activities through the Student Activities Committee (SAC). The purpose of CAUSE is to mobilize JBU

students for service and ministry on campus, in the community, and around the world. The CAUSE staff motivates, trains, and supports students as they learn to apply their knowledge and skills to outreach opportunities.

A student also may choose to serve in a residence hall as a Resident Assistant or as a representative to their Residence Hall Association. Other students serve as Career Development Assistants, helping peers investigate occupational choices in the Career Development Center.

Resources for Lifestyle

After students receive valuable academic training and are given opportunities for servanthood, next comes the goal of developing them into stewards as they seek to develop meaningful lifestyles for themselves. These lifestyles include not only career choices, but also choices regarding the development of healthy bodies through physical exercise and proper diet. The Walton Lifetime Complex offers students the most modern of health and fitness facilities for a complete daily workout. Swimming, jogging, racquetball, weights, aerobics, and team sports are just a few of the activities available in the Lifetime Health Complex to help reduce health risks and improve one's quality of living.

Student Development Services

Growth and development in college involves much more than successfully clearing all the academic hurdles. College is where many of life's great memories are made and significant personal development happens.

The "Community Covenant" serves as catalyst for rapid growth in many areas of life: spiritual, emotional, relational, and physical development. During the college experience, decisions are made which in large part establish the career and service opportunities for a lifetime. There are people and resources at John Brown University that can be of real help at this crucial time.

Office of Christian Formation

The Office of Christian Formation exists to lead the JBU community to become more like Christ through discipleship, corporate worship, and outreach. Within OCF are three primary divisions related to JBU students: Chapel, Student Ministries, and Graduate Christian Fellowship. Please see our web page for a more complete description of these ministries and other opportunities at <http://www.jbu.edu/life/christform/>.

Residence Life Office

Headed by the Associate Dean of Students/Director of Residence Life, the Residence Life Office is responsible for all concerns related to student housing on campus—room assignments, resident assistant selection and training, residence hall improvements, and residence hall educational and social programming. Each hall is staffed by a Resident Director who works to maintain a safe and healthy environment for all resident students.

Activities and Retention Office

Headed by the Director of Campus Activities and Retention, the Activities Office assists in the coordination of weekly campus activities and maintains a master calendar of events. This office works with all of the clubs and organizations on campus for club approval and funding. The staff of this office is also responsible for new student orientation programs.

The retention efforts of this office also help with the connection of students both on and off campus with the faculty, staff, and support systems to help struggling students succeed. Our goal is to see students that come to JBU successfully graduate on time.

Counseling Center

The College experience often entails emotional as well as intellectual challenges. Developing meaningful relationships, changes in one's family, stress, anxiety, and depression are just a few of the issues facing students. The professional staff in the Counseling Center is available to facilitate students' growth during these times of uncertainty, questioning, and struggle. Individual and group therapy, couple counseling, and psychoeducational groups are available to students free of charge. Counseling sessions are confidential, and appointments are scheduled with discretion and respect for the needs and desires of students.

Career Development Center

The staff at the Career Development Center (CDC) is concerned with providing a comprehensive career development program for the students of John Brown University. Services are intended to enable and guide students in their ability to make decisions, set goals, and then to teach the career planning skills necessary to reach those goals.

Students have the opportunity to develop self-understanding through the resources available at the CDC. Students may participate in individual counseling, personality inventories, and computer-aided guidance programs. The varied resources in the CDC Library can be helpful to students in any stage of career planning by helping them understand personal strengths, make wise decisions about majors, and begin to explore career alternatives.

The Center will serve as a link between college and the world of work through providing regular workshops on job search skills and strategies. The annual Career Fair brings employers and graduate school representatives to campus to increase awareness and provide information related to future career and graduate education. The CDC also provides information about graduate schools, graduate entrance test materials, job vacancy notices, occupational profiles and descriptions, and potential employers.

Medical Services

At the Health Services Office located in the Walker Building, a registered nurse is available weekdays for screening acute illnesses and injuries, as well as offering advice for everyday health problems. The nurse works closely with area doctors whose offices are within walking distance of campus.

Equipment such as crutches, heating pads, and humidifiers can be checked out for short term use. Health education and wellness materials/videos are available for personal use or class preparation. Allergy injections can be arranged with written orders from the allergist.

In order to offer complete care, it is important that the Health Services Office have on file all student medical records pertaining to pre-existing conditions such as diabetes, epilepsy, and malaria. Also, regular updates of family telephone numbers on the JBU website ensure immediate communication in case of emergency.

State law requires documentation of Measles/Rubella vaccination for resident and full-time students born after January 1, 1957. To receive an application for medical or religious exemption, contact the Arkansas Department of Health at 501-661-2438.

Act 96 of 1913 requires that students foreign-born or living outside of the United States for six months or more be screened for Tuberculosis once they return to the U.S. These screenings, which must be done within six months of the beginning of the semester, are available on campus for a minimal fee.

For more information, check www.jbu.edu/campus_studev/health

International Programs Department

The International Programs Department (IPD) serves the needs of international students, Walton scholars, and children of missionaries. The office is a resource center offering assistance with admissions, immigration regulations, counseling on cross-cultural adjustment, academic progress, short term missions projects, and study abroad programs. IPD also sponsors

social and cultural activities to promote Intercultural awareness and understanding among the entire JBU community.

Mission Statement: The International Programs Department of John Brown University supports students, faculty, and staff who will benefit from and contribute to the multicultural environment of JBU.

United States Citizenship and Immigration Services. IPD assists individual students, faculty, and staff in obtaining and maintaining the proper immigration status. In addition, workshops on immigration, employment, and U.S. Tax issues are held throughout the year. The office also issues documentation of enrollment verification, expense estimates, invitation letters, and other documents specifically requested by students.

Faculty/Staff/Students Visa Services. IPD assists in obtaining visas for studying, teaching, research and other professional positions. They assist students and faculty in obtaining visas to travel abroad on short-term missions and study trips.

John Brown University International Study Programs. In conjunction with the Academic division, the IPD administers a variety of JBU study abroad programs, such as Irish Studies, German Studies, European Arts Tour, European Business Studies, Digital Media Arts Studies, and others.

Council of Christian Colleges & Universities. IPD links students with other programs offered by the CCCU.

Short Term Mission Opportunities. IPD assists any JBU missions team traveling internationally by way of information, application, financial records, and logistics.

Curricular Practical Training (CPT) and Optional Practical Training (OPT) Workshops are designed to inform F-1 students of their eligibility to work off-campus and the application requirements.

Orientation programs are essential for transition into academic and social life at JBU. The programs are offered at the beginning of each semester.

The **Friendship Family Program** provides opportunities for students to meet and make friends with families in the community. These families become very special to the students during their stay here at JBU. Adjustment to the new cultural and physical environment is much less stressful with the support of a caring family away from home.

EDUCATIONAL PROGRAMS

Academic Divisions

Biblical Studies: Departments of Bible, Religion and Philosophy, Christian Ministry, Family Studies, and Intercultural Studies. (Pages 79-88)

Business: Departments of Accounting, Business Administration, International Business, Leadership Studies, Management, and Marketing. (Pages 91-102)

Communication and Fine Arts: Departments of Communication, Music, and Visual Arts. (Pages 105-128)

Education: Early Childhood Education; Middle School Education Programs in English/Language Arts & Social Studies and Math/Science; Secondary Education Programs in English, Mathematics, and Social Studies; P-12 Program in Music; T.E.S.O.L. and Coaching Endorsements. (Pages 131-145)

Engineering and Construction Management: Departments of Computer Science, Construction Management, and Engineering. (Pages 149-160)

Humanities and Social Sciences: Departments of English, History, Language Studies, Political Science, and Psychology. (Pages 163-174)

Interdisciplinary Studies: Departments of General Studies, Core Curriculum, and Military Science. (Pages 177-179)

Natural Science: Departments of Biology, Chemistry, General Science, Kinesiology, Mathematics, and Physics. (Pages 183-192)

Curricula

Bachelor’s Degree Programs

Accounting	B.S.	94
Biblical and Theological Studies	B.A.	80
Biochemistry	B.S.	187
Biology	B.S.	184
Broadcasting	B.S.	106
Business Administration	B.S.	95
Chemistry	B.S.	186
Children and Family Ministry	B.S.	81
Construction Management	B.S.	152
Digital Media Arts	B.S.	123
Early Childhood Education	B.S.E.	143
Engineering	B.S.Eng.	157
English	B.A.	164
English Education	B.S.E.	137
Environmental Science	B.S.	188
Exercise Studies	B.S.	190
Family and Human Services	B.S.	86
Graphic Design	B.S.	125
History	B.A.	166
Illustration	B.S.	126
Intercultural Studies	B.A.	87
Interdisciplinary Studies	B.A, B.S.	177
International Business	B.A.	97
Journalism	B.S.	107
Management	B.S.	99
Marketing	B.S.	100
Mathematics	B.S.	191
Mathematics Education	B.S.E.	138
Middle School Education	B.S.E.	140, 141

Music—Applied	B.A.	115
Music—General	B.A., B.S.....	116, 118
Music Education	B.Mus.Ed.....	119, 135
Outdoor Leadership Ministries	B.S.	82
Photography	B.S.	127
Political Science	B.A.	169
Pre-Law	171
Pre-Medical or Pre-Dental	183
Psychology	B.S.	173
Public Relations	B.S.	109
Social Studies Education	B.S.E.....	139
Spanish	B.A.	168
Sport Management	B.S.	101
Sports Medicine	B.S.	189
Worship Ministries	B.S.	121
Youth and Worship Ministries	B.S.	84
Youth Ministries	B.S.	83

Associate’s Degree Programs

Broadcasting	A.S.	106
Construction Management	A.S.	154
Electromechanical Technology	A.S.	160
General Education	A.A.....	178
Journalism	A.S.	108
Public Relations	A.S.	110

Minors

Accounting.....94
Biblical and Theological Studies80
Biology.....185
Broadcasting.....107
Business Administration96
Chemistry187
Children and Family Ministry.....82
Construction Management153
Digital Media Arts125
Economics96
Education145
English.....165
Family Studies.....86
French169
General Science188
Global Commerce.....97
Graphic Design.....126
Health and Sport.....190
History.....167
Illustration127
Intercultural Studies88
International Business.....97
International Relations170
Journalism108
Leadership Studies98
Linguistics169
Management100
Marketing101
Mathematics.....192
Military Science.....179
Music.....122
New Testament Greek81
Outdoor Leadership Ministries83
Performance Studies109
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Physics192
Political Science.....170
Pre-Law170
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Spanish169
Sport Management.....102
Teaching English to Speakers of Other Languages (T.E.S.O.L.).....88
Worship Ministries122
Youth Ministries84

University Honors Scholars Program

Mission Statement. The mission of the John Brown University Honors Scholars Program is to attract and retain academically advanced students, to stimulate and challenge those students as Christian scholars and effective members of God's kingdom, and to enrich the academic environment of the broader university community.

Description of the Program. The Honors Scholars Program consists of enriched Core Curriculum courses developed especially for gifted and highly motivated students. Emphasizing the use of primary texts, instructors challenge students through individual research, critical reflection, incisive discussion, interactive projects, and professional presentations.

Honors Scholars enter the Program at the lower division, which requires a minimum of twelve hours of freshman/sophomore level honors courses. Students wishing to continue in the Program must seek admission to the upper division, where nine hours of junior/senior level honors courses are to be completed. Eligibility for consideration to advance to the upper division is contingent upon prior completion of at least nine lower division honors hours, three additional hours in progress, and an overall GPA of 3.5. The qualifying student then provides to the Honors Committee a formal written statement of intention to continue. Only after approval to move to the upper division may the Scholar begin work on the nine-hour junior/senior component. Successful completion of the entire program is acknowledged at an Honors Convocation and by the presentation of a special Honors Degree diploma at graduation. All courses are designated "Honors" on the transcript.

However, the Scholars Program is much more than honors sections of Core courses. It is a community of students and faculty working toward enhancing the quality of scholarship on the campus as a whole. The courses are based on national research indicating that students learn more when the abstract learning process is integrated with experiential learning. Most honors courses are integrative and experiential, making use of field trips, guest speakers, and multi-media experiences.

JBU Honors Scholars are strongly encouraged to model Christian principles and good stewardship of their academic gifts through serving in leadership positions on campus and participating in service activities both on and off campus. The Student Honors Organization promotes scholarly presentations and service by the student body as a whole and serves as a peer support group for honors students. Honors Scholars often participate in regional, national, and international honors conferences, workshops, and semesters abroad. The Honors Center, available to Honors Scholars and Alpha Chi Honors Society members, provides an attractive location for studying, cooking, watching television, and tutoring. Several classes meet in the Center.

Eligibility. High school seniors are selected each spring from a large and very well-qualified pool of applicants. Transfer students and currently-enrolled JBU students who have enough courses remaining to be taken for the Honors Degree may also apply.

Eligibility for admission is based on SAT/ACT scores and a separate application. Inquiries concerning the program should be addressed to Dr. Brad Gambill, Director of the Honors Scholars Program, Box 3074, John Brown University, Siloam Springs, AR 72761 or e-mailed to bgambill@jbu.edu.

Courses. The following list indicates the courses currently available to Honors Scholars, the Core Curriculum courses for which they may substitute, and the semesters they are offered. The program is subject to periodic review and change by the Honors Committee in order to keep the program relevant, innovative, and challenging.

Honors Courses in Relation to the Core Curriculum

Students who are not admitted to the Honors Scholars Program are not allowed to enroll in honors courses.

Number	Honors Course	Core Counterpart	Term Offered
COR 1091H	Honors: Orientation to H.S.P		Fall
EGL 1083H	Honors: English I	¹ EGL 1013	Fall
EGL 1093H	Honors: English II	EGL 1023	Spring
BBL 1083H	Honors: Old Testament Survey	BBL 1013	Fall
BBL 1093H	Honors: New Testament Survey	BBL 1023	Spring
BIO 1093H	Honors: Biological Science	BIO 1003	Spring
HST 1083H	Honors: Western Civilization I	HST 1013	Fall
PSY 1093H	Honors: Introductory Psychology	Social Science	Fall
ECN 2093H	Honors: Basic Economics	Social Science	Spring, odd
POL 2193H	Honors: American Government	POL 2113	Spring
COR 2591H	² Honors: Colloquium		Upon Request
BBL 3093H	Honors: Evangelical Theology	BBL 3003	Spring
POL 3093H	Honors: Political Philosophy	Philosophy Group	Spring, even
COR 3093H, COR 4093H	Honors: Integrated Humanities I Honors: Integrated Humanities II	³ Arts Group, Philosophy Group, & EGL 4003	I—Fall, even II—Spring, odd
COR 3591H	² Honors: Colloquium		Upon Request
COR 3691H	Honors: Practicum		Upon Request
BBL 4093H	Honors: Christian Life	BBL 4003	Fall

- ____ 4193H ⁴Honors Capstone Project in _____
- ____ 4593H ⁵Honors Tutorial in _____
- ____ 4693H Honors Class Contract in _____
- ____ 4793H ⁵Honors Service Learning in _____
- ____ 4913H ⁵Honors Co-Teaching: Readings in _____
- ____ 4923H ⁵Honors Co-Teaching: Classroom Practicum in _____

¹If an incoming Honors Scholar wishes to establish credit for English I by CLEP, the exam must be taken before the first day of Honors: English I. Credit for English II is not available via CLEP.

²May be repeated for up to 3 hours of credit.

³Integrated Humanities is a six-hour sequence of two interdisciplinary courses which together substitute for three requirements in the Core Curriculum—Masterpieces of Literature, the Arts Group, and the Philosophy Group. If a student completes only one of the semesters, the course will count for one of the three.

⁴Though not required to do so, Honors Scholars are urged to complete an Honors Capstone Project in their major field of study during the junior or senior year. Projects are subject to recommendation by faculty in the appropriate department and approval by the Honors Committee. Guidelines for the Capstone Project may be obtained from the Honors Scholars office. Supervising faculty receive the usual stipend for independent study, paid by the Honors Scholars Program office.

⁵A student may earn up to six upper division honors hours by completing two of these non-traditional options. Guidelines are available at the Honors Scholars office. Options 4593H, 4793H, 4913H, and 4923H are treated as independent studies. Students will be charged the normal independent study fee of \$99 per credit hour.

John Brown University Summer Study Programs

German Studies Program

John Brown University operates a four-week summer program in Germany and Austria whereby students can earn six hours of credit. The program is housed in a 300-year-old building situated along the banks of the Main River in northern Bavaria. Courses in the German Studies program combine classroom work with trips to historical and cultural sites such as Salzburg, Munich, Heidelberg, Nuremberg, and the Austrian Alps. Course offerings vary from year to year.

Irish Studies Program

JBU operates a six-week summer program in Ireland whereby students can earn nine hours of credit. The program is directed by a JBU faculty member who also teaches one course. Additional courses are taught by Irish faculty. Ireland itself - the location, the people, and the culture - is the focus of the program. Program facilities are located on the outskirts of Belfast, Northern Ireland, with the curriculum making use of field trips to numerous locations in Ireland. Course offerings (which offer credit from JBU's core curriculum) vary from year to year.

Living and Learning in Quito

Living and Learning in Quito, Ecuador is a 13 week semester study abroad program available to students who desire to continue their college education in an international setting. Living and Learning in Quito functions under the supervision of Youth World and JBU. The program combines classroom learning and practical internships in a unique and challenging cross-cultural setting. Each participant will be enrolled in a Spanish language institute during their time in Quito. Interested students should consult the International Programs Department.

Affiliated Study Abroad Programs

Students interested in the following programs should inquire at the International Programs Department.

The Council for Christian Colleges & Universities, an association of 100 campuses in the U.S. and Canada, offers the following semester and summer programs to students of its member institutions. The programs offer a unique opportunity for students to make the world their classroom, going beyond the confines of the traditional classroom. For further information, consult the CCCU website at www.bestsemester.com.

Travel Disclaimer: All travel plans are subject to change if the situation for any of the destinations is thought to compromise the students' safety.

American Studies Program

Founded in 1976, the American Studies Program has served hundreds of students from member institutions as a "Washington, D.C. campus." ASP uses Washington as a stimulating educational laboratory where collegians gain hands-on experience with an internship in their chosen field. Internships are tailored to fit the students' talents and aspirations and are available in a wide range of fields. They also explore pressing national and international issues in public policy seminars which are issue oriented and interdisciplinary. The seminars are led by ASP faculty and Washington professionals. ASP bridges classroom and marketplace, combining biblical reflection, policy analysis and real-world experience. Students are exposed to on-the-job learning that helps them build for their futures and gain perspective on the calling of God for their lives. They are challenged in a rigorous course of study to discover for themselves the meaning of Christ's lordship in putting their beliefs into practice. The aim of the program is to help Council schools prepare their students to live faithfully in contemporary society as followers of Christ. Students earn 16 semester hours of credit.

Australia Studies Centre

The Australia Studies Centre immerses students in a dynamic Christian community through which they will come into contact with the cultural diversity of Sydney and the surrounding region. Students will interact with others who share a commitment to personal development through study and fellowship. ASC provides a variety of course offerings including theology, theatre, dance, and ethnomusicology. The courses are taught by some of Australia's leading teachers, musicians, and theologians. Travel opportunities include trips into the Blue Mountains, Jenolan Caves and Canberra. Students will experience such activities as a bush walk, touring the Australian National Museum and the Parliament House. At the end of the semester, ASC participants will come away well equipped to undertake ministry opportunities in all walks of life and across cultural boundaries. Students earn 15-18 semester hours of credit.

China Studies Program

The China Studies Program enables students to engage this large and intriguing country from the inside. While living in, and experiencing Chinese civilization firsthand, students participate in seminar courses on the historical, cultural, religious, geographical and economic realities of this strategic and populous nation. In addition to the study of standard Chinese, students are given opportunities such as assisting Chinese students learning English or working in an orphanage, allowing for one-on-one interaction. The program introduces students to the diversity of China, including Hong Kong, Beijing, Shanghai, Xi'an and Xiamen. This interdisciplinary, cross-cultural program enables students to deal with this increasingly important part of the world in an informed, Christ-centered way. Students earn 15-17 semester hours of credit.

Contemporary Music Center

The Contemporary Music Center provides students the opportunity to live and work in community while seeking to understand how God will have them integrate music, faith and business. Both interdisciplinary and multi-disciplinary in nature, the CMC offers two tracks: the Artist Track and the Executive Track. The Artist Track is tailored to students considering careers as vocalists, musicians, songwriters, recording artists, performers, producers and recording engineers. The Executive Track is designed for business, arts management, marketing, communications and other majors interested in possible careers as artist managers, agents, record company executives, music publishers, concert promoters and entertainment industry entrepreneurs. Both Artist and Executive track students receive instruction, experience and a uniquely Christian perspective on creativity and the marketplace, while working together to create and market a recording of original music. Both tracks include course work, labs, directed study and a practicum. Students earn 16 semester hours of credit.

Latin American Studies Program

Students of CCCU colleges have the opportunity to live and learn in Latin America through the Latin American Studies Program, based in San Jose, Costa Rica. The program introduces students to a wide range of experiences through the study of the language, literature, culture, politics, history, economics, ecology and religion of the region. Living with a Costa Rican family, students experience and become a part of the day-to-day lives of typical Latin Americans. Students also take part in a service opportunity and travel for three weeks to nearby Central American nations. Students participate in one of four concentrations: Latin American Studies (offered both fall and spring terms); Advanced Language and Literature (limited to Spanish majors and offered both fall and spring terms); International Business and Management (offered only in fall terms); and Tropical Sciences (offered only during spring terms). Students in all concentrations earn 16 semester credits.

Los Angeles Film Studies Center

The Los Angeles Film Studies Center is designed to train students of Council institutions to serve in various aspects of the film industry with both professional skill and Christian integrity. Students live, learn and work in the LA area near major studios. The curriculum consists of two required seminars focusing on the role of film in culture and the relationship of faith to work in this very influential industry. In addition, students choose two elective courses from a variety of offerings in film studies. Internships in various segments of the film industry provide students with hands-on experience. The combination of the internship and seminars allow students to explore the film industry within a Christian context and from a liberal arts perspective. Students earn 16-18 semester hours of credit.

Middle East Studies Program

This program, based in Cairo, Egypt, allows Council students to explore and interact with the complex and strategic world of the modern Middle East. The interdisciplinary seminars give students the opportunity to explore the diverse religious, social, cultural and political traditions of Middle Eastern people. In addition to seminars, students study the Arabic language and work as volunteers with various organizations in Cairo. Through travel to Israel, Palestine, Jordan, Syria and Turkey, students are exposed to the diversity and dynamism of the region. MESP encourages and equips students to relate to the Muslim world in an informed, constructive and Christ-centered manner at a time of tension and change. Students earn 16 semester hours of credit.

Oxford Summer Programme

This program allows students to spend a summer term studying at the Centre for Medieval and Renaissance Studies (CMRS) in Oxford, England. The program includes multidisciplinary study of the Renaissance and Reformation through examination of philosophy, art, literature, science, music, politics and religion of early modern Europe in a choice of lectures, seminars and field trips. Students earn 6-9 semester credits, which are administered directly to member institutions by CMRS.

Oxford Honours Programme

Honors and other highly qualified students have the exciting opportunity to study in England through this interdisciplinary semester in Oxford. The rigorous academic program, aimed at increasing critical thinking skills and scholarship from an integrated Christian perspective, allows participants to choose from a wide variety of tutorial study programs in numerous disciplines, including the arts, religion, history, literature and philosophy. In addition to two tutorials, students participate in a seminar and an integrative course through which they produce a scholarly project or term paper. Field trips provide opportunities for experiential learning in England's rich historical setting. Students earn 17 semester hours of honors credit.

Russian Studies Program

RSP students are exposed to the depth and diversity of the culture during a semester spent in Russia's three largest cities: Moscow, St. Petersburg and Nizhni Novgorod. In addition to three seminar courses entitled History and Sociology of Religion in Russia; Russian Peoples, Cultures and Literature; and Russia in Transition, students receive instruction in the Russian language, choosing either 4 or 6 semester hours of language coursework. For those choosing 4 hours of Russian, a seminar course, International Relations and Business in Russia, is available. RSP strives to give students as wide an experience as possible in this complex nation, beginning with time in Moscow, the heart of both medieval and modern Russia. Students then spend 12 weeks in Nizhni Novgorod, a strategic city on the Volga River. After six weeks of language instruction, students live with a Russian family for the remainder of their stay in this city. Students also participate in a service opportunity in Nizhni Novgorod. The program concludes with time in the complex and intriguing city of St. Petersburg, the Russian "window to the West." Students earn 16 semester hours of credit.

Summer Institute of Journalism

Council campuses are invited to choose two student journalists to apply for this four-week, all-expenses-paid experience in Washington, D.C. Fifteen students are selected to participate in the Institute, which lasts from mid-May to mid-June. The Institute blends classroom experience with hands-on work and provides excellent opportunity to learn through lectures and panels with leading journalists who share a strong Christian commitment. Students also participate in seminars taught by communications professors from Council member institutions, take part in field trips and complete workshop projects for hometown newspapers. SIJ provides valuable insight and training in gathering and writing news, editing copy and designing layout. The Institute develops students as Christian journalists exhibiting both professionalism and legal/ethical integrity. Students earn 4 semester hours of credit.

Uganda Studies Program

The Uganda Studies Program exposes students to the uniqueness of Ugandan culture. During their stay in Uganda, they will be able to view the beauty of nature, experience Christianity in the Ugandan culture, and learn about Ugandan history. Students participate in service projects which include teaching English, tutoring at an orphanage, constructing housing, and visiting with AIDS patients. Courses of study include African Politics, Conversational Luganda, Contemporary African Literature and Religions of Africa. Travel throughout Uganda will allow the participants to see parks, historical sites and population centers. USP equips students with an expanded worldview and an appreciation for diversity. Students earn 16 semester hours of credit.

Other Off-Campus Programs

Au Sable Institute of Environmental Studies

Located in an aspen and pine woodland on a crystal clear lake in northern lower Michigan, Au Sable Institute offers courses and programs in field ecology, field biology, land and water resources, and environmental studies. The program is designed to support and serve evangelical Christian colleges, and students participate in integrative discussions of Christian stewardship as well as in worship services held on Institute grounds. In addition to earning college credit, students may complete baccalaureate-level certificates for environmental and resource analysts and naturalists.

Eduventure

Eduventure is a unique experiential learning program combining education and adventure with hands-on cross-cultural communication and community

development. Eduventure operates programs in Fiji and Mexico. The 18-hour course of study consists of Physical Education, Cross-cultural Communications, Spiritual Formation, Field-Based Anthropology, Community Development, and Applied Missions.

Evangelical Training Association

John Brown University is affiliated with the Evangelical Training Association (ETA) through which students may earn a certificate by fulfilling certain requirements in connection with their respective degree programs. Certain Bachelor of Arts programs in John Brown University's Division of Biblical Studies meet the specifications for ETA certification. The training program is recognized nationally, and the certificate qualifies one to teach in the many churches that use the program to train Sunday School teachers.

Global Stewardship Study Program

Sponsored by the Christian Environmental Association and endorsed by the CCCU, the Global Stewardship Study Program (GSSP) gives students the opportunity to explore the critical issues of biblical stewardship in a unique living and learning setting in Belize. Students may earn as many as 16 hours of upper-division credit while investigating such diverse topics as the interconnected dimensions of natural ecology, human consumption, population, Christian discipleship, economics, language, and culture. Through the four months of study, discussion, and travel, GSSP participants gain experience for future service in international missions, education, relief and development, and environmental work.

Institute for Family Studies

The Institute for Family Studies, commissioned by Focus on the Family in Colorado Springs, exists to provide a unique Christian educational community that nurtures passionate and persuasive leaders who are committed to Jesus Christ, equipping them to promote healthy families, vibrant churches, and a civil society. Participants can earn either 12 or 15 credit hours, depending on the semester attended. The teaching and research program, tailored to the student's interests and goals, addresses issues such as the indispensability of the two-parent unit, the importance of fatherhood, marital fidelity, parental authority, and faith in God. Participants are given opportunity to interact with national and international religious, educational, political, and pro-family leaders. Credits may be applied toward many JBU programs including Christian ministries, social and behavioral curricula, and family studies.

National Collegiate Honors Council Semesters Program

Membership in the National Collegiate Honors Council (NCHC) entitles JBU Honors Scholars to apply for off-campus semesters which offer 16 hours of honors credit. Consortia agreements with host institutions enable students to receive credit directly from JBU. The semesters combine field studies, research, internships, seminars, and planned living-learning environments that fully exploit resources of the locale of the study. Settings for NCHC Semesters have included Greece, New York, Washington, D.C., Grand Canyon, Appalachia, Texas-Mexico borderlands, coastal Maine and the Czech Republic.

Semester in Spain

The Semester in Seville, Spain is an exciting way for students to be immersed in Spanish language and culture. All levels of Spanish fluency, from beginning to advanced, will benefit from the time spent with the host family and surrounding Sevillians. Travel opportunities in Spain include Barcelona, Madrid, Toledo, and Granada. Also within short flight distance are many historical cities in Europe and northern Africa. Students can earn a possible 12 semester hours of credit. The program is required for majors in Spanish.

RESERVE OFFICER TRAINING CORPS

The Reserve Officer Training Corps (ROTC) programs offered through John Brown University provide unique physical and mental challenges for all aspiring leaders. Available through cross-town agreements with the University of Arkansas, the ROTC programs prepare young men and women for careers as professional military officers. In addition to academic studies, each service requires that all students attend a weekly leadership laboratory (held at the University of Arkansas campus).

The freshman and sophomore courses are electives offered to male and female students who may earn four hours of academic credit in Aerospace Studies or up to six hours in Military Science. Absolutely no military obligation is incurred by non-scholarship students as a result of their enrollment in or completion of any or all of their freshman or sophomore ROTC courses.

U. S. AIR FORCE ROTC

In addition to the first two years of academic study (see above), John Brown University, in cooperation with the University of Arkansas and the U.S. Air Force, offers two years of advanced instruction in Aerospace Studies. Providing three hours of academic credit per semester for Air Force cadets, the advanced instruction prepares students for the responsibilities and privileges of a commissioned officer.

Air Force ROTC (AFROTC) cadets must attend and successfully complete field training, a step usually accomplished between the sophomore and junior years. AFROTC cadets may volunteer to attend various professional development courses during their “non-field-training” summers.

Each student must successfully complete the summer field training to qualify for the advanced AFROTC program. All veterans who have completed basic training and 180 days of service with any component of the U.S. Armed Forces are exempt from the freshman AFROTC course.

Financial assistance is also available in the form of monthly stipends for cadets officially enrolled in the advanced training program, who have successfully completed summer field training. Additionally, Air Force ROTC offers four-, three-, and two-year scholarships to competitively selected students. Scholarship recipients receive a monthly tax-free allowance ranging from \$250 to \$400, payment of tuition expenses, textbook payment, and payment of certain other fees. Additional information and applications for this assistance may be obtained on the Web at <http://www.afrotc.com>.

A student who successfully completes the Advanced Course in Air Force ROTC and receives a degree will be awarded a commission and will serve on active duty in the U. S. Air Force.

All textbooks, instructional material, uniforms, and equipment required for ROTC courses are loaned to the student at no cost.

See page 193 for descriptions of U.S. Air Force ROTC (ARO) courses.

U.S. ARMY ROTC

In addition to the first two years of academic study (see above), John Brown University, in cooperation with the University of Arkansas-Fayetteville and the U.S. Army, offers two years of advanced instruction in Military Science. The advanced instruction prepares students for the responsibilities and privileges of a commissioned officer. This advanced instruction offers four hours of academic credit per semester for Army cadets. Additionally, all students enrolled in the final two years of ROTC receive a monthly tax-free allowance ranging from \$350 to \$400.

Army ROTC cadets attend a 33 day Leadership Development and Assessment Course between their junior and senior school year. Cadets may attend professional development training such as airborne, air assault, British Exchange program, northern warfare, and mountain warfare. During summer field training, cadets receive room and board.

For students having a minimum of two academic years in school remaining (undergraduate, graduate, or a combination of the two), an alternate two-year program is offered. Students entering the two-year ROTC program attend a 28-day Leaders Training Course (LTC) during the summer. Rising juniors, seniors and graduate students who meet the US Army Cadet

Command's Scholar-Athlete-Leader criteria and are unable to attend the LTC may be eligible to participate in an Accelerated Cadet Commissioning Training (ACCT) program conducted on the University of Arkansas-Fayetteville campus. Students with high school-level military schooling (ROTC, NDCC, or Military Academy) may qualify for the advanced ROTC program without completing the freshman or sophomore courses. All veterans who have completed basic training and 180 days of service with any component of the U.S. Armed Forces can receive full credit for the freshman and sophomore courses and may enter ROTC at the advanced level, once junior academic standing has been achieved.

Financial assistance is also available to qualified students enrolled in ROTC courses. The Army offers 2-, 2.5-, 3-, 3.5-, and 4-year scholarships. Freshman or sophomore students who are not enrolled in Army ROTC may qualify for on-campus 2- or 3-year scholarships. Juniors, seniors, and graduate students who have at least two full years of college remaining may also qualify for on campus 2- or 3-year scholarships. Scholarships can be used to pay for graduate schooling. Scholarship students receive a monthly tax-free allowance ranging from \$250 to \$400, payment of all tuition expenses, textbook payment, and payment of certain other fees. Engineering and nursing students are highly encouraged to apply.

Army ROTC scholarship and advanced course students must agree to successfully complete at least one semester of American military history prior to commissioning.

A unique financial assistance program is available to all Army ROTC Sophomore (MSII), Junior (MSIII) and Senior (MSIV) students through the Simultaneous Membership Program (SMP). This program allows these students to be enrolled in Army ROTC while simultaneously serving with a Reserve or National Guard unit. Financial benefits of this program presently provide approximately \$600-\$1,100 per month to SMP students. In addition, ARMY ROTC SMP students will also receive Federal Tuition Assistance (FTA) which will pay 100% of tuition up to \$4,500.00 per year. Eligible Army National Guard students may also receive additional financial assistance through the Guard Tuition Assistance Program (GTAP).

All students who successfully complete the Advanced Course in either ROTC program and receive a degree may be accepted for a Regular or Reserve Commission in the United States Air Force or in one of the sixteen branches of the Army.

All textbooks, instructional material, and equipment required for ROTC courses are furnished at no cost to the student. Exception: Army ROTC MSIII (Junior) and MSIV (Senior) cadets are required to purchase their textbooks.

Course descriptions begin on page 271 for Military Science Courses (MSC) (Army ROTC).

ROTC Contact Information

John Brown University students interested in ROTC should contact the Academic Affairs Office for details. Additionally, information about the local programs available at the University of Arkansas can be found on the web at www.uark.edu/armyhq or www.uark.edu/~afrotc.

Academic Policies for Off-Campus Programs

1. For JBU credit to be awarded, the program or experience must be approved in advance by the International Programs Committee.
2. Credit earned in off-campus programs is posted as “CR” on the student’s JBU transcript.
3. Student in such programs are designated as enrolled at JBU.

Financial Aid Policy for Off-Campus Programs

This information applies only to aid directly from John Brown University. It does not affect any federal or state aid or loans.

Off-campus study is a valuable part of a student’s education. John Brown University, therefore, allows eighteen students per year to apply a portion of their institutional financial aid to semester abroad programs. In allocating financial aid funds to semester abroad programs and selecting students to receive such a benefit, the university’s policy is driven by two guiding principles:

- > Study abroad programs that immerse students in a foreign culture are some of the most valuable, life-changing educational experiences that a student can have.
- > Cross-cultural study that occurs in a Christian context and is motivated from a Christian worldview is the most meaningful kind of semester abroad experience.

Therefore, John Brown University seeks to give priority in financial aid support and student selection to cross-cultural programs that share its Christian mission and educational perspective.

Amount of Study Abroad Financial Aid

- > Up to 100% of institutional financial aid: Sevilla Study Program, JBU Semester in Ireland Program.
- > Up to 75% of institutional financial aid, depending on available funds: All CCCU programs and other Christian-based cross-cultural programs approved by the International Programs Committee.
- > Up to 50% of institutional financial aid, depending on available funds: IPC-approved domestic programs (such as the Focus on the Family Institute).

Procedure for Awarding Study Abroad Financial Aid

1. By February 1 of the preceding semester, any student planning to apply JBU financial aid to a study abroad program for the fall semester must notify the International Office in writing. The International Programs Committee will allocate up to 60% of available financial aid funds to up to 60% of the student cap for students studying abroad in the fall semester.
2. By October 1 of the fall semester, any student planning to apply JBU financial aid to a study abroad program for the spring semester must notify the International Office in writing. The International Programs Committee will allocate the remaining available financial aid funds to eligible students studying abroad in the spring semester.
3. Award amounts for each individual student will vary based on the overall number of students applying for study abroad, the particular program attended, and the amount of aid that the student is eligible for. In addition, the following factors will affect award amounts: prior participation in semester abroad programs, financial need, year of study at John Brown University, and overall GPA.

Other Stipulations

1. Students receiving scholarships that require on-campus service (such as resident assistants, Student Government Association officers, student publications editors, CAUSE officers, and athletes) may not apply their institutional scholarships to study abroad programs.
2. Students attending JBU under a tuition exchange program from another college cannot carry that exchange to an off-campus program. Students receiving JBU tuition remission may apply up to 75% of their tuition remission to an off-campus program.
3. Students receiving JBU aid while attending off-campus programs must return to JBU for further study or graduate from JBU at the conclusion of the program. If this is not done, the student must repay the amount received from JBU as financial aid for the program.

Continuing Education

The Continuing Education program has been established to develop innovative educational opportunities that meet the needs of the community of Siloam Springs and the surrounding area. Educational opportunities of special interest to business and industry are provided, as well as some graduate-level courses for local educators. The University also offers the Advance program, which may enable students who have two years of prior college work to complete a bachelor's degree in Organizational Management, Business Information Systems, or Early Childhood Education in 18 to 24 months. A full description of the programs may be found in the

ADMISSION

General Procedures

Students wishing to apply for admission should proceed as follows:

1. Register to take the ACT or SAT examination during the junior or senior year of high school and have scores sent to John Brown University.
2. Provide John Brown University with a copy of the official high school transcript. The following high school courses are recommended as college preparation:
 - English—4 units
 - Natural Science—2 units (at least one laboratory)
 - Mathematics—3 units
 - Social Studies—2 units
 - American History—1 unit
 - Foreign Language—2 units
 - Total Credits—14 units

The following are recommended for admission to programs in science and engineering:

- English—4 units
 - Natural Science—3 units
 - Mathematics—4 units
 - Social Studies—2 units
3. Submit all of the following:
 - a. Completed application for admission
 - b. Signed statement on the application form affirming that you have read, understand, and agree to abide by the University's lifestyle expectations (See Student Handbook for details.)
 - c. ACT or SAT test scores (Applicants 21 years of age or older and international applicants may be admitted without ACT or SAT scores.)
 - d. Completed high school transcript or equivalent
 - e. References from individuals who can address your spiritual and academic character
 - f. \$25 (non-refundable) processing fee
 - g. Health and immunization records, including date of measles/rubella vaccination
 4. Official transcripts of any college or post high school credit, mailed directly to JBU from the awarding institution(s)
 5. Certain departments have additional requirements for official admission:
 - a. Prospective music majors must audition.
 - b. Teacher Education applicants must have an ACT score of 20 or higher (or SAT equivalent).

Application Deadline

The Admissions Office reviews applications using a series of deadlines for guaranteed on-campus housing. The number of residence hall spaces available for new students is limited, and JBU admits the number of qualified candidates from the applicant pool for which available spaces exist in the residence halls.

Criteria for Admission

First-Time Freshmen

To be admitted as a first-time freshman, the applicant must present a transcript showing graduation from high school or GED, and the score and percentile achieved on the ACT or SAT. Home schooled students will be admitted using the same criteria. However, home schooled students seeking Federal Financial Aid will be required to submit an officially recognized high school diploma or equivalent.

To be admitted on regular freshman status, an applicant must have scored at or above 20 on the ACT or 950 on the SAT test and have a high school cumulative grade-point average at or above 2.5 (excluding remedial course work). In addition to the academic criteria outlined above, an applicant must submit two references: one from a high school counselor or teacher, the other from a church leader (pastor, youth pastor, or Sunday School teacher).

The Admissions Office is responsible for determining the overall “fit” of an applicant with the University. Academic, social, and spiritual factors are considered. It is helpful for the applicant to provide as much relevant information as possible in determining whether there is a good match between the applicant and the University.

Mandatory Placement in English

Students for whom English is a second language will take the COMPASS/ESL test for placement in the appropriate English class. Students placed in ESL classes will continue in the English track each semester without a break. (English I will immediately follow ESL III, and English II will immediately follow English I.)

Mandatory Placement in Mathematics

Freshmen who score below 19 on the math section of ACT (or SAT equivalent) will take a test for possible placement in MTH 0153, Intermediate Algebra.

ASPIRE Admission

An applicant who is unable to qualify for admission under regular criteria may be admitted by action of the Admissions Committee. First-time freshmen and transfer students having test scores or GPAs below the required minimums may request consideration by the Committee. Such applicants may be asked to write an essay describing their reasons for seeking a Christian college educational experience, their career goals, and their plans for succeeding at John Brown University. If possible, the applicant will be interviewed by an Admissions Counselor. The interview may be conducted in person or by telephone.

Students whom the Committee permits to enroll will be required to participate in ASPIRE—the Academic Success Program for Inspiring and Reaching Excellence. ASPIRE supports students academically so that they have opportunity to be successful in their first year at John Brown University. As part of the Head, Heart, and Hand mission of the University, we seek to come alongside these students to offer guidance, encouragement, and accountability.

ASPIRE stipulations include the following:

1. Academic load limited to 13 credit hours for the first semester and 16 credit hours during the second semester.
2. Required enrollment and participation in GST 1150—Strategies for College Success (meets one hour per week, but earns no credit).
3. Bi-weekly grade checks.
4. Monthly individual meetings with the Director of Academic Assistance.
5. Cohort scheduling (enrollment in three common classes as specified by the Director of Academic Assistance).
6. Specialized advising and tutoring.

ASPIRE is a fee-based program. Students and their parents or guardians must sign a commitment to participate as part of the admission agreement.

Only a limited number of students are accepted into ASPIRE each year. Once this limit has been reached, candidates are placed on a waiting list.

Transfer Students

To be admitted as a transfer student, the applicant must have been enrolled in college as a full-time student for at least one semester following high school graduation. Each college must send an official transcript directly to John Brown University. A high school transcript and standardized test scores may also be required. Transcripts for all transfer students are subject to academic review prior to acceptance. An overall college grade point average of at least 2.5 is required, and a grade of 'C' or better is required in each course received for credit. Any transfer student with less than a 2.5 cumulative GPA, regardless of ACT/SAT

score, will be brought to the academic committee for review. Any transfer student with fewer than 24 transferable hours is subject to standard high school admissions requirements (20 ACT/950 SAT) plus 2.5 HS GPA.

The following students will be brought to the admissions director for internal review and subsequent committee review when deemed necessary:

1) Those transferring from a junior or community college with no or a sub-standard ACT or SAT score (minimum 20 ACT or 950 SAT) regardless of GPA. 2) Those transferring from a fully-accredited four-year institution with less than a 3.0 cumulative GPA and with no or a sub-standard ACT/SAT score.

Entering students having more than 24 semester hours transfer credit receive scholarship consideration on the basis of college credit.

Non-Degree Students

Students wishing to enroll at the University without pursuing a degree should indicate this on the application form. The application process is streamlined and there is no processing fee, but non-degree students are required to pay for all instruction and other services at the regular rate. Such students may enroll for no more than 11 hours per semester, and credit earned may count toward a degree only after students reapply and are accepted for admission under regular student status. The reapplication process must include all relevant transcripts and applicable test scores.

International Undergraduate Admissions Requirements

John Brown University admits international students who meet the general admission criteria and have demonstrated proficiency in English. Applicants from non-English speaking countries must take the Test of English as a Foreign Language (TOEFL) as administered by the Educational Testing Service at the nearest examination center. The minimum score for admission is a total of 500, or 173 on the computer-based test. The language proficiency for Walton International Scholarship recipients is evaluated for admissions purposes by an alternative means as determined by the International Programs Office in consultation with the Department of Language Studies. In addition, the COMPASS examination will be given to place students in the appropriate level of English instruction.

International students must also provide the following:

1. Completed international application form.
2. Check or money order for a \$100 (U.S.) non-refundable application fee.
3. Essay, written by the applicant, explaining reasons for wanting to attend JBU.

4. Letter of recommendation from the following:
 - a. Principal (headmaster) of high school
 - b. Dean of Students at previous university
 - c. Pastor or church leader
5. Official transcripts of academic records at secondary school or university
6. For regular freshman status, an applicant must present an examination report of an internationally recognized, standardized test (O levels, ACT, SAT, Caribbean Examination, etc.) that will be evaluated by the International Admissions Office.
7. Immunization record including date of measles/rubella vaccination
8. Official documents showing ability to pay college costs, or an Affidavit of Support (Immigration and Naturalization Service Form I-134, available through the International Programs Office) completed by a US sponsor for \$23,500.00 (one year's costs)
9. The International Programs Office is responsible for determining the overall "fit" of an applicant with the university. Academic, social and spiritual factors will be considered. It is helpful for the applicant to provide as much relevant information as possible to determine whether there is a good match between the applicant and JBU.

When all admissions requirements have been met and an \$8,000 deposit (refundable in the event the student does not attend) is paid, the International Programs Office will issue an Immigration Form I-20 which allows the student to apply at the US Embassy for the F-1 student visa.

Mr. William A. Stevenson, III, is the director of the International Programs Office.

Graduate Admissions Requirements for international students are detailed in the Graduate and Professional Studies Catalog.

International Baccalaureate Program

Credit is awarded for higher level International Baccalaureate courses accompanied by scores of 5 or above on the respective IB exams. JBU course equivalences and the number of semester hours recognized are determined upon evaluation of the IB work.

Notice of Nondiscriminatory Policy

John Brown University admits persons to its programs and activities without regard to race, color, national or ethnic origin, or gender. The University does not discriminate on the basis of race, color, national or ethnic origin, physical or mental disability, or gender in the administration of education policies, admission policies, scholarship and loan programs, athletics, and other school-sponsored programs.

FINANCIAL PLANNING

COST OF ATTENDANCE

Application Fee

Applications for admission to the University should be accompanied by a \$25 non-refundable application fee.

Charges for 2007-2008

Traditional Undergraduate	Per Semester	Annual Total
Full-time Tuition (12-18 credit hours)	\$ 8,148	\$16,396
General Fee	390	780
Room and Board (Residence Halls)	<u>3,110</u>	<u>6,220</u>
Total	\$11,648	\$23,396

Housing options which include reduced plans (based on seven meals per week) are available on a limited basis, primarily to upper division students.

Part-time Tuition, per credit hour	\$680
Tuition per credit hour over 18	\$226
Independent Study, per credit hour <small>(in addition to regular tuition)</small>	\$ 99
Summer 2008 Tuition, per credit hour	\$340
Summer 2008 Room and Board, 4-week term	\$932
Professional Studies	See separate catalog.
Graduate Tuition, per credit hour	\$410

Reduced Tuition

Certain students receive tuition discounts when enrolling for traditional full-semester undergraduate classes, as follows:

Students 55 or over: one-half of regular rate

Students 30 to 54: one-half of regular rate, enrollment in two courses or in six credit hours maximum per semester

Concurrent High School Enrollment: Area high school students may enroll for one course per semester at reduced cost. Participation in the program is limited. (See page 53.)

Tuition Deposit

A tuition deposit of \$200 is required of all new applicants who have tentative or final acceptance status. This deposit is fully refundable up to May 1 prior to fall semester enrollment and December 15 prior to spring semester enrollment. For students applying or attaining an accepted admission status after the refund date, the tuition deposit will not be refundable. The tuition deposit is designed to secure the student's enrollment at John Brown University and will be applied as a credit directly to the student's account.

Off-Campus Housing

Married students, students living with parents, and students living with full-time faculty or staff are permitted to enter as day students. Students who are 23 years of age or older are permitted to live off campus. Students who have lived in JBU housing for at least six (6) semesters are eligible to apply to the Student Development Office to be approved to live off campus.

Room Deposit

Each student who wishes to live in University housing is required to submit \$100 before a room assignment can be made. The fee is fully refundable until May 1 for the Fall semester and December 15 for Spring terms.

1. This deposit may be submitted after the student receives notification of acceptance to the University. A room assignment is made after the deposit is received.
2. The room deposit will be held in a separate account until the student graduates or no longer resides in University housing.
3. Room damage charges may be assessed as they occur or when the student officially checks out of University housing. Charges are posted in the business office on the student's account to be paid before the beginning of the next semester. The balance of the deposit will be credited to the student's account following the end of the last semester in which the student lives in University housing. If charges exceed the amount of deposit, official transcripts or diploma may be withheld until the account is cleared. Should a student fail to follow the official check-out procedures, the room deposit will be forfeited.

Meal Plans

All residence hall students are required to participate in the JBU meal plan. They may choose either a 21- or a 16-meal-per-week option. The cost is the same; the difference is that the 16-meal option gives the student a larger spending account in the California Cafe.

Residents of the North Slope Townhouses and single students residing in Broadhurst Village Duplexes are required to participate in a minimum 7-meal plan.

Non-resident students are offered a Commuter Meal Plan which costs \$409 and provides 50 meals in the cafeteria and \$150 in Bonus Points for use in the California Cafe.

Additional Fees

Graduation Fee **\$35**

Each graduating student is required to pay this fee, without regard to Commencement participation. After anticipated graduation has been confirmed by the Registrar, the fee will appear on the student's account during the final semester of attendance. In addition, students who participate in Commencement will be required to purchase regalia through the bookstore.

Official Transcripts **\$2**

The first transcript is issued without charge. The fee is charged for all subsequently issued transcripts.

Auto Registration **\$25**

Any automobile that will be parked on campus must have a JBU parking sticker. This sticker is valid for one academic year, Fall Semester through Summer Terms. Motorcycle registration fee is \$15.

Orientation **U.S. Residents \$75, Internationals \$100**

All incoming full-time students are required to participate in orientation activities at the beginning of their first term. The fee is charged to the student's account.

Payment of Student Accounts

Tuition and fees are due and payable as a lump sum prior to the start of each semester. Payment will be the semester's charges less financial aid (i.e. scholarships, grants, and loans). A payment plan option is available to students in good financial standing; details are available from the Business Office. Payment plan information is sent to each student prior to the start of each semester. Certain fees are applicable for students on the payment plan option, and the University reserves the right to change the fee structure as needed to fund the payment plan program.

If a student's account becomes 30 days in arrears, a notice may be given regarding financial standing. Students who fail to comply with their current payment schedule are subject to termination of enrollment. Official transcripts of academic credits are not released while any balance is owed JBU, and the University engages professional collection agencies to deal with delinquent accounts.

Adjustment of Accounts

Students in traditional programs withdrawing from the University near the beginning of a semester are entitled to a partial refund of tuition, course fees, and music lesson fees, adjusted according to the following schedule:

- 90% refund during the first week of classes.
- 80% refund during the second week.
- 60% refund during the third week.
- 40% refund during the fourth week.
- 20% refund during the fifth week.

No refund after the fifth week.

Room and board will be pro-rated weekly over sixteen weeks per semester.

Non-course fees will not be refunded after classes have begun.

In the event of medical withdrawal prescribed by a physician, special consideration will be given to tuition adjustment.

Summer courses, graduate courses, and Advance modules are presented in different formats and are not subject to the above refund schedule. To receive a tuition refund for such courses, the student must complete the withdrawal before the designated class meeting.

Music Fees

Private Lessons	Per Semester
One Lesson Weekly	\$ 200.00
Two Lessons Weekly	\$ 400.00
Class Lessons in Piano	\$ 135.00
Audio Technology, each course	\$ 150.00
Music Arranging with MIDI	\$ 150.00
Practice Room Fee	\$ 15.00
Key Deposit	\$ 25.00
Recital/Presentation Fee	\$ 25.00
Recital Recording Fee	\$ 70.00
Accompanist Fee (1/2 recital)	\$ 100.00
Accompanist Fee (full recital)	\$ 200.00

In addition to Private Lesson Fees, students enrolled in applied music for credit are charged tuition according to their course load. Part-time students are charged the regular tuition fee for each semester hour of credit in music lessons; students taking more than a full-time load will be charged \$226 for each credit above 18.

A student whose JBU enrollment involves only applied music may register as a student-at-large. Regular lesson fees will be paid, but no tuition will be required. The student will receive no college credit.

Digital Media Course Fees

Certain offerings in the Digital Media Arts program require a technology support fee of \$150 per course.

Medical Insurance

Each student is required to have in force a medical and hospital insurance plan sufficient to cover personal needs while in college. Students who are not covered by their own plan or parent's plan, may purchase the JBU Student Plan, available at a very competitive price. Brochures are mailed to each student yearly.

Valuables

The University does not assume any responsibility for lost or stolen property, nor does it carry fire, theft, or damage insurance on the personal property of students. Upon arrival, students may engage one of the banks in Siloam Springs to handle financial matters and to provide safety deposit box services.

Students are required to remove all personal property from dormitories over the summer months, since the residence halls are often used by visitors.

FINANCIAL AID

Each year 85% of the students attending John Brown University benefit from some type of scholarship, loan, or work program. Students seeking financial aid are required to complete the Free Application for Federal Student Aid (FAFSA). Only full-time students may receive institutional aid.

Based on information supplied by financial aid applications and official notifications from federal and state programs, the Financial Aid Office will determine each student's financial aid award offer. Consideration for financial assistance will occur only after the student has received a tentative or final acceptance through the Admissions Office. Returning students will be awarded assistance if they are making satisfactory academic progress. To continue to receive financial aid, application for aid must be made each year. Appropriate scholarship, loan, and work awards will be made by the Financial Aid Office using the policy set by the Financial Aid Committee.

Merit scholarships are available to students based on academic, leadership, athletic, and musical talent. Descriptions of eligibility criteria and availability of assistance can be found in the Financial Aid brochure.

Financial aid applications and information may be obtained by contacting the Admissions or Financial Aid Office. Early application is advised. The priority award deadline for applying for financial aid is March 1. Those applying after March 1 will be awarded financial aid as funds are available.

Financial Aid Policy

The Board of Trustees has adopted the following policy with regard to awards of financial aid:

1. Financial aid programs funded by the institution itself are intended to supplement the various federal, state, and private donor financial aid programs administered by the institution.
2. Such institutional aid (to include athletic, academic, and leadership scholarships) will not be used to increase the total of financial aid available to the student from all sources, exclusive of any work-study or loan arrangement, beyond
 - a. In the case of a boarding student, the total cost of room, board, and tuition for the academic year.
 - b. In the case of a day student, the cost of tuition for the academic year.
3. Generally, students shall not be awarded financial aid in excess of their determined financial need. Students who do not demonstrate financial need and are eligible for Tuition Remission shall be eligible for only one other scholarship in addition to the Tuition Remission (not to exceed \$3000). Exchange Scholarship recipients through the Council for Christian Colleges and Universities (CCCCU) or the Council of Independent Colleges (CIC) shall not be eligible for any institutional scholarships beyond their exchange scholarship.
4. Any commitment of institutional financial aid shall be expressly conditioned upon the determination by the financial aid officer of the student's prior eligibility for other federal, state, and private donor financial aid, exclusive of any work-study or loan arrangement.
5. Federal regulation requires that a student must be making satisfactory academic progress regardless of whether he or she has previously received Title IV aid.

All students enrolled at John Brown University who receive financial aid through JBU or the federal Title IV Assistance Programs must meet the satisfactory academic progress requirements as defined below in order to be eligible for further aid.

Satisfactory academic progress is deemed to have been made by a student who meets both the quantitative and qualitative requirements indicated below.

Quantitative Requirements

There are two quantitative requirements that the student must meet in order to remain eligible to apply for financial assistance. First, the student must pass, at a minimum, 67% of the credits attempted while attending the University. Also, the student will remain eligible to apply for aid as

long as the number of credits attempted is not more than 150% of the number of credits required for the student's degree.

A transfer student may have earned credits at another school that will count toward his or her degree at JBU. Only transfer credits that apply to the student's degree will count as part of the 150% maximum. A student pursuing a second degree or teacher certification will have a new maximum time frame established based on the degree program requirements for which he or she enrolls.

The determination of each student's meeting the quantitative requirements for satisfactory academic progress will be made annually following the conclusion of the spring semester. If a student fails to pass at least 67% of the credits attempted or has attempted more than 150% of the number of credits required for completion of his or her degree, then the student must appeal for reinstatement of financial aid eligibility.

Qualitative Requirements

A student is deemed to have met the qualitative requirements for satisfactory academic progress for financial aid purposes provided the student's academic status is not one of Academic Suspension.

Appeal Process

If a student does not successfully meet the satisfactory academic progress policy guidelines, the Financial Aid Director will notify the student in writing of his or her financial aid suspension status. The student may submit a written appeal to the Vice President of Enrollment Management within 30 days of the time that the student is notified of his or her suspension. Financial Aid eligibility appeals will be reviewed by the Admissions/Financial Aid Committee on a case-by-case basis.

The financial aid eligibility appeal is a separate process from the Registrar's appeal process for academic suspension. A successful appeal to reinstate a student to the University after academic suspension by the Registrar's Office does not necessarily reinstate a student to the financial aid programs.

Addendum to Satisfactory Academic Progress Policy

Appeal due to mitigating circumstances: This section of the Satisfactory Academic Progress Policy gives some examples where allowances may be made for mitigating circumstances. These examples are not all-inclusive. The committee may allow other mitigating circumstances on a case-by-case basis depending on the merit of the appeal.

1. Death in the family or death of a close friend.
2. Serious illness of a family member.
3. Medical complications or prolonged illness of the student.
4. Inability to attend classes because of unexpected lack of transportation.
5. Serious financial problems requiring excessive hours of employment.

How do the following affect Satisfactory Academic Progress determinations?

1. Withdrawals: A withdrawal ('W') is counted as an attempted class that was not successfully completed.
2. Incompletes: An incomplete ('I') is counted as an attempted class that was not successfully completed.
3. Repeated course: A repeated course is counted as attempted and successfully completed if a passing grade was earned.
4. Transfer courses: Transfer courses are counted as attempted and completed if the coursework is applicable to the student's JBU degree.
5. Non-credit remedial coursework is not applicable at JBU.

Maximum Time Frame for Financial Aid Eligibility

Institutional Aid

Associate Degree Programs	Two Years
Bachelor's Degree Program	Four Years

Competitive Scholarships

The Presidential Scholarship

Each year John Brown University awards five full-tuition Presidential Scholarships to applicants who have demonstrated outstanding academic achievement. To qualify, the following must be met:

- ACT composite score of 29 or SAT 1280
- 3.9 cumulative high school GPA or above (on 4.0 scale)
- Top ten percentile ranking in high school class
- Leadership potential

Interview with scholarship committee is strongly encouraged.

Presidential Scholarship candidates must apply for admission to John Brown University and meet all applicable admissions requirements. The total scholarship package awarded will not exceed the cost of tuition.

The scholarship is fully renewable with a 3.2 cumulative GPA.

The Chancellor Scholarship

Each year John Brown University awards approximately forty half-tuition Chancellor Scholarships to applicants who have demonstrated outstanding academic achievement. To qualify, the following must be met:

- ACT composite score of 29 or SAT 1280
- 3.7 cumulative high school GPA or above (on 4.0 scale)
- Top fifteen percentile ranking in high school class
- Leadership potential

Scholarship candidates must apply for admission at John Brown University and meet all applicable admissions requirements. The total scholarship package awarded will not exceed the cost of tuition.

The scholarship is fully renewable with a 3.2 cumulative GPA.

Non-Competitive Academic Scholarships

Scholarships ranging from \$2,000 to \$5,500 per year are awarded to new full-time students in recognition of academic achievement. Awards to freshmen vary according to ACT or SAT scores, cumulative high school grade point averages, and class rank.

Academic scholarships are renewed annually contingent upon the student having the required cumulative GPA at the end of each Spring term. Time limit of eligibility is four years. A fifth year of eligibility may be granted in certain cases by the scholarship committee. Students on academic scholarships may be asked to tutor or to assume other academic-related responsibilities.

Scholarship application forms may be obtained by contacting the Admissions or Financial Aid Offices.

Named Scholarships

Many individuals and organizations have contributed funds because they believe in the University's mission, and they desire to help make John Brown University affordable to academically qualified and deserving men and women. A large number of these scholarships are given in memory of friends or family and are perpetual in nature.

Criteria for scholarship awards may include need, merit, and leadership characteristics.

Music Scholarship and Athletic Scholarships

Scholarships are available to students with demonstrated musical or athletic ability. Music/Choral scholarships are awarded by the Music Department faculty based on major and/or participation in such groups as the Cathedral Choir, Women's Chorus, and Instrumental Ensemble. Financial aid may be available for participation in certain sports such as men's basketball, soccer, tennis, and swimming, or women's basketball, soccer, volleyball, tennis, and swimming.

Walton International Scholarship Program

Education of young people shapes a nation. Soviet leaders recognized this fact and during the mid-20th century recruited many promising young scholars from third-world nations to receive free education in universities of the Eastern Bloc. The offer was eagerly accepted, and the result was that these formally educated students—their thinking now shaped by ideals of Marxism, socialism, and atheism—returned to their homelands to rise to positions of political and economic leadership.

American entrepreneur Sam Walton decried this pattern and took it upon himself to provide an alternative for these bright individuals: Come to the United States for training in economic freedom, individual responsibility, and faith. To accomplish this goal, he established programs at John Brown University and two other private liberal arts colleges in Arkansas, by which are provided 60 annual scholarships at each school for students from Central America and Mexico. Funded independently of all other University aid programs, Walton grants cover tuition, room and board, and other associated expenses. One stipulation of the scholarship agreement is that upon completion of their training, all recipients must return to their home countries for a period of time equal to that of their studies in the U.S.

Presently entering its twenty-third year, the program is a resounding success. Nearly 1100 students from Central America and Mexico have received the scholarship, and a very high percentage have completed bachelor's degrees and returned home, where the value of an American education is unmistakable. John Brown University's graduates of the Walton Scholarship Program have attained noteworthy positions in business, engineering, politics, computer science, journalism, education, and ministry. Mr. Walton's dream is being fulfilled.

Mr. Ronald Johnson directs the Walton International Scholarship Program at John Brown University.

Federal and State Financial Aid Programs

The federal government sponsors student assistance programs to those who have demonstrated financial need. Through the Federal Pell Grant Program, students may receive as much as \$4050 per year, based on authorization from Congress. Many students also are able to take advantage of the Federal Perkins Program and secure long-term, low interest (5%) loans for educational expenses.

Students may also be eligible for assistance from other sources, such as the Federal Supplemental Educational Opportunity Grant Program (SEOG), the Federal Work-Study Program, and Federal Stafford Student Loans.

Many states also participate in student aid programs for residents attending college either in or out of the state. Arkansas residents may be eligible

for the Arkansas Governor's Distinguished Scholarship (GDS) in the amount of \$10,000. The Arkansas Department of Higher Education also administers the Arkansas Academic Challenge Scholarship Program. This grant program offers first-time freshmen a four-year renewable scholarship in the amount of \$2500 the first year and increases each year. Contact the Financial Aid Office for details.

Students may qualify for a low interest Federal Stafford Student Loan (subsidized or unsubsidized) to help cover both direct and indirect costs of education. Award amounts are based on financial need. Contact the Financial Aid Office for more details.

Veterans Administration Benefits

John Brown University is an approved institution for veterans and veterans' beneficiaries training. Veterans, widows and children of veterans who lost their lives in service, or veterans who are now disabled as a result of service should contact the nearest Veterans Administration Regional Office as far in advance of enrollment date as possible for assistance in securing Veterans Administration benefits. Information regarding this program may be obtained from the JBU Registrar.

Air Force and Army ROTC Scholarships

Scholarships are available to qualified applicants. Scholarships pay tuition, there may be allowances for books and additional expenditures. Selection is based on academic record, ACT/SAT entrance scores, leadership potential, a physical exam, and a personal interview. Preferences are given to technical fields and nursing, but all disciplines may apply. For further information, see pages 32-34.

Student Employment

Students may qualify for employment through the University by completing the Free Application for Federal Student Aid (FAFSA). Students with the greatest amount of determined financial need will be given preference for institutional employment. Employment positions are available throughout the University.

Students interested in seeking employment on campus must contact the Financial Aid Office. Employment will be awarded as part of the financial aid package. Job assignments for upper-classmen will be made in accordance with student class schedules, position preference, and supervisor recommendation. All students are assigned a service-oriented position for the first year and may choose to work in food service, grounds, custodial services, or the maintenance department. These areas, vital for the daily operation of the University, require large numbers of student workers in

order to function effectively. Work time is usually limited to 10 hours per week. Paychecks are issued to students once each month for hours worked under the work program. Students may apply their earnings toward their School accounts.

Work-study participants must maintain a 2.0 cumulative grade point average to remain eligible for the full program. Students failing to maintain the required GPA will be limited to five hours of work per week.

Concurrent High School Enrollment

Each semester, JBU offers high school Juniors and Seniors an opportunity to take college courses at reduced cost. The number of courses available and the number of students who may participate is limited. Students selected may enroll for one course per term. Students who later enroll as full-time freshmen at John Brown University will receive a tuition credit equal to the monies they had paid for Concurrent Enrollments, up to \$1000.

The Concurrent High School Enrollment application form is available through the Admissions Office. Applicants must have a 3.0 cumulative high school grade point average and must provide high school transcripts and a completed reference form from their high school counselor. The application deadline for the fall semester is August 10, and January 1 for the spring.

ACADEMIC POLICIES

Students Subject to the Catalog Provisions

All students are subject to the provisions of the catalog which was in effect at the time of their first enrollment at John Brown University, with the exception of charges for tuition, etc., which apply only for a specified period of time. However, students may change to a later catalog with approval of their advisor and division chair by filling out and submitting a Change of Catalog Petition to the Registrar's Office. (See also Graduation Requirements after Extended Absence, page 74.)

Changes in Requirements and Regulations

The University reserves the right to make modifications in policies, procedures, and regulations: e.g., grading system, transfer of credit policies, guidelines for degree requirements, housing regulations and charges, tuition and fees, and admission standards, and to make such modifications applicable to any or all currently-enrolled students. When modifications occur, sensitivity to reasonable dates of implementation and appropriate categories of currently-enrolled students affected will be exercised. Students will be notified of such changes through the advisers, written notices, campus publications, and Registrar's credit summaries for individual students.

Course Credits

The basic unit of course credit is the semester hour. One semester hour of credit normally represents participation by the student in the activities of one fifty-minute class period per week for fifteen weeks together with adequate preparation through the use of approximately two hours outside of class for each period in class. Where additional supervised time is required such as for laboratories or listening sessions, an extended period of two to three hours may replace one regular class period. One hour of practicum credit requires weekly involvement of three to five hours, depending on the nature of the assignment.

Orientation

Orientation activities for all new students begin before fall registration and may continue into the semester. The goal of the Orientation program is the help each student make a smooth transition to college life at JBU.

Full-Time Student

A full-time student is one who is enrolled for 12 or more semester hours. Students in the Advance program are considered full-time, as they complete 16 hours per term.

Classification of Students

A student will be classified as a sophomore when at least 30 semester hours of course work have been completed; Junior, 60 hours; Senior, 90 hours.

Summer Terms

Undergraduate. John Brown University offers a four-week May Term which begins the Monday after Spring Commencement. Students may earn as many as six credit hours, with most available courses satisfying requirements in the University Core Curriculum. Summer tuition for undergraduate work is one half the regular credit hour rate. Housing and meal plans are available on campus during the session.

Graduate. John Brown University offers summer graduate courses in two segments totalling 15 weeks. Students may choose to enroll for whichever segments meet course needs and are compatible with family and work schedules.

Credit by Examination

Means of establishing credit include the College-Level Examination Program (CLEP), Advanced Placement (AP) Programs, International Baccalaureate Program, and in some cases, teacher-made examinations. A maximum of 30 semester hours of such credit may be applied toward the Bachelor's degree; 15 maximum for the Associate's degree. A student may not take a nationally recognized standardized examination (as listed above) if the student is currently enrolled in the equivalent course on the first day of the semester. Details about examination procedures, preparation, and course equivalence are available from the Registrar. Beginning with the Spring 2009 semester, graduating seniors must have completed all CLEP exams before the first day of their final term in residence.

Availability of Courses

Accompanying the description of each course in the back section of this catalog is an indication of the semester in which the course is to be offered. This data is subject to occasional modification. Accordingly, the University reserves the right to withdraw with reasonable notice any course offering for a particular semester.

Independent Study

Independent study courses are those in which students do not meet in a typical classroom setting but study independently under the regular supervision of a full-time faculty member. The topic of study may be an area of special interest normally outside of the existing curriculum. A student must complete an Application for Independent Study form in the Registrar's Office. Approval must be provided by the professor supervising the Independent Study, the student's advisor, and the chair of the division in which the course resides. A non-refundable fee of \$99 per semester hour will be charged to the student. In some special circumstances, the Dean of Undergraduate Studies may waive the fee. The student will pay all normal per-credit tuition charges for hours below 12 or above 18 hours.

Prerequisites

Students are not permitted to enroll for courses for which they have not completed all prerequisites. A prerequisite course must have been completed with an acceptable passing grade before enrollment in the given course is permitted. A corequisite is a course in which a student must be enrolled and satisfactorily participating simultaneously to the given course.

Required Enrollment in Specific Core Curriculum Courses

All regularly enrolled students must enroll in one of the Core Curriculum Bible courses during each of the first two years of attendance.

All regularly enrolled students except those in associate degree programs must enroll for EGL 1013 and EGL 1023 during their first two semesters of enrollment. However, some students are required to complete English as a Second Language before enrolling in EGL 1013.

Maximum Course Load

The normal maximum semester load is 18 credit hours, but the student's grade point average affects the limit for the next term. A full-time student who earns a 3.0 GPA during a semester at JBU will be permitted to enroll for an increased load. First-time freshmen students are limited to a maximum of 18 hours during their first semester.

<u>GPA</u>	<u>Next semester maximum</u>
Sem 3.0 to 3.24	19 semester hours
Sem 3.25 to 3.49	20 semester hours
Sem 3.5 or better	21 semester hours
Cum Below 2.0 (Scholastic Probation)	15 semester hours

Enrolling for any credit hours beyond 18 in a semester will incur additional tuition charges at one-third the regular per-hour rate, regardless of prior grade point average. Enrollment for more than 21 hours is permitted only upon approval of a petition to the Dean of Undergraduate Studies.

The maximum Summer Term load is 6 credit hours. A student whose grade point average for the previous semester was 3.25 or better may petition to enroll for additional hours.

Late Enrollments

Any student who enrolls after the close of the regular registration period may be subject to limitation in the course load. No student is permitted to enroll for the semester after the end of the tenth day of classes.

Auditing Classes

Students may register for courses on a non-credit or auditor basis, provided the proper procedure is followed, either at initial registration for the semester, or by official change of registration prior to the stated deadlines. The names of such students will be entered on the class roll, and the class appears in the student's academic record, but without credit and with final grade of 'S' or 'U'. It is the responsibility of the student to obtain from the instructor a statement of grading criteria for satisfactory participation. Tuition is charged at one half of the rate of for-credit registrations and subject to the same regulations.

The last day to add a course under 'Audit' status and the last day to change a course from 'Audit' to 'Credit' status is the last day to add a course. The last day to change from 'Credit' to 'Audit' status is the last day to drop a course.

Adding and Dropping Courses

Courses may be added after initial registration, provided the procedure is completed by the close of the second week of classes. Courses dropped by the approved procedure before the end of the sixth week of classes will not appear on the permanent record. Non-completion of a course thereafter will result in a letter grade based upon the student's performance relative to the required work for the complete course.

Withdrawal from the University

A student may petition for permission to withdraw from all course work for a semester after the last date to drop a course. Such a petition should be directed to the Academic Dean.

Every student withdrawing from the University before the end of a semester is required to obtain from the Student Life Office an Application for Honorable Dismissal and have it properly signed by the necessary officials and returned to the Registrar's Office. Failure to execute such an application may result in refusal to grant any possible refunds to the student.

In the event of withdrawal from school, courses are posted on the transcript with each showing a grade of 'WP' (withdrew, passing) or 'WF' (withdrew, failing). No credit is earned for the term.

Transcripts

An official transcript of a student's academic record may be obtained by submission of a written request to the Registrar's Office, provided the student has made satisfactory arrangements with the Business and Financial Aid Offices with respect to financial obligations. Transcripts are not released unless the student grants permission through a signed statement.

The first transcript is issued without charge; a \$2.00 charge is incurred for each transcript thereafter.

Access to Education Records

The Family Educational Rights and Privacy Act of 1974 extends to all former and presently enrolled students at John Brown University the right of access to certain educational records maintained by the institution. Student rights include (a) inspection and review, (b) explanation or interpretation of contents, (c) duplication of the record at a standard fee, and (d) a formal hearing, if necessary, to challenge the contents of any such record.

ATTENDANCE REGULATIONS

General Policy

A student must be registered for a class and on the official roster in order to attend. This includes students who are attending under audit status. (See *Auditing Classes*, p. 58.)

Attendance at and participation in all class sessions, except for times when students are absent for reasons beyond their control, is regarded as essential. Class activities are planned for the benefit of all students.

Classroom Demeanor

Students are expected to display classroom behavior that is appropriate to a Christian university. A professor may remove a student from a class if, in the professor's judgment, the student displays behavior that is uncivil, defiant, or otherwise disruptive to the classroom learning environment. Students dismissed from a class may not return to the class without the permission of the professor. Students may appeal any such removal by following the Academic Grievance process outlined in the Student Handbook.

Results of Failure to Attend Class

A grade of 'F' is given for any course in which a student has missed half or more of the class meetings, whether the absences are excused or unexcused, unless the student has completed withdrawal from the class before the stated deadline. An absence is recorded for each class missed by a student, including the first meeting of a class following registration, regardless of the reason for the absence. The responsibility for attending class rests with the student.

Excused Absences. Although the instructor is obligated to allow the student to make up for full credit work missed because of an excused absence, such credit is established only through the initiative of the student in accomplishing the work to the full satisfaction of the instructor. Prior notice is expected for any known activities which will interfere with class attendance.

Under the following circumstances an absence will be excused:

- a. *Death or serious illness in the immediate family.*
- b. *Class field trips which are required as class assignments.*
- c. *Club trips which are designated as educational in nature.*
- d. *Trips sponsored or sanctioned by the University authorities as University business.*
- e. *Trips required by Armed Services or the Veterans Administration.*
- f. *Local emergencies requiring the immediate attention of certain students.*
- g. *Other reasons which are acceptable to the instructor.*

Absence due to illness of the student does not necessarily qualify as excused. Each instructor has the prerogative to establish policy on this issue; the policy is to be clearly stated at the beginning of the term.

Other absences are considered unexcused.

Unexcused Absences. Faculty members are neither obligated nor expected to permit a student to make up work missed because of unexcused absences, including unexcused absences for which no penalty is assessed in accordance with the attendance policy. If a student is allowed to make up such work, full credit may not be allowed.

The number of unexcused absences in a course may be used as a factor in determining a student's grade. It is the obligation of the instructor to explain the policy at the beginning of the course. If the student attends more than half of the class meetings and thus is eligible for credit, the attendance factor may not exceed 25 percent of the total grade basis in the course.

Non-Attendance Resulting in Withdrawal

Except in case of extenuating circumstances, students who do not attend any class for ten (10) consecutive days may be withdrawn from John Brown University for non-attendance. It is the responsibility of the student to contact instructors, advisor, Registrar's Office, Business Office, Financial Aid Office, and Student Development Office if extenuating circumstances exist. Courses will not be recorded if the withdrawal occurs before the sixth week of the semester. Students will have a grade of 'WP' (Withdrawn Passing) or 'WF' (Withdrawn Failing) recorded if they are withdrawn after the fifth week of the semester.

Chapel Attendance

Chapel is an essential part of fulfilling John Brown University's basic mission of providing a "Christ-centered higher education", and is therefore a requirement for all students. (See Student Handbook for chapel policy details.) The purpose of Chapel is to gather the University family in the context of worship to better know, love, and glorify God, to gain His perspective on our learning, and to grow together as a Christ-centered community while committing ourselves to serving in the world as Jesus' disciples. Chapel is not a replacement for participation in a local church, and students are encouraged to find a home church while at JBU. Students are also encouraged to take part in the various ministry and discipleship opportunities provided through the University Student Ministries Office.

Academic Integrity

As a Christian institution of higher education, John Brown University seeks to maintain the highest standards of academic integrity. Violations of these standards will result in substantial penalties. The University is responsible to clearly articulate the Academic Integrity Policy to students and faculty by publishing it in the Student Handbook and the Faculty Handbook and by informing all first-year students of this policy. Faculty are to reference the policy in their course syllabi. However, the primary responsibility for knowledge of and compliance with this policy rests with the student.

Grading System

Indication of each student's progress is reported regularly by instructors. The grading scale used as a basis for letter grades is established by the instructor of each course.

Grade Points per Semester Hour (effective Fall 1999)

A Superior Accomplishment	4.0
A-	3.7
B+	3.3
B Commendable Accomplishment	3.0
B-	2.7
C+	2.3
C Satisfactory Accomplishment	2.0
C-	1.7
D+	1.3
D Minimal Accomplishment	1.0
F Failure	0.0

The following are not included in grade point average:

I—Incomplete Work	S—Satisfactory
NC—No credit earned	U—Unsatisfactory
WP—Withdrew, passing	WF—Withdrew, failing
W—Withdrew	

An incomplete ('I') grade must be made up within thirty days after the official grade reporting date. After the thirty days, the incomplete grade will be changed to a grade of 'F'. In extenuating circumstances, the instructor may request an extension date from the Dean of Undergraduate Studies. An 'F' grade that results due to a grade of incomplete 'I' may be changed upon approval of the instructor and the Dean of Undergraduate Studies.

When an 'F' grade has been received (other than an incomplete 'I' grade changed to 'F'), credit cannot be secured for work without repetition of the entire course.

Internship Grading

Internships and practicums may be evaluated using standard letter grades. However, because of the subjective nature of the experiences, grades of 'S' or 'U' normally are assigned. Credit hours accrue in either case.

Grade Renewal

A student may repeat any course on his or her academic record with prior approval of the department and the registrar, with the understanding that all courses and grades will remain on the permanent record. However,

only one taking of the course may contribute hours to the total for graduation, and only the last grade received will be included in the calculation of the student's grade point average. If the student receives permission and renews a grade by means of transferring an equivalent course from another institution, the completed course is posted with a grade of 'CR', and any prior attempts are excluded from graduation hours and the grade point average.

SCHOLASTIC AWARDS

Recognition of Superior Achievement

Full-time students attaining certain standards of scholastic achievement are placed on the President's or the Dean's List of Distinguished Students at the end of each semester, and attention is drawn to them through various media. To qualify for the Dean's list, the student must have at least 3.4, and at least 3.8 for the President's list.

Degree Honors

Upon completion of the Associate's or Bachelor's degree, each graduate who has attained a cumulative grade point average of 3.6 or above is recognized with an appropriate degree honor. Eligibility is contingent upon completion of at least 60 semester hours of graded course work at John Brown University. Graduation honors are indicated on the diploma, and by the wearing of an appropriate medal on the gown during the commencement exercises.

Cum Laude—Grade point average at least 3.6

Magna Cum Laude—Grade point average at least 3.8

Summa Cum Laude—Grade point average at least 3.9

Students who have between 39 and 59 semester hours of graded course work at John Brown University and have a grade point average of 3.8 or higher will graduate "with distinction."

Senior Scholastic Honors

An engraved plaque is awarded to the graduate ranking highest among those majoring in each of the ten divisions. A grade point average of at least 3.4 is required.

University Honors Degree

Each student who has successfully completed twenty-one hours of honors courses (as outlined under Honors Scholars Program, p. 23) will be granted a diploma certifying that he or she has earned a University Honors Degree. Such graduates will be identified in the Commencement Program.

Vera and Spencer Bartlett Respect Awards

These awards, in memory of Vera and Spencer Bartlett, are presented each spring to students who are judged to best exemplify the greatest respect for God, for the United States of America, and for other people. To be eligible, a student must be a junior continuing into his or her senior year, a citizen of the United States, and must have average grades or better.

Alpha Chi

Membership in Alpha Chi honor scholarship society is open by invitation to outstanding juniors and seniors. The John Brown University chapter, Arkansas Lambda, is affiliated with the National Alpha Chi Council.

SCHOLASTIC PROBATION AND REQUIRED ACHIEVEMENT FOR CONTINUED ENROLLMENT

1. A student with a cumulative grade point average (CGPA) less than 2.0 will be placed on probation the following semester.
2. The maximum enrollment per semester for any student on scholastic probation is 15 semester hours. Students should understand that such limited enrollment may lengthen the time required to meet graduation requirements.
3. A student whose CGPA is still below 2.0 after being on probation for two successive semesters, or a student with less than a 1.0 semester GPA, will be suspended unless a petition for re-enrollment is approved by the Committee on Scholastic Petitions.
4. A student may enroll after one semester of academic suspension if a petition is approved by the Committee on Scholastic Petitions.
5. A student who is permitted to re-enroll after academic suspension may continue to re-enroll if satisfactory progress is being made toward a 2.0 CGPA as determined by the Committee on Scholastic Petitions.
6. A student on Scholastic Probation may remain eligible for some types of financial aid, if standards for Satisfactory Progress are met.
(See page 47.)

APPEAL PROCEDURE

Occasionally a student may wish to appeal an academic action such as a grade, a graduation requirement, or a withdrawal penalty. Such appeals should be made in writing to the appropriate Dean. In most cases the student should first request the support of his or her major adviser, department head, or division chair.

DEGREE REQUIREMENTS

John Brown University offers four-year courses leading to the following degrees: Bachelor of Science (B.S.), Bachelor of Arts (B.A.), Bachelor of Science in Engineering (B.S.Eng.), Bachelor of Science in Education (B.S.E.), and Bachelor of Music Education (B.Mus.E.). Also offered are two-year courses leading to the Associate of Arts (A.A.) and Associate of Science (A.S.) degrees.

Requirements which apply to all degree programs are set forth in this section. Requirements applicable to specific degree programs are stated in the curricular outlines which appear in the divisional sections of the catalog, except that teaching degree requirements are found in the Division of Education. Most departments also have available suggested schedules which indicate courses taken in each semester in a typical program. The final responsibility for meeting all degree requirements rests with the student.

REQUIREMENTS FOR THE BACHELOR'S DEGREE

Education at John Brown University

John Brown University provides an education that integrates the disciplinary studies selected by the student (the major field) with a more broadly based selection of educational experiences for each student. This combination of the specific with the more general is founded on JBU's educational philosophies and goals.

John Brown University holds that higher education and career preparation are not synonymous. While JBU has traditionally emphasized preparation for well-defined careers, it has done so within the context of a liberal arts college. Consequently, a John Brown University education consists of three elements: the Major, the Core Curriculum, and the Co-Curriculum. The courses in the Major prepare the student for a career or for graduate school, while the Core Curriculum presents a broad exposure to human learning, an appreciation of which is characteristic of the balanced, whole college graduate. Many aspects of the model of wholeness are not addressed in either the major or the Core. Therefore, the extra- or co-curricular aspect of the college experience—the Co-Curriculum—is an important component of JBU's education program.

THE CORE CURRICULUM

The notion of a core curriculum is rooted in a Christian understanding of humanity. As bearers of God's image, humans were created to be thinking, valuing, culture-forming beings. The traits that a core curriculum seeks to instill—a deeper understanding of creation and culture, a sharpened intellect,

a broadened imagination—enhance our ability to glorify our Creator. In short, liberally-educated Christians are better prepared to be image-bearers of God and effective agents of God’s kingdom in today’s world.

A core curriculum in the liberal arts and sciences, therefore, plays a central role in John Brown University. While not necessarily more important than other facets of the university (such as major and minor fields of study, chapel, co-curricular opportunities, and residence life), the core curriculum provides a common base of educational experience for all students and draws connections between the various fields of study that students will explore.

GOALS OF THE JOHN BROWN UNIVERSITY CORE CURRICULUM

The Core Curriculum seeks to equip students to . . .

HEAD

1. Apply biblical truth and a Christian worldview to all areas of study.
2. Appreciate the complexity and diversity of creation and culture.
3. Understand and apply multiple approaches to discovering truth.
4. Critically evaluate ideas and arguments.
5. Communicate effectively in speech and in writing.
6. Discern and appreciate beauty in the arts and sciences.
7. Draw connections between various subjects of study.
8. Become lifelong learners.

HEART

9. Develop a mature, discerning Christian faith.
10. Demonstrate Christian character in all areas of life.
11. Build and nurture healthy relationships.
12. Understand and practice emotional maturity.

HAND

13. Serve others.
14. Practice Christian stewardship of their bodies, time, and other resources.
15. Apply Christian ethics to society and the environment.
16. Participate through their vocation in God’s creative and redemptive purposes in the world.

In order to accomplish these goals, the Core Curriculum seeks a middle ground between the extremes of a common core and a cafeteria system. Its basic philosophy is to provide all students with a common set of core classes during their early years, allow them to choose from a variety of courses within basic subject areas during their middle years, and culminate their college experience with a series of upper level common courses, as shown below.

CORE CURRICULUM COURSES

1. Lower-Level Core Classes—25 hours

- BBL 1013 Old Testament Survey
- BBL 1023 New Testament Survey
- COR 1002 Gateway Seminar in Christian Scholarship
- COR 1012 Wellness
- EGL 1013 English I: Composition
- EGL 1023 English II: Literary Analysis and Research
- HST 1013 Western Civilization I
- HST 1023 Western Civilization II
- POL 2113 American Government

2. Elective Core—19-22 hours

Students select from among the approved course offerings that satisfy requirements in the following areas. These offerings are subject to change as new courses are developed. Students should consult the online catalog for the current list.

• Wellness activity—1 hour

- COR 1121-91 Choose one of the eight options

• Natural Science—6 hours (students select 3 hours from Life Sciences and 3 hours from Physical Sciences)

Life Science options:

- BIO 1003 Biological Science
- BIO 1124 Cell Biology
- BIO 2134 Animal Biology

Physical Science options:

- CHM 1014 Fundamentals of Chemistry
- CHM 1124 General Chemistry I
- GSC 1023 Physical Science
- PHY 2114 General Physics I

• Mathematics—3 hours

- BUS 2193 Business Statistics
- MTH 1003 Quantitative Literacy
- MTH 1123 Survey of Calculus
- MTH 1134 Calculus I
- MTH 2103 Statistics with Computer Applications
- PSY 2383 Introductory Statistics

• Philosophy—3 hours

- POL 3003 Political Philosophy
- RPH 3003 Introduction to Philosophy

• The Arts—3 hours

- ART 2153 European Art and Culture
- ART 2163 Irish Art and Culture
- ART 2233 Art History
- ART 2333 Art, Design, and Creativity
- ART 2343 European Art Tour

(continued on next page)

- COM 2883 Masterpieces of Film
- MUS 1203 Liberal Arts Foundations for the Musician
- MUS 2003 The Arts in Western Culture
- MUS 3203 Music Appreciation
- Social Science—3 hours
 - ECN 2003 Basic Economics
 - ECN 2123 Principles of Macroeconomics
 - ECN 2533 Economics and Society of Central America
 - ECN 2543 Economics and Society of Ireland
 - ED 2133 Educational Psychology
 - FAM 2123 Psychology of Relationship Development
 - PSY 1013 Introductory Psychology
- Global Studies—0-3 hours, fulfilled by one of the following:
 - BBL 3583 Perspectives on the World Christian Movement
 - ECN 4103 International Economics
 - EN 3513 International Problem Solving
 - GSC 3003 Global Stewardship
 - ICS 2991/93 Study Abroad Experience
 - ICS 3173 History and Culture of Ireland
 - ICS 4113 Intercultural Family Seminar
 - LS 1593 Contemporary Latin America
 - POL 3413 Selected Topics: The European Union
 - SST 1133 Cultural Geography
 - SST 1143 World Regional Geography
 - > A three-hour regionally-focused or cross-cultural academic course
 - > Three hours of intermediate level modern foreign language
 - > A four-week minimum study abroad program
 - > A cross-cultural internship as determined by one's major or minor
- 3. Upper-Level Core Classes—8 hours
 - BBL 3003 Evangelical Theology
 - EGL 4003 Masterpieces of Literature
 - BBL 4002 Capstone Seminar in Christian Life

Sequencing of Core Curriculum Courses

The Core Curriculum is designed to function as an interrelated whole. Thus the courses are sequenced, with some serving as prerequisites to others. Instructors in upper-level courses are able to assume a base of knowledge and understanding, and use that as a foundation on which to build. In particular, the Gateway Seminar in Christian Scholarship introduces students to the Core Curriculum and establishes a Christian framework for education. The Capstone Seminar in Christian Life culminates the Core Curriculum experience and prepares students to be active participants in the Kingdom of God. Thus, the Capstone Seminar must be taken at John Brown University.

Core Curriculum Course Exemptions

Students in some degree programs that are subject to external accreditation requirements are granted exemptions to certain core curriculum courses. All such exemptions are listed in the catalog section pertaining to the particular degree program.

THE CO-CURRICULUM

Complementary to and supportive of the Core Curriculum is the Co-Curriculum. The Core and Co-Curriculum have many of the same goals, some of which, especially those of the Spiritual, Social, and Emotional dimensions, are more strongly addressed through the Co-Curriculum. Co-curricular components include Freshman Orientation, the Chapel program, student organizations (e.g., SGA, Cause Ministries, Residence Hall Associations), growth and support groups (Passion), lectureships and other special events, counseling, the Career Development Center, the Learning Assistance Program, forums and other out-of-class programs presented by the Faculty and Staff, the Lyceum Artists Series, intramural sports, Residence Life programs, programming for married students, the Soderquist Center, the Center for Marriage and Family Studies, and the student leadership programs.

The Core Curriculum and Co-Curriculum are mutually reinforcing and interdependent.

ADDITIONAL REQUIREMENTS FOR THE BACCALAUREATE DEGREE

Entrance Assessment

All entering students, including transfers, are required to participate in appropriate assessment activities. These include, but are not limited to, the CIRP (a freshman survey used nationwide) and the Student Relationship Assessment. Students are re-tested as Seniors (see "Exit Assessment" on page 71), and the results are used as the basis of a longitudinal study.

Major Subject Area

The undergraduate major defines the primary focus for a Bachelor's degree. Every Bachelor's degree is associated with the fulfillment of the requirements of at least one major program. Typically, requirements for a major program constitute about one third of the Bachelor's degree requirements, the Core Curriculum another third, and the remaining third of the Bachelor's degree is available for supporting coursework, electives, or minors in fields outside the major. Some majors, especially those programs designed to prepare students for specific professions (e.g., Construction Management and Education), may require most of the course credits not

used to meet Core Curriculum requirements, while those programs most oriented toward the liberal arts will generally seek to maximize the opportunities for students to select from a broad range of coursework.

Each Bachelor's degree program requires a minimum of 36 semester hours in the major field, including a minimum of 18 hours of courses of junior-senior level, at least two courses of which must be taken in residence at John Brown University. The Division Chair or Department Head has the prerogative of approving substitutions for courses specified by a major department.

In order to ensure that the major field constitutes a unique body of credit, the major field must include 24 or more semester hours of coursework not counting toward any other degree requirements in the major field, Core Curriculum, or other majors/minors/concentrations.

Most Bachelor's degrees require a minimum grade point average of 2.25 for major area course work. The Division of Education requires a 2.5 average for professional education and specialized field courses.

Minor Subject Area

An undergraduate minor is a formally recognized aggregate of courses in a designated secondary subject area, discipline, or interdisciplinary program usually outside of (but often complementing) the student's degree major and in which knowledge is gained in a coherent pattern of courses.

Completion of a minor requires 18-21 semester hours, in accordance with the department's specifications, including at least 6 hours of junior-senior level courses. In order to ensure that the minor field constitutes a unique body of credit, the minor field must include 12 or more semester hours of coursework not counting toward any other degree requirements in the major field, Core Curriculum, or other minors/concentrations. The minimum grade point average for course work in the minor is 2.0.

Junior-Senior Courses

Each candidate for a bachelor's degree is required to submit a minimum of 35 hours in upper-division (junior-senior) courses, identified by numbers 3000 and above. Included in this total are the 8 upper division hours specified in the Core Curriculum, courses in the major and minor fields, as well as electives.

Foreign Language

In general, Bachelor of Arts curricula specify twelve semester hours in one foreign language; however, a specific curriculum may permit a combination

of two languages. New Testament Greek fulfills the language requirement in the Biblical Studies curricula and may substitute for modern foreign language in other majors, given written approval of the department head. High school or other credit in languages may establish a waiver of part of this requirement.

Most Bachelor of Science programs do not require foreign language.

Minimum Total Semester Hours

Completion of any Bachelor's degree at John Brown University requires at least 124 hours of academic credit. Certain programs exceed the minimum.

Sufficient courses must be completed to offset any deficiency in total number of semester hours, in addition to all other specific requirements, preferably in an area which will enrich and broaden the student's acquaintance with the major areas of knowledge and/or strengthen mastery of a field of concentration.

Grade Point Average

The grade point average of all degree work must be at least 2.0, in the minor subject at least 2.0, and in the major subject at least 2.25. Education Division programs require a cumulative GPA of at least 2.5, and at least 2.5 in professional education, the teaching field, and any other state-required courses.

Exit Assessment

All seniors are required to participate in designated assessment activities as a condition of graduation. Such activities may include, but are not limited to, the CCS (a survey of college seniors used nationwide), a standardized test in the student's major field, and exit interviews with faculty members in the student's major department and/or members of the Core Curriculum Committee.

Application for Graduation

An Application for Graduation form, available at the Registrar's Office, should be completed when registering for the final semester in residence before completion of degree requirements. This application provides information regarding billing of the graduation fee and exit assessment requirements, a final check of the student's name as it is to appear on the diploma and in the commencement program.

Participation in Commencement Exercises

Degree candidates may participate in commencement exercises only upon completion of all degree requirements no later than the last day of the semester. Any course work in progress at other institutions must be completed during terms ending no later than one week following JBU commencement. If grades for the transfer work will not be reported at least eight weeks prior to commencement, the student must provide to the transferring institution a Commencement Participation Form, available from the JBU Registrar, confirming that the student is projected to pass each course with a minimum grade of 'C'. The Commencement Participation Form is to be submitted by the transferring institution directly to the JBU Registrar no later than eight weeks prior to commencement. Without the timely submission of the form, the student will not be eligible to participate.

Students not enrolled at JBU during the semester in which they plan to graduate must contact the Registrar's Office in writing during the first two weeks of the term, declaring their intention to participate in Commencement. Failure to do so may result in the student not being listed in the printed program.

Eligibility to participate in commencement is limited to the commencement at the end of the student's final semester in attendance or the commencement at the end of the following semester. Furthermore, participation eligibility is dependent upon compliance with all of the deadlines posted on the John Brown University commencement website.

Residence Requirements

Fulfillment of the residence requirements for a bachelor's degree from John Brown University consists of the following:

1. Completion after achievement of junior standing of at least two full-time semesters in residence.
2. Completion by means of courses taken in residence of at least 39 of the final 45 semester hours of credit presented in fulfillment of degree requirements.
3. Completion in residence of at least two junior-senior level courses constituting four or more credit hours in the major field.

Residence requirements may be modified to accommodate students in Pre-Medical and Pre-Dental programs.

Correspondence and Extension Work

A maximum of 30 hours of degree credit may be earned through correspondence and extension work. Each course must include a proctored exam and must be approved in advance by the major adviser and Registrar. Approval forms are available in the Registrar's Office.

The chairperson of the Education Division must approve all correspondence courses related to professional education.

Transfer of Credit

Credit which has been earned at another institution will be reviewed by the Registrar and the appropriate division faculty, and the applicability to courses in the chosen degree program will be determined. Each course accepted for transfer must have a minimum grade of 'C'. All work completed at previous institutions will be posted as 'CR' on the student's JBU transcript. Thus, only JBU course work will apply toward the student's grade point average.

Credits from institutions which are not regionally accredited may be accepted provisionally. After the student completes one full-time semester at John Brown University with a GPA of 2.0 or better, the transfer credits are evaluated, possibly requiring formal or informal testing.

Credits earned prior to five years before the date of application may not be accepted.

Currently enrolled students planning to take summer courses or correspondence work at other institutions must receive prior written approval of the major adviser and the registrar. Official course descriptions of proposed work are required.

Maximum Experiential Credits

The maximum total credit allowed for **vocal and instrumental ensembles** toward the requirements of a bachelor's degree is eight hours for music majors and four hours for non-music majors; two hours may apply to associate's degrees. The maximum allowed for **broadcasting and journalism practicums** is twelve hours toward bachelor's degrees in Communications, six toward other bachelor's degrees or associate's degrees in Communications, and three toward other associate programs. Most students pursuing biblical degrees are required to earn four **Biblical Studies internship** credits; however, these students are permitted to earn as many as six such hours, and the Youth Ministry degree requires a nine-credit experience. Majors outside the Division may include a maximum of three Biblical Studies internship hours.

Requirements for Additional Bachelor's Degrees

For two Bachelor's degrees, a minimum of 154 semester hours must be completed, incorporating all program specifications and the full Core Curriculum requirements for both degrees. At least two courses of junior-senior level in the second major field taken in residence at John Brown University. A maximum of 36 credits by exam may be included. All

other stipulations of the residence requirements apply to the second as well as to the first degree. A third Bachelor's degree requires completion of a minimum of 184 semester hours.

Graduation Requirements after Extended Absence

In general, a student is required to graduate under the requirements of a catalog which is current at the time of graduation. Current catalogs are those dated for the year in which a student's degree is conferred and for the four preceding years.

A student who, after an extended absence, desires to complete graduation requirements under a catalog which was in effect while the student was in residence at JBU is subject to the following:

1. The student must meet the requirements in the major field as listed in a current catalog completing in the five years prior to graduation a minimum of six semester hours in the major field (as approved by the major department).
2. If general education requirements were completed under the older catalog, the general education requirements of a current catalog are considered met. In areas (biblical studies, social studies, natural science, etc.) where not all general education requirements were completed, current catalog requirements must be met.
3. A student completing one of the teacher education curricula must meet Arkansas certification requirements in effect at the time of graduation.
4. All provisions of the residence requirement must be met.

Fresh Start Policy

The student who re-enrolls in the University after an absence of seven or more years and successfully completes a full-time semester may request the Academic Dean for a "Fresh Start". If the request is approved, the JBU grade point average used as basis for good academic standing, financial aid eligibility, and minimum JBU g.p.a. for graduation will exclude all credits earned prior to the absence. In effect, the Fresh Start treats early JBU work as transfer work. Of all courses earned in the first period of attendance, only those with grades of 'A,' 'B,' 'C,' or 'S' may be counted toward the degree.

REQUIREMENTS FOR THE ASSOCIATE'S DEGREE

Every program requires at least 62 semester hours of credit, and it should be possible to complete any of the degrees in four semesters. Each two-year degree program carries general education requirements, requirements specified by the department, and residence requirements.

The final responsibility for meeting all degree requirements rests with the student.

General Education Requirements for the Associate's Degree

The following courses in the University Core Curriculum must be completed by all students pursuing Associate's degrees:

- BBL 1013 Old Testament Survey
- BBL 1023 New Testament Survey
- COR 1002 Gateway Seminar in Christian Scholarship
- COR 1012 Wellness
- EGL 1013 English I: Composition
- EGL 1023 English II: Literary Analysis
- HST 10_3 Survey of Western Civilization I or II
- Mathematics—One of the following:
 - MTH 1003 Quantitative Literacy
 - MTH 1123 Survey of Calculus
 - MTH 1134 Calculus I
 - MTH 2103 Statistics with Computer Applications
 - PSY 2383 Introductory Statistics
 - BUS 2193 Business Statistics
- Social Science—One of the following:
 - BUS 4133 Economics and Society of Central America
 - ECN 2003 Basic Economics
 - ED 2133 Educational Psychology
 - FAM 2123 Psychology of Relationship Development
 - PSY 1013 Introductory Psychology
- Natural Science—One of the following:
 - BIO 1003 Biological Science
 - BIO 1124 Cell Biology
 - BIO 2134 Animal Biology
 - CHM 1014 Fundamentals of Chemistry
 - CHM 1124 General Chemistry I
 - GSC 1023 Physical Science
 - PHY 1114 Fundamentals of Physics
 - PHY 2114 General Physics I

Residence Requirements

Students in Associate's degree programs must complete two or more full-time semesters at John Brown University. At least 18 of the last 24 hours presented in fulfillment of degree requirements must be taken in residence. At least two courses totaling four credit hours in the major field or emphasis must be taken at John Brown University.

Correspondence and Extension Work

A maximum of 15 hours of credit may be allowed for extension work, including examinations for the establishment of credit. (See page 72 for details on validating such work.)

Grade Point Average

The grade point average must be at least 2.0 in work presented for an associate degree, and at least 2.0 in the major subject or emphasis.

Maximum Experiential Credits

A limited number of credits for music ensembles, communications practicums, and guided field experience may be counted in the minimum hours for an associate's degree. See regulations on page 73.

Application for Graduation

An Application for Graduation form, available at the Registrar's Office, should be completed when registering for the final semester in residence before completion of degree requirements. This application provides information regarding billing of the graduation fee and exit assessment requirements, a final check of the student's name as it is to appear on the diploma and in the commencement program.

Participation in Commencement Exercises

Degree candidates may participate in commencement exercises only upon completion of all degree requirements no later than the last day of the semester. Any course work in progress at other institutions must be completed during terms ending no later than one week following JBU commencement. If grades for the transfer work will not be reported at least four weeks prior to commencement, the student must provide to the transferring institution a Commencement Participation Form, available from the JBU Registrar, confirming that the student is projected to pass each course with a minimum grade of 'C'. The Commencement Participation Form is to be submitted by the transferring institution directly to the JBU Registrar no earlier than six weeks nor later than four weeks prior to commencement. Without this timely documentation of acceptable passing status, the student will not be eligible to participate.

Requirements for a Second Associate's Degree

1. Minimum of 90 semester hours
2. All requirements for both degrees
3. Six hours taken in residence in second major field
4. All other provisions of the residence requirements for the first degree

DIVISION OF
BIBLICAL STUDIES



DIVISION OF
BIBLICAL STUDIES

Allen, C. Balzer, Blankenship, Brisben (chair), Castleman, R. Habermas, G. Johnson, Kidd, Klotz, D. Lambert, Lenschow, McKinnon, Osmon, Vila

The mission of the Biblical Studies Division to the University community is three-fold:

1) To equip each student at JBU to be biblically literate, historically rooted, theologically reflective, doctrinally sound, and maturing in Christ-like formation in all relationships for the glory of God. This aspect of the mission is accomplished primarily by offering fourteen hours of course work in the University Core Curriculum—

Old Testament Survey
New Testament Survey
Evangelical Theology
Introduction to Philosophy
Capstone Seminar in Christian Formation

2) To equip specifically for vocational service those students who have chosen one of the major courses of study offered by the Division.

3) To prepare students for seminary or graduate studies in fields related to their areas of study.

DEPARTMENT OF BIBLE, RELIGION, AND PHILOSOPHY
(SYMBOLS: BBL, RPH)

Knowledge of the Bible is essential for effective Christian living as well as for any type of Christian work, whether one plans to attend graduate school or enter directly into ministry. The department seeks to help each student examine the scriptural basis for the faith and to guide the student in the use of basic tools for grasping the content and application of God's Word. Students are encouraged to think carefully and be intellectually honest while affirming the place of sincere Christian faith in the pursuit of truth. The department of Bible, Religion, and Philosophy offers a major and a minor in Biblical and Theological Studies and minors in Religion and Philosophy, and New Testament Greek.

Requirements for the Bachelor of Arts (B.A.) degree with major in Biblical and Theological Studies

The major in Biblical and Theological Studies is designed to equip those who are planning to enter directly into ministry or further their studies in seminary or graduate school. The curriculum provides important content in biblical studies, theology, Church history and related disciplines. Students majoring in Biblical and Theological Studies must successfully complete twelve hours of language studies, including at least two semesters of New Testament Greek.

- 1. University Core Curriculum—56 hours. See page 67.
Division requires BBL 4003 instead of 4002.
- 2. Divisional Core—9 hours
 - BBL 34_3 A New Testament book study
 - CMN 2213 Foundations and Practice of Christian Ministry
 - RPH 3323 Philosophy of the Christian Faith
- 3. Major Field—39 hours
 - BBL 2513 Elementary New Testament Greek I
 - BBL 2523 Elementary New Testament Greek II
 - BBL 3513 Syntax of New Testament Greek I *
 - BBL 3523 Syntax of New Testament Greek II *
 - * A 6-hour sequence in Latin, French, or German may replace BBL 3513 and 3523.*
 - BBL 36_3 An Old Testament book study
 - BBL 36_3 An Old Testament book study
 - BBL 34_3 A New Testament book study
 - BBL 3363 History of the Christian Church I
 - BBL 3373 History of the Christian Church II
 - BBL 4473 Seminar in Biblical Studies
 - BBL 4493 Seminar in Theological Studies
 - RPH 4423 Ethics
 - RPH 4433 Christian Apologetics
- 4. Electives as necessary to complete minimum semester hours.
Minimum total semester hours124

Requirements for minor in Biblical and Theological Studies

The student must complete successfully a minimum of 21 hours from among classes listed as BBL or RPH, beyond the University Core. These must include BBL 34_3, BBL 36_3, BBL 3363, BBL 3373, and either BBL 4493 or BBL 4473.

Requirements for minor in Religion and Philosophy

The student must complete successfully a minimum of 21 hours from among classes listed as RPH or BBL, beyond the University Core. These must include RPH 3323, 3333, 4423, and 4433, and either 3533 or 3543.

Requirements for minor in New Testament Greek

The student must complete successfully a minimum of 21 hours of classes, including BBL 2513, 2523, 3513, and 3523, LS 3173, and 6 more hours from among BBL 4512 Greek Reading and Exegesis and BBL 4581, 4582 or 4583 Selected Topics in New Testament Greek.

DEPARTMENT OF CHRISTIAN MINISTRY

(SYMBOL: CMN)

The purpose of the Department of Christian Ministry is to equip the student with the foundational knowledge and the practical skills for vocational ministry or for graduate study in the field of Christian Education. It is the intent of the Department to produce graduates who are spiritually and professionally qualified to serve as youth ministers, directors of children and family ministries, camp directors, and parachurch workers.

Requirements for the Bachelor of Science (B.S.) degree with major in Children and Family Ministries

Students who major in Children and Family Ministries will be theologically, theoretically, and practically prepared to work with children and families in a wide variety of ministry settings: international and domestic parachurch organizations, Christian care facilities for abused or special needs children, foster care group settings, and mission settings as well as churches. Nurturing spiritual development in children and offering support for families is the primary focus of this major.

The degree in children and Family Ministries provides an excellent foundation for graduate study in educational ministries, spiritual formation, family studies, and other related fields.

1. University Core Curriculum—56 hours. See page 67.
Division requires BBL 4003 instead of 4002.
2. Divisional Core—9 hours
 - BBL 34_3 A New Testament book study
 - CMN 2213 Foundations and Practice of Christian Ministry
 - RPH 3323 Philosophy of the Christian Faith
3. Major Field—37 hours
 - BBL 36_3 An Old Testament book study
 - CMN 2263 Discipleship and Evangelism
 - CMN 2303 Creating Curriculum for Children in Christian Settings
 - CMN 3253 Foundations and Practice of Children's Ministry
 - CMN 3453 Nurturing Spiritual Development in Children
 - CMN 4443 Critical Concerns with Adolescents

(continued on next page)

- CMN 4463 Senior Seminar in Children and Family Ministry
- CMN 4493 Foundations and Practice of Family and Adult Ministries

- FAM 2133 Introduction to Family Science
- FAM 3133 Marriage and Family Living
- Internship—4 hours from CMN 4611, 4612, 4614

One of the following:

- FAM 3243 Family Sexuality
- FAM 4253 Family Communication

4. Minor in another ministry or theological area, or other approved field.
5. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for minor in Children and Family Ministry

A minimum of 18 hours, including CMN 2213, 2303, 3253, 3453, and 4493; and FAM 2133.

Requirements for the Bachelor of Science (B.S.) degree with major in Outdoor Leadership Ministries

The major in Outdoor Leadership Ministries is designed to produce outdoor ministry educators and leaders equipped with sound judgment, appropriate technical ability, and effective teaching and facilitation competencies to create safe outdoor learning environments in which to nurture spiritual formation. Ministry opportunities include both national and international settings as camp program directors, wilderness guides and instructors, experiential learning and challenge course facilitators, outdoor educators, conference and retreat programmers, and leaders for children-, youth-, and family-serving organizations such as YMCA, Campfire, Scouting, and Young Life. Opportunities to earn certifications in Wilderness First Responder, Leave No Trace, Outdoor Leadership, and Outdoor Education are incorporated into the curriculum.

1. University Core Curriculum—56 hours. See page 67.
Division requires BBL 4003 instead of 4002.
2. Divisional Core—9 hours
 - BBL 34_3 A New Testament book study
 - CMN 2213 Foundations and Practice of Christian Ministry
 - RPH 3323 Philosophy of the Christian Faith
3. Major Field—39 hours
 - CMN 1632 WILD Adventure Experience
 - CMN 2223 Challenge Course Programs and Management
 - CMN 2373 Principles and Practices of Adventure Education
 - CMN 2383 Outdoor Living Skills
 - CMN 3153 Philosophy and Methods of Outdoor Education

- CMN 3213 Camp Leadership and Management
- CMN 3263 Discipleship Development and Outdoor Ministries
- CMN 3690 Practicum: Outdoor Pursuits Instruction
- CMN 4113 Wilderness First Responder
- CMN 4534 Expedition Leadership
- CMN 4163 Senior Seminar in Outdoor Leadership Ministries
- Internship—3 hours from CMN 4651, 4652, 4653

One of the following:

- CMN 2313 Christian Education with Adolescents
- CMN 2263 Discipleship and Evangelism
- CMN 3253 Foundations and Practice of Children’s Ministry
- CMN 3453 Nurturing Spiritual Development in Children
- CMN 4493 Foundations and Practices of Adult and Family Ministries

One of the following:

- CMN 3313 Foundations and Practice of Youth Ministry
- CMN 4443 Critical Concerns with Adolescents
- MGT 2173 Principles of Management
- PSY 2413 Developmental Psychology
- PSY 3423 Social Psychology

4. Minor Field or Electives as necessary to complete minimum semester hours
 Minimum total semester hours124

Requirements for minor in Outdoor Leadership Ministries

A minimum of 21 hours from the Outdoor Leadership Ministries Major and the Divisional Core including the following:

- CMN 1632 WILD Adventure Program
- CMN 2213 Foundations and Practice of Christian Ministry
- CMN 2223 Challenge Course Programs and Management
- CMN 2373 Principles and Practices of Adventure Education
- CMN 2383 Outdoor Living Skills
- CMN 3213 Camp Leadership and Management
- CMN 3263 Discipleship Development and Outdoor Ministries
- CMN 4651 Internship in Outdoor Leadership Ministries

Requirements for the Bachelor of Science (B.S.) degree with major in Youth Ministries

The Youth Ministries major is specifically designed for those students who are preparing for vocational youth ministry in church or para-church settings. Students are exposed to a broad range of topics and are given the opportunity to acquire and develop skills directly related to ministry with the contemporary youth culture.

- 1. University Core Curriculum—56 hours. See page 67.
Division requires BBL 4003 instead of 4002.
 - 2. Divisional Core—9 hours
 - BBL 34_3 A New Testament book study
 - CMN 2213 Foundations and Practice of Christian Ministry
 - RPH 3323 Philosophy of the Christian Faith
 - 3. Major Field—39 hours
 - CMN 2263 Discipleship and Evangelism
 - CMN 2313 Christian Education with Adolescents
 - CMN 3313 Foundations and Practice of Youth Ministry
 - CMN 3323 Youth Ministry Organization and Planning
 - CMN 3463 Youth Culture
 - CMN 4433 Senior Seminar
 - CMN 4443 Critical Concerns with Adolescents
 - CMN 4619 Internship in Youth Ministry
 - FAM 2133 Introduction to Family Science
 - ___3 Children’s Ministry Elective
 - ___3 Outdoor Leadership Ministry Elective
 - 4. Minor in Biblical & Theological Studies or other approved field
 - 5. Electives as necessary to complete minimum semester hours
- Minimum total semester hours124

Requirements for minor in Youth Ministries

A minimum of 20 hours from the Youth Ministries Major and the Divisional Core, including CMN 2213, 2313, 3313, 3323, 3463, 4443, and 4612.

Requirements for Bachelor of Science (B.S.) degree with major in Youth and Worship Ministries

The Youth & Worship Ministries degree incorporates a focus on worship with a call to minister to teenagers. Graduates of the program will be prepared to serve in a variety of settings where these dual gifts may be applied.

1. University Core Curriculum—56 hours. See page 67.
Division requires BBL 4003 instead of 4002.
 2. Divisional Core—9 hours
 - BBL 34_3 A New Testament book study
 - CMN 2213 Foundations and Practice of Christian Ministry
 - RPH 3323 Philosophy of the Christian Faith
 3. Worship Ministry Core—18 hours
 - MUS 1111 Musicianship I
 - MUS 1113 Music Theory I
 - MUS 2503 Worship Ministries I: Orientation
 - MUS 2513 Worship Ministries II: Materials and Methods
 - MUS 3563 Audio Technology I
 - MUS ___2 hours class/applied piano
 - MUS ___2 hours class/applied voice
 One of the following:
 - MUS 3301 Choral Techniques
 - MUS 3411 Conducting I
 4. Ministry Core—18 hours
 - BBL 3223 Communicating the Christian Message
 - BBL 3363 History of the Christian Church I
 - BBL 3373 History of the Christian Church II
 - BBL 36_3 An Old Testament book study
 - CMN 2263 Discipleship and Evangelism
 - CMN 4433 Senior Seminar
 5. Youth Ministry Core—24 hours
 - CMN 2313 Christian Education with Adolescents
 - CMN 3313 Foundations & Practice of Youth Ministry
 - CMN 3323 Youth Ministry Organization & Planning
 - CMN 3463 Youth Culture
 - CMN 4443 Critical Concerns with Adolescents
 - CMN 4619 Internship in Youth Ministry
 6. Electives as necessary to complete minimum semester hours
- Minimum total semester hours125

DEPARTMENT OF FAMILY STUDIES

(SYMBOL: FAM)

The diaconal service of caring for widows, orphans, and the poor has historically been a ministry of the Church. The Department of Family Studies seeks to better equip for this service by offering a bachelor's program in Family and Human Services and a minor in Family Studies. This innovative curriculum, which follows the course guidelines of the National Council for Family Relations, incorporates Family Studies courses

with coursework from other departments to provide the student with theological, theoretical, and practical training. Students who have earned the degree in Family and Human Services serve in a variety of capacities such as family educators, family caseworkers, social workers, youth counselors, mental health technicians, dispute mediators, foster care caseworkers, and adoption and placement counselors. The degree in Family and Human Services provides an excellent foundation for graduate programs in marriage and family therapy, professional counseling, social work, and other related fields.

Requirements for the Bachelor of Science (B.S.) degree with major in Family and Human Services

- 1. University Core Curriculum—56 hours. See page 67.
 Division requires BBL 4003 instead of 4002.
 Social Science component must be ECN 2003.
 Mathematics component advised to be PSY 2383 (Prerequisite: PSY 1013).
 - 2. Divisional Core—9 hours
 BBL 34_3 A New Testament book study
 CMN 2213 Foundations and Practice of Christian Ministry
 RPH 3323 Philosophy of the Christian Faith
 - 3. Major Field—37 hours
 FAM 2133 Introduction to Family Science
 FAM 3133 Marriage and Family Living
 FAM 3243 Family Sexuality
 FAM 4253 Family Communication
 FAM 4433 Senior Seminar
 FAM 4443 Critical Concerns with Adolescents
 FAM 4453 Family Law and Society
 ICS 4113 Intercultural Family Seminar
 RPH 4423 Ethics
 Internship—4 hours from FAM 4611, 4612, 4614
 One of the following Lifespan Development choices:
 A. FAM 2413 Developmental Psychology (Prerequisite: PSY 1013)
 B. CMN 3453 Nurturing Spiritual Development in Children
 CMN 4493 Foundations and Practice of Adult and Family Ministries
 C. ED 2113 Human Growth and Development
 CMN 4493 Foundations and Practice of Adult and Family Ministries
 - 4. Minor in Psychology, a ministry field, or other approved area
 - 5. Electives as necessary to complete minimum semester hours
- Minimum total semester hours124

Requirements for minor in Family Studies

A minimum of 18 hours: FAM 2133, 3133, 4253, 4453; RPH 4423; plus three hours of approved electives from FAM, CMN, or BBL, or PSY 2393

DEPARTMENT OF INTERCULTURAL STUDIES

(SYMBOL: ICS)

The Intercultural Studies program is designed for students focusing on cross-cultural careers in missions, translation, community development, international business, and the teaching of English as a second language.

The B.A. in Intercultural Studies requires a minor field, and students are encouraged to diversify their academic experience by adding a minor that enhances the ICS degree, in keeping with their vocational goals. For example, an ICS major might choose the TESOL minor if she/he wants to teach English in an international setting.

Requirements for the Bachelor of Arts (B.A.) degree with major in Intercultural Studies

1. University Core Curriculum—53 hours. See page 67.
 Division requires BBL 4003 instead of 4002.
 The Global Studies component is covered by program requirements.
2. Divisional Core—9 hours
 BBL 34_3 A New Testament book study
 CMN 2213 Foundations and Practice of Christian Ministry
 RPH 3323 Philosophy of the Christian Faith
3. Intercultural Studies Major Core—15 hours
 ICS 2113 Intercultural Communication
 ICS 4183 Cultural Values Seminar
 CMN 4613 Intercultural Internship
 SST 2123 Cultural Anthropology
 One of the following:
 RPH 3533 Introduction to Islam
 RPH 3543 Introduction to Hinduism and Buddhism
4. One of the following Concentrations—12 hours
 A. Cultural Leadership
 ICS 3133 Cultural Research Methods
 ICS 4133 Intercultural Leadership Skills
 POL 3353 International Relations
 SST 1143 World Regional Geography

(continued on next page)

B. Intercultural Ministries

CMN 2263 Discipleship and Evangelism

RPH 4433 Apologetics

One of the following:

BBL 3583 Perspectives on the World Christian Movement

BBL 3303 Theology of Missions

One of the following:

ICS 4133 Intercultural Leadership Skills

ICS 3243 Principles and Philosophy of Community Development

C. Community Development

ICS 3133 Cultural Research Methods

ICS 3243 Principles and Philosophy of Community Development

ICS 3263 Theory and Practice of Appropriate Technology I

ICS 3283 Theory and Practice of Appropriate Technology II

5. Modern Foreign Language—12 hours

With approval of the ICS advisor and Division Chair, students may substitute courses in New Testament Greek or Biblical Hebrew for Modern Foreign Language, and LS 3173 may substitute for 3 hours of language.

6. Minor Field in TESOL, Linguistics, or other approved field

The 21 hours below meet John Brown University’s specifications for a TESOL minor, but do not meet state requirements for public school licensure. It is recommended that the courses be taken in the order in which they are listed here.

ICS 2113 Intercultural Communications

ED 2133 Educational Psychology

LS 3173 Introduction to Linguistics

EGL 3363 Advanced English Grammar

ED 3563 Second Language Acquisition for Teachers

ED 3583 Curriculum & Instruction: TESOL (Prerequisite: ED 2133)

ED 3183 Educational Assessment

7. Electives as necessary to complete minimum semester hours

Minimum semester hours124

Requirements for minor in Intercultural Studies

A minimum of 21 hours, including

ICS 2113 or SST 2123

BBL 34_3 or 36_3

An additional 15 hours of ICS, CMN, and RPH courses selected in accordance with the student’s vocational goals.

Coursework must include at least 6 hours of junior-senior level credit.

DIVISION OF
BUSINESS



DIVISION OF BUSINESS

Balla, Butts, Copeland, Hadley, Kennelley, McCullough, Moore, O'Brien, Rothfuss, Thoma, Timmons, Walenciak (chair)

John Brown University's basic mission is to provide Christ-centered education that prepares people to honor God and serve others by developing their intellectual, spiritual, and professional lives. Building upon this foundation, the Division of Business accepts the following as its own unique mission within the University: To advance the Kingdom by developing leaders of competence, character, and conscience through student-centered educational programs in Business.

Accordingly, the Division seeks to provide an educational experience for its majors characterized by

- * *the integration of faith with the learning process*
- * *a respect for the worth of the individual who is a unique product of God's creative power, endowed with unique gifts and abilities*
- * *an up-to-date curriculum addressing a body of knowledge vital to one's personal success in life as well as the ability to function effectively in an organizational context*
- * *a focus on the ability to process knowledge, to think analytically and logically to reach workable conclusions consistent with scriptural truth*
- * *an emphasis on people skills, recognizing that organizational success is dependent as much upon social interaction as it is upon one's knowledge*
- * *the philosophy that the "bottom line" is measured not in dollars or material wealth, but in terms of the Christian concept of stewardship, that our money is to be our servant rather than our ruler, and that only what we do for Christ has eternal value.*

DEGREE PROGRAMS

The Division of Business offers five undergraduate degree programs in a traditional format leading to the Bachelor of Science (B.S.) and to the Bachelor of Arts (B.A.): Accounting, Business Administration, International Business, Management, Marketing, and Sport Management. Students may also choose the following areas as minor fields of study: Accounting, Business Administration, Economics, Global Commerce, International Business, Leadership Studies, Marketing, and Professional Accounting Development. The Division of Business also partners with the Division of Graduate and Professional Studies to offer two degree programs in a nontraditional format for working adults leading to the Bachelor of Science

(B.S.): Business Information Systems and Organizational Management. These programs are described in the Graduate and Professional Studies Catalog and on the website <http://www.jbu.edu/advance/degrees/index.asp>. Finally, the Division of Business offers the Master of Science in Leadership and Ethics (M.S.L.E.) degree and the Master of Business Administration (M.B.A.) degree. See <http://www.jbu.edu/grad/degrees.asp> for degree specifications.

All degree programs of the Division of Business are accredited by the International Assembly for Collegiate Business Education (IACBE), <http://www.iacbe.org> (913-631-3009).

GRADUATION REQUIREMENTS FOR BACCALAUREATE DEGREES

Outcomes Assessment

As a condition for graduation, students in all baccalaureate programs within the Division of Business are required to take the Major Field Achievement Test in Business during their final year.

Divisional GPA

Students must achieve a cumulative grade point average of 2.25 in all Business Division course work and in each minor.

PREPARATION FOR THE M.B.A. DEGREE

The degree programs of the Division of Business are excellent preparation for the M.B.A. degree. The following courses are specific requirements for the M.B.A. degree at John Brown University.

ATG 1173	Financial and Managerial Accounting I
ATG 1183	Financial and Managerial Accounting II
BUS 4173	Business Finance
ECN 2113	Principles of Microeconomics
MKT 2143	Principles of Marketing

Students planning to enter the M.B.A. program at John Brown University should include these classes in their undergraduate academic plans so that all specific course prerequisites for the M.B.A. are met.

Students planning to enter an M.B.A. program at another university should check the specific prerequisite requirements of that program.

DEPARTMENT OF ACCOUNTING

(SYMBOL: ATG)

The Accounting degree helps develop a student's analytical and problem solving skills within the context of the financial aspects of a business enterprise. Such skills provide a foundation for those who seek to pursue additional studies leading to practice as a professional accountant. The accounting degree also provides a solid foundation for those who do not desire to practice as accountants but who wish to pursue a range of careers that require strong analytical skills, including law or working with organizations such as the FBI or the IRS.

Those students interested in practicing as professional accountants are strongly encouraged to declare the Professional Accounting Development minor. This minor is appropriate for those who aspire to become a Certified Internal Auditor, a Certified Management Accountant, or a Certified Public Accountant.

For students interested in taking the CPA exam, the State of Arkansas requires at least 150 semester hours resulting in a baccalaureate degree. Courses include (1) at least 30 semester hours of accounting with a minimum grade of "C" and (2) at least 24 semester hours in business courses (other than accounting) with a minimum grade of "C." Students choosing to sit for the CPA exam in another state should check for that state's specific requirements.

To fulfill the 150-hour requirement, students may wish to consider John Brown University's Master of Business Administration (MBA) or Master of Science in Leadership and Ethics (MSLE) programs, both of which are available in one- or two-year formats. Students working toward the CPA certification could potentially complete a baccalaureate degree and masters degree in five years and meet all requirements to sit for the CPA exam in Arkansas.

The Baccalaureate program in Accounting requires 124 minimum total semester hours including courses from three categories: (1) the University Core Curriculum, (2) the required major field courses, and (3) a minor field of study or electives sufficient to achieve the required minimum total hours.

Requirements for the Bachelor of Science (B.S.) degree with major in Accounting

1. University Core Curriculum—49 hours. See page 67.
The Mathematics and Social Science elective areas are covered by program requirements.

- 2. Required Major Field Courses—54 hours
 - ATG 1173 Financial and Managerial Accounting I
 - ATG 1183 Financial and Managerial Accounting II
 - ATG 2103 Intermediate Accounting I
 - ATG 2113 Intermediate Accounting II
 - BUS 2113 Financial Spreadsheets
 - BUS 2153 Financial Mathematics
 - BUS 2193 Business Statistics
 - BUS 3153 Applied Business Ethics
 - BUS 3993 Internship
 - BUS 4143 Business Law
 - BUS 4173 Business Finance
 - BUS 4993 Strategic Management
 - ECN 2113 Principles of Microeconomics
 - ECN 2123 Principles of Macroeconomics
 - MGT 2173 Principles of Management

Nine hours of accounting as advised selected from the following:

- ATG 3153 Income Tax Basics
- ATG 3163 Advanced Tax topics
- ATG 3173 Cost Accounting
- ATG 3183 Non-profit Accounting
- ATG 4153 Auditing
- ATG 4163 Advanced Accounting

3. Minor Field or Electives sufficient to complete minimum total hours

Minimum total semester hours124

Requirements for minor in Accounting

21 hours: ATG 1173, 1183, 2103, 2113; plus 6 additional hours of ATG electives; plus BUS 2113

Requirements for minor in Professional Accounting Development (recommended for Accounting majors)

21 hours: A minimum of 9 hours in ATG in addition to courses in the major, selected from 3153, 3163, 3173, 3183, 4153, 4163; plus BUS 1123, 3123, 3153; plus a minimum of 3 hours selected from ECN 3133, 3213, 4103

DEPARTMENT OF BUSINESS ADMINISTRATION
(SYMBOL: BUS)

The Business Administration degree is a versatile program appropriate for those who wish to operate their own business, enter the field of business as an employee of an existing firm, pursue a masters or law degree, or serve in church or nonprofit administration. Business Administration majors find themselves positioned for careers in various areas, or may choose to specialize by combining their major with a technical minor field of study, such as Digital Media Arts or Graphic Design. Students may also choose Business Administration as a minor field of study.

The Baccalaureate program in Business Administration requires 124 minimum total semester hours including courses from three categories: (1) the University Core Curriculum, (2) the required major field courses, and (3) a minor field of study or electives sufficient to achieve the required minimum total hours.

Requirements for the Bachelor of Science (B.S.) degree with major in Business Administration

1. University Core Curriculum—49 hours. See page 67.
Mathematics and Social Science are covered by program requirements.
 2. Required Major Field Courses—54 hours
 - ATG 1173 Financial and Managerial Accounting I
 - ATG 1183 Financial and Managerial Accounting II
 - BUS 1123 Business Communication
 - BUS 2153 Financial Mathematics
 - BUS 2193 Business Statistics
 - BUS 3153 Applied Business Ethics
 - BUS 3993 Internship
 - BUS 4143 Business Law
 - BUS 4173 Business Finance
 - BUS 4993 Strategic Management
 - ECN 2113 Principles of Microeconomics
 - ECN 2123 Principles of Macroeconomics
 - ECN 3133 Money and Banking
 - ECN 4103 International Economics
 - MGT 2173 Principles of Management
 - MKT 2143 Principles of Marketing
 - MTH 1113 College Algebra (or equivalent)

One of the following:

 - BUS 2113 Financial Spreadsheets
 - BUS 3123 Developing Applications with Access
 3. Minor Field or Electives sufficient to achieve the minimum total hours
- Minimum total semester hours124

Requirements for minor in Business Administration

21 hours: ATG 1163 or 1173; ECN 2113; nine hours of BUS, excluding 4993; six additional hours from the Division. At least six hours must be at the upper-division level.

DEPARTMENT OF ECONOMICS

(SYMBOL: ECN)

Economics is the social science of human choice. From individual lives to entire countries, our choices direct and determine our future. The general purpose of the Department of Economics at John Brown University is to acquaint students with the economic processes of modern societies, to provide them with a Christian perspective and framework to approach contemporary economic issues and problems, and to foster an ability to exercise good judgment with regard to societal issues. Students may choose Economics as a minor field of study.

Requirements for minor in Economics

21 hours: ECN 2113, 2123, 4993; plus a minimum of 12 additional hours of ECN electives

DEPARTMENT OF INTERNATIONAL BUSINESS

(SYMBOL: INT)

The International Business degree is a broad program of administrative and international studies designed to prepare students to function competently in international and multicultural business contexts. In addition to the campus curriculum, students have the opportunity to participate in overseas study and international internships. This program is enhanced by JBU's rich tradition of international student diversity.

The Bachelor of Arts degree with a major in International requires 124 minimum total semester hours including courses from three categories: (1) the University Core Curriculum, (2) the required major field courses, and (3) a minor field of study or electives sufficient to achieve the required minimum total hours.

International Business majors wishing to enhance their business career preparation may select a minor in Global Commerce.

International Business may also be selected as a minor field of study.

Requirements for the Bachelor of Science (B.A.) degree with major in International Business

1. University Core Curriculum—46 hours. See page 67.
 Mathematics, Social Science, and Global Studies Electives are covered by program requirements.
2. Required Major Field Courses—57 hours
 - ATG 1173 Financial and Managerial Accounting I
 - ATG 1183 Financial and Managerial Accounting II
 - BUS 2193 Business Statistics
 - BUS 3153 Applied Business Ethics
 - BUS 3993 Internship
 - BUS 4143 Business Law
 - BUS 4993 Strategic Management
 - ECN 2113 Principles of Microeconomics
 - ECN 2123 Principles of Macroeconomics
 - INT 3173 International Finance
 Foreign Language—12 hours, including three at Intermediate level.
 One of the following:
 - BUS 2113 Financial Spreadsheets
 - BUS 3123 Developing Applications with Access
 One of the following:
 - ECN 4103 International Economics
 - INT 3113 European Trade
 One of the following:
 - INT 2183 International Management
 - INT 2113 European Business Practices
 One of the following:
 - INT 3153 International Marketing
 - INT 4113 International Marketing Research
 One of the following:
 - ICS 3 hours as advised
 - BBL 3583 Perspectives on the World Christian Movement
3. Minor Field or Electives sufficient to achieve minimum total hours
 Minimum total semester hours124

Requirements for minor in International Business

21 hours: ATG 1163 or 1173; ECN 2113; nine hours of INT courses; an additional six hours from INT, BUS, and/or ECN. At least six hours of upper-division course work must be included.

Requirements for minor in Global Commerce (recommended for International Business majors)

21 hours: BUS 2153, 4173, and 4243; INT 2113, 3113, 4113; POL 3353

DEPARTMENT OF LEADERSHIP STUDIES

(SYMBOL: LDR)

The Christian community is uniquely positioned to address the need for leadership in the world today. The Division of Business offers a Leadership Studies Minor available and applicable to a wide variety of majors at John Brown University. It is designed to be cross-disciplinary in its approach, well-grounded in academic thought, and practical in its application.

The Leadership Studies Advisory Council, comprising faculty from a variety of academic arenas and professionals from the Soderquist Center, advises and provides direction for this effort.

The Leadership Studies Minor offers courses organized for maximum student benefit and flexibility covering the discipline of leadership at its core, its competencies, and in its specific academic and professional contexts.

Requirements for minor in Leadership Studies

The minor consists of 19 semester hours in leadership studies. Introduction to Leadership Studies (LDR 1553) is a prerequisite to all other leadership study courses and should be completed by the spring semester of the student's second year.

LDR 1553 Introduction to Leadership Studies

LDR 2551 Service Learning

LDR 2553 Leadership Competencies

LDR 3563 Organizational Behavior

LDR 4193 Leadership Initiatives

A minimum of 6 hours of elective credit*

** The Leadership Studies Advisory Council maintains a list of courses from academic divisions across campus that can serve as electives for this minor. In this way, the Leadership Studies Minor offers greater flexibility to students who desire to develop leadership capabilities in a variety of areas of endeavor.*

Leader Scholar Institute

The Leader Scholar Institute (LSI) at John Brown University is an interdisciplinary community of leader scholars committed to the academic and applied study of leadership. The program supports participants primarily through course work and program requirements. One of the program's distinctives is the development of a learning community focused around leadership. Students in the Leader Scholar Institute are required to take the following courses:

LDR 1553 Introduction to Leadership Studies

LDR 3653 LSI Practicum

DEPARTMENT OF MANAGEMENT

(SYMBOL: MGT)

The Management major prepares students for careers as professional managers in corporations, public institutions, not-for-profit organizations, and small businesses. In addition, the program provides a foundation for students who want to pursue graduate degrees in business and public administration, law, and the social sciences. The curriculum gives students a broad exposure to the functional areas of business, the environments in which organizations must operate, and knowledge of important behavioral dimensions of management. Students may select Management as a major or minor field of study.

The Baccalaureate program in Management requires 124 minimum total semester hours including courses from three categories: (1) the University Core Curriculum, (2) the required major field courses, and (3) a minor field of study or electives sufficient to achieve the required minimum total hours.

Requirements for the Bachelor of Science (B.S.) degree with major in Management

1. University Core Curriculum—49 hours. See page 67.
Mathematics and Social Science are covered by program requirements.
 2. Required Major Field Courses—54 hours
 - ATG 1163 Accounting for Decision Making
 - BUS 1123 Business Communication
 - BUS 2153 Financial Mathematics
 - BUS 2193 Business Statistics
 - BUS 3153 Applied Business Ethics
 - BUS 3993 Internship
 - BUS 4143 Business Law
 - BUS 4173 Business Finance
 - BUS 4993 Strategic Management
 - ECN 2113 Principles of Microeconomics
 - ECN 2123 Principles of Macroeconomics
 - ECN 3213 Managerial Economics
 - LDR 3563 Organizational Behavior
 - MGT 2173 Principles of Management
 - MGT 2183 International Management
 - MGT 2993 Students in Free Enterprise (S.I.F.E.)
 - MGT 3513 Human Resource Management

One of the following:

 - BUS 2113 Financial Spreadsheets
 - BUS 3123 Developing Applications with Access
 3. Minor Field or Electives sufficient to complete minimum total hours
- Minimum total semester hours124

Requirements for minor in Management

21 hours: ATG 1163; BUS 3153; LDR 3563; MGT 2173, 2183, 2993, 3513

DEPARTMENT OF MARKETING

(SYMBOL: MKT)

Northwest Arkansas provides an excellent learning laboratory for the study of contemporary marketing and retailing theory and practice. Marketing students have the opportunity to learn global perspectives and processes from those who are currently leading change in the field. Students may choose Marketing as a major or minor field of study.

The Baccalaureate program in Marketing requires 124 minimum total semester hours including courses from three categories: (1) the University Core Curriculum, (2) the required major field courses, and (3) a minor field of study or electives sufficient to achieve the required minimum total hours.

Requirements for the Bachelor of Science (B.S.) degree with a major in Marketing

1. University Core Curriculum—49 hours. See page 67.
 Mathematics and Social Science are covered by program requirements.
2. Required Major Field Courses—54 hours
 - ATG 1163 Accounting for Decision Making
 - BUS 2153 Financial Mathematics
 - BUS 2193 Business Statistics
 - BUS 3153 Applied Business Ethics
 - BUS 3993 Internship
 - BUS 4143 Business Law
 - BUS 4173 Business Finance
 - BUS 4993 Strategic Management
 - COM 4323 Advertising
 - ECN 2113 Principles of Microeconomics
 - ECN 2123 Principles of Macroeconomics
 - MKT 2143 Principles of Marketing
 - MKT 3133 Retailing
 - MKT 3153 International Marketing
 - MKT 3163 Consumer Behavior
 - MKT 4113 International Marketing Research
 - MKT 4173 Marketing Strategies
 One of the following:
 - BUS 2113 Financial Spreadsheets
 - BUS 3123 Developing Applications with Access
3. Minor Field or Electives sufficient to achieve minimum total hours

Minimum total semester hours124

Requirements for minor in Marketing

21 hours: MKT 2143, 4113, 4173; COM 4323; plus a minimum of 6 hours selected from MKT 3133, 3153, 3163; plus BUS 2193 or an equivalent course in statistics

DEPARTMENT OF SPORT MANAGEMENT

The Sport Management program is designed to prepare students with a strong business component of develop the skills applicable to management-level positions in organized sport. Examples of such positions are public relations director (sports information), corporate administrator of sporting events, tournament director, high school athletics director, college athletics director or associate athletics director, business manager for an athletics department, fund-raising administrator, manager of sport facility for collegiate and professional teams, sales representative for sporting goods companies, and marketing director for intercollegiate athletics programs.

The Baccalaureate program in Sport Management requires 124 minimum total semester hours including courses from three categories: (1) the University Core Curriculum, (2) the required major field courses, and (3) a minor field of study or electives sufficient to achieve the required minimum total hours.

Requirements for the Bachelor of Science (B.S.) degree with major in Sport Management

1. University Core Curriculum—55 hours. See page 67.
2. Required Major Field Courses—47 hours
 - ATG 1163 Accounting for Decision Making
 - BUS 2333 Introduction to Sport Management and Recreation
 - BUS 2353 Commercial Recreation
 - BUS 3153 Applied Business Ethics
 - BUS 4353 Sport Law
 - BUS 3993 Internship
 - KIN 1381 Field Experience
 - KIN 1481 Field Experience
 - KIN 3353 Theory and Techniques of Coaching
 - MGT 2173 Principles of Management
 - MGT 3323 Management in Health and Sport
 - MGT 3343 Sports Facility Management

(continued on next page)

MKT 2143 Principles of Marketing
Electives: 9 hours of elective coursework from the Division of
Business, as advised

One of the following:

BUS 2113 Financial Spreadsheets

BUS 3123 Developing Applications with Access

3. Minor Field or Electives sufficient to complete minimum total hours

Minimum total semester hours124

Requirements for minor in Sport Management

21 hours: ATG 1163; BUS 2333, 2353, 4353; MGT 2173, 3323, 3343

DIVISION OF
COMMUNICATION
and **FINE ARTS**



DIVISION OF
COMMUNICATION
and FINE ARTS

Andrus, Armstrong, Beckman, Byars, Goehner, Holland, Hough, Peer, Pohle, Rollene, P. Smith, Warner, White, J. Wubbena, T. Wubbena (chair)

The Division of Communication and Fine Arts comprises the Departments of Communication, Music, and Visual Arts. Bachelor's degrees are offered in Broadcasting, Digital Media Arts, General Music, Graphic Design, Illustration, Journalism, Music, Music Education, Photography, Public Relations, and Worship Ministries. Associate degrees are offered in Broadcasting, Journalism, and Public Relations. Minors are offered in all areas as well as Performance Studies.

The mission of the Division of Communication and Fine Arts is teaching and nurturing students in their creative, intellectual, spiritual, and professional development.

DEPARTMENT OF COMMUNICATION
(SYMBOL: COM)

The Department of Communication promotes effective communication in the fields of Broadcasting, Journalism, Performance Studies and Public Relations. Theoretical and practical approaches are utilized to ensure students are prepared to communicate effectively in an increasingly diverse and global society. Creative Christian leadership is emphasized, preparing students for careers in both religious and secular media.

Students in the Department of Communication take a key role in the John Brown University community, including the operation of our on campus radio station KLRC, television station JBU TV5, student newspaper The Threefold Advocate, student yearbook The Neshier, Pi Kappa Delta speech and debate team, and on campus Theater Workshops.

Requirements for the Bachelor of Science (B.S.) degree with major in Broadcasting

- 1. University Core Curriculum—55 hours. See page 67.
- 2. Communication Department Core—15 hours
 - COM 1133 Mass Media and Culture
 - COM 2123 News Writing I
 - COM 2153 News Writing II
 - COM 2523 Public Speaking
 - COM 3493 Media Law and Ethics
- 3. Broadcasting Core—15 hours
 - ART 2103 Foundations in Digital Editing
 - ART 2123 Cinematography
 - COM 3323 Broadcast News I
 - COM 3443 Broadcast News II
 - COM 4423 Programming and Promotion
- 4. Specialty Components—18 hours
 - Film**
 - ART 2113 Introduction to Cinema
 - One of the following:
 - ART 4163 Nonfiction Film Production
 - ART 4173 Narrative Film Production
 - Radio**
 - COM 1101 Beginning Radio Practicum
 - COM 2101 Intermediate Radio Practicum
 - COM 2213 Audio Design
 - COM 3101 Advanced Radio Practicum
 - Television**
 - COM 2243 Studio and Field Production
 - COM 3473 Broadcast Documentary
- 4. Electives as necessary to complete minimum semester hours
 - Minimum total semester hours124

Requirements for the Associate of Science (A.S.) degree with major in Broadcasting

- 1. University Core Curriculum for A.S. degrees—28 hours. See page 75.
- 2. Broadcasting Core—29 hours
 - COM 1101 Beginning Radio Practicum
 - COM 1133 Mass Media and Culture
 - COM 2101 Intermediate Radio Practicum
 - COM 2213 Audio Design
 - COM 2243 Studio and Field Production

- COM 2523 Public Speaking
- COM 3323 Broadcast News I
- COM 3443 Broadcast News II
- COM 3493 Media Law and Ethics
- COM 4423 Programming and Promotion
- COM ___3 Elective

3. Electives as necessary to complete minimum semester hours

Minimum total semester hours 62

Requirements for minor in Broadcasting

Course Work—15 hours

- COM 1133 Mass Media and Culture
- COM 2243 Studio and Field Production
- COM 3323 Broadcast News I
- COM 3493 Media Law and Ethics
- COM 4423 Programming and Promotion

Broadcasting Electives—3 hours from the following:

- COM 1101 Beginning Radio Practicum
- COM 2101 Intermediate Radio Practicum
- COM 2213 Audio Design
- COM 3443 Broadcast News II
- COM 3121 Broadcast Sports Practicum
- COM 3321 Independent Television/Video Production

Minimum total semester hours 18

Requirements for the Bachelor of Science (B.S.) degree with major in Journalism

1. University Core Curriculum—55 hours. See page 67.
2. Communication Department Core—15 hours
 - COM 1133 Mass Media and Culture
 - COM 2123 News Writing I
 - COM 2153 News Writing II
 - COM 2523 Public Speaking
 - COM 3493 Media Law and Ethics
3. Journalism Major Core—22 hours
 - ART 2403 Introduction to Photography
 - COM 2333 Editing
 - COM 3353 Public Relations Writing
 - COM 3363 Magazine Writing
 - COM 3373 Editorial and Interpretative Writing
 - COM 4461 Senior Seminar

(continued on next page)

Two of the following:

- ART 3183 Social Documentary Photography
- COM 2223 Media Writing
- COM 3323 Broadcast News I
- COM 4323 Advertising

4. Journalism Practicum—6 to 12 hours, including 6 hours minimum spent on the campus newspaper. (Prerequisites: COM 2123, 2153 and 2333 or permission of the instructor). A maximum of 12 hours credit in communications practicum may apply toward the Bachelor’s degree. Practicum hours may not substitute for course work.
5. Supporting Courses—6 hours
 - ART 1123 Computer Graphics
 - ART 2253 Graphic Design I
6. Minor Field, or Electives as necessary to complete minimum semester hours. Journalism majors may not minor in Public Relations.

Minimum total semester hours124

Requirements for the Associate of Science (A.S.) degree with major in Journalism

1. University Core Curriculum for A.S. degrees—28 hours. See page 75.
2. Journalism Core—12 hours
 - COM 2123 News Writing I
 - COM 2153 News Writing II
 - COM 2333 Editing
 - COM 3363 Magazine Writing
3. Journalism Practicum—4 hours, all earned by working on the campus newspaper. (Prerequisite: COM 2123) Practicum hours may not replace course work.
4. Supporting Courses—6 hours
 - COM 2523 Public Speaking
 - One of the following:
 - ART 1123 Computer Graphics
 - ART 2403 Introduction to Photography
5. Electives as necessary to complete minimum semester hours.

Minimum total semester hours62

Requirements for minor in Journalism

Course Work—18 hours: COM 2123, 2153, 2333, 3363, 3373, and ART 1123 or ART 2403.

Journalism Practicum—4 hours on campus newspaper. (Prerequisite: COM 2123)

Requirements for minor in Performance Studies

To fulfill the requirements for a minor in Performance Studies, a total of 21 semester hours of course work, including 6 semester hours of courses of junior-senior level, must be completed: COM 1123, 1203, 2523, 2983, 3113, and 4113, plus one of the following: COM 2121 (three semesters), COM 2883, 3553, or 4583.

Requirements for the Bachelor of Science (B.S.) degree with major in Public Relations

1. University Core Curriculum—55 hours. See page 67.
2. Communication Department Core—15 hours
 - COM 1133 Mass Media and Culture
 - COM 2123 News Writing I
 - COM 2153 News Writing II
 - COM 2523 Public Speaking
 - COM 3493 Media Law and Ethics
3. Public Relations Major Core—22 hours
 - ART 2403 Introduction to Photography
 - COM 2333 Editing
 - COM 3353 Public Relations Writing
 - COM 3363 Magazine Writing
 - COM 4323 Advertising
 - COM 4453 Public Relations Planning
 - COM 4461 Senior Seminar

One of the following:

 - ART 3183 Social Documentary Photography
 - COM 2223 Media Writing
 - COM 3323 Broadcast News I
 - COM 3373 Editorial and Interpretative Writing
3. Practicum—6 hours minimum, including at least 4 credits earned by working on the campus newspaper. (Prerequisite: COM 2123 and 2333 or permission of the Department Head.) A maximum 12 hours of practicum may apply to the Bachelor’s degree. Broadcasting practicums may be substituted after eight hours in Journalism practicums have been completed. Practicum hours may not replace course work.
4. Supporting Courses—6 hours
 - ART 1123 Computer Graphics
 - ART 2253 Graphic Design I
5. Minor Field, or Electives as necessary to complete minimum semester hours. Public Relations majors may not minor in Journalism.

Minimum total semester hours124

**Requirements for the Associate of Science (A.S.) degree
with major in Public Relations**

- 1. University Core Curriculum for A.S. degrees—28 hours. See page 75.
 - 2. Courses Specified by this Department—15 hours
 - ART 1123 Computer Graphics
 - COM 2123 News Writing I
 - COM 2333 Editing
 - COM 3353 Public Relations Writing
 - COM 4453 Public Relations Planning
 - 3. Journalism Practicum—4 hours, including three earned by working on the campus newspaper. (Prerequisite: COM 2123)
 - 4. Supporting Courses—6 hours
 - COM 2523 Public Speaking
 - COM 4323 Advertising
 - 5. Electives as necessary to complete minimum semester hours.
- Minimum total semester hours62

Requirements for minor in Public Relations

Course Work—18 hours: COM 2123, 2333, 3353, 4323, 4453, and ART 1123.

Journalism Practicum—4 hours, including 2 hours earned by working on the campus newspaper. (Prerequisite: COM 2123)

DEPARTMENT OF MUSIC

(SYMBOL: MUS)

For those wishing to follow careers in music and/or worship ministries, courses are offered leading to the degrees Bachelor of Arts, Bachelor of Science, and Bachelor of Music Education (through the Division of Education). These courses provide a well-rounded education for those wishing to enter the music profession as artists, teachers, supervisors, church worship leaders and tech support, and musicians in other fields. The program in music is closely allied with work in Bible, liberal arts, and technological departments, also providing students majoring outside the Department of Music the opportunity to study music as a minor or as electives.

Departmental Requirements for the Major/Minor

In addition to satisfying the University’s general requirements for admission (page 37), all applicants must audition for admission to the music program. During the audition, each candidate must demonstrate musical ability and potential including a good sense of rhythm and the ability to sing true pitch.

1. Vocal Major Audition:

- a. Performance of two prepared songs. Suggested works include songs by classical composers (in a foreign language, if possible), and songs from operettas or Broadway musicals.
- b. Demonstration of skills at the keyboard or other instrument, as applicable. [Lack of piano skills will not preclude admittance to the music degree. However, the music majors must demonstrate specific piano skills before degree completion. Appropriate classes or private study will be required of all students based on keyboard proficiency.]

2. Piano or Organ Major Audition:

- a. Performance of two prepared selections from traditional literature, representing contrasting style periods.
- b. Playing of the scale and arpeggio on the tonic chord from any major or minor key.

3. Worship Ministries Audition:

- a. Performance of two contrasting selections, one art song and one praise and worship song, demonstrating the applicant's vocal and/or instrumental abilities.
- b. Guitarists are required to demonstrate contrasting style in strumming and picking technique.

Students entering during the Fall semester should complete the auditions by April 1. Audition forms are available online at www.jbu.edu/music.

An on-campus audition is preferable both for the student and for the faculty, but in cases where travel to Siloam Springs presents an insurmountable hardship, a recording incorporating the specified audition requirements will suffice. Students accepted on the basis of a recorded audition will need to complete the remainder of the process during the freshman orientation prior to registration. They may be asked to present part of their audition at that time.

Students are advised to complete all aspects of the audition as early in the high school senior year as possible. Those with deficiencies will be so advised, so that they may begin to work in the necessary area(s) before entering the University. Upon entrance, those who have not met the departmental standards may be granted permission by the music faculty to declare a provisional music major until such deficiencies are eliminated. Prerequisite work in the major applied area is designated as MUS 09_1 or 09_2 and does not count toward the major, the minor, or graduation hours. Once the deficiencies are removed, a student enrolls for degree credit in the applied field (MUS 19_1 or 19_2). Students entering with deficiencies in the major applied area typically require nine or ten semesters, rather than the standard eight, to finish the baccalaureate degree.

Music Scholarships

The awarding of a music scholarship is based primarily on musical ability as determined in the audition for admission described above, or on ability demonstrated in ongoing applied instruction. After receiving a scholarship, the student must earn a GPA of 2.0 each semester, a 3.0 GPA in the major applied area, and a 2.5 cumulative GPA to retain the scholarship. Scholarships are reviewed annually and may be adjusted higher or lower based upon the merit of the recipient's academic and applied work.

General Requirements for Music Degrees

1. **Demonstrated potential.** Each candidate must select a major subject (voice, piano, or organ), meet yearly requirements as set by the music faculty, and fulfill all stated degree requirements. The B.A. with an emphasis in voice, piano, or organ (see p. 115) requires that students demonstrate adequate potential in performance before being allowed to pursue this degree program. Official admittance occurs at the end of the second semester of the sophomore year, only upon recommendation of the faculty, after the student has passed the Upper Division Admittance Exam. Students desiring to pursue the performance degree must enroll each term in two-credit applied lessons in the major area.
2. **Ensemble participation.** Each music major is required to participate satisfactorily in at least one ensemble per semester at JBU. (The faculty may grant exceptions to students in directed teaching or to students taking fewer than six hours.) Up to 4 hours of Accompanying practicum (after meeting the specified prerequisites) may count as ensemble credit for those whose major instrument is piano. Students may choose music theater, choral, or instrumental groups. Qualified non-music majors are encouraged to participate.
3. **Recital attendance.** Each student receiving credit in applied music must attend a specified number of recitals. Failure to meet the recital attendance requirements adversely affects the grade in applied music.
4. **Recital participation.** All music majors and minors enrolled in applied lessons are required to perform in a departmental recital once during the freshman year and at least once each semester thereafter.
5. **Jury exams.** Counterparts to final exams in lecture courses, juries are scheduled at the end of each semester of applied study. Jury grades assigned by the adjudicators have an impact on the applied course grade, although the final grade is assigned at the discretion of the instructor.
6. **Piano proficiency.** Proficiency may be established by successful completion of one of the following tracks:
 - a. MUS 1931, 1941, 2931, 2941 Class Piano I-IV

- b. MUS 1941, 2931, 2941 Class Piano II-IV, plus one semester of MUS 1991 Applied Piano
- c. MUS 2931, 2941 Class Piano III and IV, plus two semesters of MUS 1991 Applied Piano
- d. Two semesters of MUS 1991 Applied Piano, plus MUS 2151, 2161 Functional Keyboard Skills I, II

Qualified non-keyboard majors may enroll in piano and organ lessons with an upper division number (3000+) only after taking four semesters of keyboard and passing the Upper-Division Applied Admittance Exam.

7. Upper-Division Applied Admittance Exam. The Upper-Division Applied Admittance Exam is taken by a) Music majors who need to earn upper-division credit in applied music and b) Worship Ministries majors. It is taken instead of the jury at the end of the fourth semester of degree credit in the major applied area, and it is twice the length of a usual jury.

The student must pass the “a” part of the exam in the respective applied area (see below) before earning upper division credit in applied music; if the student does not pass the “a” requirement, the next semester of study is taken for additional lower-division credit.

A student who does not pass the other parts of the exam in the respective applied area may earn upper-division credit in the applied area for the next semester, but will re-take those other parts of the exam at the end of the next semester of study. If the student fails a second time, subsequent applied study will be for lower-division credit until the student passes all remaining parts of the exam.

The same policy applies to transfer students. They must pass the “a” part of the exam in the respective applied area in order to register for upper-division credit for the next semester. If they fail any other parts of the exam not passed on the first attempt, they must re-take those parts of the exam at the end of that semester in order to continue to earn upper-level credit. Otherwise, subsequent applied study will be for lower-division credit until they pass all remaining parts of the exam.

Voice majors and concentrates are expected to

- a. perform repertoire from memory in three languages (Italian, French, and German), of varying styles, and demonstrating developing musicality and expressiveness; and
- b. sightread a song of medium difficulty.

Worship Ministries majors are expected to

- a. perform vocal repertoire from memory in two languages (Italian, French, German), of varying styles, and demonstrating developing musicality and expressiveness; and
- b. sightread a song of medium difficulty.

Piano majors and concentrates are expected to play

- a. advanced literature from three of the following style periods:
(1) Baroque (Bach WTC or comparable—more difficult than Two-part Inventions), (2) Classical (Beethoven or Mozart sonata or comparable literature), (3) Romantic (Chopin, Brahms), and
(4) Impressionistic/20th century (Debussy, Prokofieff). At least one piece or movement is to be completely memorized. The performance of these requirements should be stylistically convincing, and the performer should display a developing sense of musicality and expressiveness;
- b. major, harmonic, and melodic minor scales for four octaves in sixteenth notes at a minimum tempo of MM=120 per quarter note, note, hands together;
- c. major and minor arpeggios in all inversions for four octaves in sixteenth notes at a minimum tempo of MM=100 per quarter note, hands together;
- d. major and minor cadences (I-IV-I⁶₄-V⁷-I) with right hand in all inversions and left hand in octaves; and
- e. sight reading of (1) a hymn having three or more sharps or flats in the key signature with intermediate rhythmic complexity and
(2) a vocal accompaniment of an early-intermediate level.

Organ majors and concentrates are expected to play

- a. one work from each of these style periods: (1) Baroque, (2) Romantic, and (3) 20th century. The performance of these requirements should be stylistically convincing, and the performer should display a developing sense of musicality and expressiveness;
- b. an introduction and two stanzas of a hymn. The stanzas must be played in a contrasting manner, as appropriate for the text;
- c. a hymn transposed up **or** down a half-step and whole step; and
- d. sightreading of (1) a hymn having three or more sharps or flats in the key signature with intermediate rhythmic complexity and
(2) a simple work in trio texture.

Each candidate for the B.A. degree with an emphasis in organ is also required to earn the Service Playing Certificate (SPC) of the American Guild of Organists before entering upper level work.

8. Recital or Presentation. A candidate for the B.A. degree with emphasis in applied music performance is required to present a half recital during the junior year (MUS 3900) and a full recital during the senior year (MUS 4900)

A candidate for the B.A. or B.S. degree in General Music has the choice between a half recital during the senior year (MUS 4900) or a Senior Presentation (MUS 4910).

A candidate for the B.Mus.Ed. degree is required to perform a half recital during the senior year (MUS 4900).

Recitalists are required to enroll in applied lessons during the semester the recital is scheduled. Similarly, those choosing the Senior Presentation must enroll in MUS 4191 Selected Topics for faculty mentoring.

A candidate for the Worship Ministries degree must complete the Internship and Senior Presentation (MUS 4553) upon advisor recommendation.

9. **Certification for Organists.** All candidates for the B.A. with emphasis in organ must take the examination for the Colleague Certificate of the American Guild of Organists (CAGO) no later than the beginning of the last semester of study.

Requirements for the Bachelor of Arts (B.A.) degree in Music with emphasis in Organ, Piano, or Voice

1. University Core Curriculum—52 hours. See page 67.

The Arts Elective is covered by program requirements.

2. Courses Specified by the Department—28 hours

- MUS 1111 Musicianship I
- MUS 1113 Theory I
- MUS 1203 Liberal Arts Foundations for the Musician
- MUS 2111 Musicianship II
- MUS 2113 Theory II
- MUS 2121 Musicianship III
- MUS 2123 Theory III
- MUS 3113 Harmonic Form and Analysis
- MUS 3213 History of Music I
- MUS 3223 History of Music II
- MUS 3411 Conducting I
- MUS 3900* Junior Recital
- MUS 4103* Music Arranging with MIDI
- MUS 4900* Senior Recital

3. One of the following Emphases—33 hours

Voice

- MUS 1981* Applied Voice: 8 hours
- MUS 3981* Applied Voice: 8 hours
- MUS 1980/3980 Voice Masterclass (each semester of Applied)
- MUS 1931/41, 2931/41 Class Piano I-IV (See other options, p. 112)
- MUS 1911 Lyric Diction I
- MUS 1921 Lyric Diction II
- MUS 4281 Vocal Literature
- MUS 4382 Vocal Pedagogy
- Music Theater—6 hours from MUS 1731, 1732, 3731, 3732
- Choral Ensemble—2 hours minimum

(continued on next page)

Piano

- Applied Piano Option A or B
- A. MUS 1991* Applied Piano: 7 hours
 - MUS 1781* Applied Accompanying
 - MUS 3991* Applied Piano: 8 hours
- B. MUS 1991* Applied Piano: 8 hours
 - MUS 3991* Applied Piano: 7 hours
 - MUS 3781* Applied Accompanying
- MUS 1990/3990 Piano Master Class (each semester of Applied)
- MUS 1951/1961 Class Voice (or 2 hours of *Applied Voice)
- MUS 2151 Functional Keyboard Skills I
- MUS 2161 Functional Keyboard Skills II
- MUS 2601 Accompanying Class
- MUS 3601 Practicum in Accompanying
- MUS 4261 Piano Pedagogy
- MUS 4262 Piano Literature
- Ensemble participation: 8 semesters

Organ

- MUS 1971* Applied Organ: 8 hours
- MUS 3971* Applied Organ: 8 hours
- MUS 1951/1961 Class Voice (or 2 hours of *Applied Voice)
- MUS 2151 Functional Keyboard Skills I
- MUS 2161 Functional Keyboard Skills II
- MUS 2601 Accompanying Class
- MUS 3611 Practicum: Church Organist
- MUS 4273 Organ Literature and Pedagogy
- MUS 1990/3990 Piano Master Class (each semester of Applied Organ)
- Ensemble participation: 8 semesters

*See Music Fee Schedule on page 45.

- 4. Foreign Language—12 hours in French or German, or 6 hours in each. Other languages may be substituted only by approval of advisor. (Completion of an Intermediate language course covers the Core Global Studies component.)

Minimum total semester hours 124

Requirements for the Bachelor of Arts (B.A.) degree with major in General Music

- 1. University Core Curriculum—52 hours. See page 67.
 - The Arts Elective is covered by program requirements.
- 2. Courses Specified by this Department—29 hours
 - MUS 1111 Musicianship I
 - MUS 1113 Theory I

Piano

Applied Piano Option A or B

A. MUS 1991* Applied Piano: 7 hours

MUS 1781* Applied Accompanying

MUS 3991* Applied Piano: 8 hours

B. MUS 1991* Applied Piano: 8 hours

MUS 3991* Applied Piano: 7 hours

MUS 3781* Applied Accompanying

MUS 1990/3990 Piano Master Class (each semester of Applied)

MUS 1951/1961 Class Voice (or 2 hours of *Applied Voice)

MUS 2151 Functional Keyboard Skills I

MUS 2161 Functional Keyboard Skills II

MUS 2601 Accompanying Class

MUS 3601 Practicum in Accompanying

MUS 4261 Piano Pedagogy

MUS 4262 Piano Literature

Ensemble participation: 8 semesters

Organ

MUS 1971* Applied Organ: 8 hours

MUS 3971* Applied Organ: 8 hours

MUS 1951/1961 Class Voice (or 2 hours of *Applied Voice)

MUS 2151 Functional Keyboard Skills I

MUS 2161 Functional Keyboard Skills II

MUS 2601 Accompanying Class

MUS 3611 Practicum: Church Organist

MUS 4273 Organ Literature and Pedagogy

MUS 1990/3990 Piano Master Class (each semester of Applied Organ)

Ensemble participation: 8 semesters

*See Music Fee Schedule on page 45.

4. Foreign Language—12 hours in French or German, or 6 hours in each. Other languages may be substituted only by approval of advisor. (Completion of an Intermediate language course covers the Core Global Studies component.)

Minimum total semester hours 124

Requirements for the Bachelor of Arts (B.A.) degree with major in General Music

1. University Core Curriculum—52 hours. See page 67.
The Arts Elective is covered by program requirements.
2. Courses Specified by this Department—29 hours
MUS 1111 Musicianship I

MUS 1113 Theory I

Requirements for the Bachelor of Science (B.S.) degree with major in General Music

1. University Core Curriculum—52 hours. See page 67.

The Arts Elective is covered by program requirements.

2. Courses Specified by this Department—29 hours

MUS 1111 Musicianship I
MUS 1113 Theory I
MUS 1203 Liberal Arts Foundations for the Musician
MUS 2111 Musicianship II
MUS 2113 Theory II
MUS 2121 Musicianship III
MUS 2123 Theory III
MUS 3113 Harmonic Form and Analysis
MUS 3213 History of Music I
MUS 3223 History of Music II
MUS 3411 Conducting I
MUS 4103* Music Arranging with MIDI

Capstone Option A or B:

- A. MUS 39_1* Applied Lessons
MUS 4900* Senior Recital (half recital)
- B. MUS 4191* Selected Topics: Presentation Preparation
MUS 4910* Senior Presentation

3. One of the following Concentrations—8 hours

Voice

MUS 1981* Applied Voice: 4 hours
MUS 1980 Voice Master Class: 4 semesters
MUS 1931/41, 2931/41* Class Piano I-IV (See other options, p. 112)

Piano

MUS 1991* Applied Piano: 4 hours
MUS 1990 Piano Master Class: 4 semesters
Accompanying: 2 hours from MUS 1781, 2601
MUS 1951/1961 Class Voice (or 2 hours of *Applied Voice)

Organ

MUS 1971* Applied Organ: 4 hours
MUS 1990 Piano Master Class: 4 semesters
Accompanying: 2 hours from MUS 1781, 2601
MUS 1951/1961 Class Voice (or 2 hours of *Applied Voice)

*See Music Fee Schedule on page 45.

- 3a. Successful completion of the Upper-Division Applied Admittance Exam in the applied Concentration area.

Any additional hours in applied area will count as music electives. Any hours taken

after passing the Upper-Division Applied Admittance Exam will be taken at the 3000-level for upper division credit.

- 4. Ensemble participation—4 hours
 - 5. Electives as necessary to complete minimum semester hours
- Minimum total semester hours 124

Requirements for the Bachelor of Music Education (B.Mus.Ed.) degree with major in Music, P-8 and 7-12 certification

- 1. University Core Curriculum—46 hours. See page 67.
 - The Arts and Social Science elective areas are covered by program requirements.
 - The Philosophy elective is not required for this program.
- 2. Other Required Courses—3 hours
 - Approved First Aid/CPR Course (age appropriate)
 - COM 2523 Public Speaking
- 3. Professional Education—31 hours
 - ED 1114 Educational Foundations and Technology
 - ED 2113 Human Growth and Development
 - ED 2133 Educational Psychology
 - ED 2713 Education of the Exceptional Student
 - ED 3183 Educational Assessment
 - ED 4891 Seminar: P-12
 - ED 4890 Internship: P-12
- 4. Music Teaching Field—46 hours
 - MUS 1111 Musicianship I
 - MUS 1113 Theory I
 - MUS 1203 Liberal Arts Foundations for the Musician
 - MUS 1911 Lyric Diction I
 - MUS 1921 Lyric Diction II
 - MUS 2111 Musicianship II
 - MUS 2113 Theory II
 - MUS 2121 Musicianship III
 - MUS 2123 Theory III
 - MUS 3101 Survey of Instruments
 - MUS 3113 Harmonic Form and Analysis
 - MUS 3213 History of Music I
 - MUS 3223 History of Music II
 - MUS 3301 Choral Techniques
 - MUS 3313 Public School Music Methods, P-8
 - MUS 3411 Conducting I
 - MUS 3421 Conducting II
 - MUS 4103* Music Arranging with MIDI
 - MUS 4382 Vocal Pedagogy
 - MUS 4573 Public School Music Methods, 7-12

JOHN BROWN UNIVERSITY

MUS 4900* Senior Recital (half recital)

(continued on next page)

MUS 1731 Music Theatre Scenes (or 1732 Production)

Ensemble Participation: 4 semesters

5. One of the following Concentrations—11 hours

Voice

Applied Voice Option A or B

A. MUS 1981* Applied Voice: 4 hours

MUS 3981* Applied Voice: 3 hours

B. MUS 1951/61 Class Voice: 2 hours

MUS 1981* Applied Voice: 2 hours

MUS 3981* Applied Voice: 3 hours

MUS 1980/3980 Voice Master Class (each semester of Applied)

MUS 1931/41, 2931/41* Class Piano I-IV (See other options, p. 112)

Piano

Applied Piano Option A or B

A. MUS 1991* Applied Piano: 3 hours

MUS 1781* Applied Accompanying

MUS 3991* Applied Piano: 2 hours

B. MUS 1991* Applied Piano: 4 hours

MUS 3991* Applied Piano: 1 hour

MUS 3781* Applied Accompanying

MUS 1990/3990 Piano Master Class (each semester of Applied)

MUS 2151 Functional Keyboard Skills I

MUS 2161 Functional Keyboard Skills II

MUS 1951/61 Class Voice (or two hours of *Applied Voice)

MUS 4261 Piano Pedagogy

Organ

MUS 1971* Applied Organ: 4 hours

MUS 3971* Applied Organ: 3 hours

MUS 1990/3990 Piano Master Class (each semester of Applied Organ)

MUS 2151 Functional Keyboard Skills I

MUS 2161 Functional Keyboard Skills II

MUS 1951/61 Class Voice (or two hours of *Applied Voice)

*See Music Fee Schedule on page 45.

Minimum total semester hours137

Requirements for the Bachelor of Science (B.S.) degree with major in Worship Ministries

1. University Core Curriculum—52 hours. See page 67.
 The Arts Elective is covered by program requirements.
2. Courses specified by this Department—26 hours
 - MUS 1111 Musicianship I
 - MUS 1113 Theory I
 - MUS 1203 Liberal Arts Foundations for the Musician
 - MUS 1931/41, 2931/41* Class Piano I-IV (See other options, p. 112)
 - MUS 2111 Musicianship II
 - MUS 2113 Theory II
 - MUS 3213 History of Music I
 - MUS 3411 Conducting I
 - MUS 4103* Music Arranging with MIDI
 Vocal Instruction—4 hours. MUS 1951/61/81* Class or Applied
 Successful completion of the Upper-Division Applied Admittance
 Exam (See p. 113)
3. Worship Ministry Core—41 hours
 - MUS 1851 Music Ministries Ensemble
 - MUS 2232 Contemporary Worship Music in Theory and Practice
 - MUS 2503 Worship Ministry I: Orientation
 - MUS 2513 Worship Ministry II: Materials & Methods
 - MUS 3101 Survey of Instruments
 - MUS 3323 Children’s Music Ministries Methods
 - MUS 3563* Audio Technology I
 - MUS 3951 Contemporary Vocal Techniques
 - MUS 4553* Internship and Senior Presentation
 - CMN 2213 Foundations and Practice of Christian Ministry
 - BBL 3353 Theology of Worship
 - BBL 3363 History of the Christian Church I
 - BBL 3373 History of the Christian Church II
 - ART 2303 Foundations in Interactive Design
 Ensemble participation—4 semesters
 One of the following:
 - MUS 1731 Music Theatre Scenes
 - MUS 1732 Music Theatre Production
 One of the following:
 - MUS 1791* Applied Guitar
 - MUS 2901 Guitar in Worship
4. Electives as necessary to complete minimum semester hours
 Minimum total semester hours 124

Requirements for minor in Music

The minor in music requires 18 semester hours listed below, comprising work in the classroom, ensemble participation, and private instruction in applied music—voice, piano, organ, or other approved instrument. Please note the prerequisites for each course as specified in the Course Descriptions section of this catalog.

- MUS 1111 Musicianship I
- MUS 1113 Theory I
- MUS 1203 Liberal Arts Foundations for the Musician
- *Applied Music Instruction: 4 hours
- Ensemble Participation: 1 hour

Six hours from the following:

- MUS 3213 History of Music I
- MUS 3223 History of Music II
- MUS 3323 Children's Music Ministry Methods
- MUS 3411 Conducting I
- MUS 3563* Audio Technology I
- MUS 4261 Piano Pedagogy
- MUS 4262 Piano Literature
- MUS 4273 Organ Literature and Pedagogy
- MUS 4281 Vocal Literature
- MUS 4291 Choral Literature
- MUS 4382 Vocal Pedagogy
- MUS 4563* Audio Technology II

Requirements for minor in Worship Ministries

21 Credit Hours as follows:

- MUS 1111 Musicianship I
- MUS 1113 Theory I
- MUS 2503 Worship Ministry I: Orientation
- MUS 2513 Worship Ministry II: Methods and Materials
- MUS 3101 Survey of Instruments
- MUS 3411 Conducting I
- MUS 3563* Audio Technology I
- MUS 3851 Music Ministries Ensemble
- Piano Instruction—2 hours. MUS 1931*/41*/91* Class or Applied
- Vocal Instruction—2 hours. MUS 1951/61/81* Class or Applied

One of the following:

- MUS 1791* Applied Guitar
- MUS 1901 Basic Guitar Techniques
- MUS 2901 Guitar in Worship

* See Music Fee Schedule on page 45.

DEPARTMENT OF VISUAL ARTS

(SYMBOL: ART)

The Department of Visual Arts offers the Bachelor of Science (B.S.) Degree with majors in Digital Media Arts (with concentrations in Animation, Cinema, or Web), Graphic Design, Illustration, and Photography. Minors are available in all four areas.

All major programs require a common Visual Arts core of 24 hours and an additional 27 hours in the specialized field.

The Department of Visual Arts is housed in a state-of-the-art building featuring the latest equipment in a MAC lab, PC lab, theater-style classroom, painting and drawing classrooms, and graphic design classrooms. We also have a busy art gallery that features monthly exhibits, including an annual show of "Student Works."

All of the Visual Arts degrees are highly demanding of student time, energy, and talent. The goal of these multi-faceted programs is to graduate industry-ready professionals who are prepared to step into positions which demand diverse proficiencies. All students participate in either an internship or senior project and prepare a portfolio to further aid them in their professional development. Our students are strongly encouraged to participate in foreign study and mission opportunities as a way to broaden their understanding of our world and to enrich their Christian worldview.

Requirements for the Bachelor of Science (B.S.) degree with major in Digital Media Arts

1. University Core Curriculum—52 hours. See page 67.

The Arts Elective is covered by program requirements.

2. Visual Arts Core—24 hours

ART 1123 Computer Graphics
 ART 1133 Visual Media and Culture
 ART 2213 Color Studies
 ART 2253 Graphic Design I
 ART 2403 Introduction to Photography
 ART 4103 Portfolio and Presentation
 ART 4423 Internship

One of the following:

ART 2153 European Art and Culture
 ART 2233 Art History
 ART 2343 European Art Tour

(continued on next page)

3. Digital Media Arts Major—27 hours

One of the following Concentrations:

A. Animation

- ART 1243 Drawing I
- ART 2203 2D Computer Animation
- ART 2273 3D Computer Animation I
- ART 2453 Drawing II
- ART 3223 3D Computer Animation II
- ART 3243 2D Advanced Animation
- ART 3273 Sequential Art and Storyboarding
- ART 4253 3D Computer Animation III
- ART 4963 Senior Comprehensive Project

B. Cinema

- ART 2103 Foundations in Digital Editing
- ART 2113 Introduction to Cinema
- ART 2123 Cinematography
- ART 3403 Film Theory and Criticism
- ART 3153 Digital Darkroom
- ART 4163 Nonfiction Film Production
- ART 4173 Narrative Film Production
- ART 4963 Senior Comprehensive Project
- COM 3473 Broadcast Documentary

C. Web

- ART 2203 2D Computer Animation
- ART 2263 Graphic Design II
- ART 2303 Foundations in Interactive Design
- ART 2503 Typography
- ART 3333 Introduction to Game Design
- ART 3533 DVD Design and Authoring
- ART 3743 Web Design and Authoring
- ART 4343 Database Web Programming
- ART 4963 Senior Comprehensive Project

4. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for minor in Digital Media Arts

- ART 1123 Computer Graphics
- ART 1133 Visual Media and Culture
- ART 2103 Foundations in Digital Editing
- ART 2203 2D Computer Animation
- ART 2303 Foundations in Interactive Design
- Six hours from the following:
 - ART 3153 Digital Darkroom
 - ART 3243 2D Advanced Animation
 - ART 3743 Web Design and Authoring
- Minimum total semester hours21

Requirements for the Bachelor of Science (B.S.) degree with major in Graphic Design

1. University Core Curriculum—52 hours. See page 67.
The Arts Elective is covered by program requirements.
2. Visual Arts Core—24 hours
 - ART 1123 Computer Graphics
 - ART 1133 Visual Media and Culture
 - ART 2213 Color Studies
 - ART 2253 Graphic Design I
 - ART 2403 Introduction to Photography
 - ART 4103 Portfolio and Presentation
 - ART 4423 Internship
 - One of the following:
 - ART 2153 European Art and Culture
 - ART 2233 Art History
 - ART 2343 European Art Tour
3. Graphic Design Major—27 hours
 - ART 1243 Drawing I
 - ART 2263 Graphic Design II
 - ART 2303 Foundations in Interactive Design
 - ART 2503 Typography
 - ART 3153 Digital Darkroom
 - ART 3203 History of Advertising and Design
 - ART 3263 Graphic Design III
 - ART 3743 Web Design and Authoring
 - ART 4413 Graphic Design IV
4. Electives as necessary to complete minimum semester hours
- Minimum total semester hours124

Requirements for minor in Graphic Design

- ART 1123 Computer Graphics
- ART 2253 Graphic Design I
- ART 2263 Graphic Design II
- ART 2503 Typography

Nine hours from among the following, including six upper division:

- ART 2213 Color Studies
- ART 2403 Introduction to Photography
- ART 3203 History of Advertising and Design
- ART 3263 Graphic Design III
- ART 4413 Graphic Design IV

Minimum total semester hours21

Requirements for the Bachelor of Science (B.S.) degree with major in Illustration

1. University Core Curriculum—52 hours. See page 67.

The Arts Elective is covered by program requirements.

2. Visual Arts Core—24 hours

- ART 1123 Computer Graphics
- ART 1133 Visual Media and Culture
- ART 2213 Color Studies
- ART 2253 Graphic Design I
- ART 2403 Introduction to Photography
- ART 4103 Portfolio and Presentation
- ART 4423 Internship

One of the following:

- ART 2153 European Art and Culture
- ART 2233 Art History
- ART 2343 European Art Tour

3. Illustration Major—27 hours

- ART 1243 Drawing I
- ART 2453 Drawing II
- ART 3273 Sequential Art and Storyboarding
- ART 3323 Figure Drawing
- ART 3453 Illustration I
- ART 3463 Illustration II
- ART 4313 Illustration III

Two of the following:

- ART 3363 Watercolor Painting I
- ART 3373 Watercolor Painting II
- ART 3383 Oil Painting I
- ART 3393 Oil Painting II

4. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for minor in Illustration

- ART 1243 Drawing I
- ART 2453 Drawing II
- ART 3453 Illustration I
- ART 3463 Illustration II

Nine hours from among the following:

- ART 2213 Color Studies
- ART 2233 Art History
- ART 3273 Sequential Art and Storyboarding
- ART 3323 Figure Drawing
- ART 3363/73 Watercolor Painting
- ART 3383/93 Oil Painting
- ART 4313 Illustration III

Minimum semester hours 21

Requirements for the Bachelor of Science (B.S.) degree with major in Photography

1. University Core Curriculum—52 hours. See page 67.
The Arts Elective is covered by program requirements.
2. Visual Arts Core—24 hours
 - ART 1123 Computer Graphics
 - ART 1133 Visual Media and Culture
 - ART 2213 Color Studies
 - ART 2403 Introduction to Photography
 - ART 2253 Graphic Design I
 - ART 4103 Portfolio and Presentation
 - ART 4423 Internship

One of the following:

- ART 2153 European Art and Culture
- ART 2233 Art History
- ART 2343 European Art Tour

3. Photography Major—27 hours
 - ART 2123 Cinematography
 - ART 2263 Graphic Design II
 - ART 2303 Foundations in Interactive Design
 - ART 3153 Digital Darkroom
 - ART 3183 Social Documentary Photography
 - ART 3203 History of Advertising and Design
 - ART 4963 Senior Comprehensive Project

One of the following:

- ART 3133 Fine Art Photography
- ART 3513 Fine Art Photography and Society

(continued on next page)

One of the following:

ART 3543 Commercial Photography in Social Context

ART 4353 Commercial Studio Photography

4. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for Minor in Photography

Available on a limited basis; students majoring in Journalism or Public Relations are given first priority.

ART 2403 Introduction to Photography

ART 3133 Fine Art Photography

ART 3153 Digital Darkroom

ART 3183 Social Documentary Photography

ART 4353 Commercial Studio Photography

Six hours from among the following:

ART 2213 Color Studies

ART 2233 Art History

ART 2253 Graphic Design I

ART 2303 Foundations in Interactive Design

Minimum total semester hours21

DIVISION OF
EDUCATION



DIVISION OF EDUCATION

G. Davis, Gale, Lamborn, Moore, Van Thiel (chair)

(SYMBOL: ED)

The Division of Education offers experiences and courses designed to provide professional preparation for students who plan to teach in public or private (including Christian) schools. The Division is committed to preparing competent teachers to work with all learners in a multicultural society of diverse learners. The programs of the Division are approved by the Arkansas State Department of Education and are accredited by the National Council for the Accreditation of Teacher Education (NCATE), <http://ncate.org> (202-466-7496), the foremost accrediting agency for teacher education in the United States. Successful completion of an Education Program at John Brown University prepares teacher candidates for an initial license in the State of Arkansas. Teacher candidates who plan to teach in states other than Arkansas should transfer the Arkansas licensure and meet any specific licensure requirements of the states where they expect to teach. Licensure officials in the majority of the states automatically grant initial licensure to graduates of NCATE accredited education programs. In addition, most states will grant initial licensure to individuals certified in the State of Arkansas.

The University's Education programs are significantly enhanced through an active partnership of shared decision making with the Siloam Springs School District and the community. The Professional Development School partnership provides for the simultaneous support and renewal of both the programs for the preparation of teachers and the P-12 programs of the school district. Beginning in their sophomore year, teacher candidates actively participate in local preschools and in the P-12 classrooms of the school district, where they provide valuable assistance to preschool and P-12 programs. At the same time, experienced teachers in the schools serve as clinical faculty providing important practical experiences and instruction for the teacher candidates.

The Education Division, in keeping with the overall goals of the University, strives to provide teacher candidates with the following:

1. A firm Christian foundation with respect to their personal, moral, and spiritual development.
2. Desirable values, ideals, and a sense of individual responsibility based upon Christian principles.

3. An appreciation of the opportunities for service in the teaching profession.
4. An understanding of the role of education in a pluralistic, democratic society.
5. Knowledge and skills necessary to respond to the individual differences of diverse learners.
6. Appropriate skills and techniques for effective teaching.
7. An introduction to the processes of teaching based on professional studies which are integrated with clinical and field based experiences.
8. A knowledge of the growth and development of youth.
9. An awareness of the social, political, and economic realities that individuals experience in culturally diverse and complex human encounters.
10. A broad general education.
11. One or more academic areas of in-depth study.

PROGRESSION WITHIN THE EDUCATION PROGRAM

Candidates for a teaching license are expected to carefully plan their academic programs beginning in their freshman year and to have their plan approved by an Education adviser. Candidates are required to maintain a portfolio in order to pass through "Gates" One, Two, Three, and Four during their preparation program. The following sequence and policies are applicable to all levels and fields of licensure:

1. Admission to courses requiring field experience ("Gate One"). Specific requirements include the following:
 - a. Meet minimum JBU admission requirements for ACT/SAT scores: ACT=20, SAT=950.
 - b. Successfully complete designated portfolio requirements before registering for Education classes requiring Gate One.
 - c. Permission to release personal information to be used in appropriate situations to school personnel.
2. Formal admission to the Education Program ("Gate Two"). Specific requirements for admission include the following:
 - a. A 2.5 cumulative grade-point average in the courses required for the JBU Bachelor of Science in Education (B.S.E.) program.
 - b. Completion of the required English, math, and speech courses with a grade of 'C/2.0' or better in each. (Exception: Candidates for the P-4 and 4-8 Programs will take ED 3121 Educational Communication in lieu of the speech course before internship. A grade of 'C/2.0' or better must also be attained in this course.)
 - c. Completion of ED 1114 with a grade of 'C/2.0' or better.
 - d. Praxis I (PPST) scores which meet the state minimum requirements in

- reading, writing, and mathematics. (Information and test administration schedules are available on the ETS Website [www.ets.org]. Costs are the responsibility of the teacher candidates.) Candidates whose scores do not meet the JBU Praxis I (PPST) minimums (higher than state) must submit an approved Professional Development Plan to improve these basic skills, or must make the JBU cut-off scores by retaking the appropriate Praxis I (PPST) test(s).
- e. Formal approval of the teacher candidates' portfolios by the Education adviser before registration for Education classes requiring Gate Two.
3. Continuation in the Program. Teacher candidates must maintain the 2.5 grade-point standard throughout the program; achieve the JBU Praxis I (PPST) scores or complete the Professional Development Plan; and must demonstrate commitment to professional growth. A student failing to maintain these requirements will be placed on divisional probation and must meet the conditions of a Professional Development Plan specified by the Divisional faculty, or admission will be rescinded.

Note: John Brown University teacher candidates wishing to take professional education and major field courses off campus or through correspondence must obtain, in advance, written permission from the Division Chair and from the Registrar.
 4. Internship ("Gate Three"). Internship is normally taken during the senior year. Prior to registration for internship, candidates must meet the following requirements:
 - a. Submission of a formal application by the specified date during the semester prior to the internship semester. (Application forms and dates for submission may be obtained from the Education Office.)
 - b. Completion of specified prerequisites. (See course descriptions for internships.)
 - c. Completion of a minimum of 70% of required Teaching Field courses.
 - d. A 2.5 or higher cumulative grade-point average.
 - e. A 2.5 or higher cumulative grade-point average in Teaching Field courses, with a minimum grade of 'C/2.0' in each.
 - f. A 2.5 or higher cumulative grade-point average in all Professional Education courses completed, with a minimum grade of 'C/2.0' in each.
 - g. Completion of CPR/First Aid certification (age appropriate) before beginning internship.
 - h. Formal approval of the Gate Three portfolio which includes an interview by the Siloam Springs Public School and Education faculty.
 - i. Praxis II Series—(Documentation of passing the Praxis II Content Knowledge and having registered for or completed Praxis II Pedagogy.) All candidates are required to take the Educational Testing Service (ETS) Praxis II Series, consisting of professional and teaching field tests related to each area in which the candidates are seeking to be licensed. The examination is required for licensure and a report of scores must be sent to the Division of Education and the Arkansas State Department of Education. The "*Detailed Information*" portion of the Praxis II are kept on file for the purpose of

analysis of candidates' needs. Secondary majors must pass Content Knowledge before the Curriculum and Instruction course. Costs are the responsibility of the teacher candidates.

Due to the nature of the internship—a full-time responsibility—teacher candidates are not to be concurrently enrolled for other course work (including correspondence). Athletes, choir members, etc., are not permitted to schedule internship during a semester of participation in a sport or other activity which would interfere with this capstone professional experience.

5. Graduation requirements (“Gate Four”).
 - a. Satisfaction of all graduation requirements for the Bachelor of Science in Education (B.S.E.) or Bachelor of Music Education (B.Mus.Ed.) programs.
 - b. Recommendation by the Division upon completion of an internship experience.
 - c. Approval of professional portfolio, which must include evidence of passing Content Knowledge and taking Pedagogy Praxis II exams (i.e., registration form, ETS exam score report).
 - d. A 2.5 cumulative grade-point average.
 - e. A 2.5 in Teaching Field requirements, with a grade of ‘C/2.0’ or higher in each course.
 - f. A 2.5 in Professional Education courses, with a grade of ‘C/2.0’ or higher in each course.
6. Program completion and eligibility for an Initial License
 - a. Graduation.
 - b. Evidence of meeting the Arkansas qualifying scores on the Praxis II Series.

TESOL Endorsement

Courses are available which would allow teacher candidates to earn a TESOL endorsement. (See page 146.)

Education Minor

The Division of Education offers an Education Minor. Though the minor is not recognized for teacher licensure, the package of course work does provide a strong educational background for whatever teaching one may encounter: internationally, at the university level, in a non-traditional program, or in any career which would involve teaching others. This minor is available for Mathematics, English, History, Science, and Spanish majors. (See page 145.)

Transfer Students

The credentials of students transferring from an accredited college or university will be evaluated by the Registrar and by the Chair of the Division of Education for appropriate placement in the Education Program.

Students entering with fifty or more hours of transfer credit may enroll in restricted Professional Education courses, when necessary, during their first semester at JBU. Each situation will be reviewed at the end of that semester to determine if the student is ready for admission. Students transferring from another major within the University, or from another university, will be expected to complete all program requirements in effect at the time of the transfer. Candidates must complete all Gate requirements (One through Four) in effect at the time of transfer.

Early Childhood Education (P-4) and Middle School (4-8) teacher candidates must successfully complete at least 12 hours of Professional Education courses at JBU including the Spring Block II semester courses. Secondary Education teacher candidates must successfully complete at least 12 hours of Professional Education Teaching courses at JBU with a minimum of three hours of methods in their Teaching Field.

PROGRAMS LEADING TO PRESCHOOL/EARLY ADOLESCENCE (P-8) AND ADOLESCENCE/YOUNG ADULTHOOD (7-12) LICENSURE

VOCAL MUSIC (GRADES P-8, 7-12)

Requirements for the Bachelor of Music Education (B.Mus.Ed.) degree with major in Music

1. University Core Curriculum—46 hours. See page 67.
The Arts and Social Science elective areas are covered by program requirements.
The Philosophy elective is not required for this program.
2. Other Required Courses
Approved First Aid/CPR Course (age appropriate) before Internship
COM 2523 Public Speaking
3. Professional Education

ED	1114	Educational Foundations and Technology
ED	2113	Human Growth and Development
ED	2133	Educational Psychology
ED	2713	Education of the Exceptional Student
ED	3183	Educational Assessment
ED	4891	Seminar: P-12
ED	4890	Internship: P-12

(continued on next page)

4. Music Teaching Field

- MUS 1111 Musicianship I
 - MUS 1113 Theory I
 - MUS 1203 Liberal Arts Foundations for the Musician
 - MUS 1911 Lyric Diction I
 - MUS 1921 Lyric Diction II
 - MUS 2111 Musicianship II
 - MUS 2113 Theory II
 - MUS 2121 Musicianship III
 - MUS 2123 Theory III
 - MUS 3101* Survey of Instruments
 - MUS 3113 Harmonic Form and Analysis
 - MUS 3213 History of Music I
 - MUS 3223 History of Music II
 - MUS 3301 Choral Techniques
 - MUS 3313 Public School Music Methods, P-8
 - MUS 3411 Conducting I
 - MUS 3421 Conducting II
 - MUS 4103* Music Arranging with MIDI
 - MUS 4382 Vocal Pedagogy
 - MUS 4573 Public School Music Methods, 7-12
 - MUS 4900 Senior Recital (half recital)
 - MUS 1731 Music Theatre Scenes (or 1732 Production)
- Ensemble Participation: 4 semesters

5. One of the following Concentrations—11 hours

Voice

- Applied Voice Option A or B
 - A. MUS 1981* Applied Voice: 4 hours
 - MUS 3981* Applied Voice: 3 hours
 - B. MUS 1951/61 Class Voice: 2 hours
 - MUS 1981* Applied Voice: 2 hours
 - MUS 3981* Applied Voice: 3 hours
- MUS 1980/3980 Voice Master Class (each semester of Applied)
- Keyboard Instruction
 - MUS 1931/41*, 2931/41* Class Piano I-IV

Piano

- Applied Piano Option A or B
 - A. MUS 1991* Applied Piano: 3 hours
 - MUS 1781* Applied Accompanying
 - MUS 3991* Applied Piano: 2 hours
 - B. MUS 1991* Applied Piano: 4 hours
 - MUS 3991* Applied Piano: 1 hour
 - MUS 3781* Applied Accompanying
- MUS 1990/3990 Piano Master Class (each semester of Applied)
- MUS 2151 Functional Keyboard Skills I
- MUS 2161 Functional Keyboard Skills II

MUS 1951/61* Class Voice (or two hours of Applied Voice)
 MUS 4261 Piano Pedagogy

Organ

MUS 1971* Applied Organ: 4 hours
 MUS 3971* Applied Organ: 3 hours
 MUS 1990/3990 Piano Master Class (each semester of Applied Organ)
 MUS 2151 Functional Keyboard Skills I
 MUS 2161 Functional Keyboard Skills II
 MUS 1951/61* Class Voice (or two hours of Applied Voice)

*See Music Fee Schedule on page 45.

PROGRAMS LEADING TO ADOLESCENCE / YOUNG ADULTHOOD LICENSURE (Grades 7-12)

Requirements for the Bachelor of Science in Education (B.S.E.) degree with major in an approved teaching field

ENGLISH EDUCATION

1. University Core Curriculum—43 hours. See page 67.
 The Social Science elective area and EGL 1013, 1023, and 4003 are covered by program requirements.
2. Other Required Courses
 Approved First Aid/CPR Course (age appropriate) before Internship
 COM 2523 Public Speaking
3. Professional Education
 - ED 1114 Educational Foundations and Technology
 - ED 2113 Human Growth and Development
 - ED 2133 Educational Psychology
 - ED 2713 Education of the Exceptional Student
 - ED 3153 Reading in the Content Areas
 - ED 3183 Educational Assessment
 - ED 4663 Curriculum & Instruction: Secondary English
 - ED 4881 Seminar: 7-12 Education
 - ED 4880 Internship: 7-12 Education
4. English Teaching Field
 - EGL 1013 English I
 - EGL 1023 English II
 - EGL 2213 World Literature I
 - EGL 2223 World Literature II
 - EGL 2393 Advanced Composition
 - EGL 3333 Shakespearean Drama

(continued on next page)

EGL 3363 Advanced English Grammar

EGL 4413 American Literature to 1900

One of the following:

EGL 3313 Medieval Literature

EGL 3323 Renaissance Literature

One of the following:

EGL 3343 Restoration and Eighteenth Century Literature

EGL 3353 Nineteenth Century British Literature

5. One of the following Emphases (*Grades included in Teaching Field GPA*)

A. Literature

EGL 4483 Selected Topics in two of the following:

1) Author 2) Period 3) Genre 4) Topic

EGL 3341 Literary Magazine Practicum

B. Writing

EGL 4473 Selected Topics: Creative Writing

EGL 4473 Selected Topics: Creative Writing (2nd topic)

EGL 3321 Writing Center Practicum

MATHEMATICS EDUCATION

1. University Core Curriculum—46 hours. See page 67.

The Mathematics, Physical Science, and Social Science elective areas are covered by program requirements.

2. Other Required Courses

Approved First Aid/CPR Course (age appropriate) before Internship

COM 2523 Public Speaking

3. Professional Education

ED 1114 Educational Foundations and Technology

ED 2113 Human Growth and Development

ED 2133 Educational Psychology

ED 2713 Education of the Exceptional Student

ED 3153 Reading in the Content Areas

ED 3183 Educational Assessment

ED 4673 Curriculum & Instruction: Secondary Mathematics

ED 4881 Seminar: 7-12 Education

ED 4880 Internship: 7-12 Education

4. Mathematics Teaching Field

CS 1113 Introduction to Computing

GSC 4133 Faith and Science

MTH 1134 Calculus I

MTH 1144 Calculus II

MTH 2114 Linear Algebra and Differential Equations

MTH 2123 Vector Analysis

MTH 3103 Foundations of Mathematics

MTH 3143 Topics in Mathematics Education

MTH 3153	Foundations of Geometry
MTH 3183	Probability and Statistics
MTH 4101	Readings
MTH 4123	Abstract Algebra
PHY 2114	General Physics

MUSIC EDUCATION

See page 135.

SOCIAL STUDIES EDUCATION

1. University Core Curriculum—40 hours. See page 67.
HST 1013 and 1023, POL 2113, and the Social Science and Global Studies elective areas are covered by program requirements.
2. Other Required Courses
Approved First Aid/CPR Course (age appropriate) before Internship
COM 2523 Public Speaking
3. Professional Education

ED 1114	Educational Foundations and Technology
ED 2113	Human Growth and Development
ED 2133	Educational Psychology
ED 2713	Education of the Exceptional Student
ED 3153	Reading in the Content Areas
ED 3183	Educational Assessment
ED 4693	Curriculum & Instruction: Secondary Social Studies
ED 4881	Seminar: 7-12 Education
ED 4880	Internship: 7-12 Education
4. Social Studies Teaching Field

ECN 2113	Principles of Microeconomics
ECN 2123	Principles of Macroeconomics
HST 1013	Western Civilization I
HST 1023	Western Civilization II
HST 2113	United States History to 1865
HST 2123	United States History since 1865
HST 2153	Twentieth Century World History
HST 2413	Arkansas History
POL 2113	American Government
SST 1113	Introduction to Sociology
SST 1133	Human and Cultural Geography
SST 1143	World Regional Geography
SST 2123	Cultural Anthropology

One of the following:

BBL 3363, 3373	History of the Christian Church
HST 2243	Middle Ages
HST 2253	Roman Empire

(continued on next page)

- HST 2263 Classical Antiquity
- HST 3233 History of the Pacific Rim
- HST 3243 American Civil War
- HST 3253 British Empire
- HST 3313 Second World War
- RPH 3333 History of Philosophy
- One of the following:
 - HST 4613 Seminar in History
 - POL 4613 Seminar in United States Politics
- Two of the following:
 - POL 3003 Political Philosophy (covers Core Philosophy Elective)
 - POL 3353 International Relations
 - POL 4243 Constitutional Law

PROGRAMS LEADING TO MIDDLE SCHOOL INITIAL LICENSURE (GRADES 4-8)

Teacher candidates seeking Middle School Initial Licensure must complete the program in English Language Arts/Social Studies or Science/Mathematics. In addition, Middle School teachers will be qualified to teach all subjects in self-contained classrooms.

ENGLISH/LANGUAGE ARTS AND SOCIAL STUDIES, 4-8

1. University Core Curriculum—28 hours
 - BBL 1013 Old Testament Survey
 - BBL 1023 New Testament Survey
 - BBL 3003 Evangelical Theology
 - BBL 4002 Capstone Seminar in Christian Life
 - BIO 1003 Biological Science
 - COR 1002 Gateway Seminar in Christian Scholarship
 - COR 1012 Wellness
 - COR 11_1 Wellness Activity
 - GSC 1023 Physical Science
 - The Arts—3 hours. (See page 67.)
 - Philosophy—3 hours. (See page 67.)
 - EGL 1013, 1023, and 4003; HST 1013 and 1023; POL 2113; and the Social Science, Mathematics, and Global Studies electives are covered by program requirements.
2. Other Required Courses
 - Approved First Aid/CPR Course (age appropriate) before Internship
3. Professional Education
 - ED 1114 Educational Foundations and Technology
 - ED 2113 Human Growth and Development
 - ED 2133 Educational Psychology

- ED 2713 Education of the Exceptional Student
 - ED 3121 Educational Communications
 - ED 3183 Educational Assessment
 - ED 3353 Instructional Methods: 1-8
 - ED 3362 Curriculum and Instruction: Language Arts
 - ED 3371 Curriculum and Instruction: Reading I
 - ED 3383 Curriculum and Instruction: Arithmetic, P-8
 - ED 3393 Children and Adolescent Literature
 - ED 3763 Behavior Management
 - ED 4373 Curriculum and Instruction: Reading II
 - ED 4563 Curriculum and Instruction: Middle School
 - ED 4860 Internship: Middle School, 4-8
 - ED 4861 Seminar: Middle School, 4-8
4. English/Language Arts and Social Studies Teaching Field, 4-8
- EGL 1013 English I
 - EGL 1023 English II
 - EGL 2243 Young Adult Literature
 - EGL 2393 Advanced Composition
 - EGL 3363 Advanced English Grammar
 - EGL 4413 American Literature to 1900
 - ECN 2003 Basic Economics
 - GSC 3103 Science for Elementary and Middle School Teachers
 - HST 1013 Western Civilization I
 - HST 1023 Western Civilization II
 - HST 2113 United States History to 1865
 - HST 2123 United States History since 1865
 - HST 2413 Arkansas History
 - MTH 2143 Mathematical Structures I
 - MTH 2183 Mathematical Structures II
 - POL 2113 American Government
- One of the following:
- SST 1133 Human and Cultural Geography
 - SST 1143 World Regional Geography

MATHEMATICS AND SCIENCE, 4-8

1. University Core Curriculum—34 hours
- BBL 1013 Old Testament Survey
 - BBL 1023 New Testament Survey
 - BBL 3003 Evangelical Theology
 - BBL 4002 Capstone Seminar in Christian Life
 - COR 1002 Gateway Seminar in Christian Scholarship
 - COR 1012 Wellness
 - COR 11_1 Wellness Activity
 - EGL 1013 English I: Composition

(continued on next page)

- EGL 1023 English II: Literary Analysis and Research
- HST 1013 Western Civilization I
- HST 1023 Western Civilization II
- The Arts—3 hours. (See page 67.)
- Philosophy—3 hours. (See page 67.)
- POL 2113 and the Natural Science, Social Science, Mathematics, and Global Studies electives are covered by program requirements.
- EGL 4003 is not required in this program.

2. Other Required Courses

Approved First Aid/CPR Course (age appropriate) before Internship

3. Professional Education

- ED 1114 Educational Foundations and Technology
- ED 2113 Human Growth and Development
- ED 2133 Educational Psychology
- ED 2713 Education of the Exceptional Student
- ED 3121 Educational Communications
- ED 3183 Educational Assessment
- ED 3353 Instructional Methods: 1-8
- ED 3362 Curriculum and Instruction: Language Arts, P-8
- ED 3371 Curriculum and Instruction: Reading I
- ED 3383 Curriculum and Instruction: Arithmetic, P-8
- ED 3393 Children and Adolescent Literature
- ED 3763 Behavior Management
- ED 4373 Curriculum and Instruction: Reading II
- ED 4563 Curriculum and Instruction: Middle School
- ED 4860 Internship: Middle School, 4-8
- ED 4861 Seminar: Middle School, 4-8

4. Mathematics and Science Teaching Field, 4-8

- MTH 1113 College Algebra (*waived by Math ACT Score of 24*)
- MTH 1122 Trigonometry (*waived by Math ACT Score of 24 and successful Trigonometry course in High School*)
- MTH 2103 Statistics with Computer Applications
- MTH 2143 Mathematics Structures I
- MTH 2183 Mathematics Structures II
- BIO 1003 Biological Science
- ECN 2003 Basic Economics
- GSC 1023 Physical Science
- GSC 1143 Earth Science
- GSC 3103 Science for Elementary and Middle School Teachers
- HST 2413 Arkansas History
- POL 2113 American Government

One of the following:

- MTH 1123 Survey of Calculus
- MTH 1134 Calculus I

One of the following:

MTH 3143 Topics in Mathematics Education

MTH 3153 Foundations of Geometry

One of the following:

BIO 1134 Plant Biology

BIO 2134 Animal Biology

One of the following:

SST 1133 Human and Cultural Geography

SST 1143 World Regional Geography

PROGRAMS LEADING TO EARLY CHILDHOOD EDUCATION (Preschool-Grade 4)

Requirements for Bachelor of Science in Education (B.S.E.) degree with major in Early Childhood Education

1. University Core Curriculum—43 hours

BBL 1013 Old Testament Survey

BBL 1023 New Testament Survey

BBL 3003 Evangelical Theology

BBL 4002 Capstone Seminar in Christian Life

BIO 1003 Biological Science

COR 1002 Gateway Seminar in Christian Scholarship

COR 1012 Wellness

COR 11_1 Wellness Activity

ECN 2003 Basic Economics

EGL 1013 English I: Composition

EGL 1023 English II: Literary Analysis and Research

GSC 1023 Physical Science

HST 1013 Western Civilization I

HST 1023 Western Civilization II

POL 2113 American Government

Philosophy—3 hours. (See page 67.)

The Social Science and Global Studies electives are covered by program requirements.

EGL 4003 and the Mathematics elective are not required.

2. Other Required Courses

Approved First Aid/CPR Course (age appropriate) before Internship

HST 2413 Arkansas History

3. Professional Education

ED 1114 Educational Foundations and Technology

ED 2113 Human Growth and Development

ED 2133 Educational Psychology

(continued on next page)

- ED 2713 Education of the Exceptional Student
- ED 3121 Educational Communications
- ED 3161 Speech and Language Development
- ED 3183 Educational Assessment
- ED 3353 Instructional Methods, 1-8
- ED 3362 Curriculum and Instruction: Language Arts, P-8
- ED 3373 Curriculum and Instruction: Reading I, P-4
- ED 3383 Curriculum and Instruction: Arithmetic, P-8
- ED 3393 Children and Adolescent Literature
- ED 3763 Behavior Management
- ED 4373 Curriculum and Instruction: Reading II
- ED 4850 Internship: Early Childhood Education, P-4
- ED 4851 Seminar: Early Childhood Education, P-4

4. Early Childhood Teaching Field

- ED 3254 Fine Arts for Early Childhood Teachers
- ED 3263 Foundations of Early Childhood Education and
Preschool Field Experience
- ED 3273 Curriculum and Instruction: Early Childhood Education
- GSC 3103 Science for Elementary and Middle School Teachers
- MTH 2143, 2183 Mathematics Structures I, II

One of the following:

- SST 1133 Human and Cultural Geography
- SST 1143 World Regional Geography

5. One of the following:

A. Completion of Middle School English/Social Studies licensure.

- ED 4563 Curriculum and Instruction: Middle School
- EGL 2243 Young Adult Literature
- EGL 2393 Advanced Composition
- EGL 3363 Advanced English Grammar
- EGL 4413 American Literature to 1900
- HST 2113 United States History to 1865
- HST 2123 United States History since 1865

B. Completion of Middle School Mathematics/Science licensure.

- ED 4563 Curriculum and Instruction: Middle School
- MTH 1113 College Algebra (*waived by Math ACT Score of 24*)
- MTH 1122 Trigonometry (*waived by Math ACT Score of 24 and
successful Trigonometry course in High School*)
- MTH 2103 Statistics with Computer Applications
- GSC 1143 Earth Science

One of the following:

- MTH 1123 Survey of Calculus
- MTH 1134 Calculus I

One of the following:

- MTH 3143 Topics in Mathematics Education
- MTH 3153 Foundations of Geometry

- One of the following:
- BIO 1134 Plant Biology
 - BIO 2134 Animal Biology
- C. Completion of Endorsement in Teaching English to Speakers of Other Languages (TESOL).
- ICS 2113 Intercultural Communications
 - EGL 3363 Advanced English Grammar
 - ED 3563 Second Language Acquisition for Teachers
 - ED 3583 Curriculum and Instruction: TESOL
- D. Emphasis in Language Studies—12 hours of a modern language, as approved by Education advisor.
- E. Emphasis in Fine Arts—12 additional hours in ART and/or MUS, as approved by Education advisor.

EDUCATION MINOR

Students pursuing majors whose course work may serve as a content area for secondary teaching—including English, Mathematics, Sciences, Social Studies, and Spanish—are encouraged to complete an Education minor.

The minor does not qualify one for a teaching license but will provide practical training for those whose careers may be enhanced by the ability to teach. The courses also establish a foundation of professional education credit, should the student wish to pursue licensure in the future.

Requirements for minor in Education

- ED 2113 Human Growth and Development
- ED 2133 Educational Psychology
- ED 2713 Education of the Exceptional Student
- ED 3153 Reading in the Content Areas
- ED 3183 Educational Assessment
- ED 46_3 Curriculum and Instruction: Secondary

Minimum total semester hours18

As students progress through the Education courses, they will be required to fulfill each of the following:

1. Pass the JBU Praxis I tests in Reading, Writing, and Mathematics.
2. Pass field experience as specified within certain Education courses.
3. Pass modified Gates One, Two, and Three.
4. Pass the Praxis II content tests before enrolling in ED 46_3.

COACHING ENDORSEMENT

For a teacher candidate to earn Coaching credentials, the following courses are to be added to a B.S.E. program:

- KIN 1283 Athletic Training Techniques
- KIN 3303 Nutrition for Fitness and Sport
- KIN 3353 Theory and Techniques of Coaching

The courses below are not required, but they would be helpful to the student attempting to pass the Praxis II test for the Coaching Endorsement. Teacher candidates desiring the Endorsement would be well served by completing these courses and their required prerequisites.

- KIN 4423 Biomechanics
- KIN 4433 Exercise Physiology

T.E.S.O.L. ENDORSEMENT

For a teacher candidate to earn an endorsement in Teaching English to Speakers of Other Languages, the following courses are to be added to a B.S.E. program:

- ICS 2113 Intercultural Communications
- EGL 3363 Advanced English Grammar
- ED 3563 Second Language Acquisition for Teachers
- ED 3583 Curriculum and Instruction: TESOL

DIVISION OF
**ENGINEERING AND
CONSTRUCTION
MANAGEMENT**



DIVISION OF ENGINEERING AND CONSTRUCTION MANAGEMENT

Bland, Caldwell, French, Kim, Macfarlan, Norwood (chair), Pearson, Rodriguez, Setian

The Division of Engineering and Construction Management comprises the Departments of Computer Science, Construction Management, and Engineering. Bachelor's degrees are offered in Construction Management and Engineering. Associate's degrees are offered in Construction Management and Electromechanical Technology. A minor is offered in Construction Management.

MISSION OF THE DIVISION

The mission of the Division of Engineering and Construction Management is to provide a university education integrating general studies and disciplinary studies to equip students to excel in their chosen field of construction management or engineering.

The faculty of the Division seeks to educate the student in the methods of carefully and logically understanding problems and of designing solutions for those problems. Education within the Division is in the context that "All truth is God's truth"; therefore, a biblical world- and life-view is the basis for problem-solving procedures. "The fear of the Lord is the beginning of knowledge." (Proverbs 1:7) A low student-faculty ratio within the Division assures interaction between faculty and students on these and other issues. The curriculum and the co-curriculum prepare the Division graduate to function effectively in advanced technical positions or to enter graduate studies.

ACCREDITATION

The Bachelor of Science in Engineering degree with electrical/computer or mechanical concentration is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700, <http://www.abet.org>.

The Bachelor of Science in Construction Management degree is accredited by the American Council for Construction Education (ACCE), <http://www.acce-hq.org> (210-495-6161).

FACILITIES

The division facilities are in three buildings, providing 25000 square feet. Laboratories occupy 10000 square feet and shops 4000 square feet. There are two computer-aided design laboratories. The Division supports over 90 computers: PCs, PLCs, and microprocessors. The campus computer network provides access to the Internet. Laboratories support instruction and student design activities in thermal sciences, fluids, mechanical testing, machine design, materials science, instrumentation, control systems, electronics, communications and opto-electronics. A welding shop, a machine shop, and a modeling shop provide support for student projects. The Construction Management Department has a construction staging area and office that is used for the integrated senior capstone course which manages the construction of a building each year.

ADVISORY BOARDS

Advisory boards for both construction management and engineering are made up of distinguished alumni and other professionals. These groups give counsel on curriculum focus, professional issues, and integration of faith and learning.

SCHOLARSHIPS

Scholarships are available to upper-division construction management and engineering students. These are supported by the Fred Olney Memorial Endowment, the Thomas and Dorothy McCaw Fund for Engineering Excellence, the Harold C. Ward Engineering Scholarship fund, the Charles Willis Endowed Scholarship, the Nabholz Construction Company, the Kinco Construction Scholarship, the Milton and Leila Levy Endowment, the National Association of Women in Construction, National Society of Professional Estimators, CM alumni, and the Jeff Scholtens Memorial Endowment. Applications may be made in the division office.

DEPARTMENT OF COMPUTER SCIENCE

(SYMBOL: CS)

The Department of Computer Science offers support courses for students majoring in engineering and mathematics.

DEPARTMENT OF CONSTRUCTION MANAGEMENT

(SYMBOL: CM)

The mission of the John Brown University Construction Management Department is to produce graduates who have the knowledge, skills, and attributes needed for entry-level construction management positions and for growth into positions of greater responsibility and leadership in the construction industry. The education is to be provided in a Christian context that promotes spiritual growth and the development of positive character traits such as honesty, reliability, and industriousness, which result in a high level of professionalism.

Construction Management students have access to over sixteen computer workstations in the department. These stations are equipped with software used for estimating, scheduling, 3D architectural design, structural design, and other construction applications. Computer applications are studied in lecture courses and are used in practicum courses on real projects. Practical experience is also given in the use of surveying equipment and applicable power tools. Seniors are given experience in managing an actual construction project on lots owned by JBU in a local development.

Graduates from this department are equipped to meet the demands of the construction industry. They are found managing the construction process in both the residential and commercial sector of the industry. This program is also suited for students interested in becoming Christian missionary builders and for students interested in Design-Build. This degree includes a minor in Business Administration.

John Brown University is a member of the Associated Schools of Construction, and is recognized by the Arkansas Chapter of the Associated General Contractors of America, Inc., the Arkansas Chapter of the Associated Builders and Contractors, and the American Institute of Constructors. The program is accredited by the American Council for Construction Education (ACCE), <http://www.acce-hq.org> (210-495-6161).

National Certification Exam

Graduating seniors are required to take the Associate Constructor exam administered by the Constructor Certification Commission (CCC). The American Institute of Constructors (AIC) is the sponsoring organization and is the professional society for those working in the field of construction management.

Requirements for the Bachelor of Science (B.S.) degree with major in Construction Management

- 1. University Core Curriculum—37 hours. See page 67.
 The Mathematics, Physical Science, and Social Science Electives are covered by program requirements.
 EGL 4003, Biological Science, and Global Studies are not required.
- 2. Construction Management Major—72 hours
 - CM 1112 Construction Techniques I
 - CM 1122 Construction Techniques II
 - CM 1223 Graphic Communication Skills
 - CM 1313 Materials of Construction
 - CM 2213 Construction Methods I
 - CM 2223 Construction Methods II
 - CM 2322 Statics and Strength for Technology
 - CM 2431 Construction Internship A
 - CM 2441 Construction Internship B
 - CM 2513 Surveying
 - CM 3213 Construction Safety and Quality
 - CM 3233 Structural Systems for Building
 - CM 3413 Estimating I
 - CM 3603 Mechanical/Electrical Systems for Buildings
 - CM 3613 Architectural Design I
 - CM 3623 Architectural Design II
 - CM 4323 Construction Contracting
 - CM 4423 Estimating II
 - CM 4613 Construction Project Planning and Scheduling
 - CM 4713 Construction Management I
 - CM 4723 Construction Management II
 - CHM 1014 Fundamentals of Chemistry
 - COM 2523 Public Speaking
 - MTH 1122 Trigonometry
 - MTH 1123 Survey of Calculus
 - PHY 1114 Introductory Physics
- 3. Enhanced Business Administration Minor as specified below—24 hours
 - ATG 1163 Accounting for Decision Making
 - BUS 2193 Business Statistics
 - BUS 3153 Applied Business Ethics
 - BUS 4143 Business Law
 - ECN 2123 Principles of Macroeconomics
 - LDR 3563 Organizational Behavior
 - MGT 2173 Principles of Management
 One of the following:
 - BUS 2113 Financial Spreadsheets
 - BUS 2153 Financial Mathematics

Minimum total semester hours133

Possible Four-Year Plan for Bachelor’s Degree

Freshman Year - Fall

CM 1112	Construction Techniques I
CM 1313	Materials of Construction
COR 1002	Gateway Seminar Christian Scholarship
BBL 1013	Old Testament Survey
EGL 1013	English I
COR 1012	Wellness
15	hours

Sophomore Year - Fall

CM 2213	Construction Methods I
CM 2513	Surveying
PHY 1114	Introductory Physics
BBL 1023	New Testament Survey
HST 1013	Western Civilization I
16	hours

Summer

CM 2441	Construction Internship B
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Junior Year - Fall

CM 3413	Estimating I
CM 3613	Architectural Design I
CM 3603	Mech/Elec Systems for Buildings
BUS 2153	Financial Mathematics
POL 2113	American Government
15	hours

Senior Year - Fall

CM 4613	Constr Proj Sched & Cost Control
CM 4713	Construction Management I
BBL 3003	Evangelical Theology
BUS 4143	Business Law
LDR 3563	Organizational Behavior
3	Philosophy Elective
18	hours

Freshman Year - Spring

CM 1122	Construction Techniques II
CM 1223	Graphic Communication Skills
ATG 1163	Accounting for Decision Making
CHM1014	Fundamentals of Chemistry
MTH 1122	Trigonometry
EGL 1023	English II
17	hours

Sophomore Year - Spring

CM 2223	Construction Methods II
CM 2322	Statics & Strength for Technology
CM 2431	Construction Internship A
COR 11_1	Wellness Activity
MGT 2173	Principles of Management
HST 1023	Western Civilization II
MTH 1123	Survey of Calculus
16	hours

Junior Year - Spring

CM 3213	Construction Safety & Quality
CM 3233	Structural Systems for Buildings
CM 3623	Architectural Design II
BUS 3153	Applied Business Ethics
ECN 2123	Principles of Macroeconomics
COM 2523	Public Speaking
18	hours

Senior Year - Spring

CM 4323	Construction Contracting
CM 4423	Estimating II
CM 4723	Construction Management II
BUS 2193	Business Statistics
BBL 4002	Capstone Seminar Christian Formation
3	Arts Elective
17	hours

Requirements for minor in Construction Management

CM 1112	Construction Techniques I
CM 1122	Construction Techniques II
CM 1223	Graphic Communication Skills
CM 1313	Materials of Construction
CM 22_3	Construction Methods I or II
CM 3413	Estimating I

One of the following:

CM 3603	Mechanical/Electrical Systems for Buildings
CM 3613	Architectural Design I
CM 3213	Construction Safety and Quality

Minimum total semester hours 19

Requirements for the Associate of Science (A.S.) degree with major in Construction Management

- 1. University Core Curriculum—26 hours
 - BBL 1013 Old Testament Survey
 - BBL 1023 New Testament Survey
 - COR 1002 Gateway Seminar in Christian Scholarship
 - COR 1012 Wellness
 - EGL 1013 English I
 - EGL 1023 English II
 - HST 10_3 Western Civilization I or II
 - Core Elective Areas (See p. 67)
 - Wellness Activity—1 hour
 - Natural Science—3 hours
 - Social Science—3 hours
 - 2. Courses Specified by this Department—33 hours
 - CM 1112 Construction Techniques I
 - CM 1122 Construction Techniques II
 - CM 1223 Graphic Communication Skills
 - CM 1313 Materials of Construction
 - CM 22_3 Construction Methods I or II
 - CM 2431 Construction Internship A
 - CM 2441 Construction Internship B
 - CM 3413 Estimating I
 - ATG 1163 Accounting for Decision Making
 - BUS 2113 Financial Spreadsheets
 - BUS 2193 Business Statistics
 - Two of the following:
 - CM 3213 Construction Safety and Quality
 - CM 3603 Mechanical/Electrical Systems for Buildings
 - CM 3613 Architectural Design I
 - 3. Electives as necessary to complete minimum semester hours
- Minimum total semester hours62

DEPARTMENT OF ENGINEERING

(SYMBOLS: EE, EN, ME)

Engineers apply the theories and principles of science and mathematics to the economical solution of practical technical problems. There are some 25 different engineering specialties, but of the nearly 1.5 million engineering jobs available each year the greatest numbers are filled by engineers having electrical or mechanical backgrounds. More than one half of engineering jobs are in the manufacturing industries. The major part of the remainder is in engineering and architectural services and business and management consulting services. Governments employ about 200,000 engineers.

Engineers in the electrical/computer and mechanical areas design, develop, test and supervise the manufacture of electrical and electronic equipment, mechanical equipment, energy systems and information systems.

Mission of the Department

The Engineering Department at John Brown University strives to educate students in the application of science and technology to the service of God and humanity. The goal is to produce graduates who can begin effective engineering practice in industry, graduate school, or the mission field.

Program Educational Objectives

The faculty of Engineering is committed to the following objectives which are consistent with both the University and the Division mission statements and emphasize the head (intellectual), heart (spiritual), and hand (professional).

1. HEAD — John Brown University engineering graduates will have a strong general education, a broad foundation in electrical and mechanical fundamentals, and a depth of knowledge in a specific engineering discipline sufficient to ensure both immediate application and life-long learning.
2. HEART — John Brown University engineering graduates will be aware of their personal and professional responsibility to serve both God and humanity.
3. HAND — John Brown University engineering graduates will be prepared and confident to begin an entry-level engineering position, pursue graduate studies, or contribute as a Christian technical missionary.

Design Emphasis

At John Brown University the engineering design experience starts in the freshman year, develops with more extensive technical content through the sophomore and junior years and culminates with the two-semester senior design project. The scheme for the lower-level design courses is to introduce design methodology using small design projects that prepare the student to clearly define the problem, identify the constraints and criteria, and establish the requirements for the design. By the third year, the student will have developed the technical background to work out significant engineering design problems. The junior-level design lab provides an opportunity to work with an interdisciplinary team and produce both oral and written presentations.

Fourth year experiences include those in electronic design, antenna design, machine design and fluid system design as well as the capstone design project. The capstone project is an intense experience for the engineering student. It approaches a "real-world" situation. The projects must be finished and satisfy stated objectives as determined by active negotiation with the engineering faculty and the sponsors. Oral and written presentations are produced for this project.

Degree Candidacy

Students must apply for degree candidacy status during the second semester of the sophomore year. At this time, the student will make known the concentration of choice and complete a four-year plan in consultation with his or her advisor.

Certification for Additional Concentration

A student who majors in engineering and takes the five electrical/computer concentration courses, three electrical/computer technical elective courses, and three mechanical courses (from either the mechanical concentration courses or the mechanical technical elective courses) shall receive the degree Bachelor of Science in Engineering, Electrical/Computer Concentration and an enhancement certificate from the chair of the Division of Engineering and Construction Management certifying the additional work done in the mechanical concentration. A Bachelor of Science in Engineering, Mechanical Concentration with an enhancement certificate certifying additional work done in the electrical/computer concentration may be obtained in a similar manner.

A student who majors in engineering and takes the five electrical/computer concentration courses, the five mechanical concentration courses, two electrical/computer technical elective courses, and two mechanical technical elective courses shall receive the degree Bachelor of Science in Engineering, Electrical/Computer Concentration and Mechanical Concentration.

**Requirements for the Bachelor of Science in Engineering
(B.S.Eng.) degree with Electrical/Computer or Mechanical
Concentration**

1. University Core Curriculum—34 hours. See page 67.
The Mathematics, Physical Science, and Global Studies Electives are covered by program requirements.
EGL 4003, COR 1012, COR 11_1, and the Biological Science and Social Science Electives are not required in these programs.
2. Engineering Core—78 hours

EN	1112	Engineering Concepts and Design
EN	1122	Concepts in Electrical Engineering
EN	1222	Concepts in Mechanical Engineering
EN	2222	Instrumentation Lab
EN	2322	Engineering Economics
EN	3213	Engineering Materials Science
EN	3222	Design Lab
EN	3313	Engineering Fields
EN	3513	International Problem Solving in Engineering and Business
EN	4113	Engineering Design I
EN	4123	Engineering Design II
EN	4323	Control Systems
EE	2213	Digital Electronics
EE	2223	Electrical Circuits
EE	3313	Electronics I
ME	3113	Thermal Sciences
ME	3313	Statics and Strength of Materials
CS	1113	Introduction to Computing
MTH	1134	Calculus I
MTH	1144	Calculus II
MTH	2114	Linear Algebra and Differential Equations
MTH	2123	Vector Calculus
MTH	3183	Probability and Statistics
CHM	1124	General Chemistry I
PHY	2114	General Physics I
PHY	2124	General Physics II
3. One of the following Concentrations—24 hours
 - A. Electrical/Computer Concentration

CS	3213	Computer Architecture
EE	3323	Digital Systems
EE	3423	Signal Processing
EE	4123	Electromagnetics
EE	4413	Digital Communications Theory

(continued on next page)

Technical Electives—9 hours from the following:

- EN 350_ Selected Topics
- EN 4303 System Design with Microprocessors
- EN 4403 Engineering Management
- EN 4503 Electro-Optics
- EE 350_ Selected Topics
- EE 4203 Fiber Optic Communication
- EE 4213 Electronics II
- EE 4303 Digital Signal Processing
- EE 4403 Advanced Digital Systems
- EE 4503 Data and Computer Communications
- EE 4703 Antennas

B. Mechanical Concentration

- ME 3123 Dynamics
- ME 3223 Thermodynamics
- ME 4113 Machine Design
- ME 4213 Heat Transfer
- ME 4323 Fluid Mechanics

Technical Electives—9 hours from the following:

- EN 350_ Selected Topics
- EN 4303 System Design with Microprocessors
- EN 4403 Engineering Management
- EN 4503 Electro-Optics
- ME 350_ Selected Topics
- ME 4103 Advanced Strength of Materials
- ME 4203 Mechanical Vibrations
- ME 4303 Finite Element Analysis
- ME 4403 Compressible Flow
- ME 4503 Viscous Flow
- ME 4603 Advanced Thermodynamics
- ME 4703 Aerospace Propulsion

Total semester hours136

ENGINEERING AND CONSTRUCTION MANAGEMENT

Possible Four-Year Plan for Bachelor's degree

Freshman Year - Fall

EN 1112 Engineering Concepts and Design
 CHM1124 General Chemistry (L)
 MTH 1134 Calculus I (L)
 COR 1002 Gateway Seminar in Christian Scholarship
 EGL 1013 English I
 15 hours

Sophomore Year - Fall

EE 2213 Digital Electronics I (L)
 CS 1113 Introduction to Computing (L)
 MTH 2114 Linear Algebra & Differential Eq (L)
 PHY 2114 General Physics I (L)
 HST 1013 Western Civilization I
 17 hours

Junior Year - Fall

EE 3313 Electronics I (L)
 EN 3313 Engineering Fields (L)
 ME 3113 Thermal Sciences
 ME 3313 Statics & Strength of Materials
 BBL 3003 Evangelical Theology
 POL 2113 American Government
 18 hours

Senior Year - Fall

EN 4113 Engineering Design I
 EN 3213 Engineering Materials Science
 EE 4413 Digital Communications Theory (L) OR
 ME 4113 Machine Design
 EE 3323 Digital Systems (L) OR
 ME 4213 Heat Transfer
 EN 3513 International Problem Solving
3 Technical Elective
 18 hours

Freshman Year - Spring

EN 2322 Engineering Economics
 EN 1122 Concepts in Electrical Engineering
 EN 1222 Concepts in Mechanical Engineering
 MTH 1144 Calculus II (L)
 BBL 1013 Old Testament Survey
 EGL 1023 English II
 16 hours

Sophomore Year - Spring

EE 2223 Electrical Circuits
 EN 2222 Instrumentation Laboratory (L)
 PHY 2124 General Physics II (L)
 MTH 2123 Vector Analysis
 BBL 1023 New Testament Survey
 HST 1023 Western Civilization II
 18 hours

Junior Year - Spring

EN 3222 Design Lab (L)
 CS 3213 Computer Architecture OR
 ME 3223 Thermodynamics
 EE 3423 Signal Processing (L) OR
 ME 3123 Dynamics
 MTH 3183 Probability and Statistics
 3 Philosophy
3 Technical Elective
 17 hours

Senior Year - Spring

EN 4123 Engineering Design II
 EN 4323 Control Systems
 EE 4123 Electromagnetics OR
 ME 4323 Fluid Mechanics (L)
 BBL 4002 Capstone Seminar Christian Formation
 3 Arts
3 Technical Elective
 17 hours

Requirements for the Associate of Science (A.S.) degree with major in Electromechanical Technology

- 1. University Core Curriculum—23 hours
 - BBL 1013 Old Testament Survey
 - BBL 1023 New Testament Survey
 - COR 1002 Gateway Seminar in Christian Scholarship
 - COR 1012 Wellness
 - EGL 1013 English I
 - EGL 1023 English II
 - HST 10_3 Western Civilization I or II
 - Core Elective Areas (See p. 67)
 - Wellness Activity—1 hour
 - Social Science—3 hours
 - 2. Courses Specified by this Department—34 hours
 - EN 1112 Engineering Concepts and Design
 - EN 1121 Production Technique Laboratory
 - EN 1122 Concepts in Electrical Engineering
 - EN 1222 Concepts in Mechanical Engineering
 - EN 2222 Instrumentation Lab
 - EN 2322 Engineering Economics
 - EN 3213 Engineering Materials Science
 - CS 1113 Introduction to Computing
 - MTH 1134 Calculus I
 - CHM 1124 General Chemistry I
 - PHY 2114 General Physics I
 - PHY 2124 General Physics II
 - 3. Electives as necessary to complete minimum semester hours
- Minimum total semester hours62

HUMANITIES AND SOCIAL SCIENCES

DIVISION OF
**HUMANITIES
AND SOCIAL SCIENCES**



DIVISION OF

HUMANITIES AND SOCIAL SCIENCES

Cater, Froman (chair), Guinn, A. Himes, J. Himes, D. Johnson, P. Jones, S. Jones, Kirk, Niles, Ostrander, C. Pastoor, J. Pastoor, Ramirez, Roby

The Division of Humanities and Social Sciences offers courses that are rich in the liberal arts and that contribute to the general education of all students. The division includes departments of English, History, Language Studies, Political Science, Psychology, and Social Studies. Curricula leading to teacher certification are offered in English and Social Studies. The division also houses the Pre-Law Professional Program.

MISSION STATEMENT

The Division of Humanities and Social Sciences equips students to study human nature and the actions and ideas of people in their historical, political, and cultural contexts and to promote, from a distinctly Christian perspective, the intellectual, spiritual, and occupational development of our students. The faculty members in this division also contribute to our academic disciplines through research and publication which enriches the work of teaching that is our primary objective.

The Division of Humanities and Social Sciences develops students who

- * know the theories, ideas, research methods, and key personalities of their discipline
- * are willing to ask critical questions to evaluate and modify preconceptions
- * will develop personal values based on observation, research, critical thinking, personal reflection, and Christian principles
- * can propose thoughtful and expedient solutions to social problems
- * appreciate the great tradition of arts and literature of the West while considering both the values of that tradition and the problems inherent in the canonization of tradition
- * can communicate clearly in written and oral expression
- * develop cross-cultural understanding in Western and non-Western traditions
- * will be life-long learners and critical thinkers

DEPARTMENT OF ENGLISH

(SYMBOL: EGL)

The John Brown University Department of English offers a curriculum leading to the Bachelor of Arts and (in conjunction with the Division of Education) the Bachelor of Science in Education for teachers of English.

The curriculum for the English major emphasizes the reading and critical analysis of literature, the historical development of literature as part of culture, and the research, writing, critical thinking, and communication skills necessary for scholarship, effective teaching and success in a wide variety of professional fields.

Practicums offer experience in Writing Center consultation and experience in the production of a creative writing anthology.

Requirements for the Bachelor of Arts (B.A.) degree with major in English

1. University Core Curriculum—52 hours. See page 67.

EGL 4003 is covered by program requirements.

2. English Major Core—29 hours

EGL 2393 Advanced Composition

EGL 3313 Medieval Literature

EGL 3321 Writing Center Practicum

EGL 3333 Shakespearean Drama

EGL 3353 Nineteenth Century British Literature

EGL 3363 Advanced English Grammar

EGL 4111 Careers for English Majors

EGL 4413 American Literature to 1900

EGL 4453 Senior Seminar

One of the following:

EGL 2213 World Literature I

EGL 2223 World Literature II

One of the following:

EGL 3323 Renaissance Literature

EGL 3343 Restoration and Eighteenth Century Literature

3. One of the following Emphases

A. Literature—10 hours

EGL 3713 Literary Theory

EGL 4483 Selected Topics in two of the following:

1) Author 2) Period 3) Genre 4) Topic

EGL 3341 Literary Magazine Practicum

B. Writing—7 hours

- EGL 4473 Selected Topics: Creative Writing
- EGL 4473 Selected Topics: Creative Writing (2nd topic)
- EGL 3321 Writing Center Practicum (repeated for additional credit)

4. Foreign Language—12 hours in one language or 6 hours each in two languages. (Completion of an Intermediate course covers the Core Global Studies component.) English majors are encouraged to consider Spanish or French as a minor.

5. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for minor in English

To fulfill the requirements for a minor in English, a total of 21 semester hours of course work in English, including 6 semester hours of courses of junior-senior level, must be completed.

Requirements for minor in Teaching English to Speakers of Other Languages (TESOL)

- ICS 2113 Cross-Cultural Communications
- LS 3173 Introduction to Linguistics
- ED 2133 Educational Psychology
- ED 3563 Second Language Acquisition for Teachers
- EGL 3363 Advanced English Grammar
- EGL 3583 Curriculum and Instruction: TESOL
- ED 3183 Educational Assessment

Requirements for the Bachelor of Science in Education (B.S.E.) degree with major in English

See Division of Education, page 137.

Requirements for minor in Education

English majors whose professional plans may include teaching in non-traditional settings, internationally, or at the university level are encouraged to consider the 18-hour Education minor. Though the minor is not recognized for teacher licensure, the package will provide a strong educational background for whatever teaching opportunities one may encounter. See the Division of Education, page 145.

DEPARTMENT OF HISTORY

(SYMBOL: HST)

The Department of History seeks bright, motivated young people who are interested in the world around them and who desire to work toward becoming reflective, thoughtful and well-rounded Christians. Undergraduate study of history prepares students for graduate work in many fields, including theology, linguistics and psychology. JBU's history department is especially equipped to assist students interested in pursuing careers in law, international relations, and politics. In addition to being a good thing in itself, learning about history complements all other courses of study. For this reason, the History Department offers courses within the University Core Curriculum. Courses in this department also serve as a substantial component of the Social Studies curriculum as required for the B.S.E. degree.

Requirements for the Bachelor of Arts (B.A.) degree with major in History

1. University Core Curriculum—55 hours. See page 67.
2. Courses Specified by this Department—36 hours, including at least 12 upper division.
 - HST 2113 United States History to 1865
 - HST 2123 United States History since 1865
 - HST 2153 Twentieth Century World History
 - HST 4613 Seminar in HistoryTwenty-four hours from the following:
 - HST 2243 Middle Ages
 - HST 2253 Roman Empire
 - HST 2263 Classical Antiquity
 - HST 3183 Law and American History
 - HST 3233 History of the Pacific Rim
 - HST 3243 American Civil War
 - HST 3253 British Empire
 - HST 3313 Second World War
 - HST 341_ Selected Topics
 - HST 451_ Independent Study
 - BBL 33_3 History of the Christian Church I or II
 - POL 3143 The American Presidency
 - PSY 3383 History of Psychology
 - RPH 3333 History of Philosophy
3. Foreign Language—12 hours (or equivalent) in one or two languages. (Completion of an Intermediate language course covers the Core Global Studies component.)

- 4. Minor Field and/or Electives as necessary to complete minimum semester hours, including at least 12 hours of junior-senior level courses.

Minimum total semester hours124

Requirements for minor in History

A minimum of 18 semester hours in history beyond Core requirements, including HST 2113 and either 2123 or 2153, and at least six hours of junior-senior level courses.

U.S. History CLEP Examinations

History majors and minors may not use CLEP examinations to substitute for HST 2113 or HST 2123 after matriculating at JBU.

DEPARTMENT OF LANGUAGE STUDIES

(SYMBOL: LS)

The Department of Language Studies offers the Bachelor of Arts degree with major in Spanish, and minors in French, Spanish, and Linguistics. Courses in other languages—Chinese, German, Japanese, Latin—are offered upon sufficient student interest. Language courses meet the needs of students in Bachelor of Arts programs throughout the University. The Language Studies Department designs and schedules its courses in cooperation with the English, History, Intercultural Studies, International Business, Music, Political Science, and Biblical Studies programs.

A hallmark of the program is the use of instructional technology for out-of-class practice and exposure to samples of actual language use. The department has a facility which houses software, videos, and feature films for language learning. Students go there to record pronunciation assignments or to watch the several foreign language television channels which are available on campus. The department has worked with Instructional Technology to make other resources, such as foreign language dictionaries, available on the campus computer network.

The Spanish major entails a semester of study in Sevilla, Spain. The relatively low number of hours required for the major, 37, facilitates double-majoring. Most students do so; those who do not typically complete two minors. Students who are interested in a teaching career should consider a minor in education. See the Division of Education, page 145.

Students in other majors may earn credit in Spanish and specialized areas such as business and environmental studies by spending a semester in

Costa Rica in the Latin American Studies Program sponsored by the Council for Christian Colleges and Universities.

College credit in language may be established by CLEP or other examinations approved by the Department.

Based upon recommendation of the Department of Language Studies, a student may enter language study above the elementary level without having established college credit for the first course(s). In such cases, the early courses are waived upon completion of subsequent work. The waiver does not establish credit; hours are posted only for the specific courses completed. However, a language requirement is considered met upon completion of the highest course required.

Spanish majors, especially those considering graduate school, are urged to take at least six hours of another language.

Requirements for Bachelor of Arts (B.A.) degree with major in Spanish

- 1. University Core Curriculum—52 hours. See page 67.
The Global Studies component is covered by program requirements.
- 2. Courses Specified by the Department—21 hours
 - LS 2113 Intermediate Spanish I
 - LS 2123 Intermediate Spanish II
 - LS 3113 Readings in Spanish I
 - LS 3123 Readings in Spanish II
 - LS 3173 Introduction to Linguistics
 - LS 4163 Professional Spanish

One of the following, chosen in accordance with the student's professional goals:

 - LS 4143 Second Language Acquisition for Spanish Teachers
 - LS 4193 Language Internship
- 3. Sevilla Study Program—16 hours (recommended during the fall semester of the junior year)
 - LSS 3114 Spanish History and Civilization
 - LSS 3514 Advanced Spanish Grammar and Composition

Two of the following:

 - LSS 3044 Spanish Short Story
 - LSS 3064 History of Spanish Art
 - LSS 3554 Spanish Literature I
 - LSS 3564 Spanish Literature II

Other Sevilla courses may be substituted only upon approval of the Department of Language Studies
- 4. Minor Field
- 5. Electives as necessary to complete minimum semester hours

Minimum total semester hours124

Requirements for minor in Spanish

Completion of 18 hours of credit, including the 6 hours of intermediate study; LS 3113 & 3123 Readings in Spanish I & II; LS 3173 Introduction to Linguistics; and LS 4163 Professional Spanish.

Requirements for minor in French

Completion of 21 hours of credit, including the 12 hours of elementary and intermediate study; LS 3213 & 3223 Readings in French I & II; and LS 3173 Introduction to Linguistics.

Requirements for minor in Linguistics

Intermediate Language Study or Latin—6 hours
 EGL 3363 Advanced English Grammar
 LS 3173 Introduction to Linguistics
 Summer Institute of Linguistics—10 semester hours minimum, offered through the University of Oregon or the University of North Dakota.

DEPARTMENT OF POLITICAL SCIENCE

(SYMBOL: POL)

The Department of Political Science offers courses leading to a major in Political Science. Minors are available in Political Science, Pre-Law, and International Relations. Courses within the department enable students to gain an appreciation of the development of political theory, a deeper understanding of world political systems, and a working knowledge of the United States government. Students are also encouraged to examine the role of the Christian in political systems.

Requirements for the Bachelor of Arts (B.A.) degree with major in Political Science

1. University Core Curriculum—49 hours. See page 67.
 POL 2113 is included in Major Field requirements.
 The Philosophy elective is covered by POL 3003.
2. Courses Specified by this Department—36 hours, including the courses listed below. At least 12 upper division hours must be completed.
 - HST 2123 United States History since 1865
 - HST 2153 Twentieth Century World History
 - POL 2113 American Government
 - POL 2213 Comparative Politics
 - POL 2473 Methods of Political Analysis

(continued on next page)

- POL 3003 Political Philosophy
- POL 4613 Seminar in United States Politics

Fifteen hours from the following:

- POL 3123 The American Congress
- POL 3143 The American Presidency
- POL 3353 International Relations
- POL 4233 Elections and Voting Behavior
- POL 4243 Constitutional Law
- POL 4313 Christianity and the Legal Profession
- POL 4413 Religion and Politics

3. Foreign Language—12 hours (or equivalent) in one or two languages. (Completion of an Intermediate language course covers the Core Global Studies component.)
4. Minor Field, or Electives sufficient to complete minimum semester hours.
Minimum total semester hours124

Requirements for minor in Political Science

A minimum of 21 semester hours, including HST 2123, POL 2113, 2213, and 3003, and nine additional hours in political science. At least six hours of junior-senior level courses must be included.

Requirements for minor in Pre-Law

A minimum of 21 semester hours, including

- BUS 2153 Financial Mathematics
- EGL 2393 Advanced Composition
- POL 2113 American Government
- POL 4243 Constitutional Law
- POL 4313 Christianity and the Legal Profession

Two of the following:

- BUS 4143 Business Law
- BUS 4243 International Law
- COM 3493 Media Law and Ethics
- FAM 4453 Family Law and Society

Requirements for minor in International Relations

A minimum of 18 semester hours, including

- HST 2153 Twentieth Century World History
- POL 3353 International Relations
- BUS 4243 International Law

Nine hours from among the following:

- ECN 2043 Economies of the European Union
- ECN 2113 Principles of Microeconomics

ECN 2123	Principles of Macroeconomics
ECN 3203	Economic Development
ECN 4103	International Trade
HST 3233	History of the Pacific Rim
HST 3253	British Empire
ICS 4133	Intercultural Leadership Skills
POL 2213	Comparative Politics
SST 2123	Cultural Anthropology

American Studies Program (ASP) option

Students successfully participating in the four-month internship/seminar program in Washington, D.C., may fulfill the requirements of the Political Science minor by the additional completion of POL 2113 and 3003. Consult a Political Science faculty member for details.

PREPARATION FOR LAW SCHOOL

Current trends highlight the fact that law schools are not looking for Pre-Law majors but, instead, for students who have successfully completed a rigorous liberal arts program and who can perform well on the LSAT. The purpose of the JBU Pre-Law Professional Program is to assist students of all majors in developing the skills and knowledge necessary for active intellectual engagement in the first year of law school. The Pre-Law Professional Program also seeks to assist students as they explore their interest in the legal profession and the possible avenues in which those interests might best apply. To meet these goals, the Pre-Law Professional Program consists of the following components:

- > the Pre-Law Minor (listed under Political Science), which can be taken in conjunction with the degree of the student's choice, as a way to develop the verbal, written, and analytical skills necessary for law school;
- > the advice and guidance of Pre-Law Advisors who are both professors and lawyers;
- > an annual Fall semester Pre-Law Information Session;
- > an annual Spring semester mock LSAT test and score analysis;
- > an introduction to the integration of faith and the practice of law in JBU's Christianity & the Legal Profession course;
- > exposure to the law through JBU's Constitutional Law, Media Law, Family Law, and/or Business Law courses;
- > exposure to legal professionals currently working in a variety of fields through JBU's Family Law and Christianity & the Legal Profession courses;

> the opportunity for competitive admissions and scholarships for the Law, Justice and Culture Institute, a two-week May-term course at Trinity Christian College for undergraduate students interested in law school. The course consists of legal study and analysis, guest speakers who are lawyers in a variety of fields, and a day trip to the University of Chicago School of Law where students meet with law school personnel and sit in on a first-year law class.

Students interested in the Pre-Law Professional Program should contact the Administrative Assistant for the Division of Humanities and Social Sciences.

DEPARTMENT OF PSYCHOLOGY

(SYMBOL: PSY)

The Department of Psychology offers courses designed to introduce students to the empirical study of behavior and mental processes from the perspective of both natural revelation (scientific investigation) and special revelation (scriptural principles).

Reflecting the three-fold mission of John Brown University, psychology students are given training in Head (the basic principles and theories of psychology), Heart (the integration of a Christian worldview with psychology), and Hand (practical training and experience in psychology through supervised field experiences). The department also serves students in the University Core Curriculum by offering courses that fulfill Core electives in both Mathematics and Social Science.

Psychology students are prepared both for graduate training in psychology or related fields and for service in a variety of church and social work or mental health agencies, working under supervisors with advanced graduate training. Psychology faculty mentors provide students with advice and assistance in the transition to graduate study or employment. Graduates from the department have been successful in gaining entry to graduate schools in psychology and social work as well as law school. Employment as a psychologist or licensed counselor will require further graduate study in psychology or social work but the psychology baccalaureate degree is valued by employers for providing an excellent liberal arts foundation for careers in business, church work, welfare work, or any other area where an understanding of the human mind and interpersonal relationships may be beneficial.

Requirements for the Bachelor of Science (B.S.) degree with major in Psychology

1. University Core Curriculum—49 hours. See page 67.
 The Mathematics and Social Science electives are covered by program requirements.
 2. Courses Specified by this Department—40 hours
 - PSY 1101 Orientation to Psychology
 - PSY 1013 Introductory Psychology
 - PSY 2383 Introductory Statistics
 - PSY 2393 Research Methods
 - PSY 3203 Psychological Testing
 - PSY 3383 History of Psychology
 - PSY 4453 Advanced Research Seminar
 - PSY 4493 Seminar in Psychology
 Two of the following:
 - PSY 4333 Cognitive Psychology
 - PSY 4343 Theories of Learning
 - PSY 4353 Behavioral Neuroscience
 Two of the following:
 - PSY 2203 Theories of Personality
 - PSY 2413 Developmental Psychology
 - PSY 3423 Social Psychology
 Two of the following:
 - PSY 2233 Theories of Counseling
 - PSY 2243 Introduction to Therapeutic Interviewing
 - PSY 4213 Abnormal Psychology
 3. Minor field
 4. Electives sufficient to complete minimum semester hours.
Students who anticipate attending graduate school should consider taking at least some of the following courses:
 - BIO 3514 Human Anatomy
 - BIO 3524 Animal Physiology
 - EGL 2393 Advanced Composition
 - COM 2523 Public Speaking
 5. Achievement Test
 All psychology majors are required to complete a standardized achievement test designated by the Department.
- Minimum total semester hours124

Requirements for minor in Psychology

A minimum of 18 hours in Psychology, including PSY 1013, 2383, 2393, and six hours of junior-senior level courses.

DEPARTMENT OF SOCIAL STUDIES
(SYMBOL: SST)

The Department of Social Studies provides supporting courses to programs in Education and Intercultural Studies. Courses within the department are designed to encourage students to develop a global perspective on the modern world, including the individual and society, structures of power, and social institutions. Courses are designed to give students a greater appreciation for the effects of geographical factors on cultures, economics, and politics and the effects of cultural factors on human relations—factors such as language, economics, kinship, marriage, gender, social control, social stratification, religion, and art.

In conjunction with the Division of Education, the Division of Humanities and Social Sciences offers the Bachelor of Science in Education degree with a major in Social Studies. The Teaching Field consists of courses from four departments—Economics, Social Studies, History, and Political Science—and prepares the prospective secondary teacher for multifaceted responsibilities in the classroom. The minor in Social Studies also draws coursework from diverse fields.

**Requirements for the Bachelor of Science in Education (B.S.E.)
degree with major in Social Studies**

See Division of Education, page 139.

Requirements for minor in Social Studies

A minimum of 21 hours, including 6 hours of History and 6 hours each from any two additional departments among Economics, Intercultural Studies, Social Studies, and Political Science. At least 6 hours must be junior-senior level.

INTERDISCIPLINARY STUDIES

DIVISION OF
**INTERDISCIPLINARY
STUDIES**



DIVISION OF

INTERDISCIPLINARY STUDIES

B. Lambert, Noyes, Ostrander (chair), Whitmore

The Division of Interdisciplinary Studies offers the Bachelor of Science or Bachelor of Arts degree in Interdisciplinary Studies, the Associate of Arts degree in General Education, and the minor in Military Science. It houses the first-year seminar, *Gateway Seminar in Christian Scholarship*, the Core Curriculum Wellness course as well as courses relating to learning assistance, student development, and career planning.

The Division is also responsible for the academic advising of all students who have not declared a major. These students receive individual counseling by the Advising Coordinator and the Career Development Director who guide the student in a career exploration process using computer-assisted instruction and/or a career planning course.

DEPARTMENT OF INTERDISCIPLINARY STUDIES (SYMBOL: IDS)

Requirements for the Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) degree with major in Interdisciplinary Studies

In special circumstances, a student wishing to pursue a course of study not available within the stated offerings of John Brown University may present a petition to the Dean of Undergraduate Studies, requesting approval of an individualized program leading to a baccalaureate degree in Interdisciplinary Studies. Such a program should be thoughtfully designed in consultation with a faculty advisor after the student has had significant college experience. Therefore, a student should not begin the proposal process prior to the second semester of the sophomore year.

Interdisciplinary Studies programs conform to general University policies for bachelor's degrees, including the following:

- > Full Core Curriculum, possibly employing substitutions allowed within existing degrees. See page 67.
- > For B.A. programs, major field consisting of at least 36 semester hours and 12 hours of foreign language

- > For B.S. programs, major field consisting of at least 48 semester hours
- > At least 18 hours of upper division courses included the major field, with no presumption of waiver of specified prerequisites
- > Stated minimums for major, minor, and cumulative grade-point averages
- > Minimum total credit of 124 semester hours

A student considering an Interdisciplinary Studies degree should begin discussion with the Advising Coordinator toward the establishment of a Faculty Advisory Committee (FAC) to supervise the degree project. The FAC consists of two or three faculty members representing the academic divisions where substantial proportions of the desired courses are offered. FAC members offer guidance as the student initiates and navigates the process: defining/refining personal goals, designing a coherent program that is professionally relevant and academically valid, and completing the requirements as approved for the degree. The student must submit to the Dean of Undergraduate Studies a detailed proposal that includes the following:

- > Rationale for the desired major, including the student's personal aims
- > Documentation of any similar curricula offered by other accredited institutions
- > If the program is to form a foundation for advanced study, a statement of potential acceptability from a graduate institution to which the student may eventually apply
- > Specific course plan arranged in accordance with scheduled offerings stated in catalog
- > Current transcript showing a grade-point average of at least 2.8
- > Signatures of members of the advisory committee

Final approval of proposals for Interdisciplinary Studies is granted by the Undergraduate Council.

Requirements for the Associate of Arts (A.A.) degree with major in General Education

1. University Core Curriculum for A.A. degrees—28 hours. See page 75.
2. Courses Specified by the Division—21 hours
 - COR 11_1 Wellness Activity
 - POL 2113 American Government
 - BBL 3003 Evangelical Theology
 - EGL 4003 Masterpieces of Literature

- BBL 4002 Capstone Seminar in Christian Formation
- Natural Science—3 additional hours. (See page 67.)
- The Arts—3 hours. (See page 67.)
- Philosophy—3 hours. (See page 67.)

3. Electives sufficient to complete minimum credit hours

Minimum total semester hours62

The Associate of Arts degree in General Education is not available to students pursuing four-year degrees.

DEPARTMENT OF MILITARY SCIENCE

(SYMBOLS: ARO, MSC)

By crosstown agreement with the University of Arkansas, students at John Brown University may participate in the Reserve Officer Training Corps (ROTC) programs of the United States Army and the United States Air Force. See pages 32-34 for full descriptions of the opportunities available.

Requirements for minor in Military Science

Completion of a full ROTC program consisting of at least 18 semester hours, including 6 upper division.

DIVISION OF
NATURAL SCIENCE



DIVISION OF NATURAL SCIENCE

Beers, Blume, Bowden, Greuel, Gustavson, Holliday, Newton, Piston (chair), Siemens, Swearingen, Walker, Wakefield

The Division of Natural Science, consisting of the Departments of Biology, Chemistry, General Science, Kinesiology, Mathematics, and Physics, is equipped to give students excellent general knowledge of the indicated fields. Majors are offered in Biology, Chemistry, Biochemistry, Environmental Science, Exercise Studies, Mathematics, and Sports Medicine; a minor field may be elected in any of the departments. Degrees that prepare students for professional careers are available as well. These include a Teacher Education program in mathematics, and pre-professional programs leading to occupations in health fields, scientific research, and college teaching.

Students with high achievement are encouraged to consider graduate study. The Division offers Core Curriculum courses that provide a breadth of practical scientific knowledge to students throughout the University. In each area of the curricula, the Division desires to provide an understanding of the natural world which can help our students to become established as Christian thinkers, prepared for God-honoring careers and service.

PREPARATION FOR MEDICAL SCHOOL AND OTHER PROFESSIONAL STUDY

“Pre-medicine” is not a major at John Brown University. At most institutions of higher learning, a curriculum termed “pre-medicine” means simply that a student is meeting requirements for admission to medical school and, therefore, in addition to working toward a baccalaureate degree in some discipline, the student is satisfying these specific requirements. JBU has a Pre-Health Professions Program (PHPP) for students preparing for training as a physician, dentist, optometrist, veterinarian, or a career in one of the allied health professions, such as physician assistant, physical therapist, and occupational therapist, among others. While students in any major may participate in the PHPP, majors in Biology, Chemistry, or Biochemistry provide particularly good preparation for careers in the health professions. All students in the PHPP must fulfill certain requirements in the natural sciences (biology, chemistry, physics, and mathematics), communication skills, and courses from the social sciences and humanities, under the guidance of the Health Professions Advisory Committee. More information is available in the Natural Science Division Student Handbook.

DEPARTMENT OF BIOLOGY

(SYMBOL: BIO)

The Department of Biology offers courses designed to give the student a broad foundation in the principles of biology and a familiarity with current problems in specific subdisciplines of biology. The approach taken by the Department is to explore a Christian interpretation of the scientific facts and theories of life processes, emphasizing the harmony of such theories with a biblically based world view.

The Biology Department, in cooperation with the Chemistry Department, offers pre-professional training for students interested in a career as a dentist, physician, medical technologist, nurse, optometrist, pharmacist, physical therapist, occupational therapist, physician assistant, public health worker, and veterinarian. Graduates of the Biology Department may look forward to careers in a number of fields including teaching, research, bioethics, biotechnology, field biology/naturalist area, camp and recreation, missions, and government service. The curriculum includes courses normally required for admission to graduate schools. Any of the degree options can be combined with a minor in Education to prepare for alternative secondary teaching certification.

Requirements for the Bachelor of Science (B.S.) degree with major in Biology

1. University Core Curriculum—46 hours. See page 67.
The Mathematics and Natural Science electives are covered by program requirements.
2. Courses Specified by this Department
 - A. Biology Major Core—29 hours
 - BIO 1124 Cell Biology
 - BIO 1134 Plant Biology
 - BIO 2134 Animal Biology
 - CHM 1124, 1134 General Chemistry
 - MTH 1123 Survey of Calculus
 - MTH 2103 Statistics with Computer ApplicationsOne of the following:
 - BIO 4103 Bioethics
 - GSC 4133 Faith and Science
 - B. One of the following options:
 - 1) Pre-professional Option—45 hours (*preparation for graduate school or training as a physician, dentist, veterinarian, or optometrist*)
 - BIO 2174 Genetics
 - CHM 3134, 3144 Organic Chemistry
 - PHY 1114, 1124 Fundamentals of Physics

One hour of internship or research (BIO 3101, 3301, 4221, or equivalent). BIO 3301 is required of all students in the Pre-Health Professions Program.

An additional 24 hours of Biology, which may include CHM 3164 and as many as 9 hours of research (BIO 4222, 4223).

- 2) Allied Health Option—41 hours (*preparation for training as a physical therapist, occupational therapist, physician assistant, public health worker, nurse, pharmacist, etc.*)

BIO 3334 Microbiology

BIO 3514 Human Anatomy

BIO 3524 Animal Physiology

BIO 3301 Field Experience (or equivalent)

An additional 8 hours of Biology, which may include as many as 8 hours of research (BIO 4222, 4223).

An additional 20 hours of courses, as approved by health professions advisor, to fulfill specific requirements for admission to an allied health program. Courses may be selected in areas such as nutrition, psychology, chemistry, physics, biomechanics, exercise physiology.

- 3) Field Biology/Naturalist Option—27 hours (*preparation for field and taxonomic areas, environmental education and policy, government and park services, camp and recreation, missions, etc.*)

BIO 2164 Marine Biology

BIO 3114 Ecology

BIO 3134 Field Botany

An additional 4 hours of Biology courses

GSC 1143 Earth Science

Off-Campus—8 hours in a pre-approved off-campus Field Biology/Environmental program as advised. Approved programs include the Au Sable Institute, the Latin American Studies Program (Tropical Studies option), or other programs pre-approved by the Department.

Highly recommended: Completion of requirements for Naturalist Certificate at the Au Sable Institute for Environmental Studies

3. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for minor in Biology

A minimum of 20 semester hours in the Department of Biology, including 6 hours of junior-senior level.

Minor in Education

Students interested in teaching should complete a minor in Education. See Division of Education, page 145.

DEPARTMENT OF CHEMISTRY

(SYMBOL: CHM)

The science of chemistry deals with the composition and changes of matter. The Department of Chemistry offers courses in which students study fundamental principles that provide a strong basis for understanding the physical world and provide opportunity to develop laboratory skills.

Chemistry courses address such topics as theories of atomic and molecular structure and the nature of chemical reactions. Courses are specifically designed to provide a foundational knowledge of chemistry necessary for understanding biological processes, to help students develop a scientific attitude, to give practice in the experimental method, to provide training in laboratory techniques, to enable the student to acquire the chemical background necessary for certain specialized professions and vocational fields, and to acquaint students with the chemical aspects of our environment and our civilization. A degree in Chemistry with a minor in Education will prepare students for alternative secondary teaching certification.

Requirements for the Bachelor of Science (B.S.) degree with major in Chemistry

1. University Core Curriculum—49 hours. See page 67.

The Mathematics and Physical Science electives are covered by program requirements.

2. Courses Specified by this Department—58 hours

CHM 1124, 1134 General Chemistry
 CHM 3114 Introduction to Analytical Chemistry
 CHM 3134, 3144 Organic Chemistry
 CHM 3183 Inorganic Chemistry
 CHM 4121, 4131 Experimental Physical Chemistry
 CHM 4123, 4133 Physical Chemistry
 GSC 4133 Faith and Science
 MTH 1134, 1144 Calculus I, II
 MTH 2103 Statistics with Computer Applications
 PHY 2114, 2124 General Physics

Five hours from the following (three hours maximum in research):

CHM 1101 Glassblowing
 CHM 2151 Seminar: Nanotechnology
 CHM 3101 Teaching Practicum
 CHM 3164 Biochemistry
 CHM 422_ Chemistry Research

3. Electives as necessary to complete minimum semester hours

Minimum total semester hours124

Requirements for the Bachelor of Science (B.S.) degree with major in Biochemistry

1. University Core Curriculum—46 hours. See page 67.
The Mathematics and Natural Science electives are covered by program requirements.
2. Courses Specified by this Department—77 hours
 - BIO 1124 Cell Biology
 - BIO 2174 Genetics
 - BIO 3174 Molecular Cell Biology
 - CHM 1124, 1134 General Chemistry
 - CHM 3114 Introduction to Analytical Chemistry
 - CHM 3134, 3144 Organic Chemistry
 - CHM 3164 Biochemistry
 - CHM 3183 Inorganic Chemistry
 - CHM 4121, 4131 Experimental Physical Chemistry
 - CHM 4123, 4133 Physical Chemistry
 - MTH 1134, 1144 Calculus I, II
 - MTH 2103 Statistics with Computer Applications
 - PHY 2114, 2124 General Physics

One of the following:

- BIO 4103 Bioethics
- GSC 4133 Faith and Science

Eight hours chosen from the following, including no more than four hours of research:

- BIO 3184 Developmental Biology
- BIO 3334 Microbiology
- BIO 3514 Human Anatomy
- BIO 3524 Animal Physiology
- BIO 422_ Biological Research
- CHM 2151 Seminar: Nanotechnology
- CHM 422_ Chemistry Research

3. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for minor in Chemistry

A minimum of 20 hours selected from CHM 1124, 1134, 3114, 3134, 3144, 3164, 3174, and 3183

Minor in Education

Students interested in teaching should complete a minor in Education. See Division of Education, page 145.

DEPARTMENT OF GENERAL SCIENCE

(SYMBOL: GSC)

Requirements for the Bachelor of Science (B.S.) degree with major in Environmental Science

1. University Core Curriculum—46 hours. See page 67.

The Mathematics and Natural Science electives are covered by program requirements.

2. Courses specified by this Department—68 hours

- BIO 1124 Cell Biology
- BIO 1134 Plant Biology
- BIO 2134 Animal Biology
- BIO 3114 Ecology
- BIO 3134 Field Botany
- BIO 3334 Microbiology
- CHM 1124, 1134 General Chemistry
- CHM 3114 Introduction to Analytical Chemistry
- CHM 3134, 3144 Organic Chemistry
- GSC 1143 Earth Science
- GSC 4133 Faith and Science
- MTH 1123 Survey of Calculus
- MTH 2103 Statistics with Computer Applications

8 hours — Au Sable Institute for Environmental Studies.

Highly recommended: Completion of requirements for Land Resources or Water Resources Analyst Certificate at Au Sable Institute for Environmental Studies.

Minimum total semester hours124

Requirements for minor in General Science

A total of 18 hours taken in at least two of the following departments: biology, chemistry, physics, and general science (excluding GSC 3103). At least 8 hours of junior-senior level must be included.

DEPARTMENT OF KINESIOLOGY

(SYMBOL: KIN)

The Department of Kinesiology offers two programs: the Bachelor of Science degree with major in Sports Medicine and the Bachelor of Science degree with major in Exercise Studies. The baccalaureate curriculum in Sports Medicine leads to entry into graduate allied health professions programs such as athletic training or physical therapy as well as graduate studies in other related fields such as exercise physiology, sports health, and

sports psychology. The curriculum for Exercise Studies prepares students to conduct individual exercise programs and fitness testing. This program also meets the requirements to sit for the ACSM (American College of Sports Medicine/Fitness Instructor certification and/or the NSCA (National Strength and Conditioning Association) NSCA-CPT.

Requirements for the Bachelor of Science (B.S.) degree with major in Sports Medicine

1. University Core Curriculum—46 hours. See page 67.
 Social Science—PSY 1013 needed as prerequisite for PSY 2383, 2413
 The Mathematics and Natural Science Electives are covered by program requirements.
2. Courses Specified by this Division—72 hours
 - BIO 1124 Cell Biology
 - BIO 3514 Human Anatomy
 - BIO 3524 Animal Physiology
 - CHM 1124 General Chemistry I
 - CHM 1134 General Chemistry II
 - KIN 1103 First Aid and CPR
 - KIN 1283 Athletic Training Techniques
 - KIN 2181 Medical Terminology
 - KIN 2242 Drugs in Society
 - KIN 2283 Injury Evaluation and Rehabilitation
 - KIN 3303 Nutrition for Fitness and Sport
 - KIN 3483 Therapeutic Exercises and Modalities
 - KIN 4423 Biomechanics
 - KIN 4433 Exercise Physiology
 - KIN 4496 Internship in Health and Sport
 - MGT 3323 Management in Health and Sport
 - MTH 1113 College Algebra (*waived by Math ACT Score of 24*)
 - MTH 1122 Trigonometry (*waived by Math ACT Score of 24 and successful Trigonometry course in High School*)
 - PHY 1114 Fundamentals of Physics I
 - PHY 1124 Fundamentals of Physics II
 - PSY 2383 Introductory Statistics
 - PSY 2413 Developmental Psychology

Students may substitute BIO 1134 Plant Biology, CHM 3134 & 3144 Organic Chemistry, BIO 3301 Field Experience, and BIO 4103 Bioethics for KIN 4496 Internship in Health and Sport.

Sports Medicine majors interested in participating in the Pre-Health Professions Program (PHPP) must apply to the program by the 2nd semester of their sophomore year and will be required to take BIO 3301 Field Experience and BIO 4103 Bioethics.
3. Electives sufficient to complete minimum semester hours

Minimum total semester hours 124

Requirements for the Bachelor of Science degree with major in Exercise Studies

- 1. University Core Curriculum—51 hours. See page 67.
The Biological Science and the Wellness Activity Electives are covered by program requirements.
- 2. Courses specified by this Division—48 hours
 - BIO 1124 Cell Biology
 - BIO 3514 Human Anatomy
 - BIO 3524 Animal Physiology
 - COM 2523 Public Speaking
 - COR 1181 Aerobic Walking/Jogging
 - COR 1191 Nautilus and Free Weight Training
 - KIN 1103 First Aid and CPR
 - KIN 1283 Athletic Training Techniques
 - KIN 1381 Field Experience
 - KIN 1481 Field Experience
 - KIN 2242 Drugs in Society
 - KIN 3303 Nutrition for Fitness and Sport
 - KIN 3353 Theory and Techniques of Coaching
 - KIN 3392 Personal Training Course
 - KIN 4423 Biomechanics
 - KIN 4433 Exercise Physiology
 - KIN 4494 Internship in Health and Sport
 - MGT 3323 Management in Health and Sport
- 3. Electives sufficient to complete minimum semester hours
Minimum total semester hours 124

Requirements for minor in Health and Sport

- 1. Health and Sport Core—9 hours
 - BUS 2333 Introduction to Sport Management and Recreation
 - KIN 1283 Athletic Training Techniques
 - MGT 3323 Management in Health and Sport
- 2. Health and Sport Electives—10 hours from among the following, including at least three hours of upper division (3000 and above):
 - COR 2233 Lifeguarding
 - KIN 1103 First Aid and CPR
 - KIN 2181 Medical Terminology
 - KIN 2242 Drugs in Society
 - KIN 3303 Nutrition for Fitness and Sport
 - KIN 3353 Theory and Techniques of Coaching
 - KIN 3392 Personal Training Course
 - KIN 4423 Biomechanics

- KIN 4433 Exercise Physiology
- KIN 4492 Internship in Health and Sport

Minimum total semester hours19

Requirements for Coaching Endorsement (for Education Majors)

For a teacher candidate to earn Coaching credentials, the following courses are to be added to a B.S.E. program:

- KIN 1283 Athletic Training Techniques
- KIN 3303 Nutrition for Fitness and Sport
- KIN 3353 Theory and Techniques of Coaching

The courses below are not required, but they would be helpful to the student attempting to pass the Praxis II test for the Coaching Endorsement. Teacher candidates desiring the Endorsement would be well served by completing these courses and their required prerequisites.

- KIN 4423 Biomechanics
- KIN 4433 Exercise Physiology

DEPARTMENT OF MATHEMATICS
(SYMBOL: MTH)

The Department of Mathematics offers courses which provide a solid foundation in the mathematical sciences consistent with a Christian world view. The curriculum is designed to provide the mathematics major with the knowledge and skills necessary to enter a career in teaching, insurance and finance, industry, or to continue into graduate school. The department also offers a Core Curriculum course and support courses for students majoring in engineering, chemistry, biology, business, elementary education, and pre-professional programs.

Requirements for the Bachelor of Science (B.S.) degree with major in Mathematics

1. University Core Curriculum—49 hours. See page 67.
The Mathematics and Physical Science electives are covered by program requirements.
2. Courses Specified by this Department—48 hours
 - MTH 1134 Calculus I
 - MTH 1144 Calculus II
 - MTH 2114 Linear Algebra and Differential Equations
 - MTH 2123 Vector Calculus

(continued on next page)

- MTH 3103 Foundations of Mathematics

- MTH 4101 Readings
- MTH 4123 Abstract Algebra
- MTH 4143 Real Analysis

One of the following two courses:

- MTH 3173 Mathematical Modeling and Simulation
- MTH 3183 Probability and Statistics

An additional 6 hours of junior-senior Mathematics courses

- CS 1113 Introduction to Computing
- GSC 4133 Faith and Science
- PHY 2114, 2124 General Physics

3. Minor Field

4. Electives as necessary to complete minimum semester hours.

Minimum total semester hours124

Requirements for minor in Mathematics

A minimum of 21 hours in MTH, including 2123 and 6 hours of junior-senior level.

Requirements for the Bachelor of Science in Education (B.S.E.) degree with major in Mathematics

See Division of Education, page 138.

DEPARTMENT OF PHYSICS

(SYMBOL: PHY)

The courses in this department are planned to meet the requirements of students who intend to specialize in engineering, chemistry, or allied subjects; or are fulfilling pre-medical, pre-dental, or similar pre-professional requirements.

Requirements for minor in Physics

A minimum of 18 hours from the Department of Physics, excluding 1114 and 1124.

COURSE DESCRIPTIONS

COURSE NUMBERS

Course offerings are numbered utilizing four digits, the first indicating college year and the last the number of semester hours credit.

Courses numbered 0001 to 0999 are considered remedial; hours do not count toward minimum requirements for graduation.

Courses numbered 3001 to 4999 fulfill requirements for upper-division credits. Most of these courses have specified prerequisites.

Courses numbered 5000 and above are listed in the Division of Graduate Studies.

A *prerequisite* course must have been completed with an acceptable passing grade before enrollment in the given course is permitted.

A *corequisite* is a course in which a student must be enrolled and satisfactorily participating concurrently with the given course.

ARO (Aerospace Studies ~ Air Force ROTC)

ARO 1011, 1021 The Foundations of the United States Air Force I, II

Each course, one hour

A survey course designed to introduce cadets to the United States Air Force and Air Force Reserve Officer Training Corps. Topics include mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to communication skills. Accompanying the classroom instruction, leadership labs ARO 1010L & 1020L provide hands-on application of classroom topics and further introduction to Air Force opportunities, in an environment that illustrates the basic structure of the Air Force. Standard physical fitness regimen and testing also required. One hour of classroom and two hours of lab per week.

1011 & 1010L offered fall semester

1021 & 1020L offered spring semester

ARO 2011, 2021 The Evolution of Air and Space Power I, II

Each course, one hour

A historical survey of air and space power, from the first balloons and dirigibles to the space-age global positioning systems of the Persian Gulf War. Historical examples illustrate the development of Air Force capabilities and missions. Additional topics: Principles of War and Tenets of Air and Space Power. Co-requisite to the coursework are leadership labs, ARO 2010L & 2020L, which provide hands-on application of classroom topics and further introduction to Air Force opportunities, in an environment that illustrates the basic structure of the Air Force. Standard physical fitness regimen and testing also required. One hour of classroom and two hours of lab per week.

2011 & 2010L offered fall semester

2021 & 2020L offered spring semester

ARO 3013, 3023 Air Force Leadership Studies I, II

Each course, three hours

A study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations. Leadership labs ARO 3010L & 3020L offer concrete leadership practice, including the planning and controlling of military activities of the cadet corps, and preparing various communications. Standard fitness regimen and testing also required. Three hours of classroom and three hours of lab per week.

3013 & 3010L offered fall semester
3023 & 3020L offered spring semester

ARO 4013, 4023 National Security Affairs and Preparation for Active Duty I, II

Each course, three hours

An examination of the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Communication skills are honed within this structure. Leadership labs ARO 4010L & ARO 4020L include dispensing interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets. Physical fitness regimen and testing also required. Three hours of classroom and three hours of lab per week.

4013 & 4010L offered fall semester
4023 & 4020L offered spring semester

ART (Art and Design)

ART 1123 Computer Graphics

Three hours

A study of Illustrator, Photoshop, InDesign and Acrobat on the Macintosh platform with applications to the fields of graphic design, illustration, digital media, and photography. An additional fee is associated with this course.

Offered each semester

ART 1133 Visual Media and Culture

Three hours

A study of the fundamentals of visual media and the interaction between visual arts and humans individually and collectively.

Offered fall semester

ART 1243 Drawing I

Three hours

An experience in developing visual perception through observation and then translating three-dimensional forms into two-dimensional images. Nature, still-life, and an introduction to figure drawing are included.

Offered each semester

ART 2103 Foundations in Digital Editing

Three hours

An introduction to creative video editing and motion media composition using non-linear software. Students investigate professional editing problems in traditional digital filmmaking and experimental media to produce independent creative works. An additional fee is associated with this course.

Offered each semester

ART 2113 Introduction to Cinema **Three hours**

An introduction to the skills and art of filmmaking. Theories, genres and the history of cinema are addressed. Students' explorations of the language and grammar of film culminate in the actual production of their first short form narrative work. An additional fee is associated with this course. Prerequisite: ART 2103

Offered spring semester

ART 2123 Cinematography **Three hours**

An introduction to the process of Digital Cinema through hands-on workshops with the cameras, mounting and lighting equipment. Students gain experience in creating mood and evoking emotion through the proper combination of composition and lighting which enhances visual storytelling. Student cinematographers develop their creative skills by involvement in both fiction and documentary film productions. An additional fee is associated with this course. Prerequisite: ART 2103

Offered fall semester

ART 2153 European Arts and Culture **Three hours**

A study of the historical development of European painting, sculpture, architecture, and music from 1000 a.d. to the present. Special attention is given to the connection between art forms, culture, and worldviews. As part of the German Studies program, the course combines academic coursework with visits to important cultural sites in Germany, Austria, and Italy.

Offered summers, German Studies Program

ART 2163 Irish Art and Culture **Three hours**

A study of Irish art forms such as painting, sculpture, architecture, and film. Special attention is given to the connection between art forms and Irish history and culture. As part of the Irish Studies program, the course combines academic coursework with visits to important cultural sites in Ireland as well as guest lectures from contemporary artists.

Offered Irish Studies Program

ART 2203 2D Computer Animation **Three hours**

An introduction to the history and background of animation, with hands-on projects in 2D computer animation. The focus is on familiarizing the student with digital 2D computer animation software. An additional fee is associated with this course. Prerequisite: ART 1123

Offered spring semester

ART 2213 Color Studies **Three hours**

An opportunity to explore the transient nature of color by studying the properties of and the relationships between colors. The information gained through this study is essential for those entering both the areas of graphic design and illustration.

Offered each semester

ART 2233 Art History **Three hours**

An introduction to the major people and works responsible for our visual heritage. Students begin to work toward the goal of developing a visual literacy, including fine art, design, advertising, and architecture.

Offered fall semester

ART 2253 Graphic Design I **Three hours**

An introduction to the world of Graphic Design from typography and design to layout and printing. Includes practice in design of materials such as logos, brochures, posters, and advertising.

Offered each semester

ART 2263 Graphic Design II **Three hours**

A continuation of the study of Graphic Design, with increased emphasis on comping techniques, craftsmanship, typography, problem solving, presentation, and production on the Macintosh. Prerequisite: ART 2253

Offered each semester

ART 2273 3D Computer Animation I **Three hours**

An introduction to the interface and use of 3D computer modeling software. In project-based assignments, the student proceeds through various types of 3D modeling, texturing, and rendering. An additional fee is associated with this course. Prerequisite: ART 1123

Offered fall semester

ART 2303 Foundations in Interactive Design **Three hours**

An exploration of the principles of Interactive Authoring. With an emphasis on art and design, students combine 2-dimensional imaging, graphics authoring as well as audio and video technology for achieving interactivity from multiple source media. Interactivity, communication, interface design, target audience and scripting tools are covered. An additional fee is associated with this course.

Offered each semester

ART 2333 Art, Design, and Creativity **Three hours**

A study of the theory and practice of the creative process by focusing on key historical influences and modern trends, while incorporating an introduction to the practice of formal art and design principles through hands-on experimentation.

Offered fall semester (odd-numbered years)

ART 2343 European Art Tour **Three hours**

Students tour a major art center of Europe, analyzing masterworks in their historical context, gaining cultural experience, and enriching their own artistic foundations. It is hoped that this experience will result in greater motivation, inspiration, craftsmanship, and depth in the students' creative work. Course requirements include preliminary research targeting at least one of the region's prominent artists, a journal, and a personal summary paper.

Offered summer

ART 2403 Introduction to Photography **Three hours**

A beginner's overview to the analog and digital tools and skills required for the modern art of photography. Emphasis is placed on exposure, composition, formal aesthetics, lighting, and printing of the student's photographic vision. The course includes a fundamental study of the photographic process, visual literacy, and artistic criticism necessary for students to advance in study. An additional fee is associated with this course.

Offered each semester

ART 2453 Drawing II **Three hours**

An advancing study of drawing, with emphasis on further development of technical skills as well as conceptual visual thinking. Focus is given to the expressive qualities of drawing as finished pieces of art. Prerequisite: ART 1243

Offered spring semester

ART 2503 Typography **Three hours**

A study of the use of type in graphic design. Topics include the history of type, choosing type, and the technical aspects of setting type. Prerequisite: ART 2253

Offered spring semester

ART 3133 Fine Art Photography **Three hours**

An exploration of artistic expression through both traditional and digital imaging techniques. The course focuses on conceptual and interpretive photography and incorporates a critical, evaluative component that expands and informs the students' understanding of photography as a fine art, past and present. An additional fee is associated with this course. Prerequisite: ART 2403

Offered spring semester

ART 3153 Digital Darkroom **Three hours**

A focused look at digital photography processing encompassing capture, color management, device profiling, calibration, and printing. The course provides an advanced study in software image enhancement, retouching, and repairing. All course assignments are professionally printed at the highest digital standards. An additional fee is associated with this course. Prerequisites: ART 1123, 2403

Offered each semester

ART 3183 Social Documentary Photography **Three hours**

A critical look at both documentary and photojournalistic photography genres that provide an emphasis on developing a thoughtful approach to seeking and making meaningful photographs that attract, inform, and communicate. This course involves a sociological and cultural analysis with demanding deadlines that expose students to the realities of working photojournalists. An additional fee is associated with this course. Prerequisite: ART 2403

Offered spring semester

ART 3203 History of Advertising and Design **Three hours**

A survey of key movements, trends, people, and innovations in the history of advertising and design. Students view work, read histories, and study concepts from the world of design, in hopes of gaining an appreciative understanding of the foundational artistic images and ideas that have been both a response to and an influence upon the culture at large. This analysis of historical commercial art will solidify students' own creative foundations for success in numerous professional fields—web design, advertising, industrial, product design, and graphic design.

Offered fall semester

ART 3223 3D Computer Animation II **Three hours**

Advancing techniques in 3D computer modeling, texturing, and rendering. Strong drawing skills are assumed as students create concept art and complete complex projects in character design. An additional fee is associated with this course. Prerequisites: ART 2273 and 2453 or consent of instructor

Offered spring semester

ART 3243 2D Advanced Animation **Three hours**

Exercises of increasing complexity in 2D animation. Traditional drawing skills are also emphasized, with application to storyboarding and concept art for animation. An additional fee is associated with this course. Prerequisite: ART 2203

Offered fall semester

ART 3263 Graphic Design III **Three hours**

Advancing topics in the study of graphic design, with special attention paid to the areas of corporate identity and advertising design. Prerequisites: ART 2263, 2503

Offered fall semester

ART 3273 Sequential Art and Storyboarding **Three hours**

An introduction to the techniques of using digital illustration to enhance the telling of a story. Projects offer students the opportunity to create storyboards, animatics, and sequential art illustration. Elements of story telling and script writing are also explored, and a strong emphasis is placed on drawing skills. An additional fee is associated with this course. Prerequisite: ART 1243

Offered each semester

ART 3323 Figure Drawing **Three hours**

A visual study of the human anatomical construction. Emphasis on gesture, form, light source, shadow-mass, and composition. Prerequisite: ART 1243

Offered spring semester

ART 3333 Introduction to Game Design **Three hours**

An examination of the concepts and structure of game design. A variety of digital tools and procedures are utilized, including scripting, text editing, graphics processing, and level theory. An additional fee is associated with this course. Prerequisite: ART 2303

Offered spring semester

ART 3363 Watercolor Painting I **Three hours**

An introductory course into the media of watercolor. The basic techniques and materials are explored. Prerequisite: ART 1123

Offered fall semester (odd-numbered years) and
Spring semester (even-numbered years)

ART 3373 Watercolor Painting II **Three hours**

Continuation of the study of watercolor painting, with emphasis on advanced techniques and creativity. Prerequisite: ART 3363

Offered fall semester (odd-numbered years) and
Spring semester (even-numbered years)

ART 3383 Oil Painting I **Three hours**

Studio course with demonstrations, group critiques, and individual instruction to assist the student in learning the basic techniques of painting. Prerequisite: ART 1243

Offered fall semester (even-numbered years) and
Spring semester (odd-numbered years)

COURSE DESCRIPTIONS

ART 3393 Oil Painting II **Three hours**

Continuation of the study of oil painting, with emphasis on creativity. Prerequisite: ART 3383

Offered fall semester (even-numbered years) and
Spring semester (odd-numbered years)

ART 3403 Film Theory and Criticism **Three hours**

An examination of the origins and development of film criticism and theory that includes both an analysis of selected motion pictures and the application of theoretical principles. Various schools of analysis are considered, including genre, auteur, feminist, Marxist, and Christian. An additional fee is associated with this course. Prerequisites: ART 2103, 2113, 2123

Offered fall semester

ART 3453 Illustration I **Three hours**

An exploration of foundational illustration techniques. Rendering in various media is emphasized.

Offered fall semester (odd-numbered years)

ART 3463 Illustration II **Three hours**

An advancing study of illustration, with emphasis on creativity and solving conceptual problems. Prerequisite: ART 3453

Offered spring semester (even-numbered years)

ART 3513 Fine Art Photography and Society **Three hours**

In the context of a study abroad program, an introduction to the historical genres and continuing methodologies of art photography as applicable to the human geography and social situations of the locale. Students gain hand-on experience as they apply various exercises that explore and evaluate artistic photography using creative methods. Projects involve producing photography in the traditions of nature, landscape, social documentary, and others. May substitute for ART 3133 in Visual Arts curricula. An additional fee is associated with this course. Prerequisite: ART 2403

Offered summer

ART 3533 DVD Design and Authoring **Three hours**

An introduction to the concepts and structure of creating the content and authoring an interactive title for DVD. A variety of digital tools and procedures are employed, including scripting, text editing, graphics processing, and DVD design. An additional fee is associated with this course. Prerequisite: ART 2303

Offered fall semester

ART 3543 Commercial Photography in Social Context **Three hours**

In the context of a study abroad program, an introduction to the commercial photography and the society of a host country. Students make careful observation of the use and effectiveness of commercial photography, and participate in hands-on assignments that attempt to use photography as a commercial influence. Participants often have opportunity to apply the knowledge as they work for a local publication, gaining both quality experience and portfolio enhancement. May substitute for ART 4353 in Visual Arts curricula. An additional fee is associated with this course. Prerequisite: ART 2403

Offered summer

ART 3743 Web Design and Authoring **Three hours**

An investigation of the concepts and structure of online communications employing interactive digital media. A variety of digital tools and procedures are utilized, including scripting, text editing, graphics processing, Internet access, web browsing, file transmission, and web page design. An additional fee is associated with this course. Prerequisite: ART 2303

Offered spring semester

ART 3883 Selected Topics **Three hours**

Study of a topic not directly addressed in the regular curriculum. Topics are chosen according to student need and departmental specialties. May be repeated for credit when a different topic is studied.

Offered upon sufficient request

ART 3913 Selected Topics in Digital Design **Three hours**

Topics are chosen from various computer applications such as video imaging, 2D and 3D graphics, animation, and other applications as demand requires. Prerequisite: consent of instructor

Offered upon sufficient request

ART 4103 Portfolio and Presentation **Three hours**

Practical business aspects of the professions of graphic design, illustration, and digital media, including development of a free-lance business, interviewing for jobs, portfolio development, and self-promotion. Prerequisite: senior standing

Offered spring semester

ART 4163 Non-Fiction Film Production **Three hours**

Analysis of the methods, genre, and history of non-fiction film, for application to hands-on documentary production. Progressive projects through the semester focus on personal student-led filmmaking, culminating in a finished film worthy of entry in documentary film festivals nationwide. An additional fee is associated with this course. Prerequisites: ART 3403 and consent of instructor

Offered fall semester

ART 4173 Narrative Film Production **Three hours**

The application of traditional film roles within the field of digital cinema. Students are given the opportunity to man various crew assignments as they work to complete a short form narrative in one semester. An additional fee is associated with this course. Prerequisite: ART 3403

Offered spring semester

ART 4253 3D Computer Animation III **Three hours**

Application of 3D animation skills to the techniques of character modeling and rigging, including character design. Good drawing skills are required. An additional fee is associated with this course. Prerequisite: ART 3223

Offered fall semester

ART 4313 Illustration III **Three hours**

Designed to challenge students to further develop earlier illustration techniques and to introduce several advanced techniques, emphasis is on the production of professional portfolio-quality illustrations. Prerequisite: ART 3463

Offered fall semester (even-numbered years)

COURSE DESCRIPTIONS

ART 4343 Database Web Programming **Three hours**

An investigation of the concepts and structure of databases and the programming of web interfaces to work with these databases. A variety of digital tools and procedures are utilized, including database design, structured query languages, ASP and PHP. An additional fee is associated with this course. Prerequisite: ART 3743

Offered fall semester

ART 4353 Commercial Studio Photography **Three hours**

An advanced look at the photographic areas of portraiture, food and beverage, fashion, industry, editorial, advertising, and self-promotion photography. The course includes work with digital, 35mm, medium format, and professional 4x5 view cameras. Studio lighting experience is gained with both strobe and 'hot light' setups. An additional fee is associated with this course. Prerequisites: ART 2403, 3153

Offered fall semester

ART 4413 Graphic Design IV **Three hours**

Advanced projects and critique along with information and discussion on technical print production issues. Prerequisite: ART 3263

Offered fall semester

ART 4423 Internship **Three hours**

On-the-job work experience in a creative position/business, as approved by the student's advisor. Prerequisite: consent of advisor

Offered each semester

ART 4963 Senior Comprehensive Project **Three hours**

Original interactive creative works demonstrating proficiency in the fundamental and specialized areas of digital media. Prospective graduates glean assistance through seminar discussion and interactive critiques as they refine their skills in preparation for the realities of the professional world. An additional fee is associated with this course. Prerequisites: senior standing and consent of instructor

Offered each semester

ATG (Accounting)

ATG 1163 Accounting for Decision Making **Three hours**

Survey of financial and managerial accounting for majors outside the Division of Business. The focus is on understanding the meaning of numbers in financial statements, their relationship to each other, and how they are used in evaluating, decision making, planning, and control.

Offered spring semester

ATG 1173 Financial and Managerial Accounting I **Three hours**

Study of accounting principles and reporting needs of the sole proprietorship, partnership, and corporate forms of business. Topics include the accounting cycle, internal control, asset and liability valuation, and capital stock transactions.

Offered fall semester

ATG 1183 Financial and Managerial Accounting II **Three hours**

A continuation of ATG 1173. Study of basic concepts of management accounting, planning and control, management decision making, just-in-time operating, activity-based-costing, and financial statement analysis. Prerequisite: ATG 1173

Offered spring semester

ATG 2103 Intermediate Accounting I **Three hours**

An in-depth study of accounting concepts and procedures relating to assets.
Prerequisite: ATG 1183

Offered fall semester

ATG 2113 Intermediate Accounting II **Three hours**

Advancing topics in accounting, including in-depth study of liabilities and equities, income determination, and financial reporting. Prerequisite: ATG 2103

Offered spring semester

ATG 3153 Income Tax Basics **Three hours**

Examines laws and procedures that apply to federal income taxation of individuals, partnerships, S-corporations, and C-corporations. Students develop skills in doing tax returns, written and oral tax arguments, and tax issue recognition. Prerequisite: ATG 1183

Offered fall semester (odd-numbered years)

ATG 3163 Advanced Tax Topics **Three hours**

Introduction to estate tax, gift tax, and generation-skipping tax. Study of tax issues relating to formation and dissolution of partnerships and corporations. Prerequisite: ATG 1183

Offered spring semester (even-numbered years)

ATG 3173 Cost Accounting **Three hours**

Study of the cost cycle, job order costing, process costing, flexible budgeting, standard costs, direct costing, and non-manufacturing costs. Prerequisite: ATG 1183

Offered spring semester (odd-numbered years)

ATG 3183 Non-profit Accounting **Three hours**

Accounting for governmental units and non-profit organizations. Includes all the new pronouncements and the special rules for hospitals and universities. Emphasis on accounting to help management succeed in accomplishing organizational objectives. Prerequisite: ATG 1183

Offered fall semester (even-numbered years)

ATG 4131, 4132, 4133 Selected Topics **One to three hours**

A course offering students opportunities to study subjects of special interest. May be offered on a group basis in a classroom setting or as independent study under faculty supervision. Prerequisite: junior standing and consent of instructor.

Offered upon sufficient request

ATG 4153 Auditing **Three hours**

Study of auditing standards, professional conduct, legal liability of auditors, internal control, sampling, the nature of evidence, and auditing techniques necessary for an independent auditor to render an opinion on a company's financial statements. Prerequisite or core-requisite: ATG 2113

Offered spring semester (even-numbered years)

ATG 4163 Advanced Accounting **Three hours**
 Advanced study of accounting concepts and procedures. Includes partnerships, branches, business combinations, consolidated financial statements, multinational enterprises, segments, interim reports, and SEC reporting. Prerequisite: ATG 2113
 Offered fall semester (odd-numbered years)

BBL (Bible)

BBL 1013 Old Testament Survey **Three hours**
 A brief introduction to the history and message of the Old Testament. A general survey of the overall content of each book, and certain significant themes stressing relevance to Christian living.

Offered each semester

BBL 1023 New Testament Survey **Three hours**
 An introduction to the history and message of the New Testament. The class provides an academic overview of each book, its context and significant themes, with challenges and applications to Christian faith and discipleship.

Offered each semester

BBL 1083H Honors: Old Testament Survey **Three hours**
 A comprehensive introduction to the study of the Old Testament. The course introduces the student to the history and theology of the Old Testament, basic hermeneutical issues and book content, as well as relevant application to faith and life. Prerequisite: admission to the Honors Program or permission of the Honors Committee

Offered fall semester

BBL 1093H Honors: New Testament Survey **Three hours**
 A comprehensive introduction to the history and message of the New Testament. The class provides an academic overview of each book of the NT, its historical, religious and cultural contexts as well as major theological, apologetic, and missional issues. Introductory hermeneutical skills focus on the NT texts, stressing significant themes within the 1st century context and its particular challenges. Subsequent application to Christian faith and discipleship today reflect this biblical grounding. Prerequisite: admission to the Honors Program or permission of the Honors Committee

Offered spring semester

BBL 2003, 2253
 See Professional Studies Catalog

BBL 2513, 2523 Elementary New Testament Greek I, II **Each course, three hours**

A study of elementary Greek grammar and basic vocabulary, with practice in translation of sentences from Greek to English. BBL 2523 includes translation from the epistles of John from the Greek. Prerequisite for 2523: BBL 2513

2513 offered fall semester (odd-numbered years)
 2523 offered spring semester (even-numbered years)

BBL 3003 Evangelical Theology

Three hours

A study of the essential doctrines of the Christian faith, including those of the Scriptures, God, Humankind, Salvation (including Christian living) the Church, and the Future. The unity of Divine Revelation and the contemporary applicability of the Scriptures are emphasized. Students should be able to discern primary and secondary biblical issues, and apply biblical principles to the various wholeness dimensions of their personal lives and to the world in general. Prerequisites: BBL 1013 and 1023 or equivalent

Offered each semester

BBL 3093H Honors: Evangelical Theology

Three hours

Initial overview of the major doctrines of the Christian faith, with consideration of various approaches to theology and various contemporary schools of theology. The student is guided in integrating the biblical revelation with personal application as well as critical interaction with the contemporary world. Seminar format emphasizing student research and interchange. Prerequisites: BBL 1013 and 1023 (or Honors counterparts), and admission to the Honors Program or permission of the Honors Committee

Offered spring semester

BBL 3223 Communicating the Christian Message

Three hours

A foundational course to provide tools for preaching, speaking, and presenting the Christian message in a variety of contexts using various media. Includes an introduction to theory for creating and delivering different forms of communication, as well as practical ideas and tips for using various media. Prerequisite: BBL 34_3 or 36_3

Offered upon sufficient request

BBL 3303 Theology of Missions

Three hours

A historical and theological investigation of the nature and practice of missionary activity. The role of the local church, personal qualifications, missionary agencies, and current perspectives of missions are considered.

Offered upon sufficient request

BBL 3353 Theology of Worship

Three hours

A historical and theological investigation of the development of corporate worship emphasizing applicable Hebrew and Christian scripture. Liturgical history is examined, including the dynamics of music, sacred space, and symbols and icons from the early church to the contemporary emergent church. Prerequisites: BBL 1013, 1023

Offered fall semester (odd-numbered years)

BBL 3363, 3373 History of the Christian Church

Each course, three hours

A historical and theoretical examination of the development of the Church. The first course addresses the Early Church, Patristic, Byzantine, and Medieval periods; the sequence is completed by study of the Reformation, Enlightenment, and Modern periods. Prerequisite for 3373: BBL 3363

3363 offered fall semester

3373 offered spring semester

BBL 34_3 New Testament Book Study **Each course, three hours**

Critical study of a major book or portion of the New Testament. Students learn the principles of biblical hermeneutics rooted in rigorous exegesis. Courses are offered on a rotating basis. Prerequisite: BBL 1023

3413 The Gospel of John. Exploration of John's Gospel in relationship to the synoptic Gospels and the emerging theology of the early Church in its first-century cultural context within the Roman Empire.

3423 The Synoptic Gospels. Exploration of the Gospels of Matthew, Mark, and Luke. Using parallel format, the books are studied in relation to each other, to John's Gospel, and to the rest of the NT and Hebrew canon where appropriate. Special attention is paid to the synoptic authors, initial audiences, theological foci, and the historical and cultural background of the synoptics as well as the dynamics of the emerging church, and the social, economic, political, and religious contexts of the first-century Roman Empire.

3433 The Gospel of Luke and The Acts of the Apostles. An analysis of Luke and Acts. Emphases include the literary techniques, the historical setting, and the message of the books. Students are exposed to critical issues related to the authorship, sources, dating, and audience of these books.

3443 The Pauline Epistles. A study of the life of Paul with concerted analysis of one or more of his epistles. In addition to the man himself, special attention is paid to his initial audiences, theological foci, and the historical and cultural background of the letters, as well as the dynamics of the emerging church, and the social, economic, political, and religious contexts of the first-century Roman Empire.

3453 The General Epistles. An incisive examination of one or more of the the General Epistles. The selected section is compared to the rest of the New Testament and to the Hebrew canon where appropriate. Special attention paid to the author, initial audiences, theological foci, and the historical and cultural background of the text, as well as the dynamics of the emerging church, and the social, economic, political, and religious contexts of the first-century Roman Empire.

3463 The Book of Revelation. An in-depth analysis of the book of Revelation. Special emphasis is placed on major hermeneutical approaches to the book, as well as thorough study of its contents.

Offered each semester on a rotating basis

BBL 3513, 3523 Syntax of New Testament Greek I, II

Each course, three hours

A comprehensive study of Greek structure. Assignments in the first semester include paragraphs from the Greek New Testament that illustrate specific syntactical features. The focus of the second semester is to read chapters of the Greek New Testament and recognize the syntactical features. Prerequisite for 3513: BBL 2523 or equivalent. Prerequisite for 3523: BBL 3513 or equivalent

3513 offered fall semester (even-numbered years)

3523 offered spring semester (odd-numbered years)

BBL 3583 Perspectives on the World Christian Movement Three hours

A comprehensive 15-week course taught by outstanding teachers, expert speakers, missionaries, and Bible scholars, designed to illumine God's plan for reaching people throughout the world. As current and past methods are examined, students are given opportunity to consider their personal roles in His work. A supplementary fee is associated with this course. Prerequisite: junior standing or consent of instructor

Offered spring semester

BBL 36_3 Old Testament Book Study Each course, three hours

A rigorous study of a major portion of the Old Testament, with opportunity to learn and apply the principles of biblical hermeneutics. The courses are offered on a rotating basis. Prerequisite: BBL 1013

3613 The Pentateuch. An analysis of one or more books drawn from the first five books of the Old Testament. Issues related to the content, the literary presentation, the historical context, and the theological and practical use of these books are addressed. Students are exposed to critical issues in dating, authorship, and interpretation of the books.

3623 Historical Books of the Old Testament. An analysis of one or more books drawn from the Historical Books, Joshua through Esther. Issues related to the content, the literary presentation, the historical context, and the theological and practical use of these books are addressed. Students are exposed to critical issues in dating, authorship, and interpretation of the books.

3633 Old Testament Poetry and Wisdom. An analysis of one or more books drawn from those typically classified among the Poetic Books, or as Wisdom Literature. (At the instructor's discretion, books classified as "Writings" in the Hebrew Bible may be included.) Issues related to the content, the literary presentation, the historical context, and the theological and practical use of these books are addressed. Students are exposed to critical issues in dating, authorship, and interpretation of the books.

3643 Major Prophets. An analysis of one or more of the major prophetic books, Isaiah through Daniel. Issues related to the content, the literary presentation, the historical context, and the theological and practical use of these books are addressed. Students are exposed to critical issues in dating, authorship, and interpretation of the books.

3653 Minor Prophets. An analysis of selected books of the so-called minor prophets, Hosea through Malachi. Issues related to the content, the literary presentation, the historical context, and the theological and practical use of these books are addressed. Students are exposed to critical issues in dating, authorship, and interpretation of the of the books.

Offered each semester on a rotating basis

BBL 3713, 3723 Elementary Biblical Hebrew Each course, three hours

A study of elementary biblical Hebrew grammar and basic vocabulary with some limited conversational drill.

Offered upon sufficient request

BBL 3913

See Professional Studies Catalog

BBL 4002, 4003 Capstone Seminar in Christian Formation

Two or three hours

A writing-intensive capstone course of the University Core Curriculum designed to encourage critical and reflective thought about Christian formation. The University Core Curriculum's significant role in spiritual foundation is considered. The two-hour and three-hour courses meet together; the three-hour course is provided for students desiring more intense learning and is required of all majors in the Biblical Studies division. Prerequisites: BBL 1013, 1023, 3003, EGL 1023, and junior standing or consent of instructor

Offered each semester

BBL 4043 Irish Perspectives on Christian Formation **Three hours**

A writing-intensive course designed to encourage critical and reflective thought about Christian formation. The University Core Curriculum's significant role in Christian formation is considered. Works of St. Patrick and C.S. Lewis are presented as a basis for student reflection and as guides to Christian living. Students visit historical sites significant to each of these men and develop an understanding of their writings and contributions to the Christian faith. Visits to local churches give students opportunity to observe the present-day church in Ireland and to enjoy fellowship with Irish believers of various denominations. May substitute for BBL 4002/4003 in the Core Curriculum. Prerequisites: BBL 1013, 1023, 3003, and EGL 1023

Offered summer, Irish Studies Program

BBL 4093H Honors: Capstone Seminar in Christian Formation

Three hours

A writing intensive course which investigates major themes of Christian formation in a world of non-Christian ideas. Understanding competing ethical systems which fall short of the biblical vision are considered in light of biblical revelation. Individual and collaborative assignments are included. Replaces BBL 4002/4003 in the Core Curriculum. Prerequisites: BBL 1013, 1023, 3003, EGL 1023 (or Honors counterparts), and admission to the Honors Program or permission of the Honors Committee

Offered each semester

BBL 4473 Seminar in Biblical Studies **Three hours**

An advanced study of a particular issue related to Biblical Studies. Potential topics include critical issues in a book of the Old or New Testament, or a current trend in Biblical studies or hermeneutics. Course may be repeated when content differs. Prerequisite: junior standing or consent of instructor

Offered spring semester (odd-numbered years)

BBL 4481, 4482, 4483 Selected Topics **One to three hours**

Topics are chosen from some areas of Biblical Studies (Old Testament, New Testament, Biblical History or Theology). The course affords an opportunity for the student to do independent study and research under the supervision of the instructor. Prerequisite: junior standing or consent of instructor

Offered upon sufficient request

BBL 4493 Seminar in Theological Studies **Three hours**

A course designed to develop the student's ability to analyze and explain theological texts through research, discussion, and presentation of papers. A particular theologian, movement, or topic from the history of Christian theology typically serves as the focus of evaluation. Course may be repeated when content differs. Prerequisite: junior standing or consent of instructor

Offered spring semester (even-numbered years)

BBL 4512 Greek Readings and Exegesis **Two hours**

Readings from books of the Greek New Testament and/or selected readings from Jewish or early Christian texts in Greek. Course may be repeated for credit in another book. Prerequisite: BBL 3523 or equivalent

Offered upon sufficient request

BBL 4581, 4582, 4583 Selected Topics in New Testament Greek

One to three hours

Topics chosen from some area of New Testament Greek. The student may also do independent study and research under the direction of the instructor. Prerequisite: BBL 3523 or consent of instructor

Offered upon sufficient request

BBL 4713, 4723 Syntax of Biblical Hebrew **Each course, three hours**

An intermediate level study of Hebrew grammar and syntax. Expanded vocabulary, Hebrew to English and English to Hebrew translating are also emphasized.

Offered upon sufficient request

BIO (Biology)

BIO 1003 Biological Science **Three hours**

An introductory survey of biology designed for liberal arts students who are not majoring in the sciences. Topics addressed include genetics, evolution, biotechnology, biodiversity, and ecology, with emphasis on current issues. Laboratory experiences emphasize the scientific method and biological processes. Two hours lecture-discussion and one two-hour laboratory per week.

Offered each semester

BIO 1093H Honors: Biological Science **Three hours**

A consideration of the fundamental principles of biology with an emphasis on ecological associations, biotechnical applications, genetics, and evolution. Prerequisites: admission to the honors program or permission of the Honors Committee

Offered spring semester

BIO 1124 Cell Biology **Four hours**

An introduction to the study of living systems, beginning with the molecules of life and progressing to cellular and organismic levels of organization. Students are exposed to numerous topics in biochemistry, microbiology, cell and molecular biology, and genetics. Laboratory exercises reinforce concepts and biological processes discussed in the lecture. Three hours lecture-discussion and one two-hour laboratory per week.

Offered fall semester

COURSE DESCRIPTIONS

BIO 1134 Plant Biology **Four hours**

An introduction to the study of the plant kingdom, emphasizing adaptive aspects of anatomy, morphology, classification, physiology, ecology, and evolution of plants. Three hours lecture-discussion and one two-hour laboratory per week.

Offered spring semester

BIO 2134 Animal Biology **Four hours**

A study of major zoological phyla. Emphasis is placed on anatomical and physiological distinctions of each taxon, as well as classification and interrelationships. Three hours lecture-discussion and one two-hour laboratory per week.

Offered fall semester

BIO 2164 Marine Biology **Four hours**

A study of the biological, chemical, and physical processes that promote and maintain marine life, establishing links between marine systems, biological processes, and human activity. The laboratory portion of the course consists of an intensive spring-break study trip to the Florida Keys. Normal tuition does not cover the costs of this trip; an additional fee is associated with this course. Prerequisite: BIO 2134 (or consent of instructor)

Offered spring semester (odd-numbered years)

BIO 2174 Genetics **Four hours**

A study of basic concepts in classical and molecular genetics. Topics include Mendelian inheritance and its variations, linkage, chromosomes, gene mapping, bacterial and viral genetics, extranuclear inheritance, DNA structure and replication, mutation, DNA repair, recombinant DNA technology, genetic code, and gene expression/regulation. Laboratory exercises illustrate principles of inheritance in various biological systems and provide hands-on experience with several recombinant DNA techniques. Three hours lecture-discussion and one three-hour laboratory per week. Prerequisite: BIO 1124

Offered spring semester

BIO 3101 Biology Teaching Practicum **One hour**

Practical experience in lab preparation and instruction. Three hours per week. Prerequisites: junior standing and consent of instructor. May be repeated once for credit

Offered upon sufficient request

BIO 3114 Ecology **Four hours**

A study of the principles of ecology with emphasis on the interrelationships between organisms and their biotic and abiotic environments. Prerequisites: BIO 1134, 2134

Offered fall semester (odd-numbered years)

BIO 3134 Field Botany **Four hours**

A study of taxonomy, morphology, and ecology of representatives of the plant kingdom in a laboratory and/or field setting. Three two hour lecture/lab/field periods per week. Prerequisites: BIO 1134

Offered spring semester (even-numbered years)

BIO 3174 Molecular Cell Biology **Four hours**

An advanced study of structure-function relationships in eukaryotic cells. Emphasis on cell membranes, organelles, protein targeting, secretory pathway, bioenergetics, cytoskeleton, and cell motility. Regulation of the cell cycle, cell signaling, and recognition/adhesion are also examined, particularly as they relate to malignancy. Labs focus on experimental studies of cellular structure and function using techniques of modern cell and molecular biology. Three hours lecture-discussion and one three-hour laboratory per week. Prerequisites: BIO 2174, CHM 3144

Offered fall semester

BIO 3184 Developmental Biology **Four hours**

Development of vertebrates and invertebrates from gametogenesis through organogenesis. Emphasis is on cellular and molecular mechanisms involved in differentiation, morphogenesis, and determination of the body plan. Labs focus on experimentation with living, developing organisms. Three hours lecture-discussion and one three-hour laboratory per week. Prerequisites: BIO 2174; BIO 2134 and BIO 3174 are recommended

Offered spring semester (even-numbered years)

BIO 3201 Cadaver Dissection **One hour**

A practical study designed for transfer students who have successfully completed a college-level anatomy course that lacked cadaver dissection. Offered concurrently with the BIO 3514 laboratory.

Offered fall semester

BIO 3214 Selected Topics in Environmental Science **Four hours**

John Brown University offers a wide variety of environmental and field courses during the summer at Au Sable Institute for Environmental Studies and through the Council for Christian Colleges and Universities. See departmental advisor for courses offered. May be repeated for credit when a different topic is studied. A maximum of eight hours may be earned toward the major in biology, twelve hours toward the major in environmental science.

Offered summer, Au Sable Institute

BIO 3301 Field Experience **One hour**

Experience for Biology, Biochemistry, and Environmental Science majors in their area of interest while they observe a science- or health- related profession in a setting approved by the department. A journal and/or paper is required. Prerequisite: junior standing and approval of major advisor

Offered each semester

BIO 3334 Microbiology **Four hours**

A study of the structure, function, control, physiology, and classification of prokaryotes and viruses. Two hours lecture and two two-hour laboratories per week. Prerequisites: BIO 1124, CHM 1124

Offered fall semester

BIO 3514 Human Anatomy **Four hours**

Description and discussion of basic tissues, organs, and organ systems of the human. The laboratory is a concentrated study of histology and gross human anatomic structure. Analysis of prepared slides, anatomical models, and cadaver dissection are included. Three hours lecture-discussion and one three-hour laboratory per week. Prerequisites: BIO 1124, 2134 (or consent of instructor)

Offered fall semester

BIO 3524 Animal Physiology **Four hours**

A detailed study of the basic physiology of vertebrate organisms, including muscle, neural, cardiovascular, respiratory, urinary, digestive, endocrine, and reproductive system. Laboratories include surgical procedures and experimental manipulations of live specimens to observe and record various physiological functions. Three hours lecture-discussion and one three-hour laboratory per week. Prerequisites: BIO 1124, 2134, and CHM 1124; BIO 3514 recommended

Offered spring semester

BIO 4103 Bioethics **Three hours**

A comparison of secular and Christian approaches to basic ethical issues related to the environment, the treatment of animals, and the practice and distribution of health care. Utilizes a highly interactive format to examine various ethical theories, case studies, and current literature on a number of contemporary issues, with primary focus on biomedical ethics. Three hours of lecture-discussion per week. Prerequisite: junior standing with a major in biology, biochemistry, or environmental science; or consent of instructor.

Offered spring semester (odd-numbered years)

BIO 4121, 4122, 4123, 4124 Selected Topics in Biology **One to four hours**

Topics are chosen from areas of life science such as anatomy, biotechnology, cell biology, developmental biology, ecology, genetics, histology, marine biology, microscopy, molecular biology, and physiology. May be repeated for credit when a different topic is studied. Prerequisites: junior/senior standing and consent of instructor

Offered upon sufficient request

BIO 4220, 4221, 4222, 4223 Biological Research **Zero to three hours**

Laboratory-based research projects in an area of biology of interest to the student and supervising faculty. May be repeated for credit, but a maximum of 8 hours may be counted towards a major in Biology or Biochemistry. Prerequisite: consent of instructor

Offered each semester

BIS (Business Information Systems)

See Professional Studies Catalog.

BUS (Business Administration)

BUS 1123 Business Communication **Three hours**

Development of professional communication skills, both written and oral, in business. Includes mechanics, techniques, and psychological principles of effective business communications, with emphasis on contemporary communication technologies. Prerequisite: EGL 1013

Offered spring semester

BUS 2113 Financial Spreadsheet Applications **Three hours**

Practice in using spreadsheets for accounting and financial applications. Emphasizes creating schedules, financial modeling, generating macros, and producing reports. Prerequisite: ATG 1163 or 1173

Offered spring semester

BUS 2153 Financial Mathematics **Three hours**

Study of time-value models used in business. Topics include simple interest, compound interest, annuities, debt extinction, and bond pricing. Prerequisite: MTH 1113 or consent of instructor

Offered fall semester

BUS 2193 Business Statistics **Three hours**

A general course in statistical theory as it applies in business settings. Topics include probability, distributions, descriptive statistics, estimation, hypothesis testing, regression and correlation, non-parametric methods, ANOVA, and statistical quality control. Prerequisite: MTH 1113

Offered spring semester

BUS 2333 Introduction to Sport Management and Recreation **Three hours**

An analysis of the total field of recreation, leisure, and sports management—its scope, organizational practices and problems, and detailed discussions of relevant research and information. Students also gain a basic understanding of recreation and leisure as increasingly important aspects of our culture.

Offered fall semester (even-numbered years)

BUS 2353 Commercial Recreation **Three hours**

A study of recreational opportunities in the private sector, including industrial corporations, establishment of private corporations, for profit and nonprofit camps and sport clubs, and the use of public land by private endeavor.

Offered spring semester (even-numbered years)

BUS 3123 Developing Applications with Access **Three hours**

Practice in developing applications for managing information with Microsoft Access. Specific activities include creating and maintaining electronic files, forms, sorts, reports, queries, and writing macros and procedures. Prerequisite: junior standing

Offered fall semester

BUS 3153 Applied Business Ethics **Three hours**

An integrated set of activities designed to raise student awareness of real-life business moral dilemmas while gaining practical experience in the implementation and operation of business ethics programs and departments. Students write business cases, draft corporate codes of conduct, and study cases and laws related to corporate governance. Students interact with business ethics professionals and the Soderquist Center for Leadership and Ethics. Prerequisite: junior standing

Offered each semester

BUS 3993 Internship **Three hours**

Supervised learning involving field experience in a business firm. Offered during the summer after the junior year. Arrangements for taking the course must be made with the intern coordinator in the spring of the junior year and completed during the fall semester of the senior year. Prerequisite: junior standing

Offered fall semester

BUS 4111 Field Experience **One hour**

Supervised learning involving field experience in a business firm. Students enter into a learning agreement, document the work, meet with supervising faculty, and complete reflective assignments on the learning outcomes. As many as three field experience credits may count toward graduation hours. Prerequisite: BUS 3993

Offered upon sufficient request

BUS 4131, 4132, 4133 Selected Topics **One to three hours**

A course offering students opportunities to study subjects of special interest. May be offered on a group basis in a classroom setting or as independent study under faculty supervision. Prerequisite: junior standing and consent of instructor

Offered upon sufficient request

BUS 4143 Business Law **Three hours**

Basic legal principles that govern modern business transactions. Topics include contracts, real and personal property, agencies, employment, business formation, and Uniform Commercial Code. Prerequisite: junior standing

Offered fall semester

BUS 4173 Business Finance **Three hours**

Study of decision-making techniques involving working capital management, capital budgeting, long-term financing, and dividend policy. Prerequisites: ATG 1183, ECN 2123

Offered fall semester

BUS 4243 International Law **Three hours**

A look at areas of business law from an international viewpoint. Topics include the U.S. Constitution, government regulations of business, regulation of international trade, negotiable instruments, major western and non-western legal traditions, treaties, multinational companies, customs, conflicts of law, and international contracts.

Offered spring semester (even-numbered years)

BUS 4353 Sport Law **Three hours**

An opportunity for students to develop legal insight for effective management and the avoidance of legal complications associated with sport and recreation activities. Topics addressed include such topics as liability for injuries, risk management, crisis management, assertion of legal rights, legal status of sports organizations, and right to participate. Other areas of sport industry law to be covered are contracts, tort liability, negligence, gender equity, and sport labor relations.

Offered fall semester (odd-numbered years)

BUS 4993 Strategic Management **Three hours**

An integrative study of business strategy and policy involving case studies, simulations, research, and formal presentations. Focus is on procedures and practices of upper-level management. This is a capstone course open only to seniors in the Division of Business and should be taken during the student's final fall semester at the University. Prerequisite: senior standing

Offered fall semester

CHM (Chemistry)

CHM 1014 Fundamentals of Chemistry **Four hours**

An introduction to the field of chemistry. Designed to provide students with an understanding of basic chemical principles and their application to relevant problems, course work is suitable for students in construction management, nursing, and the liberal arts. Three hours lecture-discussion and one two-hour laboratory per week. Prerequisite or corequisite: MTH 1113 or ACT Math score of 19

Offered spring semester

CHM 1101, 3101 Chemistry Practicum

Each course, one hour

Experiences in chemistry, such as the following: glassblowing, analysis, teaching, research. Prerequisite: consent of instructor

Offered upon sufficient request

CHM 1124 General Chemistry I **Four hours**

A systematic study of basic chemical principles and properties that govern matter and its changes. Topics include the basic structure of atoms and molecules, chemical and physical properties, balancing chemical equations, and bonds. Three hours lecture-discussion and one two-hour laboratory per week.

Offered fall semester

CHM 1134 General Chemistry II **Four hours**

Topics include thermodynamics, kinetics, and chemical reactions; properties of gases, solids, and liquids; aqueous equilibria and an introduction to electrochemistry and transition metal elements. Three hours lecture-discussion and one two-hour laboratory per week. Prerequisite: CHM 1124

Offered spring semester

CHM 2151 Seminar: Nanotechnology **One hour**

An introduction to nanotechnology using the fundamental principles of matter as a guide. Discussion of both the scientific and ethical ramifications of nanotechnology using a series of readings. Prerequisite: CHM 1014 or 1124

Offered fall semester (even-numbered years)

CHM 3114 Introduction to Analytical Chemistry **Four hours**

A laboratory intensive course designed to introduce students to the field of analytical chemistry. Topics include chemical equilibrium, wet chemical methods of analysis and physiochemical methods of analysis such as spectrometry and chromatography. Required for chemistry and biochemistry majors and recommended for environmental science majors. Prerequisite: CHM 1134

Offered spring semester (even-numbered years)

CHM 3134, 3144 Organic Chemistry **Each course, four hours**

A systematic study of the hydrocarbons and their derivatives, general organic reactions, and theories of reaction mechanics. The laboratory work gives training in the preparation and properties of type compounds. Three hours lecture-discussion-quiz and three hours laboratory per week. Prerequisite for 3134: CHM 1134 with a minimum grade of 'C' or consent of instructor. Prerequisite for 3144: CHM 3134

3134 offered fall semester

3144 offered spring semester

CHM 3151, 3152, 3153 Selected Topics **One to three hours**

Topics are chosen from the various branches of chemistry. May be repeated for credit when a different topic is studied. Prerequisite: consent of instructor
Offered upon sufficient request

CHM 3164 Biochemistry **Four hours**

A study of macromolecular and metabolic biochemistry with an emphasis on carbohydrates, lipids, and proteins with an introduction to nucleic acids. The chemical basis for biological phenomena, bioenergetics and metabolic regulation is stressed. Three hours lecture-discussion and one three-hour laboratory-quiz period per week. Prerequisite: CHM 3144 or consent of instructor
Offered spring semester (odd-numbered years)

CHM 3174 Environmental Chemistry **Four hours**

Principles and analysis of chemical movement and distribution—both natural and human-induced—in natural environments. Sampling and analytical methods are included for water, soil, and air. Work is conducted both on site in natural habitats and in the laboratory. Prerequisite: CHM 3134 (Same as Au Sable Chem 332)
Offered summer, Au Sable Institute

CHM 3183 Inorganic Chemistry **Three hours**

Coverage of the bonding and properties of the main group and especially transition metal elements with a focus on their coordination and solid-state chemistry. Molecular symmetry principles, spectroscopy, and catalytic applications of these substances are discussed. An emphasis on organometallic and bioinorganic chemistry. Prerequisite: CHM 1134
Offered fall semester (odd-numbered years)

CHM 4121, 4131 Experimental Physical Chemistry **Each course, one hour**

Laboratory experiments dealing with the content of CHM 4123, CHM 4133. Three hours laboratory per week. Prerequisite: CHM 3144; prerequisite or corequisite: CHM 4123
Offered upon sufficient request

CHM 4123, 4133 Physical Chemistry **Each course, three hours**

A study of the principles of chemistry from an exact, quantitative standpoint. Behavior of matter in the various states, thermodynamic relationships, kinetics of reaction, molecular and atomic structure, phase equilibria, electro-chemistry. Prerequisite: CHM 3144, PHY 2124; prerequisite or corequisite: MTH 1144
4123 offered fall semester (even-numbered years)
4133 offered spring semester (odd-numbered years)

CHM 4221, 4222, 4223 Chemistry Research **One to three hours**

Laboratory-based research projects in an area of Chemistry or Biochemistry of interest to the student and supervising faculty. May be repeated for credit, with a maximum of four hours counting toward degree credit in Biochemistry. Prerequisite: consent of instructor
Offered each semester

CM (Construction Management)

CM 1112 Construction Techniques I Two hours

Instruction in and application of basic construction techniques by involvement in an actual construction project. One hour lecture-discussion and three hours laboratory period per week.

Offered fall semester

CM 1122 Construction Techniques II Two hours

Instruction in and application of basic construction techniques by involvement in an actual construction project. Basic instruction in arc welding is included. One hour lecture-discussion and three hours laboratory period per week.

Offered spring semester

CM 1223 Graphic Communication Skills Three hours

The study and practice of communicating ideas through manual and digital means. Emphases include the development of lettering and sketch abilities, communication through construction documents, an introduction to construction assemblies and an overview of three-dimensional model based design, and construction documentation. Two three-hour laboratory periods per week.

Offered spring semester

CM 1313 Materials of Construction Three hours

A comprehensive study of the properties, manufacture, and uses of building construction materials. Investigation into the appropriate application of materials for design and functional intent is addressed. Three hours lecture-discussion per week.

Offered fall semester

CM 2213 Construction Methods I Three hours

A study of the assemblies, methods, sequences, and equipment used in constructing residential projects. The use of the International Residential Code and local jurisdiction ordinances and their effect on both the site and building construction is included. Two hours lecture-discussion and one two-hour laboratory period per week.

Offered fall semester

CM 2223 Construction Methods II Three hours

A study of the assemblies, methods, sequences, and equipment used in commercial construction projects. An emphasis on the planning and managing of the commercial construction process is included. Two hours lecture-discussion and one two-hour laboratory period per week.

Offered spring semester

CM 2322 Statics and Strength for Technology Two hours

A study of forces on statically determinate rigid bodies at rest including analysis of determinate trusses. An introduction to stress and strain in beams and columns is included. Two hours lecture-discussion per week. Prerequisite MTH 1122 or equivalent

Offered spring semester

CM 2431 Construction Internship A One hour

Orientation to work on a construction site. The student is responsible to secure summer employment in construction, with assistance from the instructor. Taken prior to CM 2441.

Offered spring semester

CM 2441 Construction Internship B **One hour**

Ten weeks (a minimum of 400 hours) of construction work with prior approval of the major adviser. A written report of activities is required. Credit or equivalence for this course can be earned during the summer months. Prerequisite: CM 2431

Offered fall semester

CM 2513 Surveying **Three hours**

A study of the fundamentals of measuring techniques as they relate to leveling, construction layout, and mapping. Emphasis is given to the care and use of optical and electronic instruments. Two hours lecture-discussion and one two-hour laboratory period per week. Prerequisite: MTH 1122 or equivalent

Offered fall semester

CM 3213 Construction Safety and Quality **Three hours**

A study of safety and quality control as it relates to construction management. An emphasis on the financial impact of safety and quality management is included. Also included is instruction adequate to earn the 10-hour OSHA certificate. Three hours lecture-discussion per week. Prerequisite: CM 2213 or CM 2223

Offered spring semester

CM 3233 Structural Systems for Buildings **Three hours**

A study of the design of steel structural elements typically found in buildings and a consideration of steel erection procedures. Also the study of the design and control of concrete mixtures and of the design of simple reinforced concrete structural elements. Concrete Field Testing Certification instruction included. Two hours lecture-discussion and one two-hour laboratory period per week. Prerequisite: CM 2322 or ME 3114

Offered spring semester

CM 3413 Estimating I **Three hours**

An introduction to construction estimating and bid preparation with an emphasis on quantity takeoff. Residential and light commercial projects are emphasized with integration of construction accounting. Two hours lecture-discussion and one two-hour laboratory period per week. Prerequisite: CM 2213 or 2223

Offered fall semester

CM 3501, 3502, 3503 Selected Topics **One to three hours**

Study of a specific area of the construction industry, such as work methods or equipment selection. May be used for independent study. May be repeated for different topics. Prerequisite: consent of department head

Offered upon sufficient request

CM 3603 Mechanical/Electrical Systems for Buildings **Three hours**

A study of Mechanical, Electrical, and Plumbing systems of residential and commercial buildings. An introduction to Mechanical, Electrical and Plumbing codes, and design software are included. Energy conservation issues and the environmental impact of construction are discussed. Two hours lecture-discussion and one two-hour laboratory per week.

Offered fall semester

CM 3613 Architectural Design I **Three hours**

The design, development, and presentation of an architectural program for a residence. Introduction to design principles and their influence in the development of a project is addressed. The architect, contractor and owner working relationships are emphasized. Two three-hour laboratory periods per week. Prerequisite: CM 1223, and junior standing or consent of instructor

Offered fall semester

CM 3623 Architectural Design II **Three hours**

The design, development, and presentation of an architectural program for a commercial project and construction documentation for the following year's practicum project. Course emphasis includes design intent, effective communication of problem solving solutions, and an introduction to the interrelatedness of modeling, estimating and scheduling. Two three-hour laboratory periods per week. Prerequisite: CM 3613, and junior standing or consent of instructor

Offered spring semester

CM 4323 Construction Contracting **Three hours**

A study of the management aspects of the construction industry including firm organization, roles and responsibilities, contracts, specifications, bonding and insurance, labor relations, and labor law. Ethical issues relevant to construction are discussed. Three hours lecture-discussion per week. Prerequisite: senior standing or consent of instructor

Offered spring semester

CM 4423 Estimating II **Three hours**

A detailed study and application of pricing, subcontract evaluation, and bidding techniques using blueprints and specifications. Projects include several commercial building projects. An introduction to construction financing is included. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisites: CM 2223, CM 3413 and senior standing or consent of instructor

Offered spring semester

CM 4613 Construction Project Planning and Scheduling **Three hours**

A study of construction project management systems with emphasis on project planning and scheduling. Critical path schedules are developed using Primavera and Microsoft software. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: senior standing or consent of instructor

Offered fall semester

CM 4713 Construction Management I **Three hours**

A capstone experience involving application of management techniques on an actual construction project. Planning, estimating, procurement, project execution, supervision of CM 1112 students, and coordinating subcontractors is included. One one-hour planning session and two four-hour laboratories per week. Prerequisite: senior standing

Offered fall semester

CM 4723 Construction Management II **Three hours**

A capstone experience involving application of management techniques on an actual construction project. Planning, estimating, procurement, project execution, supervision of CM 1122 students, and coordinating subcontractors is included. One one-hour planning session and two four-hour laboratories per week. Prerequisite: senior standing

Offered spring semester

CMN (Christian Ministries)

CMN 1632 WILD Adventure Program

Two hours

An intensive multi-day experience available to incoming first-year and transfer students accepted into the Wilderness Impact on Leadership and Discipleship (WILD) Program. The focus is upon group living and interpersonal dynamics designed to enhance personal spiritual growth through participation in outdoor pursuit activities such as backpacking, canoeing, rock climbing, and rappelling. Significant time is spent on the JBU challenge course leading up to a multi-day trip into a pristine backcountry location (e.g., the Boundary Waters, the Rocky Mountains, the Smoky Mountains). Additional fee associated with this course.

Offered fall semester

CMN 2213 Foundations and Practice of Christian Ministry

Three hours

A course designed to help students gain a basic understanding of the nature of full-time Christian service in a variety of arenas. Class activities assist students in understanding the gifts, abilities, and personality God has given them so they can better serve in His Kingdom. Prerequisite: sophomore standing

Offered fall semester

CMN 2223 Challenge Course Programs and Management

Three hours

Historical, theoretical and experiential understanding of program and management practices associated with the use of adventure initiatives and challenge courses as an educational medium with a variety of populations. Introduction to technical skill development, facilitation strategies, processing techniques, safety procedures, equipment management, program design, evaluation methods, and applications to specific client groups. Use of challenge course programs for ministry in camp and adventure settings is emphasized.

Offered spring semester

CMN 2263 Discipleship and Evangelism

Three hours

A consideration of the Biblical and practical application of discipleship and evangelism. The social, cultural, community, and ontological ramifications of discipleship and evangelism are considered, as well as a critique of current issues, worldview, and the needs of the 21st-century world. Prerequisites: BBL 1013, 1023

Offered each semester

CMN 2283 Camping and Outdoor Recreation Skills

Three hours

Advanced training in skills essential for an effective camp/recreation career. Students are exposed to outdoor recreational activities, such as riflery, archery, low and high ropes course, backpacking, hiking, swimming, canoeing, and horseback riding. A fee is associated with this course.

Offered upon sufficient request

CMN 2303 Creating Curriculum for Children in Christian Settings

Three hours

Instruction in creating intentional learning experiences that foster faith and spiritual development in children. Facets of Christian teaching are examined, including the nature and design of curriculum, learning styles, developmental issues, and teaching methods, as well as Jesus's teaching style. Students teach four lessons during the semester, with opportunity to reflect on their teaching to promote self-awareness as a teacher. Students rigorously evaluate current published Christian curricula, and ultimately write a four-session curriculum set and teach one lesson from that curriculum.

Offered fall semester

CMN 2313 Christian Education with Adolescents

Three hours

A study of teaching and learning theories specifically for those working with adolescents in a Christian environment. Includes adolescent cultural exegesis and its application, plus observation and practice of teaching. Prerequisite: CMN 2213

Offered spring semester

CMN 2373 Principles and Practices of Adventure Education

Three hours

Theories and principles of leadership and experiential education (e.g. transfer of learning, small group development, debriefing/processing, providing appropriate feedback, therapeutic approaches, framing experiences) are applied to program development and implementation for Christian outdoor ministry setting, with special consideration of both traditional and specific populations (e.g. youth-at-risk, chemical dependency, businesses, university orientation programs). Opportunities to develop, lead and evaluate adventure education experiences are incorporated. A field trip is required.

Offered fall semester (odd-numbered years)

CMN 2383 Outdoor Living Skills

Three hours

Introduction to basic living skills in wilderness environments. Topics include low-impact camping, food rations planning, clothing, travel techniques, equipment, and navigation. Leave No Trace Certification may be earned. Field trips required. Additional fee associated with this course.

Offered fall semester

CMN 2632 Outdoor Leadership: Winter Skills

Two hours

An opportunity for students to experience a safe and educational adventure in the world of the northern Minnesota winter wilderness—its ecology, folklore, history, and exquisite beauty. Through participation in a wilderness dogsled and ski trek, students are engaged in the whole realm of winter travel and adaptive camping skills, including backcountry skiing, snowshoeing, construction of snow shelters, winter ecology, and comfort and safety. Leadership development and ministry opportunities are explored in connection with outdoor adventure pursuits. Field trips required. Additional fee associated with this course. Open to Outdoor Leadership Ministries majors or minors or by instructor permission only. Prerequisite: CMN 2383

Offered upon sufficient request

CMN 2642 Outdoor Leadership: Paddlesports **Two hours**

Instruction to prepare students for leadership roles in conducting canoeing experiences in camps, adventure programs, and other wilderness settings. Students gain and demonstrate an understanding of necessary canoeing equipment, trip planning and organization, instruction of basic canoeing strokes, implementation of safety procedures, canoe expeditioning skills and group management on canoe expeditions, stewardship practices in wilderness settings, and ministry opportunities through outdoor adventure pursuits. Field trips required. Additional fee associated with this course. Open to Outdoor Leadership Ministries majors or minors or by instructor permission only. Prerequisite: CMN 2383

Offered upon sufficient request

CMN 2652 Outdoor Leadership: Back Packing **Two hours**

Instruction to prepare students for leadership roles in conducting backpacking experiences in camps, adventure programs, and other wilderness settings. Students gain understanding of backpacking equipment, trip planning and organization, instruction of basic camping skills, implementation of safety procedures, group management on backpacking trips, stewardship practices in wilderness settings, and ministry opportunities through outdoor adventure pursuits. Field trips required. Additional fee associated with this course. Open to Outdoor Leadership Ministries majors or minors or by instructor permission only. Prerequisite: CMN 2383

Offered upon sufficient request

CMN 2662 Outdoor Leadership: Top Rope Rock Climbing **Two hours**

Instruction to prepare students for leadership roles in conducting beginning top rope rock climbing experiences in camps, adventure programs, and other wilderness settings. Emphasis is placed upon site selection, instructor qualifications, assessment of participant skills, proper use and care of equipment, belaying technique, correct use of anchors, climbing site management, stewardship practices in wilderness settings, and ministry opportunities through outdoor adventure pursuits. Field trips required. Additional fee associated with this course. Open to Outdoor Leadership Ministries majors or minors or by instructor permission only. Prerequisite: CMN 2383

Offered upon sufficient request

CMN 3112 Horsemanship **Two hours**

Instruction in teaching horse care, handling, and riding techniques to participants of different ages. Safety, stable management, and ministry opportunities through involvement in the "Right Lead" program at New Life Ranch are addressed. Field trips are required. Credit available to students other than Outdoor Leadership Ministries majors and minors only by permission of instructor. A fee is associated with this course. Prerequisite: CMN 2383

Offered upon sufficient request

CMN 3153 Philosophy and Methods of Outdoor Education **Three hours**

An examination of effective teaching techniques and administrative programming practices for outdoor experiential education. This course emphasizes development and selection of curriculum and activities appropriate for use in extending the academic classroom to the outdoors. Content is also designed to prepare prospective outdoor education professionals to teach about the outdoor environment in nonformal educational settings. Opportunities to develop, lead and evaluate outdoor education experiences are incorporated.

Offered spring semester (even-numbered years)

CMN 3213 Camp Leadership and Management **Three hours**

An introduction to the philosophy of Christian camping and its place in the spiritual, emotional, and educational development of the person. Attention is given to administration and organization of camp life from counselor training to food purchasing. The local camp New Life Ranch hosts the course and serves as a model for observation and learning.

Offered spring semester

CMN 3253 Foundations and Practice of Children's Ministry

Three hours

Preparation for ministry to children: (1) Globally, to address concerns such as HIV/AIDS, child laborers, child labor, children of war, sexually exploited children, and street children; (2) Professionally, to explore issues of leadership, including safety and liability concerns, children's ministry models, children with special needs, and job options; and (3) Biblically, to examine faith and spiritual development in children from the theological and historical standpoints of four different Christian traditions. Prerequisite or corequisite: BBL 34_3 or 36_3

Offered fall semester

CMN 3263 Discipleship Development and Outdoor Ministry

Three hours

Programming philosophy, theories, and principles for designing, conducting, and evaluating camp and adventure programs focused upon disciplining a variety of clientele in various types of Christian residential and wilderness programs. Field trip required.

Offered fall semester (even-numbered years)

CMN 3313 Foundations and Practice of Youth Ministry **Three hours**

A study of the basic principles of effective youth ministry. The class focuses on formulating theological, theoretical, and practical models for doing youth ministry, whether in a local church or para-church settings. Credit available only to Youth Ministry majors and minors. Prerequisites: CMN 2213, 2313

Offered fall semester

CMN 3323 Youth Ministry Organization and Planning **Three hours**

An opportunity for students to develop organizational and planning skills helpful in youth ministry. Building on foundations established in CMN 3313, students examine various approaches to organizing and carrying out youth programs. Open to Youth Ministry majors and minors only. Prerequisites: CMN 2213, 2313, and 3313

Offered spring semester

CMN 3373 Leadership for Outdoor Adventure Pursuits **Three hours**

Examination of the implementation of Christian focused outdoor pursuits programs, planning and leadership components, outdoor adventure-based administrative techniques, leadership competencies, therapeutic/adaptive considerations, and risk management. Field trip required. Prerequisite: CMN 2373, 2383

Offered upon sufficient request

CMN 3443 Leading Short-Term Missions Trips **Three hours**

An opportunity for students to learn about the process of planning, preparing for leading, and debriefing the short-term mission experience. Participation in the Ireland Mission Trip is required.

Offered summer

CMN 3453 Nurturing Spiritual Development in Children Three hours

An exploration of effective means of nurturing spiritual development in the young. Students are challenged to construct a working definition of children's spirituality, to examine biblical and theological foundations of children's spirituality, and to explore current theories on children's spiritual development.

Offered spring semester (even-numbered years)

CMN 3463 Youth Culture Three hours

An examination of adolescence from a holistic developmental perspective, studying intellectual, emotional, social, vocational, psychological, and spiritual growth. Students are given opportunity to analyze and interpret American youth culture for the purpose of understanding and ministering to adolescents. Students gain insight into recognizing, evaluating, and counteracting the effects of culture upon youth's self perception, world view, and understanding of God. Prerequisites: PSY 1013, and CMN 2213 or consent of instructor

Offered spring semester

CMN 3690 Practicum: Outdoor Pursuits Instruction No credit

Experience in assisting an instructor in one of the outdoor leadership courses. Through the establishment and fulfillment of a learning contract, these student assistants progress through various levels of responsibility in accordance with the instructor's guidance and course needs. Prerequisite: consent of instructor

Offered each semester

CMN 4113 Wilderness First Responder Three hours

Standards of practice for outdoor professionals providing emergency medical care in remote areas. Consideration of prolonged transport times, severe environments, and the use of portable and improvised equipment. Topics include wilderness trauma and illness, search and rescue operations, and environmental emergencies. Upon successful completion of practical and written exams students will receive a two-year Wilderness First Responder certificate from Wilderness Medicine Institute of NOLS and a two year American Heart Association Adult Heartsaver CPR certification. An additional fee is associated with this course.

Offered summer term upon sufficient request

CMN 4163 Senior Seminar in Outdoor Leadership Ministries

Three hours

A capstone course in Outdoor Leadership Ministries in which students intentionally seek to (1) integrate their previous academic and internship experiences; (2) create a professional portfolio reflecting their academic accomplishments, leadership and ministry experiences, relevant certifications, and work-samples; and (3) demonstrate competence in their discipline—conducting significant research to include investigating specific questions posed by a camp, conference center, mission agency, wilderness program, or other outdoor ministry organization, culminating in a public symposium in which the participants present their findings. Prerequisite: CMN 4653

Offered spring semester

CMN 4413 Spiritual Formation in Christian Education Three hours

A study of theoretical models of spiritual development from an evangelical perspective which gives due consideration to the biblical-theological data. Students study various age groupings for analysis in spiritual development concerns. Implications for Christian Education strategies are discussed.

Offered upon sufficient request

CMN 4433 Senior Seminar in Youth Ministry **Three hours**

A capstone course in Youth Ministry in which students strive (1) to integrate their previous academic and internship experiences, (2) to complete a professional portfolio of their education, experiences, and work-samples, and (3) to demonstrate competence in their discipline—how to assess needs, find answers, and provide help, information, or advice appropriately; continue personal and professional growth; refine their knowledge base; and increase capacity for personal reflection. Prerequisite: completion of internship

Offered spring semester

CMN 4443 Critical Concerns with Adolescents **Three hours**

An examination of some of the critical issues facing counselors, youth leaders, social workers, and educators by means of journal reviews, interviews, and computer searches. Students research topics such as teenage suicide, substance abuse, pregnancy and abortion, gangs, sexual/physical abuse, and divorce. (Same as FAM 4443)

Offered spring semester

CMN 4463 Senior Seminar in Children & Family Ministry **Three hours**

A capstone course in Children and Family Ministry in which students integrate their previous academic and internship experiences, demonstrate competence in their discipline, and create a professional vita reflecting their work, academic accomplishments, and leadership experiences. Students conduct significant research, investigating specific questions posed by social service organizations, churches, or ministry agencies, culminating in a public symposium in which the participants present their findings. Prerequisite: completion of internship

Offered spring semester

CMN 4481, 4482, 4483 Selected Topics **One to three hours**

Topics are chosen from some areas of Christian Education. The student may also do an independent study and research under the supervision of the instructor. Prerequisite: consent of instructor

Offered upon sufficient request

CMN 4493 Foundations and Practice of Adult and Family Ministries **Three hours**

A presentation of theoretical and biblical foundations and practical information in the overlapping areas of adult education and family ministry. Adult education content includes adult development, teaching strategies, adult learning theory, and instructional learning designed for adults in Christian settings. Family ministry emphases include biblical and theological foundations as well as theory and research from the social sciences concerning families. Primary emphasis is placed on helping churches become communities that strengthen families through nurturing interactive faith and providing support during times of crisis.

Offered spring semester (odd-numbered years)

CMN 4511, 4512, 4513 Independent Study in Christian Ministry **One to three hours**

Supervised exploration of topics of special interest. The course consists of large assignments of reading, regular consultation with the supervising professor, and written analysis of readings. Prerequisites: 15 hours of Christian Ministries and consent of the Christian Ministries department

Offered upon sufficient request

CMN 4534 Expedition Leadership **Four hours**

The Wilderness Education Association's National Standard Program for either the Wilderness Steward Certification or the Outdoor Leadership Certification. The NSP involves a full semester of classroom instruction, weekend outings, and the equivalent of a three-week expedition in a wilderness environment. The extended wilderness experiences focus on WEA's leadership philosophy and their 18-point curriculum. The goal is to develop professional Christian leaders who are equipped to use wilderness experiences in the spiritual development of others and who are capable of planning, organizing, and leading a safe and an environmentally sound wilderness expedition as a setting for outdoor ministry. Students who successfully complete all phases of the course will be considered for WEA Outdoor Leadership Certification. Additional fee associated with this course. Prerequisite: CMN 2383

Offered spring semester (odd-numbered years)

CMN 4544 National Outdoor Leadership School Course **Four to twelve hours**

An opportunity to enhance students' professional skills within a wilderness adventure environment. Courses vary in length. Offered in cooperation with the National Outdoor Leadership School. Additional fee associated with this course. Prerequisite: CMN 2383

Offered each semester, as arranged with OLM advisor

CMN 4554 Outward Bound School Course **Four to twelve hours**

An opportunity to enhance students' personal qualities through wilderness adventure. Courses vary in length. Offered in cooperation with an Outward Bound School. Additional fee associated with this course. Prerequisite: CMN 2383

Offered each semester, as arranged with OLM advisor

CMN 4611, 4612, 4614 Internship in Christian Ministry **One to four hours**

Participation in an approved and supervised ministry activity. Credit is available only to majors and minors within the Division of Biblical Studies. Enrollment may be repeated as necessary to fulfill specified requirements. Grading: 'S' or 'U'.

Offered each semester

CMN 4619 Internship in Youth Ministry **Nine hours**

A seven-month appointment in which the student serves under a qualified professional in an approved setting. Enrollment is limited to Youth Ministries and Youth & Worship Ministries majors. Grading: 'S' or 'U'.

Offered fall semester

CMN 4651, 4652, 4653, Internship in Outdoor Leadership Ministries **One to three hours**

Practical experience working under a qualified professional in the area of camp and recreation programs and/or outdoor education. Enrollment may be repeated as needed to fulfill the necessary requirement. Grading: 'S' or 'U'.

Offered each semester

COM (Communication)

COM 1101 Beginning Radio Practicum **One hour**

Participation in supervised entry-level radio experiences. Introduction to typical station policies, methods of operation, and Federal Communication Commission regulations.

Offered each semester

COM 1123 Performance **Three hours**

An introduction to the basics of radio and television announcer performance skills. Includes exercises in pronunciation, script marking and reading, interviewing, newscasts, and ad-lib performance.

Offered spring semester (even-numbered years)

COM 1133 Mass Media and Culture **Three hours**

A study of the fundamentals of mass media so as to discover ways in which media impacts humans individually and collectively.

Offered fall semester

COM 1203 Liberal Arts Foundations for the Musician **Three hours**

A writing-intensive study of philosophical issues fundamental to the arts. Historical survey of music literature of the Western world, with emphasis on style, form, appreciation, and application of perception skills. (Same as MUS 1203) Prerequisite or corequisite: EGL 1013

Offered spring semester

COM 2101 Intermediate Radio Practicum **One hour**

Five hours each week of practical broadcast experience on KLRC. Proficiency in announcing, control operation, handling of equipment, and other typical radio station duties are developed. May be repeated for credit.

Offered each semester

COM 2111, 2112 Practicum in Journalism **One or two hours**

Work as a staff member for a University publication. A. Reporting, proofreading, advertising, editing, photography and layout on the Threefold Advocate student newspaper. B. Work in other University journalism functions. Prerequisite: COM 2123

Offered each semester

COM 2121 Practicum in Forensics **One hour**

Participation in the University forensics team, providing experience with various forms of debate and public speaking.

Offered each semester

COM 2123 News Writing I **Three hours**

A study of the basic principles of journalism.

Offered fall semester

COM 2153 News Writing II **Three hours**

Advanced study in journalistic writing and reporting. Prerequisite: COM 2123

Offered spring semester

COM 2213 Audio Design **Three hours**

An intermediate study of audio production for broadcast in radio and television. Various analog and digital formats are taught. Remote programming for network feeds is included.

Offered fall semester (even-numbered years)

COM 2223 Media Writing **Three hours**

An integrated approach to mass media writing, emphasizing fundamental writing skills with application to the different broadcasting formats and genres. Includes ethical dimensions of writing news and commercial copy.

Offered spring semester (even-numbered years, through 2008)

COURSE DESCRIPTIONS

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An integrated approach to mass media writing, emphasizing fundamental writing skills with application to the different broadcasting formats and genres. Includes ethical dimensions of writing news and commercial copy.

Offered spring semester (even-numbered years, through 2008)

COM 3131 Radio News Practicum **One hour**

Five hours weekly in production of news materials for broadcast on KLRC. May be repeated for credit. Prerequisite: COM 3323 or consent of Broadcasting advisor
Offered each semester

COM 3141 Television Program Assistant **One hour**
Assists the faculty supervisor in the operations of TV5. Prerequisite: COM 2243 and consent of instructor
Offered each semester

COM 3151 KLRC Program Assistant **One hour**
Assists the supervisor of KLRC: traffic, music selection, announcing schedules, promotions, and production. Prerequisite: COM 1101, 2101, 3101, and consent of instructor
Offered each semester

COM 3321 Independent Television / Video Production **One hour**
Practical experience in television and video production. Students work in consultation with a faculty supervisor to complete independent projects. Prerequisite: COM 2243 and consent of instructor
Offered each semester

COM 3323 Broadcast News I **Three hours**
Principles and practice of writing and reporting news for broadcast in the contemporary television local news environment. Includes electronic newsgathering outside the studio, news package production, newscast package production, and newscast producing. Prerequisites: COM 2123, 2223, 2243
Offered fall semester (even-numbered years)

COM 3353 Public Relations Writing **Three hours**
Stresses the communication phase of the four-stage public relations cycle with emphasis on all forms of public relations and business communication writing. Prerequisite: COM 2123
Offered fall semester

COM 3363 Magazine Writing **Three hours**
Study and practice in writing for contemporary magazines as a staff member or as a free-lance writer. Prerequisite: COM 2123 or consent of instructor
Offered fall semester

COM 3373 Editorial and Interpretative Writing **Three hours**
Study and writing of editorials, columns, and other interpretative and analytical articles. Prerequisite: COM 2123 or consent of instructor
Offered spring semester

COM 3383 History of American Journalism **Three hours**
A study of the history of journalism in the United States with particular emphasis on newspapers, magazines, radio and television.
Offered upon sufficient request

- COM 3443 Broadcast News II** **Three hours**
 Practical application of broadcast television news production and performance techniques. Students produce and deliver a weekly thirty-minute news program. News Emphasis majors receive practical training and experience in anchoring, reporting, and producing; Performance & Production Emphasis majors serve as live production personnel. Prerequisites: COM 2243, 3323
 Offered spring semester (odd-numbered years)
- COM 3473 Broadcast Documentary** **Three hours**
 An introduction to and application of the techniques of researching, writing, and producing the broadcast documentary film. Various non-fiction film styles and genres are examined, as well as long-form television news package production. Students learn each element of the pre-production process, culminating in the production of a documentary short. Prerequisites: COM 2243 & 3323, or ART 2103 & 2123
 Offered fall semester
- COM 3493 Media Law and Ethics** **Three hours**
 A case-study approach to recognizing and treating law and ethical problems commonly encountered by media practitioners. Includes consideration of truth-telling, sources or information, invasion of privacy, copyright, regulation of materials produced, and telecommunication regulation.
 Offered spring semester
- COM 3553 Interpersonal Communication and Performance** **Three hours**
 Study and practice of communication skills used in one-on-one interactions between individuals. Emphases include interpersonal perspectives and their effects on individual and group performance. A discussion of the application of Christian principles of relationship formation/maintenance is included.
 Offered spring semester
- COM 4113 Student Directed One Act Plays** **Three hours**
 Instruction in the techniques of directing and producing plays, including script analysis, play selection, casting, and approaches to rehearsal. Students direct plays for public performance. Prerequisite: COM 3113 or consent of instructor
 Offered spring semester (even-numbered years)
- COM 4172 Sports Broadcasting** **Two hours**
 In cooperation with Sportscaster Camps of America, students learn the theoretical and practical aspects of sports broadcasting including baseball, basketball and football on location in the Long Beach area of California.
 Offered summer
- COM 4323 Advertising** **Three hours**
 Advertising: its economic role, layout, illustrations, copy, color, trademarks, slogans, media, campaign, and testing results. Study of buying motives of consumers and practical applications of preparing advertising copy.
 Offered spring semester
- COM 4413 Selected Topics in Broadcasting** **Three hours**
 A seminar that offers students the opportunity for critical examination of a particular issue in contemporary electronic media from a Christian world view. Prerequisite: consent of instructor
 Offered upon sufficient request

COM 4423 Programming and Promotion **Three hours**

A study of how and why broadcast programming decisions are made, and how stations and networks promote themselves to the public. Includes audience analysis, ratings, programming formats, and Christian broadcasting.

Offered fall semester (odd-numbered years)

COM 4453 Public Relations Planning **Three hours**

The planning and management of public relations programs with practice in problem-solving and program development. Prerequisite: COM 3353 or consent of instructor

Offered spring semester (even-numbered years)

COM 4461 Senior Seminar **One hour**

Specialized study of final career preparation. To be completed during the student's final semester in residence.

Offered each semester

COM 4463 Internship in Broadcasting **Three hours**

Practical experience working 150 hours under a qualified professional within the media. Responsibilities are tailored to develop skills in the student's particular area of concentration. Only one internship for credit may apply toward graduation. Prerequisites: junior standing and approval of advisor

Offered each semester

COM 4473 Internship in Journalism **Three hours**

Practical experience working under a qualified professional in journalism or public relations. Prerequisites: COM 2123, 2153, 2333, and approval of journalism advisor

Offered each semester

COM 4483 Internship in Public Relations **Three hours**

Practical experience working under a qualified professional in journalism or public relations. Prerequisites: COM 2123, 2153, 2333, 3353, junior standing, and approval of journalism advisor

Offered upon sufficient request

COM 4583 Selected Topics in Performance Studies **Three hours**

Intensive study of a topic in Theater, such as women dramaticists, non-western theater, large-stage genres, author studies, or creative playwriting. May be repeated for credit when a different topic is studied.

Offered upon sufficient request

COR (Core Curriculum)

COR 1002 Gateway Seminar in Christian Scholarship **Two hours**

An introduction to the purpose and method of Christian higher education and the distinctive mission of John Brown University through an exploration of a particular topic. Must be taken during the student's first semester at John Brown University.

Offered each semester

COR 1091 Orientation to the Honors Scholars Program **One hour**

A course designed to offer honors students a foundation for "the intellect as a Christian calling" and to introduce them to the opportunities available to them as students in the program (capstone projects, conference presentations, graduate school preparation, prestigious scholarship mentoring, etc.)

Offered fall semester

COR 1012 Wellness **Two hours**
 A practical study of fundamental health and fitness principles based upon the wellness model. Personal applications to the lifestyle of the individual are emphasized.
 Offered each semester

COR 1013
 See Professional Studies Catalog

COR 1101, 1111 Wellness Activity Selected Topic **Each course, one hour**
 An activity course other than those offered on a regular basis.
 Offered upon sufficient request

COR 1121 Backpacking/Camping **One hour**
 An activity course offering instruction in the basic skills involved in backpacking and camping. Topics such as equipment, trip planning, on-trail guidelines, and terminology are covered. A backpacking/camping trip is included.
 Offered each semester

COR 1131 Tennis **One hour**
 An activity course designed to provide basic instruction in the game of tennis. Such topics as the history of tennis, equipment, rules and scoring, etiquette, fundamental skills, and strategy are addressed.
 Offered each semester

COR 1141 Bowling **One hour**
 An activity course offering instruction in the basics of the game of bowling. Such topics as the history of bowling, equipment and facilities, rules, scoring, fundamental skills, and terminology are addressed. A \$30 fee is associated with this course.
 Offered each semester

COR 1151 Swimming **One hour**
 An activity course offering instruction in the basic skills of swimming. Such topics as history, safety, basic techniques, and various strokes are addressed.
 Offered upon sufficient request

COR 1161 Golf **One hour**
 An activity course offering instruction in the basics of the game of golf. Such topics as the history of the game, equipment, course layout, fundamental skills, golf etiquette, and terminology are addressed. A \$30 fee is associated with this course.
 Offered each semester

COR 1171 Racquetball **One hour**
 An activity course offering instruction in the basics of the game of racquetball. Such topics as the history of the game, equipment, rules, playing regulations, fundamental skills, and strategy are addressed.
 Offered each semester

COR 1181 Aerobic Walking/Jogging **One hour**
 An activity course offering students the opportunity to learn the basics of walking and jogging for fitness. Shoe selection, running/walking form, training ideas, safety measures, injuries, and terminology are topics covered.
 Offered each semester

COR 1191 Nautilus and Free Weight Training **One hour**
 An activity course designed to assist students in developing strength and stretching programs for fitness. Proper lifting techniques, training programs, and specific exercises for development of strength and endurance are covered.
 Offered each semester

COR 2233 Lifeguarding **Three hours**
Knowledge and advanced skill in swimming with training in lifeguarding. Prerequisite: advanced swimming skills.

Offered upon sufficient request

COR 2591/3591 Honors: Colloquium **Each course, one hour**
A course offering honors students opportunities to study subjects of special interest. May be offered on a group basis in a classroom setting or as independent study under faculty supervision. Each may be repeated for up to three hours of credit.

Offered upon sufficient request

COR 3093H, 4093H Honors: Integrated Humanities I, II **Each course, three hours**

A six-hour course sequence studying the development of human thought and expression from the perspective of the arts, literature, and philosophy. Using a basically chronological approach, students study the dominant artforms in their philosophical contexts, seeking to develop an integrated understanding of human history and the relationship between ideas and the arts. Students are exposed to the writings of important philosophers and great works of literature, music, and the visual arts. The course requires participation in relevant arts activities in the surrounding area, and students are encouraged to support and become involved in community arts programs as a means of developing a lifelong commitment to the arts. Prerequisites: admission to the Honors Program or permission of the Honors Committee, EGL 1023 and HST 1013 AND 1023 (or Honors counterparts)

3093H Offered fall semester (even-numbered years)

4093H Offered spring semester (odd-numbered years)

COR 3691, 3692, 3693 Practicum in Honors **One to three hours**
Experiences in Honors Scholars Program leadership, such as serving on executive council, coordinating annual research symposium, assisting professors with Gateway Seminar, etc.

Offered each semester

CS (Computer Science)

CS 1113 Introduction to Computing **Three hours**
An introduction to algorithmic problem solving in the context of a modern programming language. Such topics as problem solving strategies, basic data structures, data and procedural abstraction, and algorithm complexity are discussed. Three hours lecture-discussion per week. Prerequisite: MTH 1113 or equivalent

Offered fall semester

CS 1123 Introduction to Computer Science II **Three hours**
An introduction to data structures, data and procedural abstraction, and algorithm complexity. Three hours lecture-discussion per week. Prerequisite: CS 1113

Offered upon sufficient request

CS 2113 Introduction to Computer Systems **Three hours**
A first course in digital systems, including a treatment of logic and digital circuits as well as design using register level components. Data representation, device characteristics, and register transfer notation are covered in a manner that stresses application of basic problem solving techniques to both hardware and software design. Prerequisite: CS 1123

Offered upon sufficient request

COURSE DESCRIPTIONS

CS 2123 Analysis and Design of Algorithms **Three hours**

A study in algorithms treating such topics as appropriate choice of data structures, recursive algorithms, complexity issues, and issues associated with computability and decidability. Prerequisite: CS 1123

Offered upon sufficient request

CS 3213 Computer Architecture **Three hours**

A study of design alternatives in computer architecture. Instruction set architectures, memory subsystems organization, interfacing concepts, and issues arising in managing communication with the processor are covered. Three hours lecture-discussion per week. Prerequisite: CS 1113

Offered spring semester

CS 3233 Selected Topics **Three hours**

A study of a special area of computer science such as artificial intelligence, computational complexity, computer graphics, computer-human interface, database and information retrieval, fault-tolerant computing, information theory, numerical computation, parallel and distributed computing, or theory of computation. Prerequisite: CS 1123 and consent of instructor

Offered upon sufficient request

CS 3313 Software Systems **Three hours**

Problem solving strategies and concepts applied in the context of design and implementation of software systems. Students gain an appreciation for intractable problems as well as an exposure to concurrent systems. Prerequisite: CS 2123

Offered upon sufficient request

CS 3523 Programming Languages **Three hours**

Basic elements of programming languages (functional, imperative, and object-oriented) with an emphasis on separating the different elements of programming languages and styles. Prerequisite: CS 2123

Offered upon sufficient request

CS 3613 Operating Systems **Three hours**

Systems software applied primarily to operating systems. Such topics as process management, device management, and memory management are discussed, as are relevant issues associated with security and protection, networking, and distributed operating systems. Prerequisite: CS 3213

Offered upon sufficient request

CS 4113, 4123 Software Engineering I, II **Each course, three hours**

Two-semester sequence on design and implementation of large software systems. A continued emphasis on problem solving concepts is integrated with a treatment of the software life cycle, requirements specifications, and verification and validation issues. Social and ethical issues faced by the computing professional are discussed in the context of software engineering. Students complete a substantial software project. Prerequisite for 4113: CS 3213, 3313. Prerequisite for 4123: CS 4113

Offered upon sufficient request

ECN (Economics)

ECN 2003 Basic Economics **Three hours**

An introduction to the basic concepts of economics, including microeconomics, macroeconomics, personal finance, economics ethics, and economic history.

Offered fall semester

ECN 2043 Economies of the European Union **Three hours**

Introduction to micro- and macroeconomic issues through consideration of the Irish economy and the larger environment of the United Kingdom and the European Union. Students have the opportunity to meet leading business and trade union figures in Ireland and to visit industrial development bodies and financial and business organizations, with a view to become conversant in economic theories and their application to decision-making in private and public sector organizations. May substitute for ECN 2003 in the Core Curriculum.

Offered summer, Irish Studies Program

ECN 2093H Honors: Basic Economics **Three hours**

A study of the market economy and the government's role in maintaining economic stability. Designed to equip the student with an information base needed for effective stewardship and for working within the political process to promote economic progress. Extensive use of individual, team, and class projects. Prerequisite: admission to the Honors Program or permission of the Honors Committee

Offered spring semester (odd-numbered years)

ECN 2113 Principles of Microeconomics **Three hours**

A study of markets and how supply and demand interact to direct the allocation of resources and final goods and services. Related topics include market structure, the role of competition, and the shortcomings as well as virtues of a market approach.

Offered fall semester

ECN 2123 Principles of Macroeconomics **Three hours**

A study of the market-oriented economy as a whole with emphasis on the U.S. economy. Topics include national income accounting, determination of national output and employment levels, the banking system, monetary theory, and stabilization policy. Macroeconomic issues such as inflation, unemployment, public debt, economic growth, and the balance of payments are considered from various theoretical positions. Prerequisite: ECN 2113

Offered spring semester

ECN 2533 Economics and Society of Central America **Three hours**

Using the setting of Antigua, Guatemala, students gain understanding of major economic and social issues facing the Central American region. Topics include distribution of wealth and income, unemployment and poverty, discrimination and class struggle, microenterprise, cultural identity, women's issues, and community development.

Offered summer, Guatemala Studies Program

ECN 2543 Economics and Society of Ireland **Three hours**

On-location study of major economic and social issues facing Ireland, and by extension the European Union. Using primary text *The Economics of European Integration*, students gain understanding of topics such as distribution of wealth and income, unemployment, economic and monetary union, common markets, cultural identity, and conditions for balanced growth. Other texts and class activities apply theories and insights to the Irish situation.

Offered summer, Irish Studies Program

ECN 3133 Money and Banking **Three hours**

An examination of the U.S. banking system and the role it plays in providing for efficient exchange in the marketplace. Course discussions emphasize the roles of commercial banks, the Federal Reserve, and the U.S. Treasury in determining interest rates and the general well-being of the U.S. financial network. Also included is a review of monetary policy as a basis for policies to achieve the national economic goals of price stability, full employment, and balance of international payments. Prerequisite: ECN 2123

Offered spring semester

ECN 3203 Economic Development **Three hours**

Study of processes and strategies of economic development with an emphasis on developing countries. Application of economic theories leading to an understanding of development policies. Prerequisite: ECN 2123

Offered fall semester (odd-numbered years)

ECN 3213 Managerial Economics **Three hours**

Application of microeconomic theory and analysis to business and administrative problems with an emphasis on sound, ethical decision-making. Topics include demand analysis, production and cost analysis, market structures and pricing practices, regulation, risk, and capital budgeting. Prerequisites: ECN 2123, MTH 1113

Offered fall semester (even-numbered years)

ECN 3223 Comparative Systems **Three hours**

A study of the contrast between the extremes of command and market-driven economies. Comparisons are drawn from theological as well as ideological and theoretical perspectives. Selected real-world economic systems are analyzed. Prerequisite: ECN 2123

Offered spring semester (even-numbered years)

ECN 4103 International Economics **Three hours**

A study of the economic foundation on which the global economy rests, with an emphasis on the role of the U.S. economy. Topics include trade theory, trade restrictions, monetary systems, exchange rates, and the effect of domestic economic policies on global trade patterns. Also addressed are trade issues such as trade deficits, job displacement, economic sanctions, emerging nations, environmental concerns, immigration, and currency crises. Prerequisite: ECN 2123

Offered fall semester

ECN 4131, 4132, 4133 Selected Topics **One to three hours**

A study of subjects of special interest. May be offered as independent study under faculty supervision. Prerequisite: junior standing and consent of instructor

Offered upon sufficient request and instructor

ECN 4993 Senior Research Project **Three hours**

Individual, intensive study and presentation of an approved topic. This project is integrative in nature and is to be completed during the student's final year of study. Prerequisites: senior standing and consent of instructor

Offered spring semester

ED (Education)

ED 1114 Educational Foundations and Technology **Four hours**

A course designed to welcome students to the field of education. Includes an overview of cultural and historical foundations of American public education, emphasizing its relationship to a diverse society. Design, production, utilization and evaluation of various instructional technologies are incorporated, including ISTE principles for teachers. Classroom presentation techniques, John Brown University Education distinctives, and professional development are stressed. The on-going professional portfolio is begun. Field experience/assignments required.

Offered each semester

ED 2113 Human Growth and Development **Three hours**

A foundational course dealing with physical, mental, emotional, social, and cultural aspects of individual development from prenatal through adolescence. Emphasis is placed on the Piagetian Stages and sociocultural theory. Field assignments require the observation of children from early childhood through adolescence with an emphasis on cultural diversity.

Offered spring semester

ED 2133 Educational Psychology **Three hours**

Psychology applied to teaching and learning, covering such topics as motivation, retention, reinforcement, transfer, maturation, socialization, and individual differences relative to cultural and environmental influences. Field and/or clinical experiences are required. Prerequisites: admission to field experience (Gate One); ED 1114 and 2113

Offered each semester

ED 2713 Education of the Exceptional Student **Three hours**

Orientation to the types of exceptionalities in children including those who are gifted, mentally retarded, physically handicapped, emotionally disturbed, disadvantaged, learning disabled, and others. This course includes an overview of the legal responsibilities and special educational support systems necessary to provide services for these various populations. Designed to assist candidates in enhancing the learning of all students. Field and/or lab experiences are required. Prerequisites: admission to field experience (Gate One); ED 2113. Prerequisite or corequisite: ED 2133

Offered spring semester

ED 3121 Educational Communications **One hour**

Designed to provide teacher candidates with the various communication skills including verbal and non-verbal required for the classroom. Emphasis is placed upon communicating effectively with students, colleagues, parents, and other members of the public or professional community. Cultural and linguistic diversity factors are addressed. Field and/or clinical experiences are required. Prerequisite: admission to Education Program (Gate Two)

Offered fall semester

ED 3153 Reading in the Content Areas **Three hours**

Seventh through twelfth grade licensure candidates study assessment and instructional strategies designed to facilitate effective teaching of their content as well as the comprehension and effective use of content materials for all students, including ESL students and those with special needs. Methods are provided whereby candidates might evaluate the appropriateness of content materials and the learning needs of their students. Candidates must collaborate with a peer in developing a detailed, integrated unit that focuses on content instruction and includes learning objectives, appropriate use of teaching strategies, handouts, technology, other instructional materials, and assessment. Lab and field experiences are required. Prerequisites: admission to Education Program (Gate Two); ED 2113 and 2133. Prerequisite or corequisite: ED 3183

Offered spring semester

ED 3161 Speech and Language Development of Young Children

One hour

Introduction to normal speech and language development. Information regarding the theoretical foundations of speech and language development is provided. Emphasis is placed upon acquisition and development in the early years, birth through five years. A language case-study is required. Prerequisite: admission to Education Program (Gate Two). Corequisite: ED 3362

Offered fall semester

ED 3183 Educational Assessment

Three hours

An investigation of the principles of assessment that are of primary importance to educators of both first and second language students. Includes relating objectives to assessment, constructing tests (e.g., language assessment, designing formative and summative assessments, content area achievement, diagnostic), interpreting and using test results (including modification strategies), and utilizing portfolios and other means of authentic assessment. Prerequisites: admission to Education Program (Gate Two); and ED 2133

Offered each semester

ED 3254 Fine Arts for Early Childhood Teachers

Four hours

An exploration of the fine arts related to the P-4 curriculum. The course includes ways to integrate the curriculum content using the visual arts, music, movement, and creative dramatics. Students learn and practice methodology used to plan and present lessons, participate in lessons and activities, and observe the teaching of fine arts in the school system. Prerequisites: ED 2113 and 2133

Offered fall semester

ED 3263 Foundations of Early Childhood Education and Preschool

Field Experience

Three hours

The study of the philosophical and historical foundations of early childhood education. This course also includes the study of the physical, cognitive, social, spiritual, and emotional needs of young children. Eighteen hours of pre-school field experience (including Head Start) are required. Prerequisite: admission to field experience (Gate One); and ED 2113

Offered fall semester

ED 3273 Curriculum and Instruction: Early Childhood Education

Three hours

A course designed to provide for the study of the curriculum, teaching methods, materials, equipment, and classroom management procedures which can be used to enhance the learning experiences of preschool and kindergarten age children. Course focuses on integrated learning and includes eighteen hours of field experience in a kindergarten classroom and at a school for special needs students. Prerequisites: admission to Education Program (Gate Two); ED 2133, 3263, 3353, 3371/3, and 3393. Prerequisite or corequisite: ED 3183

Offered spring semester

ED 3353 Instructional Methods, 1-8

Three hours

Emphasizes the application of effective teaching skills. Includes experiences with several teaching models appropriate for students of diverse backgrounds and special needs. Social studies standards, methods, and materials are incorporated throughout the course. Field assignments and experiences are required. Prerequisites: Gate One, ED 2113 and 2133

Offered each semester

ED 3362 Curriculum and Instruction: Language Arts, P-4, 4-8

Two hours

Materials and methods of teaching language arts in P-4 and 4-8 classrooms. The four components of a language arts curriculum are addressed, as well as methods and materials to be used in facilitating learning in these four components. Emphasis is placed upon the use of language arts skills in all areas of the curriculum including math, science, and social studies. Clinical experiences are required. Prerequisites: admission to Education Program (Gate Two); ED 1114, 2113, and 2133. Prerequisites or corequisites: ED 3183 and 3353. Corequisites: ED 3371/3 and 3393. Corequisite for P-4: ED 3161

Offered fall semester

ED 3371 Curriculum and Instruction: Reading I, 4-8

One hour

Middle school candidates become familiar with various models of reading instruction and the theories that support those models of the reading process. This course provides an overview of instruction and assessment and is designed to encompass both theoretical and practical aspects of learning how to teach reading in grades 4-8. Restricted to teacher candidates admitted to the 4-8 middle school licensure program. Field and/or lab experiences are required. Prerequisites: admission to Education Program (Gate Two); ED 2113 and 2133. Prerequisites or corequisites: ED 3183 and 3353. Corequisites: ED 3362 and 3393

Offered fall semester

ED 3373 Curriculum and Instruction: Reading I, P-4

Three hours

Preschool through fourth grade candidates become familiar with various models of reading instruction and the theories that support those models of the reading process. This course provides a balanced overview of instruction and assessment, designed to encompass both the theoretical and practical aspects of learning how to teach reading in grades P-4. Included are studies of the stages of reading development, word identification strategies including phonics, fluency, comprehension strategies, assessment and technological strategies. Restricted to teacher candidates admitted to the P-4 program. Field and/or lab experiences are required. Prerequisites: admission to Education Program (Gate Two); ED 2113 and 2133. Prerequisites or corequisites: ED 3183 and 3353. Corequisites: ED 3161, 3362 and 3393

Offered fall semester

ED 3383 Curriculum and Instruction: Arithmetic, P-8 Three hours

Methods and materials for teaching arithmetic (based upon NCTM standards) with diverse students in grades P-8. Emphasis is placed on the use of mathematics manipulatives. For 4-8 Math/Sci emphasis there is an additional one-hour lab for methods and materials particular to Grades 5-8 (based upon NCTM standards). Field and lab experiences are required. Prerequisites: admission to Education Program (Gate Two); ED 2113, 2133, 3183, and 3353; MTH 2143 and 2183. Corequisites: ED 4373 and GSC 3103. Prerequisite or corequisite: taking Content Knowledge component of Praxis II

Offered spring semester

ED 3393 Children and Adolescent Literature Three hours

A study of the literature that might be read and studied by elementary and/or middle school students. Includes a study of the foundations of literature for children and a study of a variety of literary selections from notable children's books (especially Newbery, Caldecott, and Coretta Scott King award winners). Also includes a study of multicultural literature. Corequisites: ED 3362 and 3371/3

Offered fall semester

ED 3563 Second Language Acquisition for Teachers Three hours

A study of major theories in second language acquisition, with emphasis on contrastive principles of first and second language development. Special attention is given to second language acquisition implications in K-12 classrooms with diverse cultural and linguistic representation. A minimum of forty hours of field/clinical experiences is required in settings with English as a second language learners. Candidates are introduced to the dynamics of the educational process and the social, cultural, economic problems, and second language development which are affected. Prerequisite: ED 2133

Offered fall semester

ED 3583 Curriculum and Instruction: TESOL Three hours

Methods and materials for teaching English to non-English speakers. Classroom strategies are addressed for teaching functional English to learners of all ages. The unique characteristics and needs of the K-12 program, adult community education, and intensive English settings are analyzed. Candidates develop skills in the evaluation, selection, and implementation of appropriate ESL materials and teaching strategies. Field and/or clinical experiences are required. (Same as EGL 3583) Prerequisites: admission to Education Program (Gate Two), ED 2133, 3353, and 3563. Prerequisite or corequisite: ED 3183

Offered spring semester

ED 3763 Behavior Management Three hours

Focuses on various techniques for the changing/managing of behavior for early childhood and middle school students. Emphasis on analysis of behavioral needs and the design of appropriate classroom management strategies. Designed to meet the needs within the special education classroom as well as the regular classroom. Prerequisites: ED 2113 and 2133

Offered spring semester

ED 3861, 3862 Field Experience in a Multicultural Environment

One or two hours

An opportunity to develop practical teaching skills while working with children in another culture. Under the direction of the program supervisor, participants plan and implement teaching strategies in various subject areas including science, math, literacy, sports, music, and basic tenets of Christianity. Students participate in a formal presentation of the program, maintain a daily log, and develop a paper outlining what they have learned. One credit hour is earned for each three weeks of participation.

Offered summer

ED 3871 Field Experience: Special Education

One hour

A minimum of forty hours of field experience in a setting with students having special needs. Through participation and analysis, candidates are introduced to the dynamics of the educational process, social and economic problems, and learning styles which affect it. Prerequisites: admission to Education Program (Gate Two). Prerequisites or corequisites: ED 1114, 2113, 2133, 2713, 3353, and 3723

Offered each semester

ED 3903 Teaching in the Christian School

Three hours

An introduction to the history, philosophy, organization, and function of private Christian schools. The various curricular plans and methods are considered. Meets ACSI certification requirements. Prerequisites: admission to Education Program (Gate Two); ED 2113 and 2133

Offered upon sufficient request

ED 4373 Curriculum and Instruction: Reading II

Three hours

Procedures and methods to be used in analyzing and diagnosing reading difficulties, as well as appropriate strategies to be used to assist students with reading problems. Specifically addresses skills and strategies necessary for reading content materials. Candidates must submit an integrated unit plan that includes lesson plans, learning objectives, handouts, other instructional materials, the use of technology, and assessment. Lab experiences in the areas of diagnosis of reading difficulties and the teaching of reading in all areas of the curriculum as well as participation in an integrated lab are required. Prerequisites: admission to Education Program (Gate Two); ED 3183 and 3371/3. Corequisites: ED 3383 and GSC 3103. Prerequisite or corequisite: taking Content Knowledge component of Praxis II

Offered spring semester

ED 4563 Curriculum and Instruction: Middle School

Three hours

A consideration of the philosophy and goals of the middle school movement, characteristics of the middle school student, classroom management, curriculum designs, and learning activities and strategies designed especially for the young adolescent. Course includes field and/or clinical experiences. Prerequisites: passing Content Knowledge component of Praxis II, admission to Education Program (Gate Two); ED 2113, 2133, and 3153 or 3353. Prerequisite or corequisite: ED 3183

Offered fall semester (even-numbered years)

ED 4663 Curriculum and Instruction: Secondary English Three hours

A consideration of the secondary school English curriculum, teaching strategies, and utilization of instructional materials. Supporting topics include best teaching practices and classroom management. Field experiences/field assignments consist of a minimum of 50 hours of classroom experience with secondary English teachers. Prerequisites: passing Content Knowledge component of Praxis II, admission to Education Program (Gate Two); ED 2113, 2123, 2133, 2713, 3153, and 3183

Offered fall semester

ED 4673 Curriculum and Instruction: Secondary Mathematics

Three hours

A consideration of the secondary school Mathematics curriculum, teaching strategies, and utilization of instructional materials. Supporting topics include best teaching practices and classroom management. Field experiences/field assignments consist of a minimum of 50 hours of classroom experience with secondary mathematics teachers. Prerequisites: passing Content Knowledge component of Praxis II, admission to Education Program (Gate Two); ED 2113, 2133, 2713, 3153, and 3183

Offered fall semester

ED 4693 Curriculum and Instruction: Secondary Social Studies

Three hours

A consideration of the secondary school Social Studies curriculum, teaching strategies, and utilization of instructional materials. Supporting topics include best teaching practices and classroom management. Field experiences/field assignments consist of a minimum of 50 hours of classroom experience with secondary social studies teachers. Prerequisites: passing Content Knowledge component of Praxis II, admission to Education Program (Gate Two); ED 2113, 2123, 2133, 2713, 3153, and 3183

Offered fall semester

ED 4763 Principles of Clinical Evaluation: Diagnosis and Remediation

Three hours

Introduction to the principles of standardized testing and a survey of testing and evaluation procedures for students with disabilities. Includes procedures and methods to be used in the analysis and diagnosis of various learning and academic difficulties, with appropriate strategies for remediation. A case study with a written IEP is required as are field based and lab experiences. Prerequisite: admission to Education Program (Gate Two); ED 3183, 3273, and 3753

Offered fall semester (through 2007)

ED 4772 Speech and Language: Special Populations Two hours

Introduction to the nature and causes of common speech and/or language disorders. Strategies for the evaluation and treatment of these disorders are provided. Designed for candidates seeking special education endorsement. Prerequisite: admission to Education Program (Gate Two). Prerequisites or corequisites: ED 2713 and 3161

Offered fall semester (through 2007)

ED 4850 Internship: Early Childhood Education **Fourteen hours**

Interns are assigned to primary school(s) full-time to work under the joint supervision of an experienced classroom teacher and a university faculty member. Senior standing and Division of Education approval required. Division of Education approval of Gate Three requirements including an interview and review of the program portfolio. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three); ED 2713, 3183, 3263, 3273, 3353, 3363, 3373, 3383, and 3763. Corequisite: ED 4851

Offered each semester

ED 4851 Seminar: Early Childhood Education **One hour**

Discussion of problems and concerns encountered during Internship. Designed to bring professional theory and practice into a working perspective. Includes basic concepts of classroom management, safety, legal and ethical issues affecting teaching, working with parents, portfolio assessment, and cultural diversity. Corequisite: ED 4850

Offered each semester

ED 4860 Internship: Middle School **Fourteen hours**

Interns are assigned to a middle school and elementary school full-time to work under the joint supervision of an experienced classroom teacher and a university faculty member. Senior standing and Division of Education approval of Gate Three requirements including an interview and review of the program portfolio. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three); ED 2713, 3183, 3353, 3362, 3371, 3383, 3763, 4373, and 4563. Corequisite: ED 4861

Offered each semester

ED 4861 Seminar: Middle School **One hour**

Discussion of problems and concerns encountered during Internship. Designed to bring professional theory and practice into a working perspective. Includes basic concepts of classroom management, safety, legal and ethical issues affecting teaching, working with parents, portfolio assessment, and cultural diversity. Corequisite: ED 4860

Offered each semester

ED 4880 Internship: Secondary **Fourteen hours**

Interns are assigned to a secondary school full-time, to work under the joint supervision of an experienced classroom teacher and a university faculty member. Senior standing and Division of Education approval of Gate Three requirements including an interview and review of the program portfolio. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three); ED 2713, 3153, 3183, C & I course for teaching field, and any endorsement prerequisites. Corequisite: ED 4881

Offered each semester

ED 4881 Seminar: Secondary **One hour**

Discussion of problems and concerns encountered during Internship. Designed to bring professional theory and practice into a working perspective. Includes basic concepts of classroom management, safety, legal and ethical issues affecting teaching, working with parents, portfolio assessment, and cultural diversity. Corequisite: ED 4880 or 4890

Offered each semester

ED 4890 Internship: P-12

Fourteen hours

Interns are assigned to elementary and secondary schools full-time, to work under the joint supervision of experienced classroom teachers and a university faculty member. Senior standing and Division of Education approval of Gate Three requirements including an interview and review of the program portfolio. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three); ED 2713, 3183, C&I course for teaching field. Corequisite: ED 4891

Offered each semester

ED 4891 Seminar: P-12

One hour

Discussion of problems and concerns encountered during Internship. Designed to bring professional theory and practice into a working perspective. Includes basic concepts of classroom management, safety, legal and ethical issues affective teaching, working with parents, portfolio assessment, and cultural diversity. Corequisite: ED 4890

Offered each semester

ED 4901, 4902, 4903 Selected Topics

One to three hours

An intensive study of a selected area of the school curriculum designed to meet the particular needs of pre-service and in-service teachers or administrators. Specific subtitles may be added. Division of Education approval required.

Offered each semester

EE (Electrical Engineering)

EE 2213 Digital Electronics

Three hours

A study of bipolar and MOS switching circuits, combinational and sequential logic design and programmable logic devices. Includes a design component. Two hours lecture-discussion and one two-hour laboratory per week.

Offered fall semester

EE 2223 Electrical Circuits

Three hours

A study of electrical circuits using Ohm's law, Kirchoff's laws and Thevenin's and Norton's theorems including time and frequency domains. First and second order circuits are studied including RC, RL and RLC components. Three hours lecture-discussion per week. Prerequisites: EN 1122 and MTH 2114

Offered spring semester

EE 3313 Electronics I

Three hours

A study of diodes and transistors, including BJTs and FETs and the circuits that use them. Topics include biasing, rectifiers, limiters, clamps, amplifiers and switches and operational amps. Two hours lecture-discussion and one three-hour laboratory per week. Prerequisite: EE 2223

Offered fall semester

EE 3323 Digital Systems

Three hours

A continuation from EE 2213 of the design and analysis of digital systems with particular emphasis in one or more areas of application. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisites: EE 2213 and EE 3313

Offered fall semester

EE 3423 Signal Processing **Three hours**

Includes signal representation, Fourier techniques, convolution, correlation, AM, PM, and FM modulation, spectral density, filter synthesis, and signal control. Includes a design project. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EE 2223

Offered spring semester

EE 3501, 3502, 3503 Selected Topics **One to three hours**

A study of a special area of electrical engineering such as computer design, microprocessor applications, antennas, transmission line applications, power electronics, active filters, electric motor design or direct energy converters. May also be used as internship credit or independent study. Prerequisite: consent of department head.

Offered upon sufficient request

EE 4123 Electromagnetics **Three hours**

Application of Maxwell's equations to transmission lines, waveguides and antennas. Includes antenna design. Three hours lecture-discussion per week. Prerequisite: EN 3224 or EN 3313

Offered spring semester

EE 4203 Fiber Optic Communication **Three hours**

A study of fiber optic communications including the optical channel, fiber optic sources and receivers. Includes the study of LEDs, lasers, p-n and pin diodes, photodiodes and APDs. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EN 3224 or EN 3313

Offered upon sufficient request

EE 4213 Electronics II **Three hours**

A study of the analysis and design of electronic circuits using diodes, BJTs and FETs. Topics include low and high frequency effects, power amps, oscillators, filters and converters. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EE 3313

Offered upon sufficient request

EE 4303 Digital Signal Processing **Three hours**

Theory and techniques of characterizing discrete time signals. Includes Fourier and Z-transform, flow graphs, digital filter design, quantization effects and spectral estimation. Includes a design component. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EE 2123 or EE 2223

Offered upon sufficient request

EE 4313 Analog Signal Processing **Three hours**

Includes signal representation, Fourier techniques, convolution, correlation, AM, PM, and FM modulation, spectral density, filter synthesis and signal design. Includes a design project. Three hours lecture-discussion per week. Prerequisite: EE 2123

Offered fall semester (through Fall 2007)

EE 4403 Advanced Digital Systems **Three hours**

Topics may be selected from advanced logic design, coding, digital filters, computer systems, digital communications, or digital control. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EE 3223 or EE 3323

Offered upon sufficient request

EE 4413 Digital Communications Theory **Three hours**

Study of digital communications systems may include such topics as QAM, FSK, CPM, M-ary, PSK, ISI, coding theory, or correction theory/coding. Lab implements various communications in digital form. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EE 3423

Offered fall semester (starting Fall 2008)

EE 4423 Communication Systems **Three hours**

Amplifiers, oscillators, phase-locked loops, mixers, amplitude modulation, angle modulation, pulse modulation and an introduction to information theory. Includes a design project. Three hours lecture-discussion-laboratory per week. Prerequisite: EE 4313

Offered spring semester (through Spring 2008)

EE 4503 Data and Computer Communications **Three hours**

A study of data transmission, encoding, multiplexing, networking, circuit and packet switching, and local and wide area networks. Also computer communication architecture including networking and protocols. Includes a design component. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisites: CS 1113 and either EE 3223 or EE 2213

Offered upon sufficient request

EE 4703 Antennas **Three hours**

A study of antenna systems including the monopole, dipole, loop, helical, microstrip antennas, and parabolic dish, as well as arrays. The course covers the topics of radiation pattern, directivity, gain, efficiency, impedance tuning, and an introduction to propagation. Includes antenna system design. Three hours lecture-discussion per week. Prerequisite: EN 3224 or EN 3313.

Offered upon sufficient request

EGL (English)

EGL 1013 English I: Composition **Three hours**

Writing in a variety of modes and styles for different audiences and purposes. The sequence of written assignments builds on writing from personal experience and gradually integrates perspectives from published sources. A short, research-based essay is required.

Offered each semester

EGL 1023 English II: Literary Analysis and Research **Three hours**

An introduction to the analysis of literary texts through reading and researching a selection of short stories, poems, dramas, and novels. In addition to essays of analysis of such works, a substantial research paper is required. Prerequisite: EGL 1013

Offered each semester

EGL 1083H English I: Honors Composition **Three hours**

A course which has as its thematic core the ethnographical study of local cultures. Focus is on primary and secondary research methods, problem solving, and speaking skills. Methods include experiential, reflective, integrative, and collaborative learning, and teaching by way of field experiences, group projects, interviews, guest speakers, and seminar-type participation. Prerequisite: admission to the Honors Program or permission of the Honors Committee

Offered fall semester

EGL 1093H English II: Honors Literary Analysis and Research

Three hours

An introduction to the analysis of literary texts, including poetry, drama, short fiction, and the novel. Methods may include collaborative learning, field experience, group projects, guest speakers, and seminar-type participation. Assignments will include analysis and response to literary texts and a short documented scholarly research paper, leading up to a longer research project in which the student works with a selected text, the author of that text, and secondary sources to analyze the production of texts in context. Prerequisites: admission to the Honors Program or permission of the Honors Committee and EGL 1013 or Honors equivalent

Offered spring semester

EGL 2213 World Literature I

Three hours

Readings from the major writers of the Western World from ancient through Renaissance. Includes readings from related non-Western literature. A scholarly paper is required. Prerequisite: EGL 1023

Offered fall semester (odd-numbered years)

EGL 2223 World Literature II

Three hours

Readings from writers of the Western World from the Enlightenment through the contemporary period. Includes readings from related non-Western literature. A scholarly paper is required. Prerequisite: EGL 1023

Offered spring semester (even-numbered years)

EGL 2243 Young Adult Literature

Three hours

An introduction to young adult literature as a genre, including an overview of the history of the field, experiences with representative samples of the literature, and guidelines to be used in the promotion and evaluation of such works for use in the classroom and family settings.

Offered spring semester

EGL 2313

See Professional Studies Catalog.

EGL 2393 Advanced Composition

Three hours

Rhetorical techniques and practice in different styles of writing. The course provides an overview of rhetoric and composition pedagogy, with emphasis on various professional and educational conventions for writing. Assignments include exercises on the rhetorical effects of diction, grammatical construction, syntax, and paragraph organization; a sequence of written documents in various writing modes; lesson plans and oral presentations on editing or composing academic essays; and participant-observations in Writing Center consultation. Prerequisite: EGL 1023 or equivalent

Offered spring semester

EGL 3313 Medieval Literature

Three hours

A study of early English literature from the Anglo-Saxon period through the fifteenth century. Authors may include Chaucer, Langland, and Kempe; anonymous works may include *Beowulf*, *The Dream of the Rood*, and *Sir Gawain and the Green Knight*. Most works are read in translation; however, the course introduces students to broad concepts in the history of the English language. A scholarly paper is required. Prerequisite: EGL 1023 or equivalent

Offered fall semester (odd-numbered years)

- EGL 3321 Writing Center Practicum** **One hour**
 Experience in Writing Center methods through participant-observation, readings, and periodic staff meetings. Three hours of tutoring (peer reviews and grammar advice on student writing) each week and a weekly memo are required. Prerequisite or corequisite: EGL 2393 and 3363
 Offered each semester
- EGL 3323 Renaissance Literature** **Three hours**
 A study of the masterpieces from the English Renaissance. A scholarly paper is required. Prerequisite: EGL 1023 or equivalent
 Offered spring semester (even-numbered years)
- EGL 3333 Shakespearean Drama**
 Representative comedies, tragedies, histories, and romances. A scholarly paper is required. Prerequisite: EGL 1023 or equivalent
 Offered spring semester (odd-numbered years)
- EGL 3341 Literary Magazine Practicum** **One hour**
 Working with the production of a literary magazine, including editing, formatting, and writing.
 Offered spring semester (odd-numbered years)
- EGL 3343 Restoration and Eighteenth Century Literature** **Three hours**
 A study of the major writers, genres, and issues of this period. Authors may include Dryden, Behn, Pope, Richardson, Johnson, and Burney; issues may include British colonialism and slavery, the rise of the novel, and the beginnings of British feminism. A scholarly paper is required. Prerequisite: EGL 1023 or equivalent
 Offered fall semester (even-numbered years)
- EGL 3353 Nineteenth Century British Literature** **Three hours**
 A study of the major British writers of the Romantic and Victorian periods. A scholarly paper is required. Prerequisite: EGL 1023 or equivalent
 Offered spring semester (odd-numbered years)
- EGL 3363 Advanced English Grammar** **Three hours**
 An intensive study of the systems of English grammar and an introduction to the history of the English language. Prerequisite: EGL 1023 and junior standing
 Offered fall semester
- EGL 3583 Curriculum and Instruction: TESOL** **Three hours**
 Methods and materials for teaching English to non-English speakers. Course addresses classroom strategies for teaching elementary children through adults survival English, and English for other specific purposes. Includes the skills to evaluate, select, access, and implement appropriate ESL materials and teaching strategies. (Same as ED 3583) Prerequisite: ED 2133
 Offered upon sufficient request
- EGL 3713 Literary Theory** **Three hours**
 A study of the primary texts of literary criticism and aesthetics from Plato to the present. Focuses on developing knowledge and application of the various ideas from the different schools of thought. Prerequisites: EGL 1013, 1023, and one upper-level literature course. Prerequisite or corequisite: RPH 3003
 Offered fall semester (odd-numbered years)

EGL 4003 Masterpieces of Literature **Three hours**

Selections from ancient to contemporary world literature in drama, prose, and poetry. A capstone of the University Core Curriculum. Prerequisites: EGL 1023, HST 1013/23, and RPH 3003

Offered each semester

EGL 4043 Irish Literature **Three hours**

A reading-intensive overview of the literary history of Ireland through examination of selected works of writers William Butler Yeats, Oscar Wilde, George Bernard Shaw, James Joyce, C. S. Lewis, and others. A scholarly paper is required. May substitute for EGL 4003 in the Core Curriculum. Prerequisites: EGL 1023, HST 1013/23

Offered summer, Irish Studies Program

EGL 4111 Careers for English Majors **One hour**

A seminar that explores the world of work as it relates to the skills developed in the English program and the individual strengths of the students. Prerequisite: senior standing

Offered fall semester

EGL 4413 American Literature to 1900 **Three hours**

Major American writers from colonial times through the nineteenth century. A scholarly paper is required. Prerequisite: EGL 1023 or equivalent

Offered fall semester (even-numbered years)

EGL 4433 Twentieth Century Literature **Three hours**

A study of major British and American writers of the period, including authors representing Modernism, Existentialism, and other Post-Modern literary movements. A scholarly paper is required. Prerequisite: EGL 1023 or equivalent

Offered spring semester (odd-numbered years)

EGL 4453 Senior Seminar **Three hours**

Independent investigation of an area which is not covered in depth in other departmental offerings. A scholarly paper is required. Prerequisite: junior standing

Offered fall semester (even-numbered years)

EGL 4473 Selected Topics: Creative Writing **Three hours**

Instruction in a designated genre or subgenre of writing, such as poetry, fiction, playwriting, creative non-fiction, memoir, biography, or writing about faith. A scholarly paper is required. May be repeated for credit, as topics vary each semester. Prerequisite or corequisite: EGL 2393

Offered spring semester

EGL 4483 Selected Topics: Literature **Three hours**

In-depth study of a literary topic of interest. Options: a. Author, b. Period, c. Genre, d. Topic. A scholarly paper is required. Sample topics that could be offered include Russian Literature, Modern American Poetry, Renaissance Drama, Jane Austen, Women Writers of Color, Native American Literature. Prerequisite: EGL 1023 or equivalent

Offered each semester

EGL 4493 Composition Theory **Three hours**

A study of the history and development of writing as an academic discipline with emphasis on how various aspects and styles of writing are valued, taught, and assessed at different levels of education. Prerequisite: 12 hours of EGL

Offered fall semester (odd-numbered years, through 2007)

EGL 4611, 4612, 4613 Independent Study/Research

One to three hours

Independent study supervised by a member of the English faculty. A scholarly paper and/or a significant research project is required. Enrollment by permission of the department.

Offered upon sufficient request

EN (Engineering)

EN 1112 Engineering Concepts and Design

Two hours

A first course in engineering involving basic engineering concepts and the design process. Two hours lecture-discussion per week.

Offered fall semester

EN 1121 Production Techniques Laboratory

One hour

Basic training in the areas of welding, metal fabrication and machine tools. Two two-hour laboratory periods per week.

Offered spring semester

EN 1122 Concepts in Electrical Engineering

Two hours

An introduction to electrical circuits: Ohm's Law, Kirchoff's Laws, Thevenin and Norton equivalent circuits, resistors, capacitors, and inductors. Two hours lecture-discussion per week. Prerequisite: MTH 1134

Offered spring semester

EN 1222 Concepts in Mechanical Engineering

Two hours

An introduction to the profession and its special arenas. Calculation adventures in structures, machine components, materials, motion, thermal and energy systems and system design. Use is made of computerized solvers and CAD. Two hours lecture-discussion per week. Prerequisite: MTH 1134

Offered spring semester

EN 2222 Instrumentation Lab

Two hours

An introduction to laboratory procedures, basic instrumentation techniques and reporting of laboratory work. Includes the use of testing apparatus, oscilloscopes, various transducers, statistical analysis of data and uncertainty analysis. One hour lecture-discussion and one three-hour laboratory period per week. Prerequisites: EN 1122, EN 1222, and MTH 1144

Offered spring semester

EN 2322 Engineering Economics

Three hours

A study of economics as applied to engineering decision making. Consideration is given to reliability, maintainability and feasibility in comparisons of costing and payback schemes. The economic impact of environmental and safety considerations are explicitly included. The context is a free enterprise system, subject to government regulation and investment capitalization. Two hours lecture-discussion per week.

Offered spring semester

EN 3213 Engineering Materials Science

Three hours

A microscopic study of engineering materials, with emphasis on how structures relate to properties. Three hours lecture-discussion-laboratory per week. (Same as PHY 3213) Prerequisite: CHM 1124

Offered fall semester

EN 3222 Design Lab **Two hours**
Student works on design projects in a team context. Four hours in laboratory per week. Prerequisite: EN 2222

Offered spring semester

EN 3313 Engineering Fields **Three hours**
An integrated study of electric, magnetic, fluid, thermal and other fields. Gauss's law and Laplace's and Poisson's equations with an introduction to Maxwell's equations. Numerical and graphical techniques. Two hours lecture-discussion and one three-hour laboratory per week. Prerequisites: PHY 2124 and MTH 2123

Offered fall semester

EN 3501, 3502, 3503 Selected Topics **One to three hours**
A study of a special area of engineering. May also be used as internship credit or independent study. Prerequisite: consent of department head.

Offered upon sufficient request

EN 3513 International Problem Solving in Engineering and Business **Three hours**
An opportunity for students to acquire the knowledge, ability, and predisposition to work effectively with people from other cultures who define problems differently than they do. Through course instruction and interactions, students examine the historical, social, cultural, religious, political and value systems that impact how people approach problems differently, and are prepared to work in multi-cultural, diverse professions.

Offered fall semester

EN 4113 Engineering Design I **Three hours**
A study of specifications, feasibility, modeling, optimization methods, elements of professionalism, and economic analysis. Initiation of the senior design project with written and oral reporting of preliminary work. Three hours lecture-discussion per week. Prerequisites: EN 3222 and MTH 2123

Offered fall semester

EN 4123 Engineering Design II **Three hours**
A capstone course to integrate previous engineering learning experiences in problem formulation and solution. Includes the completion of the major design project initiated in Engineering Design I, with written and oral reporting of the work. Involves supervision of freshman design students. Three hours lecture-discussion per week. Prerequisite: EN 4113

Offered spring semester

EN 4303 System Design with Microprocessors **Three hours**
A study of the application of microcomputers to systems with output related to input. Particular emphasis is given to interfacing techniques. Includes one design project. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisites: CS 1113 and either EE 3223 or EE 2213

Offered upon sufficient request

EN 4313 Control Systems **Three hours**
A study of linear, continuous and digital, time-invariant control systems from both the classical transform and modern state-variable points of view. Three hours lecture-discussion per week. Prerequisite: EN 3123

Offered fall semester (through Fall 2007)

EN 4323 Control Systems **Three hours**

A study of linear, continuous and digital, time-invariant control systems from both the classical transform and modern state-variable points of view. Three hours lecture-discussion per week. Prerequisite: EE 2223

Offered spring semester (starting Spring 2009)

EN 4403 Engineering Management **Three hours**

A study of elements and process of engineering project management covering applicable subjects such as managerial processes, organizational behavior issues, project and task scheduling, cost estimating/evaluation/control, critical path evaluations, resource allocation, integrated tracking and control systems, risk analysis, problem identification, recovery processes and techniques, decision theory. Three hours lecture-discussion per week. Prerequisite: EN 2322

Offered upon sufficient request

EN 4503 Electro-Optics **Three hours**

A study of wave and ray optics, diffraction, reflection, refraction, and polarization in free space and transmission lines, and waveguides. Laboratories include experiments with lasers, detectors, emitters, optical fibers, photovoltaic devices, optical communication and optical instrumentation. Two hours lecture-discussion and one two-hour laboratory per week. Prerequisite: EE 3213 or EE 3313. Co-requisite: EN 3224 or EN 3313

Offered upon sufficient request

FAM (Family Studies)

FAM 2123 Psychology of Relationship Development **Three hours**

A foundation course that integrates biblical and psychological literature in the area of interpersonal, marriage, and family relationships. Coursework includes analysis and application of current theory and psychological research on gender differences, family of origin issues, sexuality, personality types, communication styles, forgiveness, dating, and emotional intelligence. An additional fee is associated with this course. This course may not be audited. (Same as PSY 2123)

Offered spring semester

FAM 2133 Introduction to Family Science **Three hours**

A study of family structure and dynamics from the perspective of theology and family science theory. Some of the major theories for understanding families are evaluated along with God's model of family roles and relationships, and what families are like when they are empowering or disabling, healthy or dysfunctional, successful or unsuccessful. Genograms are a major tool. Prerequisite: sophomore standing

Offered each semester

FAM 2413 Developmental Psychology **Three hours**

A study of physical, cognitive, emotional, and social development of the human from conception through adulthood. (Same as PSY 2413) Prerequisite: PSY 1013

Offered each semester

FAM 3133 Marriage and Family Living **Three hours**

A study of contemporary marital and family issues in light of a theological understanding of family relationships and responsibilities. Family lifespan issues and parent education issues include singleness, courtship, child-rearing practices and effects through developmental stages, and factors known to affect family health. Prerequisite: FAM 2133

Offered each semester

FAM 3243 Family Sexuality **Three hours**

A study of normal sexual development throughout the lifespan, considered from physical, social, spiritual, moral, and theological vantage points. By helping students understand typical expectations and experiences of human sexuality, they will be able to better recognize healthy and unhealthy sexuality in themselves and others. Prerequisites: a human development course, BBL 3003, or consent of instructor

Offered fall semester

FAM 4253 Family Communication **Three hours**

A course designed to help students become more skillful in interpersonal communication as well as facilitating communication within the premarital and family setting. Includes communication for the purpose of building intimacy and conflict resolution. An additional fee is associated with this course. Prerequisite: FAM 2133, 3133, and senior standing

Offered each semester

FAM 4433 Senior Seminar **Three hours**

A capstone course in family studies in which students strive (1) to integrate their previous academic and internship experiences, (2) to complete a professional portfolio of their education, experiences, and work-samples, and (3) to demonstrate competence in their discipline through family life program evaluation, planning, and implementation. The senior project requires a major study and formal paper written for a professional program (secular, church, or para-church) that provides family life education and/or services. To be taken during the student's final spring semester of study. Prerequisite: FAM 2133; FAM 3133 or consent of instructor

Offered spring semester

FAM 4443 Critical Concerns with Adolescents **Three hours**

An examination of some of the critical issues facing parents, counselors, youth leaders, social workers, and educators by means of journal reviews, interviews, and computer searches. Students research topics such as teenage suicide, substance abuse, pregnancy and abortion, gangs, sexual/physical abuse, and divorce. (Same as CMN 4443)

Offered spring semester

FAM 4453 Family Law and Society **Three hours**

This class develops the skills of analyzing statutes and court cases, writing legal arguments and interviewing clients enmeshed in legal issues that affect families. Legal areas include marriage, divorce, child custody, family crimes, adoption, abortion, inheritance, death and dying, courts, and Department of Human Services. Prerequisite: junior standing

Offered fall semester

FAM 4481, 4482, 4483 Selected Topics **One to three hours**

Topics are chosen from areas of Family Studies. The student may also do independent study and research under the supervision of the instructor. Prerequisite: consent of instructor

Offered upon sufficient request

FAM 4611, 4612, 4614 Internship in Family and Human Services **One to four hours**

Practical experience working under a qualified professional in the area of family and human services or family life education. Enrollment is limited to majors and minors in this field. Each semester hour represents 50 hours of service.

Offered each semester

GSC (General Science)

GSC 1023 Physical Science **Three hours**

Selected and coherent topics in the sciences of physics, chemistry, and earth science. An evaluation of the scientific method and the contributions of the theories and facts of science to society are emphasized so that students have sufficient information to evaluate arguments using scientific justification. Three hours lecture-discussion-demonstration per week.

Offered each semester

GSC 1143 Earth Science **Three hours**

Introductory survey of topics in geology, astronomy, and meteorology. Earth materials and processes of geology are emphasized.

Offered fall semester (even-numbered years)

GSC 3003 Global Stewardship **Three hours**

A practical examination of Christians' mandates to serve and care for the earth and to love our neighbors as we love ourselves. Both of these directives assume that we have a clear understanding of how Earth's biological, geological, chemical, anthropological, sociological, and political systems work. Students in Global Stewardship explore these issues through a study of environmental science from a perspective of Christian responsibility. Meets Global Studies requirement in the Core Curriculum. Prerequisite: Core Life Science

Offered spring semester (even-numbered years)

GSC 3103 Science for Elementary and Middle School Teachers **Three hours**

Study of physical and biological environment designed to help prospective elementary and middle school teachers to develop a scientific perspective on their surroundings. Various methods of communicating scientific truth and encouraging scientific inquisitiveness are presented and practiced. Prerequisite: BIO 1003 and 1023; GSC 1143 strongly recommended

Offered spring semester

GSC 3164 Field Geology **Four hours**

Geology as the context of ecosystems and human settlements. An introductory geology course with emphasis placed upon field observations of geological processes, both past and present. Although glacial geomorphology is a dominant theme, such topics as mineral and rock classification, seismology, groundwater flow, fossil fuel resources, climatic change, map interpretation, and fossil identification are also included. Prerequisite: one year of science (Same as Au Sable Geol 316)

Offered summer, Au Sable Institute

GSC 4133 Faith and Science **Three hours**

A capstone course designed to assist students in developing an integrated view of faith and science. Topics are selected from fundamentals of the Christian faith, history of science, nature of science, discovering God in the physical universe, creation of life, evolution of life, science in philosophy and theology, science and culture, and images of man. Prerequisite: senior standing or consent of instructor

Offered spring semester

HST (History)

HST 1013 Western Civilization I **Three hours**

A survey of the origins and development of western civilization in its global context to the early Renaissance.

Offered each semester

HST 1023 Western Civilization II **Three hours**

A survey of the development of western civilization in its global context from the early Renaissance to the present.

Offered each semester

HST 1083H Honors: Western Civilization I **Three hours**

A survey of the origins and development of western civilization in its global context to the early Renaissance, focusing on major issues and turning points as highlighted in original documents. Prerequisite: admission to the Honors Scholars Program or permission of the Honors Committee

Offered fall semester

HST 2111 Selected Topics: Language Lab **One hour**

A rudimentary introduction to a language of interest, designed to enrich historical study of a particular era. Possible offerings include Egyptian Hieroglyphics, Greek, Roman inscriptions, Medieval Latin, Anglo-Saxon, and Romance and Celtic languages.

Offered each semester

HST 2113 United States History to 1865 **Three hours**

A survey of American political, social, and economic history from the colonial era through the Civil War.

Offered fall semester (odd-numbered years)

HST 2123 United States History since 1865 **Three hours**

A survey of American political, social, and economic history from the reconstruction era to the present.

Offered spring semester (even-numbered years)

HST 2153 Twentieth Century World History **Three hours**

A study of major political, economic, and military trends of the twentieth century. Major countries such as Russia, India, Japan, China, the United States, and the United Kingdom receive special attention.

Offered fall semester (odd-numbered years)

HST 2243 Middle Ages **Three hours**

A study of medieval Europe with an emphasis on the role of the Celts, Germanic tribes, and the Church in shaping medieval society, culture, and intellectual life.

Offered fall semester (odd-numbered years)

COURSE DESCRIPTIONS

HST 2253 Roman Empire **Three hours**

A study of the origins and development of the Roman Empire with an emphasis on the interaction between imperial administration and daily life and culture, including the Roman response to the emergence and growth of Christianity.

Offered spring semester (odd-numbered years)

HST 2263 Classical Antiquity **Three hours**

A study of the ancient world with a focus on Greece and the rise and fall of the Roman Republic. The military, social, and political consequences of Greek and Roman rule are considered.

Offered fall semester (even-numbered years)

HST 2413 Arkansas History **Three hours**

A study of the political, social, and economic development of Arkansas from the eras of exploration and early statehood to the present. Major themes include the Civil War and Reconstruction, segregation and disenfranchisement, the one-party experience, progressivism, the struggle for democracy, and civil rights. Meets state requirements for elementary and secondary teachers.

Offered online, upon sufficient request

HST 3183 Law and American History **Three hours**

A study of the development of law and legal theory in American history from colonial times to the present. Attention is given to the interaction between America's legal system and the social, economic, and religious aspects of American life.

Offered spring semester (even-numbered years)

HST 3233 History of the Pacific Rim **Three hours**

A study of the history of the Pacific Rim since the early modern period. Countries and regions of focus include Japan, China, Korea, and the west coasts of the Americas.

Offered spring semester (odd-numbered years)

HST 3243 American Civil War **Three hours**

A study of the causes, course, and consequences of the American Civil War, as well as its effects on the American culture. The international relations of the North and the Confederacy are also examined.

Offered spring semester (even-numbered years)

HST 3253 British Empire **Three hours**

A study of the origins, development, rise, and decline of the British Empire, from the early modern period to the present. Attention is devoted to British activity in the Caribbean, Asia, Africa, the Middle East, North America, and Europe.

Offered fall semester (even-numbered years)

HST 3313 Second World War **Three hours**

A study of the causes, course, and consequences of the Second World War.

Offered spring semester (odd-numbered years)

HST 3411, 3412, 3413 Selected Topics **One to three hours**

Selected topics in history are considered. Examples include Renaissance Europe, Early Modern Europe, American Founding, American West, and Nazi Germany. May be offered in a classroom setting or as independent study. Prerequisite: consent of the history department

Offered upon sufficient request

HST 4613 Seminar in History

Three hours

An introduction to methods of historical research, philosophies of history, and Christian reflection on history. Students research a particular topic in history. Prerequisites: junior standing or consent of instructor

Offered fall semester (even-numbered years)

HONORS

___ **4193H Honors Capstone Project in _____** **Three hours**

A substantial scholarly project/paper representing significant research, normally in the student's major field. The endeavor must be approved by the divisional (and in some cases departmental) chair, a faculty mentor, and the Honors Committee. Guidelines may be obtained from the Honors Scholars Office.

Offered each semester

___ **4593H Honors Tutorial in _____** **Three hours**

Modeled on the European system of education, an independent study in which the student writes papers in response to assigned writings, then meets with the faculty mentor to read and discuss each paper. Papers may be written weekly for eight weeks or bi-weekly for the entire semester. Must be approved by the division chair, the faculty mentor, and the Honors Committee. Guidelines may be obtained from the Honors Scholars Office. Prerequisite: junior standing

Offered each semester

___ **4693H Honors Class Contract in _____** **Three hours**

A substantial scholarly project/paper, including significant research and/or other appropriate activities that warrant honors credit, in a non-honors upper-division class in addition to the work normally required for the course. Must be approved by the division chair, the faculty mentor, and the Honors Committee. Guidelines may be obtained from the Honors Scholars Office. Prerequisite: junior standing

Offered each semester

___ **4793H Honors Service Learning in _____** **Three hours**

A service learning project planned, developed, overseen, and executed by the student in conjunction with the faculty mentor. Must be approved by the division chair, the faculty mentor, and the Honors Committee. Guidelines may be obtained from the Honors Scholars Office. Prerequisite: junior standing

Offered each semester

___ **4913H Honors Co-Teaching: Readings in _____**

___ **4923H Honors Co-Teaching: Classroom Practicum in _____**

Each course, three hours

A six-hour teaching practicum with a master teacher as mentor. During the first semester, the student is assigned readings in pedagogy and the content area, resulting in a lengthy scholarly paper that articulates a theory of teaching and presents sample lesson plans. During the second semester, the upper division student co-teaches a limited number of class sessions (up to one third) in an introductory level class. Must be approved by the Undergraduate Dean, the division head, the faculty mentor, and the Honors Committee. Guidelines may be obtained from the Honors Scholars Office. Prerequisite: senior standing

Offered each semester

ICS (Intercultural Studies)

ICS 1511 Introduction to Walton Scholarship **One hour**

Preparation for incoming freshmen in the Walton International Scholarship Program (WISP). A foundation for success at JBU is laid by helping students understand the WISP's goals and gain skills needed for a successful college career.

Offered fall semester

ICS 2113 Intercultural Communications **Three hours**

A study of the process of interpersonal communications in one's own culture and the principles of effective communication within another cultural context. Attention is given to values, ethnocentricity, nonverbal communication, and change.

Offered spring semester

ICS 2183 Intercultural Field Experience **Three hours**

A summer experience in a cross-cultural context in conjunction with an organization approved by the department prior to the beginning of the field work. An evaluation from the organization and a full, written report (in term paper form) is required. For ICS minors only. Prerequisite: consent of instructor

Offered each semester

ICS 2903

See Professional Studies Catalog.

ICS 2991, 2993 Study Abroad Experience **One or three hours**

A study of a particular non-U.S. region or culture that includes a minimum four-week immersion experience in that region or culture. Fulfills the Global Studies requirement in the Core Curriculum.

Offered upon sufficient request

ICS 3133 Cultural Research Methods **Three hours**

A study of the stages of field research, data-gathering techniques; participant observation, interviewing, census, mapping, document analysis, trends in ethnographic research. Prerequisite: ICS 2113 or 2123

Offered spring semester (odd-numbered years)

ICS 3163 Geo-Cultural Studies **Three hours**

Researching the history, geography, social structures, religious and economic environments of specific countries to be visited by student teams.

Offered upon sufficient request

ICS 3171, 3172, 3173 Selected Topics **One to three hours**

Investigation of subjects of specific interest and importance to the student preparing for specialized intercultural service.

Offered upon sufficient request

ICS 3243 Principles and Philosophy of Community Development

Three hours

An introduction to the basic principles and strategies of community development. Students learn how to facilitate community development in impoverished areas in such a way that faith and appropriate technology are joined together to reduce human drudgery, to alleviate poverty, and to contribute to a deeper understanding and effective application of spiritual truths. Emphasis is placed upon the developer's role as a facilitator of social change, the skills needed for facilitating social change, and an understanding of how communities adopt new ideas. Prerequisites: ICS 2113, 2123

Offered fall semester (even-numbered years)

ICS 3263, 3283 Theory and Practice of Appropriate Technology I, II

Each course, three hours

Appropriate Technology (AT) is a study of applying technologies relevant to the context or environment in which they will be used. Emphasis is placed on applying technologies of housing and construction, energy, food production, land management, manufacturing, and health and sanitation to community development projects. Prerequisite for 3283: ICS 3263

3263 offered spring semester (odd-numbered years)

3283 offered fall semester (odd-numbered years)

ICS 4113 Intercultural Family Seminar

Three hours

A study of the elements for the successful transition of a family from their own culture into a different cultural setting. Skills for confronting culture stress and perceived expectations are considered. A model for family synergy is proposed.

Offered spring semester (even-numbered years)

ICS 4123 Intercultural Internship

Three hours

A supervised intercultural experience in which the student works with an approved mentor selected with the vocational objectives of the student in mind. A minimum of 135 hours of practical service is required. Written assignments are required, including a personal philosophy of intercultural service. Limited to Intercultural Studies Majors. Prerequisites: ICS 2113 or 2123 and approval by professor

Offered each semester

ICS 4133 Intercultural Leadership Skills

Three hours

A practical examination of the process of developing and maintaining effective intercultural relationships. Leadership skills, intercultural team dynamics and conflict resolution, and the servant model of leadership are considered. Prerequisite: ICS 2113 or 2123, or LDR 2133 or 2183

Offered fall semester (odd-numbered years)

ICS 4183 Cultural Values Seminar

Three hours

An examination of contemporary Western values contrasted with values expressed in other cultures and evaluated in light of biblical principles. Enrollment limited to Intercultural Studies Majors and Minors in the final year; others may participate by permission of the instructor. Prerequisites: ICS 2113, 2123

Offered spring semester

ICS 4511 Capstone to Walton Scholarship

One hour

Preparation for graduating seniors in the Walton International Scholarship Program. Topics of discussion include re-entry into Latin American culture, professional considerations, and future roles as successful WISP alumni.

Offered spring semester

IDS (Interdisciplinary Studies)

IDS 1101 Career Planning

One hour

Development of career decision-making skills through assessment and evaluation of self and the work world, using testing, computer guidance systems, and exercises.

Offered fall semester

IDS 1150 Strategies for College Success **No credit**

A study of basic academic skills that students need to be successful in college work, including using a syllabus, reading and using textbooks, note taking, test taking, time management, and organization. Also addressed are areas such as goal setting, seeking assistance, and learning styles. Students are given opportunity to apply these skills in their regular course work.

Offered fall semester

IDS 3111, 3112 Teaching Assistant **One or two hours**

Involvement in a weekly planning sessions and twice weekly class in a Gateway Seminar class. Assistants teach and facilitate group work.

Offered each semester

IDS 3341, 3342, 3343 Selected Travel Study **One to three hours**

Travel study under supervision as approved for credit by the Chair of the Division of General Studies.

Offered upon sufficient request

INT (International Business)

INT 2113 European Business Practices **Three hours**

A study of the cross-cultural aspects of doing business internationally, with special focus on the European context. As part of the course requirements, students travel to Europe for four weeks to experience cultural behaviors and differences firsthand.

Offered summer

INT 2183 International Management **Three hours**

Study of the management process from the perspective of an international organization. (Same as MGT 2183)

Offered fall semester

INT 3113 European Trade **Three hours**

An examination of the basics of international trade, the relevance of the EU, and the integration of the European economy. Included in the curriculum is a four-week tour of European businesses and political institutions relevant to trade.

Offered summer

INT 3153 International Marketing **Three hours**

Study of the marketing process from an international/global perspective with emphasis on developing, promoting, and pricing products in emerging markets. (Same as MKT 3153) Prerequisite: ECN 2113 (or 2003)

Offered spring semester

INT 3173 International Finance **Three hours**

Study of methods and processes of financial management for multinational organizations. Prerequisites: ATG 1183 and ECN 2123 (or 2003)

Offered spring semester

INT 4113 International Marketing Research **Three hours**

Applied study of marketing research using projects supplied by multinational firms. Includes role and methods of marketing research as a means to enhance the marketing strategies and decisions of the modern business organization. Theory and application of such topics as problem identification, research design, survey development, data analysis, and report presentation are covered. Client interaction is emphasized. (Same as MKT 4113) Prerequisites: BUS 2193 and INT 3153 or MKT 3143

Offered fall semester

INT 4131, 4132, 4133 Selected Topics **One to three hours**

A course offering students opportunities to study subjects of special interest. May be offered on a group basis in a classroom setting or as independent study under faculty supervision. Prerequisite: junior standing and consent of instructor

Offered upon sufficient request

KIN (Kinesiology)

KIN 1102, 1103 First Aid and CPR **Two or three hours**

Instruction in basic first aid, safety, and cardiopulmonary resuscitation (CPR). Students enrolled in 1103 are required to observe emergency treatment and participate in ambulance calls through a certified/licensed EMT response facility, and to write a paper recounting the experience.

Offered each semester

KIN 1283 Athletic Training Techniques **Three hours**

Instruction in the recognition, prevention, and care of athletic injuries as well as advanced emergency medical treatment, and proper selection, care, and use of protective sports equipment.

Offered spring semester

KIN 1381, 1481 Field Experience **Each course, one hour**

A minimum of forty hours of field experience per credit hour. Students are introduced to the professions in Health and Sport through observation of professionals in the field.

Offered each semester

KIN 2181 Medical Terminology **One hour**

Directed self study in the use of the basic prefixes, suffixes and roots of medical terminology. The course assists the student in utilizing medical terms appropriately in both written and verbal forms.

Offered spring semester

KIN 2242 Drugs in Society **Two hours**

An introductory course focusing on the use and abuse of drugs on our society. Emphasis on strategies to assist future educators, practitioners, and youth leaders in recognition, intervention, and prevention of abuse.

Offered fall semester (even-numbered years)

KIN 2283 Injury Evaluation and Rehabilitation **Three hours**

A systematic study and laboratory application of athletic training injury evaluation principles, techniques, and rehabilitation for the spine, and upper and lower extremities.

Offered fall semester (odd-numbered years)

COURSE DESCRIPTIONS

KIN 3303 Nutrition for Fitness and Sport **Three hours**

A study of the nutritional considerations and implications for individuals active in physical fitness and sporting activities.

Offered spring semester (even-numbered years)

KIN 3333 Community Recreation **Three hours**

A practical study and application of the knowledge, understandings, and activities which are most applicable in community recreation programs.

Offered fall semester (even-numbered years)

KIN 3353 Theory and Techniques of Coaching **Three hours**

Exploration of philosophical, sociological, and psychological considerations of human performance in competitive athletics. Various theories and techniques of coaching are explored and practiced.

Offered fall semester (odd-numbered years)

KIN 3392 Personal Training Course **Two hours**

A practical study to prepare and qualify students to work as personal trainers. Class activities are designed to bridge the gap between kinesiology-related course work and the application of skills in personal training. Participants become eligible to test for a personal training certification provided by the National Council on Strength and Fitness Board for Certification. Prerequisite: junior standing or consent of instructor

Offered fall semester (odd-numbered years)

KIN 3483 Therapeutic Exercises and Modalities **Three hours**

A study in theory and application of therapeutic modalities and rehabilitation exercise/equipment prescribed for the treatment and management of athletic injuries.

Offered fall semester (even-numbered years)

KIN 4423 Biomechanics **Three hours**

A study of body movement and the analysis of those movements in terms of force, time, and dimension. The course includes selected anatomical and functional kinesiological content. Prerequisite: BIO 3514

Offered spring semester (even-numbered years)

KIN 4433 Exercise Physiology **Three hours**

A study of physiological responses and adaptations of the human body to physical activity. Prerequisite: BIO 3524

Offered spring semester (odd-numbered years)

KIN 4491-4496 Internship **One to six hours**

Practical experience working under a qualified professional in the area of sports medicine/athletic training, community health education, fitness, or sport management, in an approved setting. Prerequisite: permission of advisor

Offered each semester

LDR (Leadership)

LDR 1553 Introduction to Leadership Studies **Three hours**

An introductory study of historical and contemporary theories of leadership. Emphasis is on leadership as a social process involving the interaction of leaders and followers in different contexts. Required of students enrolled in the Leader Scholars Institute, and a threshold course in the Leadership Studies minor.

Offered each semester

LDR 2111, 2121 Current Topics in Student Development

Each course, one hour

Designed for and limited to those students currently in or planning to be in leadership positions on campus. Topics surrounding student leadership and the responsibilities that accompany leadership positions are discussed—including theory, elements, and practice of leadership. The purpose of this course is to increase the effectiveness of student leaders.

2111 Offered fall semester
2121 Offered spring semester

LDR 2551 Service Learning

One hour

A practical, self-directed independent study focused on giving students a better understanding of global issues and how to change these issues from information into action. Students research and present their chosen global issue in a variety of different methods throughout the semester.

Offered each semester

LDR 2553 Leadership Competencies

Three hours

Focused analysis of leadership skill sets necessary to ensure good individual and organization performance: providing direction, leading by example, enabling others, sharing power, and seeking a better way. Attitudes and mindsets of effective leaders are also examined. Aspiring leaders lay groundwork for success through the exploration of real-world examples, practical applications, and numerous leadership exercises.

Offered fall semester

LDR 2991, 2992, 2993 Students in Free Enterprise (S.I.F.E.)

One to three hours

Student-directed program established to promote economic education about the free enterprise system to other students and the community. Emphasizes experiential acquisition of leadership skills through self-directed projects and participation in national and international competitions. (Same as MGT 2991/92/93)

Offered each semester

LDR 3563 Organizational Behavior

Three hours

A competency-building course designed to study group theory, group research, and its application in a variety of fields. Using experiential learning methods, students analyze individuals and team processes in work situations, increasing understanding of the concepts of consensus building, small group life-cycles, leading teams, and group dysfunction.

Offered fall semester

LDR 3651, 3652, 3653 Leader Scholar Institute Practicum

One to three hours

Opportunities for experience in applied servant leadership. Students become involved in activities approved by the LSI practicum coordinator. The goal is to find projects which “give back” to communities that have supported the student earlier in life. Required of all LSI scholars.

Offered spring semester

LDR 4131, 4132, 4133 Selected Topics **One to three hours**

A course offering students opportunities to study subjects of special interest. May be offered on a group basis in a classroom setting or as independent study under faculty supervision. Prerequisite: junior standing and consent of instructor

Offered upon sufficient request

LDR 4193 Leadership Initiatives **Three hours**

A capstone study of emotional intelligence and how it impacts life leadership challenges. Students analyze specific leadership situations, glean insight into such topics as conflict resolution, the self disciplines, and research on the emotional impact of leadership. Prerequisite: senior standing or consent of instructor

Offered spring semester

LS (Language Studies)

LS 1113, 1123 Elementary Spanish I, II **Each course, three hours**

Basic skills of listening, reading, speaking, and writing the language, with special emphasis on verbal and aural comprehension. Much use of songs and clips from Spanish-language television and feature films. An overview of the diverse cultures of the Spanish-speaking world is given.

1113 offered fall semester

1123 offered spring semester

LS 1173, 1183, 1193 English as a Second Language I, II, III

Each course, three hours

The non-native English speaker who is judged not ready for EGL 1013 is required to take LS 1173, 1183, and/or 1193. Advancement through the sequence of ESL courses is determined by the student's score on the ESL component of the COMPASS test. If satisfactory proficiency has not been achieved, a student is required to repeat an ESL course one or more times without additional credit. In addition to regular class meetings, two 50-minute laboratory sessions are required each week.

1173 offered upon sufficient request

1183 offered fall semester

1193 offered each semester

LS 1213, 1223 Elementary French I, II **Each course, three hours**

A study of the basic skills of listening, reading, speaking, and writing the language. Students are taught practical skills such as ordering meals, checking into a hotel or youth hostel, and using public transportation. Frequent dictées are done in class and as homework. Pronunciation is drilled and students make recordings which are graded. There is some work on gestures and physical greetings. Textbook-specific videos are used. Some attention is given to Francophone countries besides France.

1213 offered fall semester

1223 offered spring semester

LS 1313, 1323 Elementary German I, II **Each course, three hours**

Basic skills of listening, reading, speaking, and writing the language, with special emphasis on verbal and aural comprehension. During the fall semester there is a short unit on the Reformation and German Advent and Christmas customs. The second course includes supplementary readings about German immigration to the U.S. Students who have German ancestry are encouraged to share family memorabilia and traditions with the class. German folksongs are taught each semester.

1313 offered fall semester (even-numbered years)
1323 offered spring semester (odd-numbered years)

LS 1413, 1423 Elementary Latin I, II **Each course, three hours**

A foundational study of Latin vocabulary and grammar for the purpose of developing reading skills. Texts range from Vulgate New Testament passages, traditional Latin hymns, and historical documents such as the Nicene Creed in the first course, to Caesar's *Gallic Wars*, St. Paul's epistles, and writings of recent authors such as C.S. Lewis in the second. The courses also feature English-to-Latin translation exercises. Prerequisite for 1423: LS 1413

1413 offered fall semester (odd-numbered years)
1423 offered spring semester (even-numbered years)

LS 1513, 1523 Selected Topics **Each course, three hours**

Introductory study of a language other than those regularly offered.

Offered upon sufficient request

LS 1593 Contemporary Latin America **Three hours**

An examination of the commonalities as well as the unique national experiences of each country in Latin America, addressing the social, political, historical, and economic factors. No knowledge of the Spanish language is required.

Offered upon sufficient request

LS 2113, 2123 Intermediate Spanish I, II **Each course, three hours**

Advancing study of the language skills of listening, reading, speaking, and writing. The first course entails a comprehensive grammar analysis; the second involves much cultural and literary reading and the writing of short compositions.

2113 offered fall semester
2123 offered spring semester

LS 2213, 2223 Intermediate French I, II **Each course, three hours**

Advancing study of the language skills of listening, reading, speaking, and writing. There is much use of French-language television clips, feature films, songs, and assorted pedagogical videos. A unit on France during WWII, with particular attention to the Holocaust, is included in 2223.

2213 offered fall semester (even-numbered years)
2223 offered spring semester (odd-numbered years)

LS 2513, 2523 Selected Topics: Intermediate Language I, II

Each course, three hours

Intermediate study of a language other than those regularly offered.

Offered upon sufficient request

LS 3113 Readings in Spanish I **Three hours**

Readings about contemporary Latin American culture, with emphasis on societal issues. Students use a variety of resources, including assigned texts, television, print media, the Internet, and others. Class presentations are required. This class is taught in Spanish. Prerequisite: LS 2123

Offered fall semester

LS 3123 Readings in Spanish II **Three hours**

A study of selected short stories, poetry, and essays by Latin American writers, such as Isabel Allende, Carlos Fuentes, and others. A final paper and a presentation are required. This class is taught in Spanish. Prerequisite: LS 3113 recommended

Offered spring semester

LS 3173 Introduction to Linguistics **Three hours**

Phonetics, syntax, semantics, language change (special attention to the history of English), language variety (taxonomy and dialects), the Bible and language, Christian approaches to the study of language, and translation theory. Besides a number of core readings and assignments, there are other items related to each student's major or minor. For example, Spanish majors and minors do work on Spanish phonetics and pronunciation, and TESOL minors have projects involving pitfalls for learners of English as a second language.

Offered fall semester (odd-numbered years)

LS 3213 Readings in French I **Three hours**

Readings about the culture of Francophone countries, with emphasis on societal issues in French-speaking Europe. A brief consideration of French history is included. Students use a variety of resources, including assigned texts, television, print media, the Internet, and others. Class presentations are required. This class is taught in French. Prerequisite: LS 2223

Offered upon sufficient request

LS 3223 Readings in French II **Three hours**

A study of selected short stories, poetry, and essays by Francophone writers. Most of the works were produced by 19th- and 20th-century authors and poets such as Charles Baudelaire, Alphonse Daudet, and others. A final paper and a presentation are required. This class is taught in French. Prerequisite: LS 3213 recommended

Offered upon sufficient request

LS 3513, 3523 Selected Topics: Advanced Language I, II

Each course, three hours

Advanced study of a language other than those regularly offered.

Offered upon sufficient request

LS 4143 Second Language Acquisition for Spanish Teachers

Three hours

Taught in Spanish, a foreign language pedagogy course designed for future middle and high school Spanish teachers. Some attention is given to problematic Spanish language issues such as orthography, the placing of accents, false cognates with English, pronunciation, and irregular verbs.

Offered upon sufficient request

LS 4163 Professional Spanish

Three hours

A practical study conducted in Spanish providing a solid foundation in the vocabulary and discourse patterns related to professional life, with emphasis on business practices. Course components include a review of problematic grammatical structures, some attention to dialectical variations between countries, and practice in written translation and mock commercial correspondence. An overview of the geography of the Spanish-speaking world is also presented. Prerequisites: LS 3113 & 3123

Offered upon sufficient request

LS 4193 Language Internship

Three hours

A minimum of 135 hours of contact time in a professional or ministry setting in the greater Siloam Springs area. Students keep a journal of their experiences, documenting specific vocabulary and grammatical forms they frequently used and a summary of their observations. Prerequisites: LS 3113 & 3123, and Semester in Spain

Offered upon sufficient request

LSS (Language Studies ~ Sevilla Program)

Offered in Spain through Trinity Christian College

LSS 3044 Spanish Short Story

Four hours

In-depth study of the Spanish language through a selection of writings by three contemporary Spanish storytellers: Miguel de Unamuno; Leopoldo Alas, "Clarín"; and Ignacio Aldecoa.

LSS 3064 History of Spanish Art

Four hours

Covers significant elements of Spanish art: Islamic, Romanesque, Gothic, Baroque, Modern and 20th Century. Includes paintings by Murillo, Velázquez, Picasso, and Dali. Videos, slides, and field trips supplement classroom instruction. An additional \$100 fee is associated with this course to cover field trip expenses.

LSS 3114 Spanish History and Civilization

Four hours

Synthesis of the political, socio-economic, and cultural history of Spain from prehistoric origins through Imperial Spain, including the 19th century.

LSS 3514 Advanced Spanish Grammar and Composition

Four hours

Grammatical structures and specific vocabulary, used in a series of composition and conversation themes.

LSS 3554 Spanish Literature I

Four hours

Introductory study of the history of Spanish literature. Reviews in theory and practice of the most representative passages of the key works of the Middle Ages, Renaissance, and Golden Age (the 11th through 17th centuries).

Offered fall semester

LSS 3564 Spanish Literature II

Four hours

Introductory study of the history of Spanish literature. Reviews in theory and practice of significant passages of the key works of the 18th, 19th, and 20th centuries.

Offered spring semester

LSS 4611, 4612, 4613, 4614 Selected Topics **One to four hours**

In-depth study of a topic of particular interest. Prerequisites: advanced standing, approval of the Department of Language Studies, and consent of on-site instructor
Offered upon sufficient request

ME (Mechanical Engineering)

ME 3113 Thermal Sciences **Three hours**

An introduction to the thermal sciences of mechanical engineering, providing an overview of thermodynamics, fluid dynamics and heat transfer. Three hours lecture-discussion per week. Prerequisites: MTH 1144 and PHY 2124

Offered fall semester

ME 3123 Dynamics **Three hours**

A vector analysis of the kinematics and kinetics of particles and rigid bodies. Work, energy, impulse and momentum. Modeling with differential equations. Solutions by analog and numerical techniques. Includes the design of an experiment and a machine. Three hours lecture-discussion per week. Prerequisites: MTH 2114 and ME 3313

Offered spring semester

ME 3223 Thermodynamics **Three hours**

A continuation from ME 3113 of the study of the laws of classical thermodynamics with a brief introduction to compressible flow. Energy conservation in closed and flowing systems. Application to power and refrigeration cycles. Three hours lecture-discussion per week. Prerequisites: ME 3113 and MTH 1144

Offered spring semester

ME 3313 Statics and Strength of Materials **Three hours**

A design sequence from applied loads to selection of optimum material, shape, and size for the elements in structures or machines. Forces are resolved in static equilibrium, then elastic or plastic stress analysis is used to assure adequate strength and deflection. Three hours lecture-discussion per week. Prerequisites: EN 1222 and MTH 2123

Offered fall semester

ME 3501, 3502, 3503 Selected Topics **One to three hours**

A study of a special area of mechanical engineering such as fluid induced vibrations, fluidics, rotating machinery, thermal energy converters, viscoelastic materials or quality control. Prerequisite: consent of department head

Offered upon sufficient request

ME 4103 Advanced Strength of Material **Three hours**

Multidimensional considerations of stress and strain through constitutive models. Study of curved beams, pressure vessels, and machine components subjected to cyclic and thermal loading. Consideration of failure modes including plastic deformation analysis, rupture and fatigue. Three hours lecture-discussion per week. Prerequisite: ME 3114 or ME 3313

Offered upon sufficient request

ME 4113 Machine Design **Three hours**

Practical application of kinematics, materials mechanics and mechanical processes to the design of machines and machine elements. Static and dynamic load analysis, stress analysis, material selection and failure analysis. Three hours discussion-design per week. Prerequisite: ME 3123

Offered fall semester

ME 4203 Mechanical Vibrations **Three hours**

A study of the oscillatory motions of bodies and the forces associated with them. Includes the study of undamped and damped, free and forced vibrations, vibration of continuous systems and random vibrations. Three hours lecture-discussion per week. Prerequisite: MTH 2114

Offered upon sufficient request

ME 4213 Heat Transfer **Three hours**

A study of energy movement due to temperature differences via the mechanisms of conduction, convection, and radiation. Includes a class design project. Three hours lecture-discussion per week. Prerequisites: MTH 2114 and ME 3113

Offered fall semester (starting Fall 2008)

ME 4223 Heat Transfer **Three hours**

A study of energy movement due to temperature differences via the mechanisms of conduction, convection, and radiation. Includes a class design project. Three hours lecture-discussion per week. Prerequisite: ME 3113 and MTH 2114

Offered spring semester (through Spring 2008)

ME 4303 Finite Element Analysis **Three hours**

Finite element methods covering fundamental concepts and computer implementation. Topics include solutions of boundary value problems in fluid and solid mechanics with thermal effects and applications to engineering design. Three hours lecture-discussion per week. Prerequisite: MTH 2114

Offered upon sufficient request

ME 4323 Fluid Mechanics **Three hours**

A study of the conservation of mass, momentum and energy in relation to laminar and turbulent fluid flow. Viscous effects and application to steady and unsteady flow, incompressible and compressible fluids. Includes an individual design project. Two hours lecture-discussion and one two-hour laboratory period per week. Prerequisites or corequisites: MTH 2114 and PHY 2124

Offered spring semester

ME 4403 Compressible Flow **Three hours**

One-dimensional compressible flow of perfect gases. Includes Mach waves, normal and oblique shocks, Prandtl-Meyer expansion waves, isentropic flow in variable area ducts, and flows in constant area ducts with friction or heat transfer. Three hours lecture-discussion per week. Prerequisite: ME 3113

Offered upon sufficient request

ME 4503 Viscous Flow **Three hours**

Study is pursued for special instances of Navier Stokes solutions, vorticity accounting, creeping, laminar, unstable and turbulent flows. A case study in design is used to compare true viscous behavior with simplified "design" equations. Three hours lecture-discussion per week. Prerequisite: EN 3224 or EN 3313

Offered upon sufficient request

ME 4603 Advanced Thermodynamics **Three hours**

An extension to the thermodynamics taught in ME 3113 and ME 3223 to the realms of analytic, non-equilibrium and statistical thermodynamics. Three hours lecture-discussion per week. Prerequisite: ME 3213 or ME 3223

Offered upon sufficient request

ME 4703 Aerospace Propulsion **Three hours**

A study of aerospace propulsion devices, including jet engines and rockets. Application of compressible flow, thermodynamics, and fluid mechanics to propulsion systems. Includes analysis of engine components. Three hours lecture-discussion per week. Corequisite: ME 3213 or 3223

Offered upon sufficient request

MGT (Management)

MGT 2173 Principles of Management **Three hours**

An examination of basic principles of leadership and management from historical and contemporary perspectives. Topics include a discussion of the theories, concepts, interrelationships, moral dimensions, character, functions and skills required to lead and manage today's organizations.

Offered spring semester

MGT 2183 International Management **Three hours**

Study of the management process from the perspective of an international organization. (Same as INT 2183)

Offered fall semester

MGT 2991, 2992, 2993 Students in Free Enterprise (S.I.F.E.)

One to three hours

Student-directed program established to promote economic education about the free enterprise system to other students and the community. Emphasizes experiential acquisition of leadership skills through self-directed projects and participation in national and international competitions. (Same as LDR 2991/92/93)

Offered each semester

MGT 3323 Management in Health and Sport **Three hours**

Principles of organization and implementation of policies and procedures relating to the management of sports medicine/athletic training programs, health and physical education programs, community fitness and wellness programs, and camp/recreation programs. Principles, policies, and procedures are applied to personnel and facility management. Prerequisite: junior standing

Offered spring semester (odd-numbered years)

MGT 3343 Sport Facility Management **Three hours**

A study of indoor and outdoor facilities utilized in sport and recreation. Planning, design, equipping, scheduling, programming, care and maintenance, and financial considerations are discussed.

Offered spring semester (even-numbered years)

MGT 3513 Human Resource Management **Three hours**

Introduction to human resource management principles, processes, and systems, including analysis of such elements as organizational assessment and human resource planning, recruitment and selection, compensation and benefits administration, training and development, employee relations, human resource management information systems, and employment laws.

Offered spring semester (odd-numbered years)

MKT (Marketing)

MKT 2143 Principles of Marketing **Three hours**

Study of the marketing process of identifying a need and selecting target markets; developing a product to satisfy the need; and distributing, promoting, and pricing the product. Prerequisite: ECN 2113 (or 2003)

Offered spring semester

MKT 3133 Retailing **Three hours**

Exposure to the many facets of retailing with a focus on contemporary concepts. Topics include marketing structures, environmental analysis, financial strategies, merchandising, pricing, promotion, distribution, personnel issues, electronic retailing business models, and effective e-commerce retailing strategies.

Offered fall semester (odd-numbered years)

MKT 3153 International Marketing **Three hours**

Study of the marketing process from a global perspective with emphasis on developing, promoting, and pricing products in emerging markets. (Same as INT 3153) Prerequisite: ECN 2113 (or 2003)

Offered spring semester

MKT 3163 Consumer Behavior **Three hours**

A study of the buying patterns, decision-making, motivation, and behavior of the consumer. Students analyze the psychological, social, and economic influences on consumption.

Offered fall semester (even-numbered years)

MKT 4113 International Marketing Research **Three hours**

Applied study of marketing research using projects supplied by multinational firms. Includes role and methods of marketing research as a means to enhance the marketing strategies and decisions of the modern business organization. Theory and application of such topics as problem identification, research design, survey development, data analysis, and report presentations are covered. Client interaction is emphasized. (Same as INT 4113) Prerequisites: BUS 2193 and INT 3153

Offered fall semester

MKT 4131, 4132, 4133 Selected Topics **One to three hours**

A course offering students opportunities to study subjects of special interest. May be offered on a group basis in a classroom setting or as independent study under faculty supervision. Prerequisite: junior standing and consent of instructor

Offered upon sufficient request

MKT 4173 Marketing Strategies **Three hours**

A capstone marketing course designed to integrate the student's knowledge of marketing through case analysis and practical application of marketing tools. Students design a marketing strategy for a community organization or business enterprise. Prerequisite: MKT 4113

Offered spring semester (odd-numbered years)

MSC (Military Science ~ Army ROTC)**MSC 1111, 1121 Military Skills and Leadership (MS I)****Each course, one hour**

Incorporates the Army ROTC courses involving both classroom and outdoor instruction. Teaches basic rappelling and mountaineering, care, maintenance, and firing of weapons; and the fundamentals of land navigation and survival operations in a field environment. The MS I cadet also receives instruction in leadership, organization, and role of the Army and reserve forces, branches of the Army, and the Army physical fitness program. These classes consist of one hour lecture-discussion and one hour laboratory per week. Open to freshman and sophomore level students only.

1111 offered fall semester
1121 offered spring semester

MSC 2112, 2122 Leadership Development I, II (MS II)**Each course, two hours**

A continuation of basic ROTC courses. During MS II, cadets are taught basic military subjects such as land navigation, first aid, marksmanship, role of NCO's, military correspondence, and drill and ceremonies. Cadets also spend time on leadership, Soviet military power, principles of war, and national defense policy. Two hours lecture-discussion and one hour leadership laboratory per week. Prerequisite: Completion of MS I or equivalent, as determined by the Professor of Military Science.

2112 offered fall semester
2122 offered spring semester

MSC 3114, 3124 Applied Leadership I, II (MS III)**Each course, four hours**

Development of managerial and leadership abilities, maximizing performance-oriented "hands-on" training. Student-led drill, physical training, and methods of instruction. Training intended to orient the students toward the ROTC Advanced Camp experienced normally in the summer prior to the senior year or fourth year of ROTC. Three hours lecture-discussion and three hours leadership laboratory (drill) per week. Prerequisite: Completion of MS I and II, veteran status, Simultaneous Membership Program (SMP) participant, or equivalent, as determined by the Professor of Military Science.

3114 offered fall semester
3124 offered spring semester

MSC 4114, 4124 Advanced Leadership I, II (MS IV)**Each course, four hours**

The study of various military organizations and their role in military operations. Discussion of command and staff management in military organizations, executive responsibility of Army commissioned officers, service customs, courtesies and traditions. The study of personnel management, the military justice system, training, and maintenance management. Three hours lecture-discussion and three hours leadership and planning laboratory per week. Prerequisite: Successful completion of MS III course work

4114 offered fall semester
4124 offered spring semester

MTH (Mathematics)**MTH 0153 Intermediate Algebra****Three hours**

A course designed for students who need to improve their mathematical understanding and skills prior to taking Core Curriculum or major field math courses. This course covers the fundamentals of algebra, including simplification of algebraic expressions, solving equations, and graphing techniques. Although the course grade is included in the student's cumulative grade point average, Intermediate Algebra does not satisfy any college math requirements; credit does not apply toward minimum hours required for graduation.

Offered fall semester

MTH 1003 Quantitative Literacy**Three hours**

A course to give students tools to be critical readers of current issues involving quantitative data and to understand the concepts of statistics, the science of gaining information from numeric data. Applications of the use of data from a wide variety of professions, public policy, and everyday life are made. The study focuses on methods of producing data, organizing data, and drawing conclusions from data. Topics may include sampling; experiments and experimental design; measurement, validity, and accuracy; describing distributions; understanding relationships and correlation; consumer price index; confidence intervals; and statistical significance. Prerequisite: ACT Math Score of at least 19 or equivalent, or MTH 0153

Offered each semester

MTH 1113 College Algebra**Three hours**

Topics include solving equations and systems of equations, functions and graphing, complex numbers, inequalities, logarithms, exponentials, sequences, series, mathematical induction, and the binomial theorem. Prerequisite: ACT Math Score of at least 19 or equivalent, or MTH 0153

Offered each semester

MTH 1122 Trigonometry**Two hours**

Foundations and applications, including the trigonometric functions and their graphs, proving identities, analytic trigonometry, solution of triangles, polar coordinates, two-dimensional vectors, dot products, and DeMoivre's Theorem for powers and roots of complex numbers. Prerequisite or corequisite: MTH 1113

Offered spring semester

MTH 1123 Survey of Calculus**Three hours**

An introduction to the concepts of differentiation and integration. An emphasis is placed on applied problems in physical, life, and social sciences. A student may not earn credit in both MTH 1123 and 1134. Prerequisites: ACT Math Score of at least 24 or equivalent, or MTH 1113 and 1122

Offered spring semester

MTH 1134 Calculus I**Four hours**

A study of the foundational principles of calculus with an emphasis on derivatives of functions of one variable and an introduction to integrals. A strong emphasis is placed on application to problems in science and engineering. Prerequisites: four years of high school mathematics and an ACT Math score of 24 or equivalent, or MTH 1113 & 1122

Offered fall semester

MTH 1144 Calculus II **Four hours**

A continuation of the study of fundamental calculus concepts, with special emphasis on integration and the use of infinite series. Applications to problems in physics, probability theory, and engineering are emphasized. Prerequisite: MTH 1134

Offered spring semester

MTH 2103 Statistics with Computer Applications **Three hours**

A study of statistical methods including frequency distributions, descriptive statistics, probability distributions, hypothesis testing—one sample and two sample z - and t -tests, analysis of variance—one-way between-groups, one-way repeated measures, two-way between-groups, correlation, and regression. Use of personal computer application programs for collecting, storing, analyzing, and presenting data in textual and graphical forms are emphasized, as well as the use of a high end word processor, spreadsheet, database, graphics, statistical, and desktop publishing program for producing high quality reports and presentations. Also includes use of on-line databases and networks for data gathering. Prerequisites: computer literacy, and MTH 1113 or equivalent

Offered spring semester

MTH 2114 Linear Algebra and Differential Equations **Four hours**

A continuation of the study of differential equations as begun in Calculus II with special emphasis on applications to problems in physics and engineering. The course also includes an introduction to linear algebra as this subject forms the basis for the study of higher dimensional systems of differential equations. In preparation for MTH 2123, the course ends with an introduction to vectors in two and three-dimensional space. Prerequisite: MTH 1144

Offered fall semester

MTH 2123 Vector Calculus **Three hours**

An introduction to the study and application of multivariable and vector calculus. Prerequisite: MTH 2114

Offered spring semester

MTH 2143, 2183 Mathematical Structures I, II **Each course, three hours**

A presentation of mathematics in a format that prepares teachers of elementary school mathematics. Topics include problem-solving, sets and logic, functions, the mathematical meaning and background of arithmetic through real numbers, number theory, probability and statistics, introductory geometry, geometric constructions, congruence, similarity, measurement, and coordinate geometry. Prerequisite for 2143: ACT Math Score of at least 19 or equivalent, or Passing Score (State Level) on Praxis I—Math, or MTH 0153 with grade of ‘C’ or better. Prerequisite for 2183: MTH 2143

2143 offered fall semester

2183 offered spring semester

MTH 3103 Foundations of Mathematics **Three hours**

Introductory predicate logic, set theory, and methods of mathematical proof. The general techniques learned are applied to topics from discrete mathematics, cardinality, metric spaces, algebraic structure, and field properties of real numbers. Prerequisite: MTH 1144

Offered fall semester

MTH 3113, 4113 Selected Topics **Three hours**

Topics are chosen from various branches of mathematics such as set theory, number theory, complex variables, history of mathematics, combinatorics, and topology. May be repeated for credit when a different topic is studied. Prerequisite: consent of instructor

Offered upon sufficient request

MTH 3143 Topics in Mathematics Education **Three hours**

An introduction to the philosophy and practice of teaching mathematics. Discussion and analysis of current trends and an introduction to the literature. Prerequisite: MTH 1134, or MTH 1123 and 2183

Offered fall semester (even-numbered years)

MTH 3153 Foundations of Geometry **Three hours**

An introduction to the theory of Euclidian, neutral, Lobachevskian, Riemannian, incidence, and affine geometrics, together with linear, planar and spatial order properties. Designed primarily for prospective secondary teachers of mathematics. Prerequisite: MTH 1134, or MTH 1123 and 2183

Offered fall semester (odd-numbered years)

MTH 3173 Mathematical Modeling and Simulation **Three hours**

A study of the building of mathematical models and computer simulations to describe selected topics from physical, biological, and social sciences. Prerequisites: MTH 2123 and CS 1113

Offered upon sufficient request

MTH 3183 Probability and Statistics **Three hours**

An introduction to the theory of probability and statistical inference including discrete and statistical inference, discrete and continuous random variables, sampling distributions, the Central Limit Theories, estimation, and hypothesis testing. Prerequisite: MTH 1144

Offered spring semester

MTH 4101 Readings **One hour**

A directed experience in reading in the mathematical literature. Prerequisite: MTH 1144

Offered each semester

MTH 4123 Abstract Algebra **Three hours**

An introduction to modern algebra and algebraic structures such as groups, rings, integral domains, and fields. Prerequisites: MTH 2114 and MTH 3103

Offered spring semester (even-numbered years)

MTH 4143 Real Analysis **Three hours**

A systematic study of topics in mathematical analysis such as the real number system, sequences, limits, continuity, differentiation, and integration. Prerequisites: MTH 2123 and MTH 3103

Offered spring semester (odd-numbered years)

MUS (Music)**MUS 0103 Elements of Music Theory** **Three hours**

Rudiments of music including meter, intervals, scales, key signatures, triads, and seventh chords. Includes fundamental aural skills and an introduction to notation and sequencing software used in subsequent music theory coursework. Credit does not count toward graduation hours or toward music major or minor field. May be waived by examination.

Offered fall semester

MUS 0971 Applied Organ **One hour**

One 1/2-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. For music majors and minors who do not meet requirements for the applied study in the major area. Credits do not count toward applied requirements or toward graduation hours. May be repeated each semester.

Offered each semester

MUS 0980, 1980, 3980 Masterclass in Voice **No credit**

Required of all students taking applied voice. A weekly performance class in which students have the opportunity to perform for their peers and receive constructive remarks regarding technique, interpretation, and general performance procedures. Specific topics are addressed at the discretion of the instructors.

Offered each semester

MUS 0981 Applied Voice **One hour**

One 1/2-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. For music majors and minors who do not meet requirements for applied voice credit. Credits do not count toward applied voice requirements or graduation hours. May be repeated each semester. Prerequisite: consent of instructor

Offered each semester

MUS 0990, 1990, 3990 Masterclass in Piano **No credit**

Required of all students taking applied piano. A weekly performance class in which students have the opportunity to perform for their peers and receive constructive remarks regarding technique, interpretation, and general performance procedures. Specific topics are addressed at the discretion of the instructors.

Offered each semester

MUS 0991 Applied Piano **One hour**

One 1/2-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. For music majors and minors who do not meet requirements for applied piano credit. Credits do not count toward applied piano requirements or toward graduation hours. May be repeated each semester. Prerequisite: consent of instructor

Offered each semester

MUS 1111 Musicianship I **One hour**

A course developing the aural skills of singing at sight and taking dictation. Musical materials representative of diatonic harmony of the common practice period. Two hours of laboratory per week. Prerequisite: MUS 0103 (or waiver) Corequisite: MUS 1113

Offered spring semester

MUS 1113 Theory I **Three hours**

A study of diatonic harmony of the common practice period with emphasis on analytical and part-writing skills. Pre-requisite: MUS 0103 (or waiver). Corequisite: MUS 1111

Offered spring semester

MUS 1203 Liberal Arts Foundations for the Musician **Three hours**

An introduction to the music curriculum for all music majors and minors. Consideration of philosophical issues fundamental to the arts. Historical survey of music literature of the Western world, with emphasis on style, form, appreciation, and application of perception skills. (Same as COM 1203) Prerequisite or corequisite: EGL 1013

Offered spring semester

MUS 1731, 3731 Music Theatre Scenes **Each course, one hour**

Introduction to the art of stage craft through the medium of musical theatre, operetta, and opera. Stage movement and characterization skills are developed through performance in selected scenes. May be repeated for additional credit. A not-for-credit enrollment option is available.

Offered each year

MUS 1732, 3732 Music Theatre Production **Each course, two hours**

Introduction to the art of stage craft through the medium of musical theatre, operetta, and opera. Stage movement and characterization skills are developed through performance in a fully staged production. May be repeated for additional credit. A not-for-credit enrollment option is available.

Offered each year

MUS 1781, 3781 Applied Accompanying **One hour**

One half-hour private lesson per week devoted primarily to vocal literature currently being accompanied. Student required to accompany three vocalists (or an equivalent ensemble), attending their voice lessons every other week and rehearsing with each student 30 minutes per week. Vocalists attend the applied accompanying lesson at least twice during the semester to work on ensemble issues. Minimum amount of daily practice to be determined by instructor. Prerequisite: consent of instructor

Offered each semester

MUS 1791 Applied Guitar **One hour**

One 1/2-hour private lesson per week. Student must supply guitar for practice and lessons. Minimum amount of daily practice to be determined by instructor. Prerequisite: consent of instructor

Offered upon sufficient request

MUS 1831, 3831 Women's University Chorus **One hour**

The ensemble performs a variety of styles from the standard collegiate and sacred choral literature. The group performs primarily for on-campus functions. Audition required. A not-for-credit enrollment option is available.

Offered each semester

1831 may be repeated each semester of lower division study

3831 may be repeated each semester of upper division study

MUS 1841, 3841 Instrumental Ensemble **One hour**

The ensemble performs a variety of styles from the standard instrumental ensemble literature. The group performs at least once per semester. Two hours of rehearsal each week in addition to performances. Audition required. A not-for-credit enrollment option is available.

Offered each semester

1841 may be repeated each semester of lower division study

3841 may be repeated each semester of upper division study

MUS 1851, 3851 Music Ministries Ensemble **One hour**

The focus of this ensemble is on the musical portion of the worship service and various ways in which music may be structured to complement the stylistic preferences of different denominational settings and worship styles. The group gains experience by performing music for area churches, chapel services, schools, and civic organizations. Includes vocalists and instrumentalists. Two hours of rehearsal required each week plus additional rehearsals for performances. Audition required. A not-for-credit enrollment option is available.

Offered each semester

MUS 1861 Jazz/Pop Ensemble **One hour**

An ensemble designed to give woodwind, brass, and percussion instrumentalists performance opportunities in the genres of jazz and pop music. The group performs at home ball games and other venues. Two hours of rehearsal each week in addition to performances. Audition required. A not-for-credit enrollment option is available.

Offered each semester

MUS 1891 Applied Instrument **One hour**

One 1/2-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. Available for instrumental music minors.

Offered upon sufficient request

MUS 1892 Applied Instrument **Two hours**

One 1-hour or two 1/2-hour private lessons per week. Minimum amount of daily practice to be determined by instructor. Available for instrumental music minors.

Offered upon sufficient request

MUS 1901 Basic Guitar Techniques **One hour**

Class instruction focused on guitar playing styles and techniques applicable to church settings. Primary emphasis is given to playing rhythm guitar; some lead guitar techniques are addressed.

Offered upon sufficient request

MUS 1911 Lyric Diction I **One hour**

Foreign language pronunciation for singers through application of the International Phonetic Alphabet. Two fifty-minute sessions per week.

Offered spring semester (odd-numbered years)

MUS 1921 Lyric Diction II **One hour**

Continuation of pronunciation study with emphasis on German and French. Two fifty-minute sessions per week. Prerequisite: MUS 1911

Offered fall semester (odd-numbered years)

MUS 1931, 1941 Class Piano I, II **One hour**

Basic keyboard techniques and application of music fundamentals to the keyboard, including major and minor scales, modes, chord progressions, arpeggios, harmonization, improvisation, accompaniments, transposition, solo and ensemble repertoire. Three hours of class each week and 1/2 hour of practice daily. Prerequisite: ability to read music notation

1931 Offered fall semester
1941 Offered spring semester

MUS 1951, 1961 Class Lessons in Voice **One hour**

Group instruction with emphasis on foundational vocal techniques, practice skills, and beginning song literature. Two hours of class weekly and 1/2 hour of practice daily.

1951 Offered fall semester
1961 Offered spring semester

MUS 1971, 3971 Applied Organ **One hour**

One 1/2-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. Prerequisite: see requirements to enter each level of work in organ as listed on pages 111 and 114.

Offered each semester
1971 may be repeated each semester of lower division study
3971 may be repeated each semester of upper division study

MUS 1972, 3972 Applied Organ **Two hours**

One 1-hour or two 1/2-hour private lessons per week. Minimum amount of daily practice to be determined by instructor. Prerequisite: see requirements to enter each level of work in organ as listed on pages 111 and 114.

Offered each semester
1972 may be repeated for each semester of lower division study
3972 may be repeated for each semester of upper division study

MUS 1981, 3981 Applied Voice **One hour**

One 1/2-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. Prerequisite: see requirements to enter each level of work in voice major as listed on pages 111 and 113, and consent of instructor

Offered each semester
1981 may be repeated for each semester of lower division study
3981 may be repeated for each semester of upper division study

MUS 1982, 3982 Applied Voice **Two hours**

One 1-hour or two 1/2-hour private lessons per week. Minimum amount of daily practice to be determined by instructor. Prerequisite: see requirements to enter each level of work in voice major listed on pages 111 and 113, and consent of instructor.

Offered each semester
1982 may be repeated for each semester of lower division study
3982 may be repeated for each semester of upper division study

MUS 1991, 3991 Applied Piano **One hour**

One 1/2-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. Prerequisite: see requirements to enter each level of work in piano major as listed on pages 111 and 114, and consent of instructor

Offered each semester
1991 may be repeated for each semester of lower division study
3991 may be repeated for each semester of upper division study

MUS 1992, 3992 Applied Piano **Two hours**

One 1-hour or two 1/2-hour private lessons per week. Minimum amount of daily practice to be determined by instructor. Prerequisite: see requirements to enter each level of work in piano major as listed on pages 111 and 114, and consent of instructor

Offered each semester

1992 may be repeated for each semester of lower division study

3992 may be repeated for each semester of upper division study

MUS 2003 The Arts in Western Culture **Three hours**

An introduction to music and the visual art forms. Consideration is given to philosophical issues fundamental to the arts. Selected masterworks of instrumental and/or vocal music, architecture, painting, and sculpture are studied, with emphasis on style, form, and application of perception skills.

Offered fall and spring (even-numbered years)

MUS 2111 Musicianship II **One hour**

A course developing the aural skills of singing at sight and taking dictation. Musical materials representative of diatonic and chromatic harmony of the common practice period. Two hours of laboratory per week. Prerequisite: MUS 1111

Offered fall semester

MUS 2113 Theory II **Three hours**

A study of chromatic harmony of the common practice period, with emphasis on analytical and part-writing skills. Prerequisite: MUS 1113

Offered fall semester

MUS 2121 Musicianship III **One hour**

A course developing the aural skills of singing at sight and taking dictation. Musical materials representative of chromatic harmony of the common practice period and selected modern styles. Two hours of laboratory per week. Prerequisite: MUS 2111

Offered spring semester

MUS 2123 Theory III **Three hours**

A study of the practices of modern composers (beginning with Debussy), with emphasis on analytical skills and creative writing in selected styles. Prerequisite: MUS 2113

Offered spring semester

MUS 2151 Functional Keyboard Skills I **One hour**

Acquisition of keyboard skills beyond note-reading, such as playing from chord charts, harmonization in various styles, transposition, and improvisation. Prerequisite: MUS 2113 or consent of instructor

Offered upon sufficient request

MUS 2161 Functional Keyboard Skills II **One hour**

A continuation of skills in reading chord charts, harmonization in various styles, transposition, improvisation, and open-score reading. Prerequisite: MUS 2151 or consent of instructor

Offered upon sufficient request

MUS 2232 Contemporary Worship Music in Theory and Practice

Two hours

An integrated study of music theory with an emphasis on emerging pop symbols and popular and jazz harmonies used in current worship music. The creation of worship charts, lead sheets, chord substitution, simplified hymn harmonizations, segues, intros, outros, turnarounds, and arranging are studied in detail. Prerequisites: MUS 2111, 2113

Offered spring semester (odd-numbered years)

MUS 2503 Worship Ministry I: Orientation

Three hours

An overview of church worship ministry with emphasis on leading worship services in class, and observing church worship services and rehearsals in the local area. Students learn the dynamics of healthy church ministry and the role worship plays in the overall mission of a church. Students learn to design a basic worship service, then how to evaluate and critique in order to improve one's leading skills. Guided field observation required. Prerequisites: MUS 1111, 1113

Offered fall semester

MUS 2513 Worship Ministry II: Materials and Methods

Three hours

An advancing study of church worship ministry resources, with emphasis on specific denominational liturgy, visual arts in worship, and working effectively with church staff, other musicians, and congregation members. Guided field observation required. Prerequisites: MUS 1113 & 2503

Offered spring semester

MUS 2601 Accompanying Class

One hour

Various aspects of accompanying including how to analyze and rehearse music, how to maintain ensemble balance, and the working out of performance details involved with collaborative musical artistry. Repertoire presented is from standard vocal, choral, instrumental, and church music. Students gain experience and practice accompanying other students during the semester.

Offered upon sufficient request

MUS 2901 Guitar in Worship

One hour

Application of guitar skills to the worship setting. Prerequisite: MUS 1901 or waiver

Offered upon sufficient request

MUS 2931, 2941 Class Piano III, IV

One hour

Continuation of keyboard techniques including major and minor scales, modes, chord progressions and inversions, arpeggios, harmonization, improvisation, vocal and instrumental accompaniments, vocal and instrumental score reading (including transposing instruments), solo and ensemble repertoire. Three hours of class each week and 1/2 hour of practice daily. Prerequisite for 2931: MUS 1941. Prerequisite for 2941: MUS 2931

2931 Offered fall semester

2941 Offered spring semester

MUS 3101 Survey of Instruments

One hour

A survey of wind, string, and percussion instruments. Functional knowledge with a "hands-on" approach. Includes arranging projects utilizing *Finale* software. Two hours of laboratory per week. Prerequisites: MUS 1111, 1113

Offered fall semester (odd-numbered years)

COURSE DESCRIPTIONS

MUS 3113 Harmonic Form and Analysis **Three hours**

A study of the structure of the standard homophonic forms through analysis of 18th, 19th, and 20th century literature. Prerequisites or corequisites: MUS 1203, 2123
Offered fall semester (odd-numbered years)

MUS 3123 Counterpoint **Three hours**

Exercises in analysis and writing of two- and three-part counterpoint in 18th century style. Prerequisites: MUS 3113 and consent of instructor
Offered upon sufficient request

MUS 3201 Introduction to World Music **One hour**

Overview of music of various world cultures studied in relation to religion; includes jazz, folk, and pop influences.
Offered upon sufficient request

MUS 3203 Music Appreciation **Three hours**

An introduction to music, through the study of selected masterworks of concert and stage genres representative of a variety of historical periods. Emphases on style and form, understanding and appreciation, and application to other examples of the perception skills developed through the study of the selected works. Prerequisites: EGL 1023 and HST 1013 & 1023

Offered spring semester

MUS 3213, 3223 History of Music I, II **Three hours**

The first semester surveys the historical development of music from the pre-Christian era to 1750. The second covers music from 1750 to the present. Prerequisite: MUS 1203

3213 Offered fall semester (even-numbered years)

3223 Offered spring semester (odd-numbered years)

MUS 3301 Choral Techniques **One hour**

A study of rehearsal techniques, including auditions, choral diction and tone, stylistic analysis, as well as score study, programming of repertoire, and organization and management. Prerequisites: MUS 2123 or consent of instructor

Offered fall semester (even-numbered years)

MUS 3313 Public School Music Methods, P-8 **Three hours**

Methods and materials of teaching music in elementary/middle schools, including the development of lesson plans, classroom observations, and role-playing a music teaching situation. Field experiences are required. For music majors only. Prerequisites: MUS 2111, 2113, Gate 1

Offered spring semester (odd-numbered years)

MUS 3323 Children's Music Ministry Methods **Three hours**

Study of current and traditional philosophies, methods, and materials for use with preschool through sixth-grade church choirs. Prerequisites: MUS 1111, 1113

Offered spring semester (odd-numbered years)

MUS 3411 Conducting I **One hour**

Basic conducting patterns and techniques; score-reading, both choral and instrumental; study and preparation of graded choral music. Class meets two days per week. Prerequisites: MUS 1113 and 1111, or consent of instructor.

Offered fall semester (odd-numbered years)

MUS 3421 Conducting II

One hour

Advanced conducting techniques, score preparation, and interpretation. Emphasis on conducting assigned selections, the study of advanced choral works, and stylistic interpretation. Class meets two days per week. Prerequisite: MUS 3411 or consent of instructor

Offered spring semester (even-numbered years)

MUS 3563 Audio Technology I

Three hours

Introduction to multi-track recording, recording studios, and the technology involved in mixing and processing sound. Related subjects in setting up sound reinforcement systems, proper selection of microphones and establishing the proper mix and sound quality. Also includes subjects such as acoustics, surround sound installation and set-up, digital audio workstations, and copyright law. An additional fee is associated with this course.

Offered fall semester

MUS 3601 Practicum in Accompanying

One hour

Student accompanies voice students at their lessons and rehearsals, musical theatre workshop rehearsals, or other accompaniment opportunities with the permission of the instructor. Prerequisite: MUS 1781

Offered each semester

MUS 3611 Music Practicum: Church Organist

One hour

Student assumes the position of organist for a local church in the region and prepares and presents all organ music needed for the worship services of the church, which may include hymns, service music, choral anthem accompaniments, and solo voluntaries (prelude, offertory, communion music, postlude). Prerequisite: consent of instructor

Offered each semester

MUS 3621 Music Practicum: Student Conductor

One hour

Selected specifically by the conductor of the Cathedral choir, a student is given opportunity to serve in various capacities, such as section leader, choral librarian, rehearsal conductor, and assistant conductor in performances. Assigned duties are tailored to offer practical experience in all aspects of choral and/or instrumental performance. Prerequisite: MUS 3421 and consent of instructor

Offered each semester

MUS 3661 Music Practicum: Technology

One hour

Student serves as sound technician in a church, JBU chapel, recording studio, audio post-production facility, radio station, etc. Prerequisite: MUS 3563 or consent of instructor

Offered each semester

MUS 3801 Cathedral Choir

One hour

The Cathedral Choir, open to students from all fields of study, performs standard collegiate choral literature of the various style periods. It is featured in the annual Christmas Candlelight Service and takes an annual tour during Spring Break. Admission by audition. May be repeated each semester. A not-for-credit enrollment option is available.

Offered each semester

MUS 3900 Junior Recital **No credit**

Presentation of a recital during the junior year. Must be enrolled in applied lessons in the area of performance during the semester of the recital. The student writes program notes that must be prepared in advance of the recital hearing and be approved by the faculty committee for distribution at the recital. Hearing must be held at least two weeks before the scheduled performance.

Offered each semester

MUS 3951 Contemporary Vocal Techniques **One hour**

A forum addressing elements of technique and pedagogy using current worship repertoire. Class activities provide instruction in improvisation, stylistic interpretation, harmonizing, and stage presence, and opportunities to perform and receive feedback from instructor and students. Prerequisite: establishment of Upper-Division Applied Proficiency in Voice

Offered fall semester (odd-numbered years)

MUS 4103 Music Arranging with MIDI **Three hours**

Projects in transcription (adapting music composed for one musical medium to a different medium), music arrangements (free treatment of pre-existing material), and composition utilizing MIDI keyboards and sequencing software. Special emphasis on creative writing in a variety of styles. An additional fee is associated with this course. Prerequisite: consent of instructor

Offered spring semester (even-numbered years)

MUS 4191, 4192, 4193 Selected Topics **One to three hours**

Study of a topic such as Twentieth Century Styles or Composition. A one-hour private lesson fee is charged per credit hour.

Offering dependent upon student interest and faculty availability

MUS 4261 Piano Pedagogy **One hour**

An overview of pedagogical trends, historical practices, methods, and contemporary issues in piano teaching. Prerequisite: consent of instructor

Offered upon sufficient request

MUS 4262 Piano Literature **Two hours**

A chronological survey of keyboard and piano literature from the 18th century to the present. Prerequisite: consent of instructor

Offered upon sufficient request

MUS 4273 Organ Literature and Pedagogy **Three hours**

A brief chronological survey of literature for the organ from the Renaissance to the present. Basic pedagogical source materials are included. Prerequisite: consent of instructor.

Offered upon sufficient request

MUS 4281 Vocal Literature **One hour**

A survey of vocal song literature, and analysis and comparison of styles of representative works. Prerequisite or corequisite: MUS 3223 or consent of instructor

Offered spring semester (even-numbered years)

MUS 4291 Choral Literature **One hour**

A brief chronological study of choral literature from the Renaissance to the present. Prerequisite: consent of instructor

Offered upon sufficient request

MUS 4382 Vocal Pedagogy **Two hours**

A study of vocal anatomy and pedagogical approaches as applied to the teaching of voice. Prerequisite: consent of instructor

Offered spring semester (even-numbered years)

MUS 4553 Internship and Senior Presentation **Three hours**

An internship under the guidance of an experienced and qualified minister of music in an approved church music program, including a senior presentation. Prerequisite: approval of the Worship Ministries major advisor

Offered each semester

MUS 4563 Audio Technology II **Three hours**

Advanced topics from Audio Technology I including multi-track recording, processing sound, final mix-down and use of a digital studio workstation for master CD preparation. Includes study of microphone design, speaker design, acoustical environment and its selection for establishing the proper sound environment/mix quality. Includes class time in subjects such as sampling via MIDI, integration of video and sound tracks, and location recording. An additional fee is associated with this course. Prerequisite: MUS 3563

Offered spring semester

MUS 4573 Public School Music Methods, 7-12 **Three hours**

Contemporary methodology for teaching music in middle/junior and senior high schools, including philosophy of music education, psychology of music learning, curriculum development, classroom management, and evaluation. Field experiences are required. Prerequisites: MUS 3313, Gate 2

Offered spring semester (even-numbered years)

MUS 4900 Senior Recital **No credit**

Presentation of a recital during the academic year preceding graduation. Must be enrolled in applied lessons in the area of performance during the semester of the recital. The student writes program notes that must be prepared in advance of the recital hearing and be approved by the faculty committee for distribution at the recital. Hearing must be held at least two weeks before the scheduled performance.

Offered each semester

MUS 4910 Senior Presentation **No credit**

Presentation of a project representing significant research and/or creative endeavor during the academic year preceding graduation. Projects must be approved by the department head, division chair, and faculty mentor. Prerequisites or corequisites: MUS 3113, 3213, 3223. Corequisite: MUS 4191

Offered each semester

OM (Organizational Management)

See Professional Studies Catalog.

PHY (Physics)

PHY 1101, 2101, 3101, 4101 Physics Practicum **Each course, one hour**

Experiences may involve teaching physics, radioisotope technology, electronics, atomic and nuclear physics, and sound and acoustics. Prerequisite: consent of instructor

Offered upon sufficient request

PHY 1114 Fundamentals of Physics I **Four hours**

An introductory study of the principles of mechanics and waves and sound. Primarily for biology, construction management, and sports medicine majors. Three hours lecture-discussion and one two-hour laboratory period per week. Prerequisites: MTH 1113 & 1122

Offered fall semester

PHY 1124 Fundamentals of Physics II **Four hours**

An introductory study of the principles of thermodynamics, electricity and magnetism, and optics. Primarily for biology, construction management, and sports medicine majors. Three hours lecture-discussion and one two-hour laboratory per week. Prerequisite: PHY 1114

Offered spring semester

PHY 2114 General Physics I **Four hours**

A study of the principles of mechanics and waves and sound. Primarily for biochemistry, chemistry, and engineering majors. Prerequisite: MTH 1134

Offered fall semester

PHY 2124 General Physics II **Four hours**

A study of the principles of thermodynamics, electricity and magnetism, and optics. Primarily for biochemistry, chemistry, and engineering majors. Prerequisite: PHY 2114

Offered spring semester

PHY 2123 Mechanical Systems **Three hours**

A study of the history of machines, energy conversion, mechanical elements, loads, prime movers, regulators, and converters. An introduction to thermodynamics. Laboratory work and the use of case studies and design projects in engineering mechanical systems. Three hours discussion-design per week. (Same as ME 2123) Prerequisite: PHY 2114

Offered spring semester

PHY 3114 Statics and Strength of Materials **Four hours**

A design sequence from applied loads to selection of optimum material, shape and size for the elements in structures or machines. Forces are resolved in static equilibrium, then elastic or plastic stress analysis is used to assure adequate strength and deflection. Three hours lecture-discussion and one two-hour problem-solving session per week. (Same as ME 3114) Prerequisite: MTH 1144

Offered fall semester

PHY 3173 Selected Topics **Three hours**

Topics chosen from the many branches of physics such as optics, sound and acoustics, nuclear physics, astronomy, and theoretical physics. May be repeated for credit when a different topic is studied. Prerequisite: consent of instructor

Offered upon sufficient request

PHY 3213 Engineering Materials Science **Three hours**

A microscopic study of engineering materials, with emphasis on how structures relate to properties. Three hours lecture-discussion-laboratory per week. (Same as EN 3213) Prerequisite: CHM 1124

Offered fall semester

PHY 3224 Engineering Field Theory **Four hours**

An integrated study of electric, magnetic, gravitational, fluid, thermal and other fields. Applications using Gauss's law. Solutions to the Laplace and Poisson equations, with introduction to Maxwell's equations. Numerical and graphical techniques. The laboratory experiences involve both analysis and design. Three hours lecture-discussion and one three-hour laboratory period per week. (Same as EN 3224) Prerequisite: PHY 2124; Co-requisite: MTH 2123

Offered spring semester (through Spring 2007)

PHY 3313 Thermodynamics **Three hours**

A continuation from ME 2123 of the study of the laws of classical thermodynamics with a brief introduction to statistical approaches. Energy conservation in closed and flowing systems. Application to power and refrigeration cycles. Three hours lecture-discussion per week. (Same as ME 3213) Prerequisites: ME 2123 and MTH 1144

Offered fall semester (through Fall 2006)

POL (Political Science)

POL 2113 American Government **Three hours**

A study of the origins, institutions, and policies of national, state, and local government in the United States. The course promotes better citizenship through understanding and appreciation of American self-government. A biblical assessment of the various aspects of American government is offered.

Offered each semester

POL 2163 Irish Politics and Society **Three hours**

A study of contemporary political and social development in Ireland, with special attention given to the political-religious conflict in Northern Ireland. The focus is on the application of Christian principles of peacemaking to political and social conflict. Activities include academic course work, guest lectures by Irish political leaders, and visits to important political/social sites in Ireland.

Offered Irish Studies Program

POL 2193H Honors: American Government **Three hours**

A study of the origins, institutions, and policies of the national government in the United States, incorporating biblical assessments of various facets of the American system of government. Students formulate their own political views as informed by the principles and practices presented in course readings and class discussion. The course promotes better citizenship through understanding and appreciation of American self-government. Prerequisite: admission to the Honors Scholars Program or permission of the Honors Committee

Offered spring semester

POL 2213 Comparative Politics **Three hours**

A comparative study of major political systems focusing on the principles, institutions, and customs that constitute the various regimes of the world.

Offered spring semester (even-numbered years)

POL 2473 Methods of Political Analysis **Three hours**

This course introduces students to the logic and techniques of quantitative and qualitative analysis in political science. Special attention is given to survey research, computer applications and data analysis (using SPSSX).

Offered fall semester (odd-numbered years)

POL 3003 Political Philosophy **Three hours**

A study of ancient and modern political philosophies, utilizing primary texts. The course addresses the place of political philosophy in the broader field of philosophy, emphasizing a world-views approach as a means of understanding human existence. Topics include nature, reason, freedom, justice, right, property, law, religion, will, passions, power, customs, and community. (Same as RPH 3013)

Offered each semester

POL 3093H Honors: Political Philosophy **Three hours**

A study of ancient and modern political philosophies that incorporates biblical assessments of political themes and Christian critiques of classical and modern political thought. Students formulate their own political views as informed by the principles and practices presented in course readings and class discussion. (Same as RPH 3093H) Prerequisite: admission to the Honors Program or permission of the Honors Committee

Offered spring semester (even-numbered years)

POL 3123 The American Congress **Three hours**

A study of the U.S. Congress focusing on its origin, development, and modern practice as a representative and deliberative institution. The Congress is examined in the context of its relationship to the other two branches of the national government and its general role in the federal constitution. Prerequisite: POL 2113

Offered fall semester (even-numbered years)

POL 3133 Politics of Social Policy **Three hours**

An examination of the origin, logic, structure, and function of America's social welfare state. Public policy initiatives (and evaluations of proper impact) in areas of income support, poverty and welfare, social security, health care, affirmative action, and crime are examined. Special emphasis is placed upon assessing the competing goals of social policy in America, and how this dynamic contributes to the ongoing dialogue concerning the proper role of government intervention in the domestic realm.

Offered upon sufficient request

POL 3143 The American Presidency **Three hours**

A study of the American presidency focusing on its origin, development, and modern practice. The executive branch is examined in the context of its relationship to the other two branches of the national government and its general role in the federal constitution. Prerequisite: POL 2113

Offered spring semester (even-numbered years)

POL 3353 International Relations **Three hours**

An examination of the development of international relations and international organizations and how Christians have responded to the issues of war and peace. Prerequisites: HST 1013 or 1023, and POL 2113

Offered spring semester (even-numbered years)

POL 3413 Selected Topics **Three hours**

Special topics in Political Science are considered.

Offered upon sufficient request

POL 4113 Latin American Politics **Three hours**

A study of the constitutional development of Central and South American nations, with special attention given to the political principles and practices of contemporary Latin America. Prerequisites: POL 2213 or 3353; POL 2473 recommended

Offered upon sufficient request

POL 4233 Elections and Voting Behavior **Three hours**

An examination of the role of elections in American politics. Topics include democratic electoral systems, participation, determinants of vote choice, media effects, and the influence of public opinion on the policy process. Particular attention is devoted to understanding the role and influence of Christians in the electoral process. Prerequisite: POL 2473 recommended

Offered spring semester (odd-numbered years)

POL 4243 Constitutional Law **Three hours**

A seminar on the origin, development, and contemporary practice of American constitutionalism as expressed through interpretations of the U.S. Constitution by the U.S. Supreme Court. Topics addressed include the institutional structure of federal government, checks and balances, federalism, the commerce power, the Bill of Rights, and the Fourteenth Amendment. Prerequisites: POL 2113 and junior standing, or consent of instructor

Offered fall semester (even-numbered years)

POL 4313 Christianity and the Legal Profession **Three hours**

A theoretical and practical study of the connection between Christian teachings and a career in American law. Students strive to determine how they will integrate their faith and the practice of law. Prerequisites: consent of pre-law advisor

Offered spring semester (odd-numbered years)

POL 4413 Religion and Politics **Three hours**

A study of the relationship between religion and politics, with particular attention devoted to understanding the role of Christians in a pluralistic democratic society. Specific topics discussed include religion and political behavior, clergy political activism, and the mobilization of religious interests. Prerequisites: POL 2113; 2473 recommended

Offered spring semester (odd-numbered years)

POL 4511, 4512, 4513 Independent Study **One to three hours**

Supervised exploration of topics of special interest to the student. The course consists of large assignments of supervised reading, regular consultation with the supervising professor, and written analysis of readings, as assigned by the professor. Prerequisites: 15 hours of political science/history

Offered upon sufficient request

POL 4613 Seminar in United States Politics **Three hours**

An introduction to methods of political research, philosophies of political science, and the relationship between the study of political science and a Christian world view. Students research a particular topic in U.S. politics. Prerequisites: POL 2473 and nine additional hours of political science

Offered fall semester (odd-numbered years)

POL 4711, 4712, 4713 Internship **One to three hours**

Fieldwork in politics or law combined with reading and writing assignments that explore the theory and practice of these fields. One credit hour is earned for each 45 hours of experience. Prerequisite: consent of supervising instructor

Offered upon sufficient request

PSY (Psychology)**PSY 1013 Introductory Psychology** **Three hours**

A scientific study of the principles underlying human behavior. The student is introduced to the theory, research, and practice that characterize modern psychology.
Offered each semester

PSY 1093H Honors: Introductory Psychology **Three hours**

A scientific study of the principles underlying animal and human behavior, focusing on the development of psychology in relation to other academic disciplines. Critical thinking and integrative themes are stressed by using in-class exercises and formal projects. Prerequisite: admission to the Honors Scholars Program or permission of the Honors Committee

Offered fall semester

PSY 1101 Orientation to Psychology **One hour**

Designed to help students develop the knowledge and skills that will enable them to make intelligent choices about their future in the discipline. Topics for discussion include the changing nature of psychology, departmental resources and goals, career development, and graduate school. Not required of majors who upon matriculation to JBU have completed more than 12 transferable hours in psychology.

Offered fall semester

PSY 2123 Psychology of Relationship Development **Three hours**

A foundation course that integrates biblical and psychological literature in the area of interpersonal, marriage, and family relationships. Coursework includes analysis and application of current theory and psychological research on gender differences, family of origin issues, sexuality, personality types, communication styles, forgiveness, dating, and emotional intelligence. An additional fee is associated with this course. This course may not be audited. (Same as FAM 2123)

Offered spring semester

PSY 2203 Theories of Personality **Three hours**

A study of the development, organization, and dynamics of personality with references to theories of personality developed in the 20th century. Prerequisite: PSY 1013

Offered spring semester

PSY 2233 Theories of Counseling **Three hours**

A study of major counseling theories. Includes dynamic, existential, humanistic, gestalt, cognitive-behavioral, reality, and family systems theories of counseling and the most useful strategies from each, for the beginning student of counseling. Prerequisite: PSY 1013

Offered fall semester

PSY 2243 Introduction to Therapeutic Interviewing **Three hours**

Basic elements of interviewing, setting conditions for psychological growth, and the development of effective action plans for healthy psychological change. Prerequisite: PSY 1013

Offered spring semester

PSY 2383 Introductory Statistics **Three hours**

A general statistics course that stresses a conceptual understanding of statistical procedures, and their appropriate use and interpretation. The course uses spreadsheet applications, current behavioral research publications and examples from current events to teach critical thinking skills. Topics include descriptive statistics, the normal distribution, probability and inferential statistics. Prerequisite: PSY 1013

Offered each semester

PSY 2393 Research Methods **Three hours**

An introduction to research methods in psychology that stresses critical thinking about methodological issues. Research skills are developed in hypothesis construction, research design, interpretation of statistical results, scientific writing, library and internet research, and presentation of results to a professional audience. Prerequisites: PSY 1013 and 2383.

Offered each semester

PSY 2413 Developmental Psychology **Three hours**

A study of the physical, cognitive, emotional, and social development of the human from conception through adulthood. (Same as FAM 2413) Prerequisite: PSY 1013

Offered each semester

PSY 2903

See Professional Studies Catalog.

PSY 3203 Psychological Testing **Three hours**

An examination of the theory, interpretation, and appropriate use of individual and group tests of personality, mental ability, aptitude, achievement, and interest. Prerequisite: PSY 1013 and 2383

Offered fall semester (odd-numbered years)

PSY 3383 History of Psychology **Three hours**

A study of the historical and theoretical development of psychology. Emphasis is placed on persons, concepts, problems and systems from which current psychology evolved. Prerequisite: PSY 1013 and 2393

Offered spring semester

PSY 3411, 3412, 3413 Selected Topics **One to three hours**

Topics chosen from a variety of topics related to psychology. May be repeated for credit when a different topic is studied. Prerequisite or corequisite: PSY 1013

Offered upon sufficient request

PSY 3423 Social Psychology **Three hours**

An investigation of how the behavior, feelings and thoughts of an individual are influenced or determined by the behavior and characteristics of others. Topics for discussion include attraction, attitudes, aggression, persuasion, and group behavior. Prerequisite: PSY 1013

Offered spring semester

PSY 4213 Abnormal Psychology **Three hours**

The nature, causes, and treatment of maladaptive behavior including personality disorders, psychoses, reactions to stress, anxiety disorders, and other dysfunctions. Prerequisite: PSY 1013; PSY 2233 recommended

Offered fall semester

PSY 4262, 4263 Field Experience **Two or three hours**

Placement in a variety of off-campus settings to gain practical exposure to the professional field. Open to psychology majors. May be repeated once for credit with consent of instructor. A student may receive a letter grade for a maximum of 3 credit hours; any additional hours will be graded S/U. Students must supply transportation to the field placement sites. Prerequisites: PSY 1013 and 2233; PSY 2243 recommended

Offered fall semester

PSY 4333 Cognitive Psychology **Three hours**

A study of the major principles, research methods, and empirical findings of cognitive psychology, including attention, memory, imagery, categorization, language, and problem solving. Prerequisites: PSY 1013 and 2393

Offered spring semester (even-numbered years)

PSY 4343 Theories of Learning **Three hours**

A study of the major theories, research methods, and empirical findings of animal and human learning. Classical and operant conditioning paradigms are emphasized. Prerequisite: PSY 1013 and 2393

Offered spring semester (odd-numbered years)

PSY 4353 Behavioral Neuroscience **Three hours**

A study of the biological bases of behavior. Topics for consideration include neuroanatomy, neuropsychology, learning and memory, emotion, drug effects, and the biological correlates of mental disorders. Prerequisite: PSY 1013; PSY 2393 strongly recommended

Offered fall semester

PSY 4411, 4412, 4413 Independent Research in Psychology **One to three hours**

Student-directed research supervised by a member of the psychology faculty. Prerequisite: PSY 4453 and consent of a supervising instructor

Offered upon sufficient request

PSY 4453 Research Seminar **Three hours**

An opportunity for students to develop research skills in a content area. May focus on specific areas such as social or cognitive psychology, with the goal of completing and presenting an empirical research project. Prerequisites: PSY 2383 and 2393

Offered fall semester

PSY 4493 Seminar in Psychology **Three hours**

A capstone in the discipline emphasizing contemporary issues and an approach to psychology from a Christian perspective. Prerequisite: PSY 2393 and six hours of BBL. Prerequisite or corequisite: PSY 3383

Offered spring semester

RPH (Religion and Philosophy)

RPH 3003 Introduction to Philosophy **Three hours**

A survey of classical writings and themes in the study of philosophy, including religion, knowledge, the human self, and the problem of evil. Major Enlightenment and contemporary world views, such as naturalism, existentialism, and postmodernism, are examined from a Christian perspective. Prerequisites: EGL 1023, HST 1013, and HST 1023

Offered each semester

RPH 3013 Political Philosophy **Three hours**

A study of ancient and modern political philosophies, utilizing primary texts. The course addresses the place of political philosophy in the broader field of philosophy, emphasizing a world-views approach as a means of understanding human existence. Topics include nature, reason, freedom, justice, right, property, law, religion, will, passions, power, customs, and community. (Same as POL 3003)

Offered each semester

RPH 3093H Honors: Political Philosophy **Three hours**

A study of ancient and modern political philosophies that incorporates biblical assessments of political themes and Christian critiques of classical and modern political thought. Students formulate their own political views as informed by the principles and practices presented in course readings and class discussion. (Same as POL 3093H) Prerequisite: admission to the Honors Program or permission of the Honors Committee

Offered spring semester (even-numbered years)

RPH 3323 Philosophy of the Christian Faith **Three hours**

An advanced study of major issues in a Christian approach to philosophy. The course often centers around the works of a major Christian philosopher as a basis for discussion and evaluation. Prerequisite or corequisite: RPH 3003, 3333, or equivalent

Offered each semester

RPH 3333 History of Philosophy **Three hours**

A survey of the development of the western philosophical traditions from Plato to Derrida, based on a close reading of primary texts. Emphasis is placed on how Christian thought can be enriched by and/or can critique the major developments in western philosophy.

Offered spring semester (even-numbered years)

RPH 3533 Introduction to Islam **Three hours**

An examination of the religion, history, and culture of Islam. The study traces the growth and development of Islamic traditions across time and place, looking in particular at how Muslims understand their own faith tradition in relation to broader human experience expressed in literature and the arts. Focus is on primary sources. Prerequisite: junior standing or consent of instructor

Offered spring semester (odd-numbered years)

RPH 3543 Introduction to Hinduism and Buddhism **Three hours**

An examination of the "eastern" religious traditions of Hinduism and Buddhism. The survey includes historical aspects—following the growth and development of these religious traditions across time and place, as well as theological aspects—considering how each tradition approaches issues such as divinity, nature, humanity, salvation, sin, community, and ritual. Focus is on primary sources. Prerequisite: junior standing or consent of instructor

Offered spring semester (even-numbered years)

RPH 4423 Ethics **Three hours**

A systematic and critical study of the theoretical basis of human morality. Students evaluate historical ethical systems, develop a biblically based system of ethics, and apply that system to various current events and lifestyle issues. Prerequisite: RPH 3003

Offered each semester

RPH 4433 Christian Apologetics **Three hours**

A study of the defense of historic Christian faith against the challenges of modernism, postmodernism, naturalism, evil, etc. Various methods of defense are examined in light of the nature of the Christian faith and of major opposing systems. Prerequisite or corequisite: RPH 3003 or 3333

Offered fall semester (odd-numbered years)

RPH 4481, 4482, 4483 Selected Topics **One to three hours**

Topics are chosen from some area of Religion and Philosophy. The student may also do independent study and research under the supervision of the instructor. Prerequisite: consent of instructor

Offered upon sufficient request

Social Studies (SST)

SST 1113 Introduction to Sociology **Three hours**

Understanding sociological research and how to apply it to aid in developing a global perspective of today's world. Topics of emphasis include the individual and society, structures of power, and social institutions common to all cultures and societies. The sociology of the body—health and illness, sexuality, and aging—is also discussed.

Offered online, upon sufficient request

SST 1133 Cultural Geography **Three hours**

Use of cartographic media as a means of communication. Instruction in techniques of interpretation of such media. Meets state requirements for elementary and secondary teachers.

Offered spring semester (odd-numbered years)

SST 1143 World Regional Geography **Three hours**

General survey of world regions including a study of geographic factors which underlie strengths of world powers. Meets state requirements for elementary and secondary teachers.

Offered spring semester (even-numbered years)

SST 2123 Cultural Anthropology **Three hours**

The study of culture, language, economics, kinship, marriage, gender, social control, social stratification, religion, art, and cultural change from an applied anthropological perspective using case studies.

Offered fall semester

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TRACY A. BALZER, Director of Christian Formation, 1997.

B.A., Seattle Pacific University

M.A., John Brown University

STEPHEN T. BEERS, Vice President for Student Development, 1998.

B.A., Taylor University

M.S., Wright State University,

Ed.D., Ball State University

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B.A., Taylor University

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B.S., M.S., Ph.D., University of Arkansas

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B.S., M.S., Illinois State University

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B.A., M.S., Aurora University

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B.S., John Brown University

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B.A., Texas Tech University

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B.S.E., John Brown University

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B.R.Ed., William Tyndale College

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 B.A., Calvin College
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 A.A., Cottey College
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 Administration, 1980.
 B.A., University of Connecticut
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 B.A., University of South Carolina
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 Professional Studies, 1978.
 B.A., John Brown University
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- PAUL M. HINES, Registrar, 1999.
 B.S.E., M.Ed., Southern Arkansas University
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- RONALD E. JOHNSON, Director of Walton International Scholarship
 Program, 1996.
 B.S., Devry Institute
 M.S., California Coast University
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 Services, 2000.
 B.S., Ball State University
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JOHN BROWN UNIVERSITY

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B.A., Bartlesville Wesleyan College
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M.A., University of Iowa

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M.F.A., Syracuse University

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B.F.A., Texas Tech University

M.F.A., Colorado State University

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