JOHN BROWN UNIVERSITY
2011-2013 CATALOG Undergraduate Studies

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For information concerning the Graduate Programs or the Degree Completion Programs, please refer to the individual 2011-2013 Graduate Programs or Degree Completion Programs catalogs.

## UNIVERSITY CALENDAR

Traditional Undergraduate Studies
FALL 2011
W 8/17-F8/19
F $8 / 19$
Sa 8/20-T 8/23
Sa $8 / 20$
W 8/24
M 9/5
W 9/7
W 9/7
F 10/14
M 10/17-T 10/18
F 10/21
M 10/31-M 11/14
W 11/23-F 11/25
M 12/12-R 12/15
Sa 12/17
SPRING 2012
M 1/9
M 1/9-T 1/10
M $1 / 9$
W 1/11
W $1 / 25$
W $1 / 25$
F 3/2
F 3/9
M 3/19-F 3/23
M 3/26-M 4/9
F 4/6
M 4/30-R 5/3
Sa 5/5
SUMMER 2012 - May Term
M 5/7
W 5/9
F 5/18
M 5/28
F6/1

| International Student Orientation | W 8/15-F 8/17 |
| :---: | :---: |
| New Student Move-In | F 8/17 |
| New Student Orientation | Sa 8/18-T 8/21 |
| New Student Registration | Sa $8 / 18$ |
| Classes Begin | W 8/22 |
| Labor Day Holiday | M 9/3 |
| Last Day for New Enrollments | W $9 / 5$ |
| Last Day to Add a Course | W $9 / 5$ |
| Mid-semester Grades Due | F 10/12 |
| Fall Break | M 10/15-T 10/16 |
| Last Day to Drop a Course | F 10/19 |
| Registration for Spring Term | M 10/29-M 11/12 |
| Thanksgiving Holidays | W 11/21-F 11/23 |
| Examination Week | M 12/10-R 12/13 |
| Commencement Exercises | Sa 12/15 |
|  | SPRING 2013 |
| New Student Move-In | M 1/7 |
| New Student Orientation | M 1/7-T 1/8 |
| New Student Registration | M 1/7 |
| Classes Begin | W 1/9 |
| Last Day for New Enrollments | W 1/23 |
| Last Day to Add a Course | W 1/23 |
| Mid-semester Grades Due | F 3/1 |
| Last Day to Drop a Course | F 3/8 |
| Spring Break | M 3/18-F 3/22 |
| Registration for Fall Term | M 3/25-M 4/8 |
| Good Friday Holiday | F 3/29 |
| Examination Week | M 4/29-R 5/2 |
| Commencement Exercises | Sa 5/4 |
|  | SUMMER 2013 - May Term |
| Classes Begin | M 5/6 |
| Last Day to Add a Course | W 5/15 |
| Last Day to Drop a Course | F 5/24 |
| Memorial Day Holiday | M 5/27 |
| End of Term | F 5/31 |

## 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 Evangelical's:

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 people regeneration by the Holy Spirit is absolutely essential.
5. We believe in the present ministry of the Holy Spirit by whose indwelling the Christian is enabled to live a godly life.
6. 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.
7. We believe in the spiritual unity of believers in our Lord Jesus Christ.

## 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 multicultural 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 ninety-two 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 45 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. A wide variety of ministry opportunities are offered to students through the office of Christian Formation.


#### Abstract

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 92 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. Several city parks, as well as nearby attractions such as Beaver Lake 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 of the North Central Association of Colleges and Schools (NCA), http://ncahigherlearningcommission.org, phone (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, phone (202) 466-7496, for the preparation of teachers. The Bachelor of Science in Engineering Program, including electrical/computer, mechanical, or renewable energy concentration, is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 212024012, phone: (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, phone (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 (IACBE), http://www.iacbe.org, phone (913) 631-3009. The United States Department of Justice has approved John Brown University for the education of foreign students.

## Council for Christian Colleges \& Universities

John Brown University is a charter member of the Council for Christian Colleges \& Universities (CCCU), a resource- and information-sharing association of 111 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, www.cccu.org, phone (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 four-day examination period. Commencement exercises follow each semester, scheduled on the Saturday after final examination week.

In additional to the fall and spring semester, JBU 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.

## The Student Body

The student body of nearly 1,300 in John Brown University's traditional programs represents more than 40 states and more than 50 nations. Approximately 10-15\% 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 400 additional students participate in JBU's Degree Completion Program for adult learners.

Graduate Studies programs in Counseling, Leadership and Ethics, Business Administration, and Ministry areas include more than 300 enrollees.

## THE SODERQUIST CENTER FOR LEADERSHIP AND ETHICS

The Soderquist Center for Leadership and Ethics (SCLE) 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 serves as a global resource for equipping people in the corporate, non-profit, and academic world with the transforming power of ethical leadership. The Center is 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 equipping through customizable training programs. Customers include companies and corporations, not-for-profit organizations, and emerging leaders in graduate and undergraduate programs. The Center engages leaders through programs such as 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 and Master of Science in Leadership and Ethics 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.

# THE CENTER FOR RELATIONSHIP ENRICHMENT 

## CRE Vision Statement

The Center for Relationship Enrichment (CRE) exists to encourage and enrich relationships through the transforming power of biblically-based principles.

## CRE Mission Statement

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

## Primary Goals:

1. Provide informational and training events designed to instill Christ-centered principles of healthy relationships, with an emphasis on marriage relationships, in the JBU community and at a local, regional, national, and international level.
2. Consult with Christian colleges and universities to assess existing relationship curricula/ ministries/programs, help develop new courses/programs, and equip leaders to facilitate the implementation of those programs including the design, development, and delivery of a weekend relationship enrichment program for university students who are seriously dating, engaged, or married.
3. Consult with churches to assess existing marriage curricula/ministries/programs, help develop new courses/programs, and equip leaders to facilitate the implementation of those programs to help them increase their effectiveness in serving marriages and families.
4. Develop relationship-related assessments for colleges, universities, and churches to help them assess the degree to which what they are doing is making a measurable difference in the emotional, relational, and spiritual lives of those they serve.
5. Develop a comprehensive program for Northwest Arkansas to provide pre-marital education, marriage enrichment, and leadership training in ways that will impact churches, community agencies, and corporations with the goal of impacting the marriages of this community. This will also be designed to serve as a model for other communities.

## 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 resources supporting the research needs of the JBU community. The 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, microforms, and DVDs. In addition, the library subscribes to more than 11,000 periodical titles, nearly all of which are available electronically. The library also subscribes to 80 electronic databases (full-text periodicals, online reference resources, and indexes). The library provides access to 13,000 e-book titles, including 400 online reference books.

The professional library staff provides research and reference services to both individuals and groups, and efficient interlibrary loan services to the JBU community. The library facility includes large and small study rooms, a group research lab, quiet and comfortable spaces for reading, and a computer lab for student use.

In addition to resources in the main library, a number of materials are housed in four library branches. The Music Library, 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 Construction Management Library, in the Balzer Technology Center, houses books and periodicals related to that discipline. The Soderquist Center for Leadership and Ethics Library is located in the Soderquist Business Center, and contains materials relevant to business and ethics.

The Film Library is housed in the library and contains films that have been selected based on their recommendation by the Academy of Motion Picture Arts and Sciences, the American Film Institute, or Spiritually Significant Films.

The gateway to the JBU Library is its web site, www.jbu.edu/library, where information about all library collections and services may be obtained. The library web site 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 web site, instant messaging, or via e-mail at library@jbu.edu.

The JBU Library belongs to several networks and consortia. To provide efficient interlibrary loan services, the library is a member of the Online Computer Library Center (OCLC), which gives our users borrowing privileges to over 110 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 the published materials of the school's founder, John E. Brown, Sr., materials of radio evangelist J. Vernon McGee, the Romig juvenile literature collection, and the Gary and Carrie Oliver Marriage and Family Resource Room. 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 technology resources available for students. All campus buildings and remote sites are interconnected with a network and Internet infrastructure that allows for authorized access from classrooms, laboratories, offices, residence halls, and remote locations. Wireless networking also extends accessibility in most residential and study areas across the university.

There are general classroom laboratories equipped with computers and instructional technology for hands-on instruction, and these are available for general computer 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. Black and white and color laser printing is available for a small fee.

There is a Media Lab located in the Learning Resource Center for special printing and other media service needs. Digital cameras, projectors, and other audio/visual technology may be checked out for academic projects. Supplies for lettering, posters, banners, and other needs are available for sale. Large format color printing is also available for a fee.

Each residence hall provides access to a 24 -hour computer lab for student use. Additionally there are other specialized computer labs housed in specific academic departments. These include Biology, Chemistry, Construction Management, Engineering, Language, Music, Physics, Visual Arts, and the Writing Center.

Students who bring their own computer to campus may connect it to the campus network using their provided network account. Once connected, students may access the Internet, email, classrelated resources, references, and other university services.

More complete and current information about technology services at John Brown University may be found through the World Wide Web via the Eaglenet portal at http://eagle.jbu.edu.

## Office of Academic Assistance

Students may contact the Director of Student Support Services 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.

The Office of Academic Assistance administers the CLEP and MAT, and proctors tests for correspondence courses. For general information, fees, or to schedule an appointment, call the Academic Assistance Coordinator at (479) 524-7401.

## Student Support Services

Student Support Services (SSS) 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, who 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. The Director of Student Support Services 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 (479) 238-8770 or 5247271, email JWright@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 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 allcampus activities through the Student Activities Committee (SAC). Student Ministries creates opportunities for outreach and for inward spiritual growth. The CAUSE staff supports, trains,
and mobilizes JBU students to use their knowledge and skills for service and ministry on campus, in the community, and around the world. Passion and our men's and women's ministries provide opportunities for students to serve as facilitators for spiritual development on campus through small group Bible studies, mentoring, and retreat programming.

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, the next goal is 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 (WLHC) 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 WLHC 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 (OCF) 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.

## Residence Life Office

Headed by the 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 Office

Headed by the Coordinator of Student Activities and Orientation, 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.

## Student 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 Student Counseling Center is available to facilitate students' growth while at JBU. Individual and group therapy, couple counseling, and psycho-emotional groups are available to students free of charge. Counseling sessions are confidential, and appointments are scheduled with discretion and respect for needs and desires of students. For assistance, call (479) 238-8760 or visit our web site.

## 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.

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.

## Health Services

At the Health Services office located in the Walker Student Center, 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.

Educational programs are offered to various JBU student groups. The programs include but are not limited to: CRP/First Aid, weight management, stress management, college wellness, etc.

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 web site ensure immediate communication in case of emergency.

Arkansas law of 2009 requires documentation of two doses of Measles/Mumps/Rubella (MMR) vaccination for all incoming freshmen and foreign-born students. All other students are required to have documentation of one dose of MMR.

To receive an application for any exemption, contact the Arkansas Department of Health at (501) 661-2169. You can receive the MMR vaccine on campus.

Arkansas Law regarding Act 96 of 1913 requires all incoming students who were born or have lived for longer than six months in countries where Tuberculosis is endemic to show documentation of a TB skin test administered in the U.S. within six months of classes beginning. This can be done on campus.

## International Programs Department

The International Programs Department (IPD) serves the needs of international students including Walton scholars, MK's and third culture students. The office also offers assistance with international student orientation, immigration regulations, and international education opportunities. IPD 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 intercultural environment of JBU.

United States Citizenship and Immigration Services. IPD assists students, faculty, and staff in obtaining and maintaining the proper immigration status. Workshops are conducted on immigration, employment, and U.S. tax issues.

Walton International Scholarship Programs. The Walton International Scholarship Program (WISP) awards 60 annual scholarships to students from Central America and Mexico. IPD attentively seeks to ensure growth and long-term success for its WISP scholars.

International Education. IPD administers, in conjunction with the academic division, our Semester in Ireland Studies Program and a variety of JBU international summer studies programs. IPD also links students with international and domestic studies opportunities offered through the Council of Christian Colleges \& Universities. Short-term international mission teams are coordinated by the Office of Christian Formation in partnership with the IPD.

The Friendship Family Program connects international students with a host family who will help in the adjustment process and contributes to students' success by providing care and support.

## EDUCATIONAL PROGRAMS

## Academic Divisions

Biblical Studies: Departments of Bible, Religion, and Philosophy, Christian Ministry, Family and Human Services, and Intercultural Studies.

Business: Departments of Accounting, Business Administration, Economics, International Business, Leadership Studies, Management, and Marketing.

Communication and Fine Arts: Departments of Communication, Music, and Visual Arts.
Education: Early Childhood Education; Secondary Education Programs in English, Mathematics, and Social Studies; P-12 Program in Music; and TESOL Endorsement.

Engineering and Construction Management: Departments of Construction Management, Engineering, and Renewable Energy.

Humanities and Social Sciences: Departments of English, History, Language Studies, Political Science, Psychology, and Social Studies.

Interdisciplinary Studies: Departments of Interdisciplinary Studies, Core Curriculum, and Military Science.

Natural and Health Sciences: Departments of Biology, Chemistry, General Science, Kinesiology, Mathematics, and Physics.

## MAJORS AND MINORS

## Curricula

## Bachelor's Degree Programs

| Accounting | B.S. |
| :---: | :---: |
| Art and Illustration | B.S. |
| Biblical and Theological Studies | B.A. |
| Biochemistry | B.S. |
| Biology | B.S. |
| Broadcasting | B.S. |
| Business Administration | B.S. |
| Chemistry | B.S. |
| Child and Family Studies | B.S. |
| Communication | B.S. |
| Construction Management | B.S. |
| Digital Media Arts | B.S. |
| Early Childhood Education | B.S.E. |
| Engineering | B.S.Eng. |
| English | B.A. |
| English Education | B.S.E. |
| Exercise Studies | B.S. |
| Family and Human Services | B.S. |
| Graphic and Web Design | B.S. |
| History | B.A. |
| Intercultural Studies | B.A. |
| Interdisciplinary Studies | B.A., B.S. |
| International Business | B.A., B.S. |
| Journalism | B.S. |
| Management | B.S. |
| Marketing | B.S. |
| Mathematics | B.S. |
| Mathematics Education | B.S.E. |
| Music-Applied | B.A. |
| Music-General | B.A., B.S. |
| Music Education | B.Mus.Ed. |
| Outdoor Leadership Ministries | B.S. |


| Philosophy | B.A. |
| :--- | :--- |
| Photography B.S. <br> Political Science B.A. <br> Pre-Law  <br> Pre-Medical or Pre-Dental  <br> Psychology B.S. <br> Public Relations B.S. <br> Renewable Energy B.S. <br> Social Studies Education B.S.E. <br> Spanish B.A. <br> Speech Communication B.A. <br> Sports Medicine B.S. <br> Worship Arts B.S. <br> Youth and Worship Ministries B.S. Bouth Ministries |  |

## Associate's Degree Programs

Construction Management
Electromechanical Technology
General Education
Interdisciplinary Studies
A.S.
A.S.
A.A.
A.A.

## Minors

Accounting
Art and Illustration
Biblical and Theological Studies
Biology
Broadcasting
Business Administration
Chemistry
Child and Family Studies
Church Leadership
Communication
Construction Management
Digital Media Arts
Economics
Education
English
Family and Human Services
French
General Science
Graphic and Web Design
History
Intercultural Studies
International Business
International Relations
Journalism
Kinesiology
Leadership Studies
Linguistics
Management
Marketing
Mathematics
Military Science
Music
New Testament Greek
Outdoor Leadership Ministries
Photography
Physics
Political Science
Pre-Law
Professional Accounting Development
Psychology

## Public Relations

Religion and Philosophy
Renewable Energy
Social Studies
Spanish
Speech Communication
Speech/Drama
Teaching English to Speakers of Other Languages (TESOL)
Worship Arts
Youth Ministries

## 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 (HSP) consists of enriched Core Curriculum courses developed especially for 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 upper-division 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 Executive Committee a formal proposal of intention to continue. Only after approval to move to the upper division may the scholar begin work on the nine-hour upper-division component. Students choose to graduate at one of two levels: Presidential Honors (complete 21 honors hours along with an Honors Capstone Project) or University Honors (complete 21 honors hours). All courses are designated "Honors" on the transcript.

However, the Honors Scholars Program is much more than honors sections of Core Curriculum 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.

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 Honors Student Government 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, provides an attractive location for studying, cooking, and tutoring. Several classes meet in the center's classroom.

Eligibility. High school seniors are selected 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 submission of the Honor's 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-mail 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 1091 | Honors: Orientation to HSP |  | Fall |
| EGL 1083 | ${ }^{1}$ Honors: English I | EGL 1013 | Fall |
| EGL 1093 | Honors: English II | EGL 1023 | Spring |
| BBL 1083 | Honors: Old Testament Survey | BBL 1013 | Fall |
| BBL 1093 | Honors: New Testament Survey | BBL 1023 | Spring |
| BIO 1093 | Honors: Biological Science | BIO 1003 | Spring |
| HST 1083 | Honors: Western Civilization I | HST 1013 | Fall |
| HST 1093 | Honors: Western Civilization II | HST 1023 | Spring |
| PSY 1093 | Honors: Introductory Psychology | Social Science | Fall |
| ECN 2093 | Honors: Basic Economics | Social Science | Spring, odd |
| POL 2193 | Honors: American Government | POL 2013 | Spring, even |
| COR 2591 | ${ }^{2}$ Honors: Colloquium |  | Upon <br> Request |
| BBL 3083 | ${ }^{6}$ Honors: Integrated Theology I | BBL 3003 | Fall, odd |
| BBL 4083 | ${ }^{6}$ Honors: Integrated Theology II | BBL 4002 | Spring, even |
| COR 3093 | Honors: Integrated Humanities I | Arts | Fall, even |
| COR 4093 | Honors: Integrated Humanities II | $\begin{aligned} & \overline{\text { Philosophy }} \text { and EGL } \\ & \underline{4003} \end{aligned}$ | Spring, odd |
| COR 3111 | Honors: Introduction to Honors Capstone Project |  | Fall |
| COR 3591 | ${ }^{2}$ Honors: Colloquium |  | Upon <br> Request |
| COR 3691 | Honors: Practicum |  | Upon <br> Request |

$4193{ }^{4}$ Honors Capstone Project in
${ }^{5}$ Honors Tutorial in
4693 Honors Class Contract in $\qquad$
${ }^{5}$ Honors Service Learning in
${ }^{5}$ Honors Co-Teaching: Readings in $\qquad$
${ }^{5}$ Honors Co-Teaching: Classroom Practicum in $\qquad$
${ }^{1}$ If 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.
${ }^{2}$ May be repeated for up to 3 hours of credit.
${ }^{3}$ Integrated 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.
${ }^{4}$ Though 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.
${ }^{5}$ A student may earn up to six upper-division honors hours by completing two of these nontraditional options. Options 4593, 4793, 4913, and 4923 are treated as independent studies. Students will be charged the normal independent study fee of $\$ 105$ per credit hour.
${ }^{6}$ Integrated Theology is a six-hour sequence of two interdisciplinary courses which together substitute for two requirements in the Core Curriculum (Evangelical Theology and Capstone Seminar in Christian Life). If a student completes only one of the semesters, the course will count for one of the two.

## Off-Campus Study Programs

Students interested in the following programs should inquire at the International Programs office in the Walker Student Center.

## JBU Semester in Ireland

John Brown University operates a semester-long program in Belfast, Northern Ireland every fall semester. Students live in Belfast, take 15 hours of core curriculum course work with Irish professors, and travel throughout Ireland as they connect classroom and experiential learning.

## German Studies Program

John Brown University operates a four-week summer program in Germany (GSP) 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. The GSP is offered upon sufficient faculty sponsorship.

## India Studies Program

The India Studies program (ISP) offers a unique opportunity to encounter one of today's most fascinating and diverse cultures. This diversity, as well as the call to be an obedient witness for Christ throughout the world, provides a rich and engaging setting to equip students to be servantleaders in a pluralistic world of beliefs, cultures, and needs. The ISP is structured to provide students with both immersion in a local community and broad exposure to a variety of peoples, places, and customs in India, including an extensive two-week travel portion of the program to provide students a close up look at India's diversity. Students will participate in two core courses designed to provide a broad overview of the historical, religious, geographical, and economic landscape of India. Rounding out the 16 hour semester experience, students will also have the opportunity to take courses in their major areas with Indian students and professors. At its heart, the India Studies Program strives to encourage and equip students to effectively relate to India and its people in an informed, constructive, and Christ-centered manner.

## 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.

## LCC International University (effective Spring 2013)

LCC International University (formerly Lithuania Christian Fund College) is a nationally and internationally recognized liberal arts institution in the city of Klaipéda, Lithuania. Established in 1991 by a joint venture of Lithuanian, Canadian, and American foundations, LCC has distinguished itself in the region by offering a unique, future-oriented style of education and an interactive academic environment within the context of a Christian academic community.

Study abroad students select 15 to 17 credit hours from courses in Business Administration, English Language and Literature, Psychology and Theology. Students share a room with three European roommates and receive a monthly stipend for food and entertainment. The LCC study abroad program also includes an orientation week, travel throughout Lithuania, weekend trip to Riga and Tallinn, and a one-week semester break trip to St. Petersburg and Moscow. For more information contact the JBU International Office.

## Affiliated Study Abroad Programs

The Council for Christian Colleges \& Universities, an association of 111 campuses in the U.S. and Canada, offers the following 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 web site 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 (ASP) 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 (ASC) 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, crosscultural 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 (CMC) 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 multidisciplinary 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 member 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

Based in Cairo, Egypt, the Middle East Studies Program (MESP) allows council member 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 Wycliffe Hall in Oxford, England. The program includes multi-disciplinary 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 six to nine semester credits, which are administered directly to member institutions.

## 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.

## Uganda Studies Program

The Uganda Studies Program (USP) 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.

## Washington Journalism Center

Washington Journalism Center (WJC) is an advanced, experiential semester on Capitol Hill that will cultivate professional news skills and encourage students to think through the implications of being a Christian working in the news media in a city that is home to the powerful and the powerless. The center 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. The center develops students as Christian journalists exhibiting both professionalism and legal/ethical integrity. Students earn 16 semester hours of credit.

## Other Off-Campus Programs

## 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.

## 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 International. The program combines classroom learning and practical internships in a unique and challenging cross-cultural setting. Students will be enrolled in a Spanish language institute during their time in Quito. Interested students should consult the International Programs office.

## 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 (Seville)

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 Sevillianos. 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 16 semester hours of credit. The program is required for majors in Spanish.

## 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 non-JBU led off-campus programs is posted as "CR" on the student's JBU transcript.
3. Students 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 that a student may have. It also does not apply to the JBU Semester in Ireland Program.

Off-campus study is a valuable part of a student's education. Therefore, JBU allows a certain number of 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, depending on available funds: Semester in Spain Program (Seville) and Oxford Honours Programme.
> Up to $75 \%$ of institutional financial aid, depending on available funds: all international CCCU programs.
> Up to $50 \%$ of institutional financial aid, depending on available funds: other Christianbased cross-cultural programs approved by the International Programs Committee.
> Up to $50 \%$ of institutional financial aid, depending on available funds: all domestic CCCU programs and 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 Programs Office
in writing. The International Programs Committee may allocate up to $75 \%$ of available financial aid funds 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 Programs 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 or intercultural experiences, 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 must 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.
4. All summer study abroad tuition and fees must be paid in full by May 5, fall trip(s) payment due August 5, and spring trip(s) payment due January 5.

## Reserve Officer Training Corps - ROTC

The Reserve Officer Training Corps (ROTC) Programs offered through John Brown University provide unique physical and mental challenges for all aspiring leaders. Available through crosstown agreements with the University of Arkansas-Fayetteville, 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 $\$ 300$ to $\$ 450$, payment of tuition expenses, textbook payment, and payment of certain other fees. Additional information and applications for this assistance may be obtained 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. For descriptions of U.S. Air Force Aerospace Studies courses (ARO).

## 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 16 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. For descriptions of U.S. Army Military Science courses (MSC).

## 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 http://www.uark.edu/armyhog or www.afrotc.uark.edu.

## 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-3 units (two of three should be biology, chemistry, or physics)
Mathematics-3 units (Algebra I and higher)
Social Studies-3 units
American History-1 unit
Foreign Language-2 units

Total Credits-16 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-3 units

Total Credits-14 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 as stated in the Student Handbook
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 a 950 or higher on the SAT test

## 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 educated students will be admitted using the same criteria. However, home educated 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 below 480 on the SAT math section will be placed 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 $13-14$ credit hours for the first semester and 16 credit hours during the second semester.
2. Required enrollment and participation in Strategies for College Success: Gateway Seminar.
3. Bi-weekly grade checks.
4. Monthly individual meetings with the Director of Student Support Services.
5. Specialized advising and tutoring.
6. Writing Assessment and possible enrollment in Basic Writing.

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 fulltime 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 Admissions Committee for review. Any transfer student with fewer than 24 transferable hours is subject to standard high school admissions requirements (20 ACT or 950 SAT) plus 2.5 high school 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 or 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 nondegree 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 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 or the ACT, SAT, A levels or O levels. The minimum TOEFL score for admission is a total of 500 for the written exam, or 173 on the computer-based exam, or 61 on the web-based exam. 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 after students arrive on campus to place students in the appropriate level of English instruction.

International students must also provide the following:

1. Completed international application form.
2. Essay, written by the applicant, explaining reasons for wanting to attend JBU.
3. A $\$ 100$ U.S. non-refundable application fee.
4. Letter of recommendation from the following:
a. Academic reference: Principal (headmaster) of high school or the Dean of Students at a previous university
b. Personal reference: Pastor or church leader
5. Official transcripts of academic records at secondary school or university. This must be sent from the high school/university to JBU.
6. For regular freshman status, an applicant must present an examination report of an internationally recognized, standardized test: ACT, SAT, TOEFL, O Levels, A Levels, or the Caribbean Exams (CXC).
7. Health form: Immunization record including dates of two doses of

Measles/Mumps/Rubella vaccination, and current Tuberculosis (TB) screening performed in the United States if student is born or has lived in an area where TB is endemic for more than six months.
8. Bank statement or an Affidavit of Support showing ability to pay for one year's fees.
9. Copy of Passport or Birth Certificate.

When all admissions requirements have been met and the initial deposit paid, the International Programs office will issue an Immigration Form I-20. This allows the student to apply for the F1 student visa at an American Embassy.

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

## International Baccalaureate Program

Credit is awarded for higher level international baccalaureate (IB) courses accompanied by scores of five or above on the respective IB exams. JBU course equivalences and the number of credit hours awarded are determined upon evaluation of the IB work.

## Notice of Non-Discriminatory 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 2012-2013

| $\quad$Traditional Undergraduate | Per <br> Semester | Annual <br> Total |
| :--- | ---: | ---: |
| Full-time Tuition (12-18 credit hours) | $\$ 10,398$ | $\$ 20,796$ |
| General Fee | 489 | 978 |
| Room and Board (Residence Halls) | $\underline{3,951}$ | $\underline{7,902}$ |
| Total | $\$ 14,838$ | $\$ 29,676$ |

Other housing options available on a limited basis to upper-division students.

Part-time Tuition, per credit hour
\$694
Part-time General Fee ( $9-11$ credit hours) \$245

Tuition per credit hour over 18 hours \$347

Independent Study, per credit hour (in addition to regular tuition) \$105
Online Course Fee, per credit hour \$66

Summer 2013 Tuition, per credit hour \$347

Summer 2013 Room and Board, 4-week term \$1,182

## 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, with no course or cumulative hour restrictions
> Students 30 to 54 - one-half of regular rate, enrollment in two courses or 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.

## Tuition Deposit

A tuition deposit of $\$ 300$ is required of all new applicants who have tentative or final acceptance status. This deposit is fully refundable before 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 22 years of age or older are permitted to live off campus. Students who have lived in JBU housing for at least six semesters are eligible to apply to the Student Development office for approval to live off campus.

## Room Damage 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 semester.

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 deposit will be held as a deposit on the student 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 by the Residence Life Directors, 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 12-16- or a 21-meal-per-week option. The cost is the same; the difference is that the 12and 16-meal option gives the student a larger spending account in the California Cafe.

Residents of the Townhouses are required to participate in a minimum 7-meal plan.

Non-resident students are offered two commuter options:

1. $\$ 525$ which provides 50 meals in the cafeteria and $\$ 175$ in bonus points for use in the California Café or
2. $\$ 286$ which provides 25 meals in the cafeteria and $\$ 105$ for use in the California Cafe

A detailed compilation of costs can be viewed on our web site.

## Additional Fees

For the 2012-2013 school year students may incur additional fees, depending on major and residential status. A detailed compilation of additional fees can be viewed on our web site.

## Graduation Fee \$35

Each graduating student is required to pay this fee, without regard to commencement participation. The fee will appear on the student's account at the time the application for graduation has been submitted. 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 \$100 Internationals \$200

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 prior to the start of each semester. Payment will be the semester's charges less pending financial aid (i.e. scholarships, grants, and loans). A payment plan option is available to students in good financial standing-payment plan fees are $\$ 50$ per
semester. Payment policy and payment plan details are available on the Student Accounts \& Cashiering Services web page. 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. Paper check, E-check, VISA, MasterCard, Discover, and American Express are accepted.

Students who fail to comply with their current payment schedule are subject to finance charges and termination of enrollment. Official transcripts of academic credits are not released while any balance is owed JBU. The university engages professional collection agencies when collecting 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:
$100 \%$ 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 the number of weeks in the term.
Commuter meal plans are pro-rated to the number of meals used.
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 are presented in different formats and are not subject to the above refund schedule. Students in traditional summer courses withdrawing from a course are entitled to receive a tuition refund according to the following schedule:
$100 \%$ before the second class meeting.
$90 \%$ before the third class meeting.
$80 \%$ before the fourth class meeting.
$60 \%$ before the fifth class meeting.
$40 \%$ before the sixth class meeting.
$20 \%$ before the seventh class meeting.

No refund after the seventh class meeting.

## Music Fees

## $\underline{\text { Per Semester }}$

Private Lessons:
One Lesson Weekly ..... \$ 250
Two Lessons Weekly ..... \$ 500
Class Lessons in Piano ..... \$ 140
Audio Technology, each course ..... \$ 150
Music Arranging with MIDI ..... \$ 150
Practice Room Fee ..... \$ 25
Recital/Presentation Fee ..... \$ 30
Recital Recording Fee ..... \$ 70
Accompanist Fee ( $1 / 2$ recital) ..... \$ 100
Accompanist Fee (full recital) ..... \$ 200
Worship Arts Presentation ..... \$ 125

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 as well as the private lesson fees. Students whose private lessons put them at more than a full-time load (19+ hours) will be charged overload tuition and the private lesson fees for each credit hour over 18 hours.

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.

## Visual Arts Course Fees

Certain offerings in the Visual Arts Program require a technology support fee of $\$ 150$ per course.

## Education Program Fees

A per-term fee of $\$ 25$ will be charged to a student's account for Digital Portfolio.

## Medical Insurance

Each student is required to have in force a medical and hospital insurance plan sufficient to cover personal needs while in college. John Brown University recommends that all international students have health insurance with annual limits of not less than $\$ 100,000$. Students not covered by their own plan or a parent's plan will be automatically enrolled in a third party provided insurance plan. Plan fees are to be determined for the 2012-2013 academic year and plan details will be available online.

## 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 either 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, or
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 $\$ 3,000$ ). Exchange scholarship recipients through the Council for Christian Colleges \& Universities 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

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.

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 their 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. Withdrawal: a withdrawal ('W') is counted as an attempted class that was not successfully completed.
2. Incomplete: 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 course: transfer courses are counted as attempted and completed if the course work 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's Degree Programs
Bachelor's Degree Programs

Two Years
Four Years

## Scholarships

## 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:

1. ACT composite score of 29 or SAT 1280
2. 3.9 cumulative high school GPA or above (on 4.0 scale)
3. Top ten percentile ranking in high school class
4. 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 forty five Chancellor scholarships to applicants who have demonstrated outstanding academic achievement. To qualify, the following must be met:

1. ACT composite score of 29 or SAT 1280
2. 3.7 cumulative high school GPA or above (on 4.0 scale)
3. Top fifteen percentile ranking in high school class
4. 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 $\$ 2,750$ to $\$ 11,500$ 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 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, cross-country, cheerleading, and golf, or women's basketball, soccer, volleyball, cross-country, cheerleading, and tennis.

## 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-fifth year, the program is a resounding success. Over 1,200 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 $\$ 5,550$ 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 $\$ 2,500$ 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.

## 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. Army ROTC full tuition and fee scholarship recipients will receive full room and board scholarships from JBU. See Reserve Officer Training Corps.

## 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 upperclassmen 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 eight 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 a 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 freshman at John Brown University will receive a tuition credit equal to the monies they had paid for concurrent enrollments, up to $\$ 1,260$.

The Concurrent High School Enrollment application form for local students attending the classes on the campus of JBU is available through the admissions office. Otherwise, for students attending JBU classes off campus, the application form is available through the college counselor at the high school you attend. 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 completing a Change of Catalog form in the Registrar's office. Students may submit a Change of Catalog form until they have completed 75 hours. After that point, no further catalog changes will be permitted except in case of extended absence, as described in Graduation Requirements after Extended Absence.

## 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, 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 advisors, written notices, and campus publications.

## 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 15 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 to 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.

## 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

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 Core Curriculum. Summer tuition for undergraduate work is onehalf the regular credit hour rate. Housing and meal plans are available on campus during the session.

## Credit by Examination

Means of establishing credit include the College-Level Examination Program (CLEP), Advanced Placement Programs (AP), International Baccalaureate Program (IB), and in some cases, teachermade 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. Students are not permitted to take the CLEP test for any course in which they are currently enrolled or have been enrolled in during the current semester. Details about examination approval and course equivalence are available from the Registrar's office. Graduating seniors must have completed all CLEP exams before the first day of their final term in residence. CLEP exams are administered by the Office of Academic Assistance.

## 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 $\$ 105$ per semester hour will be charged to the student. In some special circumstances, the division chair may waive the fee. The student will pay all normal per-credit tuition charges for hours below 12 or above 18 hours.

## Prerequisites and Corequisites

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 complete both the freshman level Core Curriculum Bible courses by the end of their 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.

All new students must complete the Gateway Seminar in Christian Scholarship during their first semester of attendance.

## 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.

## GPA

Sem 3.0 to 3.24

Sem 3.25 to 3.49

Sem 3.5 or better

Cum Below 2.0 (Academic Probation)

## Next semester maximum

19 semester hours

20 semester hours

21 semester hours

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 Associate Dean of Academic Services.

The maximum summer term load is six 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 limitations in the course load. No student is permitted to enroll for the semester after the end of the tenth day of classes.

## Auditing Courses

Students may register for courses on a non-credit or audit, 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 a statement of grading criteria for satisfactory participation from the instructor. 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 eighth 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 Associate Dean of Academic Services.

Every student withdrawing from the university before the end of a semester is required to obtain from the Student Development office an application for withdrawal, 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 official transcript is issued without charge; a $\$ 2$ charge is incurred for each transcript thereafter.

## Access to Educational Records

The Family Educational Rights and Privacy Act of 1974 (FERPA) 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.

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. Students will be allowed to make up for full credit work missed because of an excused absence. Under the following circumstances and absence will be excused:
a. Death or serious illness in the immediate family.
b. Participation in intercollegiate athletic events.
c. Class field trips which are required as class assignments. *
d. Club trips which are designated as educational in nature.*
$e$. Trips sponsored or sanctioned by the university authorities as university business.
f. Trips required by Armed Services or the Veterans Administration.
g. Local emergencies requiring the immediate attention of certain students.
h. 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 in the syllabus at the beginning of the semester.

Other absences are considered unexcused.
Procedure for 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 must be established 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. It is the responsibility of the student to notify the professor in advance of any class activity that will interfere with class attendance. Such notification must be made in a manner consistent with the stated expectations in the professor's course syllabus.

* Professors and club sponsors must propose educational trips to the Dean of Undergraduate Studies for approval as excused absences. Educational trips should be planned in such a way as to minimize potential conflicts with other classes as much as possible.

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 consecutive days may be withdrawn from John Brown University for non-attendance. It is the responsibility of the student to contact instructors, advisor, registrar, Business office, Financial Aid, and Student Development if extenuating circumstances exist. Courses will not be recorded if the withdrawal occurs before the eighth week of the semester. Students will have a grade of 'WP' (withdrawn, passing) or 'WF' (withdrawn, failing) recorded if they are withdrawn after the seventh 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 therefore attendance is a requirement for all students (see Student Handbook). 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, in 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
U - Unsatisfactory
NC - No credit earned
WP - Withdrew, passing
WF - Withdrew, failing
W - Withdrew

An incomplete ('I') grade must be made up within 30 days after the official grade reporting date. After the 30 days, the incomplete grade will be changed to a grade of ' F '. In extenuating circumstances, the instructor may request an extension date from the Associate Dean of Academic Services. 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 term grade point average, and at least 3.8 term grade point average 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-cumulative grade point average at least 3.6
Magna Cum Laude-cumulative grade point average at least 3.8
Summa Cum Laude-cumulative 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."

## University Honors Degree

Each student who has successfully completed twenty-one hours of honors courses (as outlined under Honors Scholars Program) 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 their senior year, a citizen of the United States, and must have average grades or better.

## Alpha Chi

Membership in Alpha Chi National College Honors 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.

## Academic Probation and Required Achievement for Continued Enrollment

1. A full-time 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 academic 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 reenroll if satisfactory progress is being made toward a 2.0 CGPA as determined by the Committee on Scholastic Petitions.
6. A student on Academic Probation may remain eligible for some types of financial aid, if standards for Satisfactory Academic Progress are met.

## Appeal Process

Occasionally a student may wish to appeal an academic action such as a grade, 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 advisor, 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.Ed.). 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 Education Division. 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.

## Requirements for Additional Bachelor's Degree

For Two bachelor's degrees, a minimum of 154 semester hours must be completed, incorporating all program specifications. Students completing two degrees may fulfill the Core Curriculum requirements of the degree program with the fewest Core requirements. The major requirements of each degree program must include 24 or more semester hours of course work not included in the major field of the other degree program. At least two upper-division courses in the second major field must be taken in residence at JBU. 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.

## 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

1. Develop a mature, discerning Christian faith.
2. Demonstrate Christian character in all areas of life.
3. Build and nurture healthy relationships.
4. Understand and practice emotional maturity.

HAND

1. Serve others.
2. Practice Christian stewardship of their bodies, time, and other resources.
3. Apply Christian ethics to society and the environment.
4. 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
KIN 1002 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 2013 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 most current list.

- Wellness Activity-1 hour


## KIN 1011-91 Wellness Activity Courses

- Natural Science-6 hours (students select three hours from Life Sciences and three hours from Physical Sciences)

Life Science options:
BIO 1003 Biological Science
BIO 1124 Cell Biology
BIO 1134 Plant Biology
BIO 2134 Animal Biology
Physical Science options:
CHM 1014 Fundamentals of Chemistry
CHM 1124 General Chemistry I
GSC 1023 Physical Science
GSC 1033 Astronomy
PHY 1114 Fundamentals of Physics
PHY 2114 General Physics I

- Mathematics-3 hours

BUS 2193 Business Statistics
MTH 1123 Survey of Calculus
MTH 1134 Calculus I
MTH 2003 Introduction to Statistics
MTH 2103 Applied Statistics for Scientists
PSY 2383 Statistics for the Behavioral Sciences

- Philosophy-3 hours

POL 3003 Political Philosophy (or RPH 3013)
RPH 3003 Introduction to Philosophy

- The Arts-3 hours

ART 2163 Irish Art and Culture
ART 2233 Art History I
ART 2333 Art, Design, and Creativity
ART 2343 European Art Tour
COM 2083 Masterpieces of Film
MUS 1203 Liberal Arts Foundations for the Musician
MUS 2003 The Arts in Western Culture
MUS 3003 Masterpieces of Music

- Social Science-3 hours

ECN 2003 Basic Economics
ECN 2113 Principles of Microeconomics
ECN 2123 Principles of Macroeconomics
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

BBL 3583 Perspectives on the World Christian Movement
ECN 4103 International Economics

EN 3513 International Problem Solving
GSC 3003 Global Stewardship
HST 3443 The Modern Middle East
HST 3473 African Civilization since 1850
ICS 2991/93 ${ }^{1}$ Study Abroad Experience
ICS 3173 Selected Topic: History and Culture of Ireland
ICS 4113 Intercultural Family Seminar
INT/MGT 2183 International Management
INT/MKT 3153 International Marketing
LS 1593 Introduction to Latin America
POL 2213 Comparative Politics
RPH 3533 Introduction to Islam
RPH 3543 Introduction to Hinduism and Buddhism
SST 1133 Cultural Geography
SST 1143 World Regional Geography
> 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-Division Core Classes-8 hours

BBL 3003 Evangelical Theology
BBL 4002 Capstone Seminar in Christian Life
EGL 4003 Masterpieces of Literature
${ }^{1}$ Students who plan to spend a minimum of four weeks in a cross-cultural experience may take ICS 2991/93 Study Abroad Experience as an Independent Study course to fulfill their Global Studies requirement. The student must arrange to complete ICS 2991/93 before participating in the crosscultural experience. Further information is available through the International Programs office.

## Global Studies Exemptions

International students are exempt from the Global Studies requirement. Students from the United States who have significant cross-cultural life experiences may qualify for Global Studies exemption. Students should consult the Global Studies Exemption form on the JBU web site to determine if they have sufficient cross-cultural experience to apply for exemption.

## 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. Cocurricular 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 Academic 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 for Leadership and Ethics, the Center for Relationship Enrichment, and the student leadership programs.

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

## Additional Requirements for the Bachelor's 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 (SRA). Students are re-tested as seniors with an Exit Assessment 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 course work, 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 course work.

Each bachelor's degree program requires a minimum of 36 semester hours in the major field, including a minimum of 18 hours of upper-division courses - 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.

A second major may be added to any degree program providing all of the requirements of both major fields are met.

Most bachelor's degrees require a minimum grade point average of 2.25 for major area course work. The Education Division 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 to 21 semester hours, in accordance with the department's specifications, including at least six hours of upper-division courses. The minimum grade point average for course work in the minor is 2.0.

## Upper-Division Course

Each candidate for a bachelor's degree is required to submit a minimum of 35 hours in upperdivision (junior-senior) courses, identified by numbers 3000 and above. Included in this total are the eight 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 12 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 course work 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 2.7 , and at least 2.5 in professional education, the teaching field, and any other staterequired 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.

## Residence Requirements

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

1. Completion (after achieving junior standing) of at least two full-time semesters in residence.
2. Completion (by means of courses taken in residence) of at least 36 of the final 45 semester hours of credit presented in fulfillment of degree requirements. CLEP credit is not considered as "taken in residence."

## 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 advisor and registrar. Approval forms are available in the Registrar's office.

## Transfer of Credit

Credit which has been earned at another institution will be reviewed by both 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.

John Brown University accepts credit from regionally accredited institutions and Bible credit from schools accredited by the Association for Biblical Higher Education (ABHE). Transfer credits from international affiliated institutions are evaluated on a case by case basis.

Currently enrolled students planning to take summer courses or correspondence work at other institutions must receive prior written approval of the major advisor 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 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 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.

## Additional Bachelor's Degree After Conferral of First Degree

When a student desires to begin an additional bachelor's degree at JBU after having had one or more bachelor's degrees conferred by JBU, the student must apply through the admissions process as a degree-seeking student.

At the point in time when the first degree is conferred, that degree is frozen. No additional majors, minors, or emphases will be added to the degree, and the GPA for the degree is final. If a second degree is in progress at the time the first degree is conferred, then the student will be allowed to complete the second degree without readmission.

For an additional degree, the core curriculum will be considered met except for any additions to the core which have occurred since the catalog under which the student earned the previous degree(s). The student will meet the requirements for the degree in the catalog that is current when he/she applies for readmission. The student must complete at least 30 unique major hours for the second degree and at least nine unique hours for a new minor.

## Application for Graduation

An application for Graduation form, available online as part of pre-registration, should be completed when registering for the final semester in residence before completion of degree requirements. This application provides information regarding the graduation fee, exit assessment requirements, and 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 five weeks prior to commencement, the student must provide to the transferring institution a Commencement Participation Approval form, available from the Registrar's office. The deadline for returning this form is specified on the JBU commencement web site.

## 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

A student who re-enrolls in the university after an absence of seven or more years and completes one full-time semester or term with a 2.0 GPA or higher may request a "Fresh Start" by petitioning the appropriate Academic Dean. This petition must be made within one semester following the first semester in which a 2.0 or greater is earned. If the petition is approved, none of the credits earned prior to the absence will be included in the GPA calculation and only those with a 'C' or higher may be used to fulfill graduation requirements. In effect, the Fresh Start treats early JBU work as transfer work. After the "Fresh Start" is applied to a student's transcript, those courses with a 'C' or higher will be designated by 'CR' and those with a 'C-' or lower will be designated by 'NC'.

## 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:

1. Lower-level Core Classes-19 hours

BBL 1013 Old Testament Survey
BBL 1023 New Testament Survey
COR 1002 Gateway Seminar in Christian Scholarship
KIN 1002 Wellness
EGL 1013 English I: Composition
EGL 1023 English II: Literary Analysis and Research
One of the following:
HST 1013 Western Civilization I
HST 1023 Western Civilization II
2. Elective Core Classes-9 hours

Mathematics-3 hours
BUS 2193 Business Statistics
MTH 1123 Survey of Calculus
MTH 1134 Calculus I
MTH 2003 Introduction to Statistics
MTH 2103 Applied Statistics for Scientists
PSY 2383 Statistics for the Behavioral Sciences

Social Science-3 hours:
ECN 2003 Basic Economics
ECN 2113 Principles of Microeconomics
ECN 2123 Principles of Macroeconomics
ED 2133 Educational Psychology
FAM 2123 Psychology of Relationship Development
PSY 1013 Introductory Psychology
Natural Science-3 hours:
BIO 1003 Biological Science
BIO 1124 Cell Biology
BIO 1134 Plant Biology
BIO 2134 Animal Biology
CHM 1014 Fundamentals of Chemistry
CHM 1124 General Chemistry I
GSC 1023 Physical Science
GSC 1033 Astronomy
PHY 1114 Fundamentals of Physics I
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 JBU.

## Correspondence and Extension Work

A maximum of 15 hours of credit may be allowed for extension work, including examinations for the establishment of credit.

## Grade Point Average

The grade point average must be at least 2.0 in work presented for an associate's 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.

## 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

Allen, C. Balzer, Blankenship, Brisben (chair), Bruce, Castleman, Klotz, Lanker, Ogle, Reed, Vila

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

1) To equip each student 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 14 hours of course work in the Core Curriculum -

## Old Testament Survey

## New Testament Survey

## Evangelical Theology

## Introduction to Philosophy

## Capstone Seminar in Christian Life

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 minor in Biblical and Theological Studies, a major in Philosophy, and minors in Church Leadership, New Testament Greek, and Religion and Philosophy.

## 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. Majors in Biblical and Theological Studies must complete 12 hours of language studies, including at least two semesters of New Testament Greek.

1. University Core Curriculum- 55 hours
2. Courses Specified by this Division-9 hours

BBL 34_3 A New Testament book study
CMN 1213 Christian Leadership and Service
RPH 3323 Philosophy of the Christian Faith
3. Required Major Field Courses-39 hours

BBL 2513 Elementary New Testament Greek I
BBL 2523 Elementary New Testament Greek II
BBL 3363 History of the Christian Church I
BBL 3373 History of the Christian Church II
BBL 34_3 A New Testament book study
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 $\underline{3523}$

BBL 36_3 An Old Testament book study
BBL 36_3 An Old Testament book study

BBL 4473 Seminar in Biblical Studies
BBL 4493 Seminar in Theological Studies
RPH 4423 Ethics
RPH 4433 Philosophy of Religion
4. Electives as necessary to complete minimum total hours

Minimum total semester hours 124

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

When the Apostle Paul was in Athens, he spoke with Epicurean and Stoic philosophers in that city. Christians today continue that conversation, for the sake of the church and for the world, and some Christians have been remarkable philosophers in their own right (e.g., Augustine and Aquinas).

Philosophy resembles mathematics, in its rigor and clarity; history, in its sensitivity to people and ideas across cultures and ages, and literature, in its concern for articulate expression.

Philosophy majors are well positioned to pursue any career that requires analytical reasoning, as well as graduate school in philosophy, theology, ministry, business, law, or medicine.

1. University Core Curriculum-55 hours
2. Courses Specified by this Division-9 hours

BBL 34_3 A New Testament book study
CMN 1213 Christian Leadership and Service
RPH 3323 Philosophy of the Christian Faith
3. Required Major Core Courses- 15 hours

RPH 2323 Logic
RPH 3343 Ancient \& Medieval Philosophy
RPH 3353 Modern Philosophy
RPH 4423 Ethics

RPH 4433 Philosophy of Religion
4. Electives in Philosophy/Religious Studies (minimum of 12 hours)

BBL 4493 Seminar in Theological Studies
EGL 3713 Literary Theory
POL 3003 Political Philosophy
RPH 3003 Introduction to Philosophy
RPH 3533 Introduction to Islam

RPH 3543 Introduction to Hinduism and Buddhism
RPH 4481/82/83 Special Topics in Religion/Philosophy
5. Language Requirement - 12 hours
6. Electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . . 124

## Requirements for minor in Biblical and Theological Studies

The student must successfully complete a minimum of 21 hours beyond the Core.
Required Courses-15 hours
BBL 3363 History of the Christian Church I

BBL 3373 History of the Christian Church II
BBL 34_3 A New Testament Book Study
BBL 36_3 An Old Testament Book Study
One of the following:
BBL 4473 Seminar in Biblical Studies
BBL 4493 Seminar in Theological Studies

An additional six hours from among BBL or RPH courses

## Requirements for minor in Church Leadership

The student must successfully complete a minimum of 18 hours.
Required Courses-12 hours
BBL 3353 Theology of Worship
CMN 2263 Discipleship and Evangelism
CMN 4613 Internship in Christian Ministry
One of the following:
BBL 3223 Communicating the Christian Message
CMN 2313 Christian Formation of Adolescence
COM 2523 Public Speaking
ICS 2113 Intercultural Communications
Six hours from the following:
RPH 3323 Philosophy of the Christian Faith
RPH 4433 Philosophy of Religion
Or six hours from BBL or RPH (must be upper-division courses)

## Requirements for minor in New Testament Greek

The student must successfully complete a minimum of 21 hours.
Required Courses-15 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
LS 3173 Introduction to Linguistics
Six hours from the following:
BBL 4512 Greek Reading and Exegesis
BBL 4581/82/83 Selected Topics: New Testament Greek

## Requirements for minor in Religion and Philosophy

The student must successfully complete a minimum of 21 hours beyond the Core.
Required Courses-15 hours
RPH 2323 Logic
RPH 3343 Ancient \& Medieval Philosophy
RPH 3353 Modern Philosophy
RPH 4423 Ethics
RPH 4433 Philosophy of Religion
One of the following:
RPH 3533 Introduction to Islam
RPH 3543 Introduction to Hinduism and Buddhism
An additional three hours from among BBL or RPH courses.

## DEPARTMENT OF CHRISTIAN MINISTRY

(SYMBOL: CMN)
The Department of Christian Ministry seeks to equip students with biblical and professional knowledge and practical skills for service and ministry, as well as for graduate study in the field
of Christian leadership, formation, and evaluation. The department's intent is to develop graduates who are qualified to work with children, youth, and families in a variety of domestic and international venues such as churches, social service agencies, inner city ministries, camp and recreation settings, and parachurch organizations.

## Requirements for the Bachelor of Science (B.S.) degree with major in Child and Family Studies

Students who major in Child and Family Studies will be prepared to work with children and families in a wide variety of settings: social service agencies, international benevolent organizations, Christian care facilities for abused or special needs children, foster care group settings, and mission settings, as well as parachurch organizations and churches. Offering holistic care and support-emotional, social, physical, and spiritual support-for children and families is the primary focus of this major.

1. University Core Curriculum-55 hours
2. Courses Specified by this Division-9 hours

BBL 34_3 A New Testament book study
CMN 1213 Christian Leadership and Service
RPH 3323 Philosophy of the Christian Faith
3. Required Major Field Courses-38 hours

BBL 36_3 An Old Testament book study
CMN 2303 Creating Holistic Curriculum for Children in Crisis

CMN 3273 Critical Concerns with Children
CMN 3453 Nurturing Spiritual Development in Children
CMN 4221 Introduction to Senior Seminar
CMN 4443 Critical Concerns with Adolescents
CMN 4463 Senior Seminar
CMN 4493 Ministering to Families across the Life Span
FAM 2133 Introduction to Family Science

FAM 3133 Marriage and Family Living
FAM 3223 Principles of Effective Parenting

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 total hours

Minimum total semester hours 124
*The CFS major with a minor in FHS will qualify the student for CFLE Certification (ECN 2003 must be taken as the Social Science option to meet CFLE requirements).

## Requirements for minor in Child and Family Studies

The student must successfully complete a minimum of 18 hours.
BBL 34_3 A New Testament book study
CMN 1213 Christian Leadership and Service
CMN 2303 Creating Holistic Curriculum for Children in Crisis
CMN 3273 Critical Concerns with Children
CMN 3453 Nurturing Spiritual Development in Children
FAM 2133 Introduction to Family Science

## 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-55 hours
2. Courses Specified by this Division-9 hours

BBL 34_3 A New Testament book study
CMN 1213 Christian Leadership and Service
RPH 3323 Philosophy of the Christian Faith
3. Required Major Field Courses-42 hours

CMN 2223 Challenge Course Programs and Management

CMN 2263 Discipleship and Evangelism
CMN 2313 Christian Formation of Adolescents

CMN 2373 Principles and Practices of Experiential Education
CMN 2383 Outdoor Living Skills
CMN 3213 Camp Leadership and Management
CMN 4113 Wilderness First Responder
CMN 4221 Introduction to Senior Seminar
CMN 4433 Capstone in Christian Ministry
CMN 4463 Senior Seminar

CMN 4614 Internship in Christian Ministry (two sections required)
FAM 2133 Introduction to Family Science

FAM 4443 Critical Concerns with Adolescents
4. Minor in an approved field, or select two of the following concentrations choosing nine unique hours from each:
A. Church Ministry

BBL 3353 Theology of Worship
BBL 3363 History of the Christian Church I
BBL 3373 History of the Christian Church II
BBL 36_3 Old Testament book study
B. Counseling Ministry

FAM 4253 Family Communication
PSY 2203 Theories of Personality
PSY 2233 Theories of Counseling
PSY 2243 Introduction to Therapeutic Interviewing
C. Intercultural Ministry

ICS 2113 Intercultural Communications
ICS 4183 Cultural Values Seminar
RPH 4433 Philosophy of Religion
SST 2123 Cultural Anthropology
D. Ministry Leadership

LDR 2563 Leadership Competencies
LDR 2552 Service Learning
LDR 3563 Organizational Leadership
LDR 3651 LSI Capstone Practicum
E. Para-church Ministry

BBL 3353 Theology of Worship
CMN 3473 Ministry Resources
FAM 4253 Family Communication
RPH 4433 Philosophy of Religion
F. Worship Ministry

BBL 3353 Theology of Worship
BBL 36_3 Old Testament book study
MUS 2503 Worship Arts I: Orientation
MUS 2513 Worship Arts II: Materials and Methods
G. Youth and Family Ministry

CMN 3453 Nurturing Spiritual Development in Children
FAM 3133 Marriage and Family Living
FAM 3223 Principles of Effective Parenting
FAM 4253 Family Communication
5. Electives as necessary to complete minimum total hours

Minimum total semester hours124

## Requirements for minor in Outdoor Leadership Ministries

The student must successfully complete a minimum of 18 hours beyond the Core.
CMN 2223 Challenge Course Programs and Management
CMN 2263 Discipleship and Evangelism
CMN 2373 Principles and Practices of Experiential Education

CMN 2383 Outdoor Living Skills
CMN 3213 Camp Leadership and Management
CMN 4113 Wilderness First Responder

## 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 parachurch 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-55 hours
2. Courses Specified by this Division-9 hours

BBL 34_3 A New Testament book study
CMN 1213 Christian Leadership and Service

RPH 3323 Philosophy of the Christian Faith
3. Required Major Field Courses-42 hours

BBL 3223 Communicating the Christian Message
CMN 2263 Discipleship and Evangelism
CMN 2373 Principles and Practices of Experiential Education
CMN 2313 Christian Formation of Adolescents
CMN 2463 Youth Culture

CMN 4221 Introduction to Senior Seminar
CMN 4433 Capstone in Christian Ministry
CMN 4463 Senior Seminar
CMN 4493 Ministering Across the Lifespan

CMN 4614 Internship in Christian Ministry (two sections required)
FAM 2133 Introduction to Family Science

FAM 3243 Family Sexuality
FAM 4443 Critical Concerns with Adolescents
4. Minor in an approved field, or or select two of the following concentrations choosing nine unique hours from each:
A. Church Ministry

BBL 3353 Theology of Worship
BBL 3363 History of the Christian Church I

BBL 3373 History of the Christian Church II

BBL 36_3 Old Testament book study
B. Counseling Ministry

FAM 4253 Family Communication
PSY 2203 Theories of Personality

PSY 2233 Theories of Counseling
PSY 2243 Introduction to Therapeutic Interviewing
C. Intercultural Ministry

ICS 2113 Intercultural Communications

ICS 4183 Cultural Values Seminar
RPH 4433 Philosophy of Religion
SST 2123 Cultural Anthropology
D. Ministry Leadership

LDR 2563 Leadership Competencies
LDR 2552 Service Learning
LDR 3563 Organizational Leadership
LDR 3651 LSI Capstone Practicum
E. Outdoor Leadership Ministry

CMN 2223 Challenge Course Programs and Management
CMN 2383 Outdoor Living Skills
CMN 3213 Camp Leadership and Management
CMN 4113 Wilderness First Responder
F. Para-church Ministry

BBL 3353 Theology of Worship
CMN 3473 Ministry Resources

FAM 4253 Family Communication
RPH 4433 Philosophy of Religion
G. Worship Ministry

BBL 3353 Theology of Worship
BBL 36_3 Old Testament book study
MUS 2503 Worship Arts I: Orientation
MUS 2513 Worship Arts II: Materials and Methods
H. Youth and Family Ministry

CMN 3453 Nurturing Spiritual Development in Children
FAM 3133 Marriage and Family Living
FAM 3223 Principles of Effective Parenting
FAM 4253 Family Communication
5. Electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . . 124

## Requirements for minor in Youth Ministries

The student must successfully complete a minimum of 18 hours beyond the Core.
BBL 3223 Communicating the Christian Message
CMN 2263 Discipleship and Evangelism
CMN 2373 Principles and Practices of Experiential Education
CMN 2313 Christian Formation of Adolescents
CMN 2463 Youth Culture
FAM 4443 Critical Concerns with Adolescents

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

The Youth and 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-55 hours
2. Courses Specified by this Division-9 hours

BBL 34_3 A New Testament book study

CMN 1213 Christian Leadership and Service
RPH 3323 Philosophy of the Christian Faith
3. Youth Ministry Core-36 hours

BBL 3223 Communicating the Christian Message
CMN 2263 Discipleship and Evangelism
CMN 2313 Christian Formation of Adolescents
CMN 2463 Youth Culture
CMN 4221 Introduction to Senior Seminar
CMN 4433 Capstone in Christian Ministry
CMN 4463 Senior Seminar
CMN 4493 Ministering to Families across the Life Span
CMN 4614 Internship in Christian Ministry (two sections required)
FAM 2133 Introduction to Family Science
FAM 4443 Critical Concerns with Adolescents
4. Worship Ministry Core-18 hours

MUS 1111 Musicianship I
MUS 1113 Theory I
MUS 1931/41/91 Applied/Class Piano (2 hours)
MUS 1951/61/81 Applied/Class Voice (2 hours)
MUS 2503 Worship Arts I: Orientation
MUS 2513 Worship Arts II: Materials and Methods
MUS 3563 Audio Technology I
One of the following:

MUS 3101 Survey of Instruments
MUS 3411 Conducting I
5. Electives as necessary to complete minimum total hours

Minimum total semester hours 125

## DEPARTMENT OF FAMILY AND HUMAN SERVICES

(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 and Human Services seeks to better equip for this service by offering a bachelor's program in Family and Human Services and a minor in Family and Human Services. This innovative curriculum, which follows the course guidelines of the National Council for Family Relations, incorporates Family and Human Services courses with course work 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- 55 hours

Social Science component must be ECN 2003.
Mathematics component must be PSY 2383.
2. Courses Specified by this Division-6 hours

CMN 1213 Christian Leadership and Service
RPH 3323 Philosophy of the Christian Faith
3. Required Major Field Courses-41 hours

FAM 2133 Introduction to Family Science

FAM 2413 Developmental Psychology
FAM 3133 Marriage and Family Living

FAM 3223 Principles of Effective Parenting

FAM 3243 Family Sexuality
FAM 4221 Introduction to Senior Seminar

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
PSY 1013 Introduction to Psychology

RPH 4423 Ethics

Internship-4 hours from FAM 4611, 4612, or 4614
4. Minor in an approved field or nine unique hours from each of any two of the following concentrations:
A. Child and Family Studies

BBL 34_3 A New Testament book study
CMN 2303 Creating Holistic Curriculum for Children in Crisis

CMN 3273 Critical Concerns with Children

CMN 3453 Nurturing Spiritual Development in Children
B. Child and Adolescent Development

CMN 2463 Youth Culture
CMN 3273 Critical Concerns with Children

CMN 3453 Nurturing Spiritual Development in Children

PSY 2203 Theories of Personality
C. Psychology

PSY 2233 Theories of Counseling
PSY 2393 Research Methods
PSY 3423 Social Psychology
PSY 4213 Abnormal Psychology
D. Wilderness Counseling

CMN 2223 Challenge Course Programs and Management
CMN 2373 Principles and Practices of Experiential Education
CMN 3213 Camp Leadership and Management
PSY 2233 Theories of Counseling
E. Pre-Counseling

CMN 4493 Ministering to Families across the Life Span
ICS 2113 Intercultural Communications

PSY 2233 Theories of Counseling
PSY 2243 Introduction to Therapeutic Interviewing
F. Criminology

POL 3133 Politics of Social Policy
PSY 4213 Abnormal Psychology
POL 4243 Constitutional Law
SST 1113 Introduction to Sociology
G. Social Justice

HST 2323 Poverty and Welfare in American History
POL 3133 Politics of Social Policy
POL 3213 Faith and Politics
RPH 4423 Ethics
5. Electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in Family and Human Services

The student must successfully complete a minimum of 18 hours.
Required Courses-15 hours
FAM 2133 Introduction to Family Science
FAM 3133 Marriage and Family Living
FAM 3243 Family Sexuality
FAM 4253 Family Communication
RPH 4423 Ethics
An additional three hours of approved electives from FAM 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 (ICS) 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, ICS majors might choose the TESOL minor if they want 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-52 hours

The Global Studies component is covered by program requirements.
2. Courses Specified by this Division-9 hours

BBL 34_3 A New Testament book study
CMN 1213 Christian Leadership and Service
RPH 3323 Philosophy of the Christian Faith
3. Intercultural Studies Major Core-15 hours

ICS 2113 Intercultural Communication

ICS 4123 Intercultural Internship
ICS 4183 Cultural Values Seminar
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. International Studies

ICS 3133 Cultural Research Methods
ICS 4133 Intercultural Leadership Skills
POL 3353 International Relations
SST 1143 World Regional Geography
B. Intercultural Ministries

CMN 2263 Discipleship and Evangelism
RPH 4433 Philosophy of Religion
One of the following:
BBL 3303 Theology of Missions
BBL 3583 Perspectives on the World Christian Movement
One of the following:
ICS 3243 Principles and Philosophy of Community Development
ICS 4133 Intercultural Leadership Skills
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 three hours of language.
6. Minor in TESOL, Linguistics, or other approved minor

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 and Instruction: TESOL (Prerequisite: ED 2133)
ED 3183 Educational Assessment
7. Electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . . . . . 124

## Requirements for minor in Intercultural Studies

A student must successfully complete a minimum of 21 hours.
Required Courses-9 hours
One of the following:
ICS 2113 Intercultural Communication
SST 2123 Cultural Anthropology
One of the following:
BBL 34_3 A New Testament book study
BBL 36_3 An Old Testament book study

One of the following:
ICS 3243 Principles and Practice of Community Development

## ICS 4133 Intercultural Leadership Skills

An additional 12 hours of CMN, ICS, and RPH courses selected in accordance with the student's vocational goals.

At least six hours must be upper-division courses.

## DIVISION OF

## BUSINESS

Balla, Butts, Fast, Kennelley, McCullough (chair), M. Moore, Rothfuss, Suarez
Building upon the university foundation, the Division of Business accepts the following as its own unique mission:

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

Accordingly, our "Business at JBU" programs demonstrate the following core values in all its program development and delivery:

* Christian faith
* Service to students
* Significance of relationships
* Academic stewardship
* Preparing leaders
* Unity among diversity

Driven by our core values to achieve our mission, "Business at JBU" seeks to provide an educational environment characterized by the following:

* integration of faith with the learning process
* respect for the worth of the individual
* up-to-date curriculum
* ability to process knowledge
* emphasis on people skills
* the Christian concept of stewardship


## 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, and Marketing. Students may choose from the following areas as minor fields of study: Accounting, Business Administration, Economics, International Business, Leadership Studies, Management, Marketing, Professional Accounting Development, and Sport Management (minor no longer available, effective July 1, 2012).

The Division of Business partners with the Degree Completion Program to offer the Organizational Management degree with emphases in Business Information Systems and Healthcare. These programs are in nontraditional format for working adults leading to the Bachelor of Science (B.S.). This program is described in the Degree Completion Catalog and on the web site www.jbu.edu/dcp/degree_programs.

In addition, JBU offers a Master of Business Administration (MBA) degree with three different emphases and two Master of Science (MS) degrees in Leadership. All master level programs are described on the web site www.jbu.edu/grad/.

All Business degree programs are accredited by the International Assembly for Collegiate Business Education (IACBE), www.iacbe.org, phone (913) 631-3009 (through 2012). All Business programs are candidates for accreditation through The Accreditation Council for Business Schools and Programs (ACBSP), www.acbsp.org, phone (913) 339-9356.

## Graduation Requirements for Baccalaureate Degree

## Outcomes Assessment

As a condition for graduation, students in all baccalaureate programs within the Division of Business are required to take the Major Field Test in Business during their final year. The testing is done at the end of the Capstone class, Strategic Management BUS 4993.

Traditional undergraduate students are also required to obtain a business internship during the summer before their final year, through the Accounting/Business Internship BUS 3993.

## Divisional GPA

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

## Preparation for the MBA Degree

The degree programs of the Division of Business are excellent preparation for the MBA degree at John Brown University. Students planning to enter graduate studies at another university should check the specific prerequisite requirements of that program.

## DEPARTMENT OF ACCOUNTING

(SYMBOL: ATG)
The Accounting degree helps students develop analytical and problem solving skills within the financial context of a business. Such skills provide a foundation for students who seek additional studies leading to practice as a professional accountant. This degree can also help equip students in other careers which require analytical skills, such as law, FBI, or IRS services, and not-forprofit and mission organizations.

Accounting minor - An accounting minor will be extremely valuable to students with any other business degree. Students majoring in areas outside the business field may find the accounting minor to be a marketable addition to their plan of study.

Professional Accounting Development minor - Students interested in practicing as professional accountants are strongly encouraged to declare the Professional Accounting Development minor. This minor is appropriate for those who desire to practice as a Certified Internal Auditor (CIA), a Certified Management Accountant (CMA), or a Certified Public Accountant (CPA). Since the requirements for the CPA exam vary from state to state, students wishing to take this exam should consult with the State Board of Accountancy where the exam will be taken. Most states require 150 semester hours and some require a year or two of experience. The Professional Accounting Development minor is flexible to help students meet the requirements of various states.

The baccalaureate program in Accounting requires 124 minimum total semester hours including courses from three categories: 1) 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

Mathematics and Social Science electives are covered by program requirements.
2. Required Major Field Courses-54 hours

ATG 2173 Principles of Financial Accounting
ATG 2183 Principles of Managerial Accounting
ATG 3103 Intermediate Accounting I

ATG 3113 Intermediate Accounting II
ATG 3993 Accounting Internship
BUS 2113 Financial Spreadsheet Applications

BUS 2153 Financial Mathematics
BUS 2193 Business Statistics
BUS 3153 Applied Business Ethics
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

Three courses from among the following, as advised:
ATG 3153 Federal Income Tax Basics

ATG 3163 Advanced Federal Income Tax Topics
ATG 3173 Cost Accounting

ATG 3183 Government and Not-For-Profit Accounting
ATG 3213 Managerial Information Systems

ATG 4153 Auditing and Attestation Services

ATG 4163 Advanced Accounting
3. Minor field or electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in Accounting

Students (non-Accounting majors) must successfully complete a minimum of 21 hours.
Required Courses-15 hours
ATG 2173 Principles of Financial Accounting
ATG 2183 Principles of Managerial Accounting
ATG 3103 Intermediate Accounting I
ATG 3113 Intermediate Accounting II
BUS 2113 Financial Spreadsheet Applications
An additional six hours of electives from ATG.

## Requirements for minor in Professional Accounting Development (Accounting majors only)

Students must successfully complete a minimum of 21 hours.
A minimum of 12 hours selected from:
ATG 3153 Federal Income Tax Basics
ATG 3163 Advanced Federal Income Tax Topics
ATG 3173 Cost Accounting
ATG 3183 Government and Not-For-Profit Accounting
ATG 3213 Managerial Information Systems
ATG 4153 Auditing and Attestation Services

## ATG 4163 Advanced Accounting

An additional nine hours from the Division of Business.

Students are encouraged to select courses that will satisfy the CPA exam requirements in the state where licensure will be sought.

## 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 administration or other 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 and Web 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 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- 46 hours

Mathematics, Social Science, and Global Studies electives are covered by program requirements.
2. Required Major Field Courses-57 hours

ATG 2173 Principles of Financial Accounting
ATG 2183 Principles of Managerial Accounting
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 3143 Principles of Marketing
MTH 1113 College Algebra (or equivalent)
3. Divisional Electives-3 hours from among the following:

ATG 3213 Managerial Information Systems
BUS 2113 Financial Spreadsheet Applications
BUS 3123 Developing Applications with Access
3. Minor field or electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in Business Administration

The student must successfully complete a minimum of 21 hours.

Required Courses-6 hours
ECN 2113 Principles of Microeconomics
One of the following:
ATG 1163 Accounting for Decision Making
ATG 2173 Principles of Financial Accounting
An additional nine hours selected from BUS, excluding BUS 4993.
A minimum of six additional hours from the division.

At least six hours must be upper-division courses.

## 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

The student must successfully complete a minimum of 21 hours.
Required Courses-9 hours
ECN 2113 Principles of Microeconomics

ECN 2123 Principles of Macroeconomics
ECN 4993 Senior Research Project

An additional 12 hours of electives from ECN.

## 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 or Bachelor of Science degrees with a major in International Business requires 124 minimum total semester hours including courses from three categories: (1) the 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 may also be selected as a minor field of study.

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

## 1. University Core Curriculum- 46 hours

Mathematics, Social Science, and Global Studies electives are covered by program requirements.
2. Required Major Field Courses-57 hours

ATG 2173 Principles of Financial Accounting
ATG 2183 Principles of Managerial Accounting

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:
ATG 3213 Managerial Information Systems
BUS 2113 Financial Spreadsheet Applications
BUS 3123 Developing Applications with Access
One of the following:
ECN 4103 International Economics
INT 3113 European Trade
One of the following:
INT 2113 European Business Practices

INT 2183 International Management
One of the following:
INT 3153 International Marketing
INT 4113 Marketing Research
One of the following:
BBL 3583 Perspectives on the World Christian Movement
3 Intercultural Studies course, as advised
3. Minor field or electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in International Business

The student must successfully complete a minimum of 21 hours.

Required Courses-6 hours
ECN 2113 Principles of Microeconomics
One of the following:
ATG 1163 Accounting for Decision Making
ATG 2173 Principles of Financial Accounting
An additional nine hours of INT courses
A minimum of six additional hours from BUS, ECN, or INT
At least six hours must be upper-division courses.

## 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, including the Leader Scholars Institute and professionals from the Soderquist Center for Leadership and Ethics, 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 student must successfully complete a minimum of 19 hours.
Required courses-10 hours
LDR 2552 Service Learning
LDR 2563 Leadership Competencies

LDR 3563 Organizational Leadership
LDR 3652 Leader Scholars Institute Capstone Practicum

Nine hours from among the following:
BUS 3153 Applied Business Ethics

CMN 3213 Camp Leadership and Management
EN 4403 Engineering Management
HST 3423 Leaders in History

ICS 4133 Intercultural Leadership Skills
LDR 1511-41 Leadership Colloquium

LDR 2121 Student Leadership
LDR 2991/92/93 Students in Free Enterprise (S.I.F.E.)

MGT 3513 Human Resource Management
POL 3143 The American Presidency
PSY 3423 Social Psychology

RPH 4423 Ethics

## Leader Scholars Institute

The Leader Scholars Institute (LSI) at John Brown University is an interdisciplinary community of leader scholars committed to the academic and applied study of leadership. One of the program's distinctives is the development of a learning community focused around leadership. The program supports participants through active and reflective leadership learning both in and out of the classroom. Students in the Leader Scholars Institute are required to take the courses listed below; additionally, one credit of Leadership Colloquium is earned for each year of the LSI program successfully completed. LSI students complete their experience with graduation honors and an official notation on their transcript.

LDR 1511/21/31/41 Leadership Colloquium (optional)

## 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 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- 46 hours

Mathematics , Social Science and Global Studies electives are covered by program requirements.
2. Required Major Field Courses-57 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 Leadership
MGT 2173 Principles of Management
MGT 2183 International Management
MGT/LDR 2993 Students in Free Enterprise (S.I.F.E.)
MGT 3513 Human Resource Management
MKT 3143 Principles of Marketing
One of the following:
ATG 3213 Managerial Information Systems
BUS 2113 Financial Spreadsheet Applications
BUS 3123 Developing Applications with Access
3. Minor field or electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in Management

The student must successfully complete a minimum of 21 hours.
ATG 1163 Accounting for Decision Making
BUS 3153 Applied Business Ethics

## 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 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- 46 hours

Mathematics, Social Science and Global Studies electives are covered by program requirements.
2. Required Major Field Courses-57 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
COM 4323 Advertising
ECN 2113 Principles of Microeconomics
ECN 2123 Principles of Macroeconomics

MKT 3133 Retailing
MKT 3143 Principles of Marketing
MKT 3153 International Marketing
MKT 3163 Consumer Behavior

MKT 4113 Marketing Research
MKT 4173 Marketing Strategies
One of the following:
ATG 3213 Managerial Information Systems
BUS 2113 Financial Spreadsheet Applications
BUS 3123 Developing Applications with Access
3. Minor field or electives as necessary to complete minimum total hours

Students will be strongly encouraged to minor in journalism, public relations, communication, graphic and web design, or digital media.

Minimum total semester hours124

## Requirements for minor in Marketing

The student must successfully complete a minimum of 21 hours.

Required Courses-15 hours
BUS 2193 Business Statistics (or other approved statistics course)
COM 4323 Advertising
MKT 3143 Principles of Marketing

MKT 4113 Marketing Research
MKT 4173 Marketing Strategies
Two of the following:
MKT 3133 Retailing
MKT 3153 International Marketing
MKT 3163 Consumer Behavior

## DEPARTMENT OF SPORT MANAGEMENT

The minor in Sport Management is designed to prepare students with a strong business component to 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 athletic director, college athletics director or associate athletics director, business manager for an athletic 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.

## Requirements for minor in Sport Management (minor no longer available, effective July 1, 2012)

The student must successfully complete a minimum of 21 hours.
ATG 1163 Accounting for Decision Making
BUS 2333 Introduction to Sport Management and Recreation
BUS 2353 Commercial Recreation

BUS 4353 Sport Law
MGT 2173 Principles of Management

MGT 3323 Management in Health and Sport
MGT 3343 Sport Facility Management

## DIVISION OF

## COMMUNICATION AND FINE ARTS

Andrus, Armstrong, Edwards, Goehner, D. Gould, K. Gould, Holland, Martin, Peer, Pohle, E. Roebuck, D. Rollene, M. Smith, P. Smith, Snediker, J. Wubbena, T. Wubbena (chair)<br>The Division of Communication and Fine Arts is comprised of the Departments of Communication, Music, and Visual Arts. Bachelor's degrees are offered in Art and Illustration, Communication, Digital Media Arts, General Music, Graphic and Web Design, Music, Music Education, Photography, and Worship Arts. Minors are offered in all areas, as well as Drama.<br>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 celebrates the centrality of communication in human life through promoting effective communication across many contexts and through multiple media methods.

Varying contexts require different methods and styles of communication. Required core courses teach students human and mediated communication in a variety of contexts. Communication majors combine theory with practice. Students are encouraged to pursue their own communication interests as they seek to impact an increasingly diverse and global society.

Communication majors are well-prepared for effective communication work in media industries, business, non-profit organizations, and ministries that require excellent written, interpersonal, organizational, oral and media production skills. Creative Christian leadership is emphasized, preparing students for careers in both faith-based and secular communication fields. Local, national, and international internship and mission trip opportunities allow participating students to further develop a global perspective.

Additionally, students in the Department of Communication are actively engaged in the John Brown University community. JBU Communication students produce the award-winning student newspaper, The Threefold Advocate. Students work with online radio station MyPositiveEdge.com, and at JBU's professional radio station KLRC 101.1 FM. As part of

Golden Eagle Productions, students produce live video coverage of JBU home basketball games, and take on roles including directing, camerawork, play-by-play and color commentary. The department sponsors speech and debate competition through its award-winning forensics team, and the drama program produces two plays each year through the department's theatre workshops. All of these co-curricular programs are open to any JBU student, not just Communication majors.

Majors may shape their program with an advisor or choose to concentrate their study within one of the following areas of emphasis:

The Digital Journalism Emphasis offers students a chance to learn writing, information gathering and reporting, formatting, editing, anchoring, and producing for both traditional digital and media platforms. Among the tools that students use to report live are some of the latest technologies, such as Twitter® and Skype®. Students also study critical issues faced in today's complex communications environment. "Hands-on" experience is emphasized in the digital journalism curriculum.

The Public Relations Emphasis provides students with instruction in the principles, processes, skills, and management of public relations programs designed to attain or maintain interorganizational or social accord. Students learn both the basic skills of writing, graphics, and oral presentation, as well as the managerial functions of planning, research, campaign development, and evaluation. The program prepares students with a solid ethical foundation, an awareness of diversity and multiculturalism, and an understanding of the use of social media for strategic engagement with an organization's publics.

The Radio/TV/Web Emphasis offers students the production skills and industry knowledge necessary to change society through the development of compelling programming. This emphasis empowers students to become cultural leaders who can succeed in the burgeoning business of creating and distributing content through radio, television, and the Web. Essential industry courses expand beyond production to teach programming strategies, sales, and media entrepreneurship, plus legal and ethical considerations. Student-created content is distributed via radio, TV, DVD, and the Web, including live streaming audio/video podcasting, and various streams of social media.

The Social Advocacy Emphasis explores the connections between advocacy, as a pragmatic practice for social change, and rhetoric, as a historical tradition of public argument, within national and local contexts. Students understand advocacy as a practice that includes public argument and reasoning in multiple contexts as well as how each context demands its own set of unique actions. Students will learn to assess competing interests within a public issue as well as how to plan local, regional, and national advocacy campaigns. By the completion of the emphasis, students come to understand advocacy as a necessary part of citizenship.

The Multi-Context Emphasis provides students with the opportunity to become excellent communicators who can speak, write, and use media in a highly effective manner. Outstanding communication skills prepare students to work in a wide variety of contexts such as business, media, ministry, and non-profit organizations. Generalists choose courses from at least three of
the other department emphases (in consultation with an advisor) to build a program that best suits their goals in the communication field. Communication majors also choose department cocurricular activities according to their interests.

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

1. University Core Curriculum-55 hours
2. Communication Department Core-15 hours

COM 1133 Mass Communication and Society
COM 2123 News Writing and Reporting I
COM 2433 Diversity and Media Issues
COM 2523 Public Speaking
COM 4293 Communication Law and Ethics
3. Emphases Options:

## A. Digital Journalism Emphasis-27 hours

ART 2403 Photo 1: Introduction to Photography
COM 1153 Introduction to TV and Audio Production
COM 1163 Communication Technologies
COM 2333 Editing
COM 2353 Public Relations Writing and Technology
COM 3153 Advanced Digital Reporting
COM 3363 Magazine Writing
COM 3463 Online Editorial Journalism
COM 4323 Advertising
Digital Journalism Practicum Electives-4 to 8 hours

COM 2111, 2112 Practicum in Journalism
COM 3111, 3112 Advanced Practicum in Journalism
COM 4211, 4212 Online News Bureau Practicum

## Digital Journalism Internship-3 hours

COM 4473 Internship in Journalism

## Digital Journalism Supporting Courses-6 hours

ART 1123 Computer Graphics
At least one of the following:
COM 3453 Social Movements
COM 4253 Integrated Media
COM 4343 Programming and Promotion for Radio/TV/Web
Minor field or electives as necessary to complete minimum total hours.
Minimum total hours to graduate as a Communications Major
with Digital Journalism Emphasis 124

## B. Public Relations Emphasis-27 hours

COM 2343 News Editing for Public Relations
COM 2353 Public Relations Writing and Technology
COM 3363 Magazine Writing
COM 3433 Persuasive Communication
COM 3453 Social Movements
COM 3653 Specialized Writing in Public Relations
COM 4323 Advertising
COM 4373 Online Advocacy

COM 4453 Public Relations Planning
MKT 3143 Principles of Marketing

## Public Relations Practicum Electives-2 to 4 hours

COM 2111, 2112 Practicum in Journalism

## Public Relations Internship-3 hours

COM 4483 Internship in Public Relations
Public Relations Supporting Courses-6 hours
ART 1123 Computer Graphics
ART 2253 Graphic Design I
Minor field or electives as necessary to complete minimum total hours.
Minimum total hours to graduate as a Communications Major
with Public Relations Emphasis

## C. Radio/TV/Web Emphasis-25 hours

COM 1101 Beginning Radio Practicum
COM 1233 Audio Production
COM 1153 Introduction to TV and Audio Production
COM 1163 Communication Technologies
COM 2101 Intermediate Radio Practicum
COM 3101 Advanced Radio Practicum
COM 3421 JBU-TV EagleBreak Practicum
COM 3423 EagleBreak
COM 4253 Integrated Media
COM 4333 Advanced Television Production

COM 4343 Programming and Promotion for Radio/TV/Web

## Radio/TV/Web Elective-3 hours

COM 3153 Advanced Digital Reporting
COM 4323 Advertising
COM 4413 Selected Topics in Radio/TV/Web

## Radio/TV/Web Practicum Electives-2 hours

COM 1131, 2131 Radio/TV/Web Performance Practicum
COM 2111, 2112 Practicum in Journalism
COM 2121 Practicum in Forensics
COM 3111, 3112 Advanced Practicum in Journalism
COM 3121 Radio/TV/Web Sports Practicum
COM 3131 Radio News Practicum
COM 3141 Television Program Assistant
COM 3151 KLRC Program Assistant
COM 3321 Independent Television/Video Production
COM 4172 Sports Broadcasting
COM 4211, 4212 Online News Bureau Practicum

## Radio/TV/Web Internship-3 hours

COM 4463 Internship in Radio/TV/Web
Minor field or electives as necessary to complete minimum total hours.
Minimum total hours to graduate as a Communications Major with Radio/TV/Web Emphasis 124

## D. Social Advocacy Emphasis-27 hours

COM 1163 Communication Technologies

COM 2533 Oral Interpretation
COM 2563 Argumentation and Debate

COM 3433 Persuasive Communication

COM 3453 Social Movements
COM 3543 Rhetoric of Popular Culture
COM 4273 Narrative Performance
COM 4363 Political Communication

COM 4373 Online Advocacy

## Social Advocacy Practicum Electives-4 hours

COM 2111 Practicum in Journalism
COM 2121 Practicum in Forensics
COM 3121 Radio/TV/Web Sports Practicum
COM 4211 Online News Bureau Practicum

## Social Advocacy Electives-6 hours

Select six credits of other communication (COM) courses of interest, including practicum Minor field or electives as necessary to complete minimum total hours.

Minimum total hours to graduate as a Communications Major
with Social Advocacy Emphasis

## E. Multi-Context Emphasis-27 hours

Students in the Multi-Context Emphasis take courses in any three areas of the Communication Department: Digital Journalism, Radio/TV/Web, Social Advocacy, and/or Public Relations. Nine hours minimum are required, in each of the chosen areas. A total of

15 hours of upper-division courses must be selected. A minimum of three practicum hours are required.

Minimum total hours to graduate as a Communications Major
with Multi-Context Emphasis 124

## Requirements for minor in Communication

The student must successfully complete a minimum of 18 hours.
COM 1133 Mass Communication and Society
COM 2123 News Writing and Reporting I
COM 2523 Public Speaking
An additional nine hours from COM in at least two of the Communication emphases of study are required. At least six hours must be upper-division course work.

## Requirements for minor in Drama

The student must complete a minimum of 18 hours.
COM 1112 Freshman Theatre Workshop
MUS 1731, 3731 Musical Theatre Methods (two hours total)
COM 2121 Practicum in Forensics (minimum one hour)
COM 2533 Oral Interpretation
COM 3113 Theatre Workshop
COM 4273 Narrative Performance
MUS 1732, 3732 Music Theatre Production (four hours total)

## DEPARTMENT OF MUSIC

(SYMBOL: MUS)

For those wishing to follow careers in music and/or worship arts, courses are offered leading to the degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Music Education (through the Education Division). These curricula provide a well-rounded education for those wishing to enter the music profession as artists, teachers, conductors, church worship leaders and tech support, and musicians in other fields. In addition, the degrees in general music are designed for students who want to earn a degree in music with the option to explore other avenues of intellectual inquiry. Students often complete a second major or minor in a field outside music.

All programs in music are 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, 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. For Worship Arts majors, one of the two selections may be a praise and worship song.
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, 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. For Worship Arts majors, one of the prepared selections may be an arrangement of a praise and worship song or traditional hymn.
b. Playing of the scale and arpeggio on the tonic chord from any major or minor key.
3. Instrumental major Audition:
a. Performance of two contrasting selections demonstrating lyrical playing and technical proficiency. Repertoire may include studies, etudes and sonata or concerto literature, classical in nature. Sample repertoire is that of state solo and ensemble competitions.
b. Playing of major scales through four sharps and four flats demonstrating the full range of the instrument.
c. Sight-reading a short excerpt.

NOTE: Bass players, guitar players, and set drummers may send a recording consisting of a demonstration of playing in contemporary styles and improvising. Recorded excerpts from ensembles such as jazz bands, combos, and worship teams may be included to demonstrate abilities in ensemble playing.

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 or Worship Arts major until such deficiencies are eliminated. Prerequisite work in the major applied area is designated as MUS 09_1 or MUS 0891 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, 19_2, 1891 or 1892). 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. The B.Mus.Ed. is a nine-semester degree: eight semesters of course work and the ninth semester spent in an internship. It is only possible to complete the degree in eight semesters if a student transfers in approved hours.

## 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.

A student majoring in the music program may expect to retain a scholarship for eight semesters providing the above criteria are met. An exception is made for a student in the music education program who is completing the internship during a ninth semester. If a student fails to meet any portion of the scholarship requirements, that student will be placed on probation, but will retain the music scholarship for the following semester. At the end of the probationary period, the progress of the student will be reassessed. At such time, the music scholarship will either be continued or discontinued.

## General Requirements for Music Degrees

1. Demonstrated potential. Each candidate must select a major subject (voice, piano, organ, or instrument), 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 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 (requirements). Each music and worship arts major is required to participate satisfactorily in at least one ensemble per semester at JBU. (The faculty will grant exceptions to B.Mus.Ed. students during the semester of their internship or to students taking fewer than six hours.) Up to four 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 nonmusic majors are encouraged to participate.
3. Recital attendance. Satisfactory completion of MUS 1000 Recital Attendance is required every semester music and worship arts majors are full-time students at JBU. Students in the B.Mus.Ed. program are exempted the semester of their internship. Two semesters are required of students minoring in music or worship arts.
4. Recital participation. All music and worship arts majors enrolled in applied lessons are required to perform in a departmental recital in their area of concentration once during the first year of study and at least once each semester thereafter, or at the discretion of the teacher.
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 a minimum GPA of 2.5 in 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, MUS 3151 Functional Keyboard Skills I, and MUS 3161 Functional Keyboard Skills 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 Arts majors. The exam 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-division credit. Otherwise, subsequent applied study will be for lower-division credit until they pass all remaining parts of the exam.

Vocal majors and concentrates are expected to
a. perform repertoire from memory in four languages (English, Italian, French, and German), of varying styles, and demonstrating developing musicality and expressiveness; and
b. sightread a song of medium difficulty.

Worship Arts vocal concentrates are expected to
a. perform vocal repertoire from memory in two languages (English, Italian, French, or German), of varying styles, and demonstrating developing musicality and expressiveness; and
b. sightread a song of medium difficulty. The sight-reading portion of the exam may be taken following the successful completion of MUS 2111 Musicianship II.

Piano majors and concentrates are expected to
a. play 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. play major, harmonic, and melodic minor scales for four octaves in sixteenth notes at a minimum tempo of $\mathrm{MM}=120$ per quarter note, hands together;
c. play major and minor arpeggios in all inversions for four octaves in sixteenth notes at a minimum tempo of $\mathrm{MM}=100$ per quarter note, hands together;
d. play major and minor cadences (I-IV-I ${ }^{6}{ }_{4}-\mathrm{V}^{7}-\mathrm{I}$ ) with right hand in all inversions and left hand in octaves; and
e. sightread (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 earlyintermediate level.

Organ majors and concentrates are expected to
a. play 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. play an introduction and two stanzas of a hymn. The stanzas must be played in a contrasting manner, as appropriate for the text;
c. play a hymn transposed up or down a half-step and whole step; and
d. sightread (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 upperdivision work.

Instrumental concentrates are expected to
a. perform literature and technical exercises as determined by the instrumental instructor.
b. sight-reading as determined by the instrumental instructor.
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). These recitals cannot take place during consecutive semesters.
- 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). Four hours of upper-division credit in the applied concentration is necessary in order to perform a senior recital.
- A candidate for the B.Mus.Ed. degree is required to perform a half recital during the senior year (MUS 4900).
- A candidate for the B.S. degree in Worship Arts is required to design and execute a corporate worship service (Senior Presentation in Worship Arts MUS 4920).

Recitalists are required to enroll in applied lessons during the semester the recital is scheduled. Similarly, those choosing the Senior Presentation or the Senior Presentation in Worship Arts must enroll in MUS 4191 Senior Presentation Preparation for faculty mentoring.
9. Major Field Test in Music. Music majors are required to take the Major Field Test in Music as a condition of graduation after completing MUS 4113 and 3223. If one of these courses is taken in the last semester of study, the Major Field Test should be taken as late in the semester as practical.
10. 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

The Arts elective is covered by program requirements.
2. Courses Specified by the Department- 28 hours

MUS 1000 Recital Attendance
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 3213 History of Music I
MUS 3223 History of Music II
MUS 3241 Musicianship III
MUS 3243 Theory III
MUS 3411 Conducting I
MUS 3900* Junior Recital
MUS 4103* Music Arranging with MIDI
MUS 4113 Harmonic Form and Analysis
MUS 4900* Senior Recital
3. One of the following Emphases-31 hours

Voice
MUS 1911 Lyric Diction I
MUS 1921 Lyric Diction II

MUS 1931/41, 2931/41 Class Piano I-IV (see other options in Piano Proficiency)
MUS 1980/3980 Voice Masterclass (each semester of Applied Voice*)
MUS 1981* Applied Voice: 8 hours
MUS 3981* Applied Voice: 8 hours
MUS 4281 Vocal Literature
MUS 4382 Vocal Pedagogy
Music Theatre-6 hours from
1731, 1732, 3731, $\underline{3732}$
Choral Ensemble-a minimum of two semesters
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 3781* Applied Accompanying
MUS 3991* Applied Piano: 7 hours
MUS 1990/3990 Piano Masterclass (each semester of Applied Piano)
MUS 1951, 1961 Class Voice (or 2 hours of Applied Voice*)
MUS 2601 Accompanying Class
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 3601 Music Practicum: Accompanying

MUS 4261 Piano Pedagogy
MUS 4262 Piano Literature

Ensemble Participation: 6 hours (Ensemble requirements)
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 1990/3990 Piano Masterclass (each semester of Applied Organ*)
MUS 2601 Accompanying Class
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 3611 Music Practicum: Church Organist
MUS 4273 Organ Literature and Pedagogy

Ensemble participation: 6 hours (Ensemble requirements)
4. Foreign Language-12 hours in French or German, or six hours in each. Other languages may be substituted only by approval of advisor. Completion of an intermediate language course meets the Global Studies requirement of the Core Curriculum.
5. Electives as necessary to complete minimum total hours

Minimum total semester hours124
*See Music Fee Schedule.

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

1. University Core Curriculum-52 hours

The Arts elective is covered by program requirements.
2. Courses Specified by this Department-29 hours

MUS 1000 Recital Attendance
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 3213 History of Music I
MUS 3223 History of Music II
MUS 3241 Musicianship III
MUS 3243 Theory III
MUS 3411 Conducting I
MUS 4103* Music Arranging with MIDI
MUS 4113 Harmonic Form and Analysis
Capstone Option A or B:
A. MUS 39_1* or 3891* Applied Lessons

MUS 4900* Senior Recital (half recital)
B. MUS 4191* Senior Presentation Preparation

MUS 4910* Senior Presentation
3. One of the following Concentrations-12 or 13 hours

Voice
MUS 1981* Applied Voice: 4 hours
MUS 1980 Voice Masterclass: 4 semesters

MUS 1931, 1941, 2931, 2941* Class Piano I-IV (see other options in Piano Proficiency)
Ensemble participation: 4 hours (Ensemble requirements)
Piano
MUS 1991* Applied Piano: 4 hours
MUS 1990 Piano Masterclass: 4 semesters
MUS 1951, 1961 Class Voice (or 2 hours of Applied Voice*)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
Ensemble participation: 4 hours (Ensemble requirements)
Organ
MUS 1971* Applied Organ: 4 hours
MUS 1990 Piano Masterclass: 4 semesters
MUS 1951, 1961 Class Voice (or 2 hours of Applied Voice*)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
Ensemble participation: 4 hours (Ensemble requirements)
Instrumental Music (as applied instructors are available)
MUS 1891* Applied Instrument: 4 hours
MUS 1890 Instrumental Music Masterclass: 4 semesters (as needed and available)
MUS 1931, 1941, 2931, 2941* Class Piano I-IV (see other options in Piano Proficiency)
MUS 1951 Class Voice (or 1 hour of Applied Voice*)
Ensemble participation: 4 hours (Ensemble requirements)
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. Four hours of upper-division credit is necessary in order to perform a senior recital.
4. Choose a minimum of one additional upper-division hour in music if concentrating in voice or instrumental music.
5. Foreign language-12 hours in French or German, or six hours in each. Other languages may be substituted only by approval of advisor

Completion of an intermediate language course meets the Global Studies requirement of the Core Curriculum
6. Electives as necessary to complete minimum total hours

Minimum total semester hours124

* See Music Fee Schedule.


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

## 1. University Core Curriculum-52 hours

The Arts elective is covered by program requirements.
2. Courses Specified by this Department-29 hours

MUS 1000 Recital Attendance
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 3213 History of Music I
MUS 3223 History of Music II

MUS 3241 Musicianship III
MUS 3243 Theory III
MUS 3411 Conducting I
MUS 4103* Music Arranging with MIDI
MUS 4113 Harmonic Form and Analysis
Capstone Option A or B:
A. MUS 39_1* or 3891* Applied Lessons

MUS 4900* Senior Recital (half recital)

## B. MUS 4191* Senior Presentation Preparation

MUS 4910* Senior Presentation
3. One of the following Concentrations- 12 or 13 hours

Voice
MUS 1981* Applied Voice: 4 hours
MUS 1980 Voice Masterclass: 4 semesters
MUS 1931, 1941, 2931, 2941* Class Piano I-IV (see other options in Piano Proficiency)

Ensemble participation: 4 hours (Ensemble requirements)
Piano
MUS 1991* Applied Piano: 4 hours
MUS 1990 Piano Masterclass: 4 semesters
MUS 1951, 1961 Class Voice (or 2 hours of Applied Voice*)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
Ensemble participation: 4 hours (Ensemble requirements)

## Organ

MUS 1971* Applied Organ: 4 hours
MUS 1990 Piano Masterclass: 4 semesters
MUS 1951, 1961 Class Voice (or 2 hours of Applied Voice*)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
Ensemble participation: 4 hours (Ensemble requirements)
Instrumental Music (as applied instructors are available)
MUS 1891* Applied Instrument: 4 hours
MUS 1890 Instrumental Music Masterclass: 4 semesters (as needed and available)
MUS 1931, 1941, 2931, 2941* Class Piano I-IV (see other options in Piano Proficiency)

MUS 1951 Class Voice (or 1 hour of Applied Voice*)
Ensemble participation: 4 hours (Ensemble requirements)
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. Four hours of upper-division credit is necessary in order to perform a senior recital.
4. Choose a minimum of one additional upper-division hour in music if concentrating in voice or instrumental music.
5. Electives as necessary to complete minimum total hours

Minimum total semester hours 124
*See Music Fee Schedule.

## 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

The Arts and Social Science electives are covered by program requirements.
The Philosophy elective is not required for this program.
2. Other Required Courses- 3 hours

Approved First Aid and 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 Differentiated Learning
ED 3183 Educational Assessment
ED 4890 Internship: P-12
ED 4891 Seminar: P-12
4. Music Teaching Field-46-47 hours

MUS 1000 Recital Attendance
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 3101 Survey of Instruments
MUS 3213 History of Music I
MUS 3223 History of Music II
MUS 3241 Musicianship III
MUS 3243 Theory III
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 4113 Harmonic Form and Analysis
MUS 4382 Vocal Pedagogy
MUS 4573 Public School Music Methods, 7-12
MUS 4900* Senior Recital (half recital)
Ensemble participation: 4 hours (Ensemble requirements)
One of the following:
MUS 1731 Music Theatre Methods: Drama I
MUS 1732 Music Theatre Production
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, 1961 Class Voice: 2 hours

MUS 1981* Applied Voice: 2 hours
MUS 3981* Applied Voice: 3 hours
MUS 1980/3980 Voice Masterclass (each semester of Applied Voice*)
MUS 1931, 1941, 2931, 2941* Class Piano I-IV (see other options in Piano Proficiency) 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 3781* Applied Accompanying
MUS 3991* Applied Piano: 1 hour
MUS 1990/3990 Piano Masterclass (each semester of Applied Piano*)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 4261 Piano Pedagogy
MUS 1951, 1961 Class Voice (or two hours of Applied Voice*)

## Organ

MUS 1971* Applied Organ: 4 hours
MUS 3971* Applied Organ: 3 hours
MUS 1990/3990 Piano Masterclass (each semester of Applied Organ*)

MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 1951, 1961 Class Voice (or two hours of Applied Voice*)
Minimum total semester hours 137
*See Music Fee Schedule.

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

1. University Core Curriculum-52 hours

The Arts elective is covered by program requirements.
2. Courses specified by this Department-18 hours

MUS 1000 Recital Attendance
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 3213 History of Music I
MUS 3411 Conducting I
MUS 4103* Music Arranging with MIDI
3. One of the following concentrations- 9 hours

Voice
MUS 1981* Applied Voice: 4 hours
MUS 1980 Voice Masterclass: 4 semesters

MUS 1931, 1941, 2931, 2941* Class Piano I-IV (see other options in Piano Proficiency) MUS 1891* Applied Instrument

Piano
MUS 1991* Applied Piano: 4 hours
MUS 1990 Piano Masterclass: 4 semesters
MUS 1951, 1961 Class Voice (or 2 hours of Applied Voice*)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 1891* Applied Instrument
Organ
MUS 1971* Applied Organ: 4 hours
MUS 1990 Piano Masterclass: 4 semesters
MUS 1951, 1961 Class Voice (or 2 hours of Applied Voice*)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 1891* Applied Instrument
Instrumental Music (as applied instructors are available)
MUS 1891* Applied Instrument: 4 hours
MUS 1890 Instrumental Music Masterclass: 4 semesters (as needed and available)
MUS 1931, 1941, 2931, 2941* Class Piano I-IV (see other options in Piano Proficiency)
MUS 1951 Class Voice (or 1 hour of Applied Voice*)
3a. Successful completion of the Upper-Division Applied Admittance Exam in the applied concentration area
4. Worship Arts Core-38-39 hours

BBL 3353 Theology of Worship
BBL 3363 History of the Christian Church I
BBL 3373 History of the Christian Church II
MUS 2503 Worship Arts I: Orientation
MUS 2513 Worship Arts II: Materials and Methods
MUS 3101 Survey of Instruments
MUS 3232 Contemporary Worship Music in Theory and Practice
MUS 3323 Children's Music Ministry Methods
MUS 3563* Audio Technology I
MUS 36_1 Music Practicum: (as advised)
MUS 3951 Corporate Worship Techniques
MUS 4191* Senior Presentation Preparation
MUS 4553 Internship in Worship Arts
MUS 4920* Senior Presentation in Worship Arts
One of the following:
MUS 1731 Music Theatre Methods: Drama I
MUS 1732 Music Theatre Production
One of the following:
ART 1123 Computer Graphics
ART 2253 Graphic Design I
Ensemble participation: 4 hours (Ensemble requirements)
5. Electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . . 124
*See Music Fee Schedule.

## Requirements for minor in Music

The student must successfully complete a total of 18 semester hours comprising work in the classroom, ensemble participation, and private instruction in applied music (either private or class)-voice, piano, organ, or other approved instrument.

Required Courses-12 hours
MUS 1000 Recital Attendance
MUS 1111 Musicianship I
MUS 1113 Theory I
MUS 1203 Liberal Arts Foundations for the Musician
Applied Music Instruction*: 4 hours (either private or class)
Ensemble Participation: 1 hour
Six hours from the following:
MUS 3101 Survey of Instruments
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

Please note required prerequisites for each course as specified in the course descriptions.

* See Music Fee Schedule.


## Requirements for minor in Worship Arts

The student must successfully complete a minimum of 21 hours.
MUS 1000 Recital Attendance
MUS 1111 Musicianship I
MUS 1113 Theory I
MUS 2503 Worship Arts I: Orientation
MUS 2513 Worship Arts II: Materials and Methods
MUS 3101 Survey of Instruments
MUS 3411 Conducting I
MUS 3563* Audio Technology I
MUS 3851The Red Steps
Choose one option:
A. Vocal or Piano Concentrate:

Piano Instruction-2 hours from MUS 1931*/41*/91* (Class or Applied)
Vocal Instruction-2 hours from MUS 1951/61/81* (Class or Applied)

Instrumental music instruction - one hour from MUS 1891* (Applied)
B. Instrumental Concentrate:

Instrumental music instruction -2 hours from MUS 1891* (Applied)
Piano Instruction-2 hours from MUS 1931*/41*/91* (Class or Applied)
Vocal Instruction-1 hour from MUS 1951/81* (Class or Applied)

* See Music Fee Schedule.


## DEPARTMENT OF VISUAL ARTS

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

All major programs require a common Visual Arts core of 15 hours and an additional 36 hours in the specialized field.

The Department of Visual Arts is housed in a state-of-the-art building featuring the latest equipment in two MAC labs, theatre-style classroom, painting and drawing classrooms, graphic design classrooms, photography studios, screenprinting/printmaking studio and a traditional and digital darkroom. We also have a busy art gallery that features monthly exhibits, including an annual show of "Student Works." In the Spring of 2012, we will also occupy the former Engineering building and expand into larger studios, editing suites for cinema, sound recording studios, a permanent student gallery, and a larger printmaking studio.

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 Art and Illustration

1. University Core Curriculum-52 hours

The Arts elective is covered by program requirements.
2. Visual Arts Department Core-15 hours

## ART 1123 Computer Graphics

## ART 1133 Visual Art Foundation

ART 2213 Color Studies
ART 2403 Photo 1: Introduction to Photography
One of the following:
ART 2153 European Arts and Culture
ART 2233 Art History I
ART 2343 European Art Tour
3. Art and Illustration Core-15 hours

ART 1243 Drawing I
ART 2453 Drawing II
ART 2613 Digital Illustration I
ART 3323 Figure Drawing I
ART 3423 Figure Drawing II
4. One of the following tracks-21 hours:

## Illustration Concentration

ART 3453 Illustration I
ART 3463 Illustration II
ART 4103 Portfolio and Presentation

## ART 4313 Illustration III

ART 4963 Senior Comprehensive Project
Two of the following:
ART 2613 Digital Illustration I
ART 3363 Watercolor Painting I
ART 3373 Watercolor Painting II
ART 3383 Oil Painting I
ART 3393 Oil Painting II
ART 3613 Digital Illustration II
ART 3643 Introduction to Printmaking
ART 3653 Screenprinting

## Fine Art Concentration

ART 3233 Art History II
ART 3623 Advanced Studio I
ART 3633 Advanced Studio II
ART 4953 Capstone Exhibition
Three of the following:
ART 2613 Digital Illustration I
ART 3363 Watercolor Painting I
ART 3373 Watercolor Painting II
ART 3383 Oil Painting I
ART 3393 Oil Painting II
ART 3613 Digital Illustration II

ART 3643 Introduction to Printmaking
ART 3653 Screenprinting
4. Electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . . 124

## Requirements for minor in Art and Illustration

The student must successfully complete a minimum of 21 hours.

## ART 1133 Visual Art Foundation

## ART 1243 Drawing I

## ART 2453 Drawing II

ART 3453 Illustration I
One of the following

## ART 2233 Art History I

ART 3233 Art History II
Six hours from the following:

## ART 2613 Digital Illustration I

ART 3323 Figure Drawing I
ART 3363 Watercolor Painting I
ART 3373 Watercolor Painting II
ART 3383 Oil Painting I
ART 3393 Oil Painting II
ART 3613 Digital Illustration II

## ART 3643 Introduction to Printmaking

ART 3653 Screenprinting

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

## 1. University Core Curriculum-52 hours

The Arts elective is covered by program requirements.
2. Visual Arts Department Core-15 hours

## ART 1123 Computer Graphics

## ART 1133 Visual Art Foundation

## ART 2213 Color Studies

ART 2403 Photo 1: Introduction to Photography
One of the following:
ART 2153 European Arts and Culture
ART 2233 Art History I
ART 2343 European Art Tour
3. Digital Media Arts Core-36 hours

## Digital Art Concentration

ART 1243 Drawing I
ART 2273 3D Art I
ART 2453 Drawing II
ART 2613 Digital Illustration I
ART 3223 3D ART II
ART 3323 Figure Drawing I

## ART 3423 Figure Drawing II

ART 3453 Illustration I
ART 3613 Digital Illustration II
ART 4103 Portfolio and Presentation
ART 4253 3D Art III
ART 4963 Senior Comprehensive Project

## Cinema Concentration

ART 2103 Foundations in Digital Editing
ART 2113 Introduction to Cinema
ART 2123 Cinematography
ART 2253 Graphic Design I
ART 3153 Photo 3: Digital Darkroom
ART 3403 Film Theory and Criticism
ART 4103 Portfolio and Presentation
ART 4163 Non-Fiction Film Production
ART 4173 Narrative Film Production
ART 4423 Internship
ART 4963 Senior Comprehensive Project
One of the following:
ART 3523 Lighting for Photography and Cinema
ART 3703 Scriptwriting
4. Electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . 124

## Requirements for minor in Digital Media Arts

The student must successfully complete a minimum of 21 hours.
ART 1123 Computer Graphics
ART 2103 Foundations in Digital Editing
ART 2303 Interactive Design I
ART 2123 Cinematography
ART 2273 3D Art I
ART 3223 3D Art II
ART 4173 Narrative Film Production

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

1. University Core Curriculum-52 hours

The Arts elective is covered by program requirements.
2. Visual Arts Department Core-15 hours

## ART 1123 Computer Graphics

ART 1133 Visual Art Foundation
ART 2213 Color Studies
ART 2403 Photo 1: Introduction to Photography
One of the following:
ART 2153 European Arts and Culture
ART 2233 Art History I
ART 2343 European Art Tour
3. Graphic and Web Design Core-36 hours

## ART 1243 Drawing I

## ART 2253 Graphic Design I

## ART 2263 Graphic Design II

## ART 2303 Interactive Design I

ART 2503 Typography
ART 3203 History of Advertising and Design
ART 3333 Interactive Design II
ART 4103 Portfolio and Presentation
ART 4423 Internship
One of the following:
ART 3263 Graphic Design III
ART 3743 Interactive Design III
Six hours from among the following:
ART 2273 3D Art I
ART 2613 Digital Illustration I
ART 3283 Graphic Design in Social Context
ART 3503 Motion Graphics
ART 3643 Introduction to Printmaking
ART 3653 Screenprinting
ART 4413 Graphic Design IV
4. Electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in Graphic and Web Design

The student must successfully complete a minimum of 21 hours.
ART 1123 Computer Graphics
ART 2253 Graphic Design I
ART 2263 Graphic Design II
ART 2303 Interactive Design I
ART 2503 Typography
ART 3263 Graphic Design III
ART 3203 History of Advertising and Design

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

1. University Core Curriculum-52 hours

The Arts elective is covered by program requirements.
2. Visual Arts Department Core-15 hours

## ART 1123 Computer Graphics

ART 1133 Visual Art Foundation
ART 2213 Color Studies
ART 2403 Photo 1: Introduction to Photography
One of the following:
ART 2153 European Arts and Culture
ART 2233 Art History I
ART 2343 European Art Tour
3. Photography Core-36 hours

## ART 2253 Graphic Design I

## ART 2463 Photo 2: Traditional Darkroom

ART 3153 Photo 3: Digital Darkroom
ART 3523 Lighting for Photography and Cinema
ART 4103 Portfolio and Presentation
ART 4133 Fine Art Photography
ART 4183 Social Documentary Photography
ART 4353 Commercial Studio Photography
ART 4423 Internship
ART 4963 Senior Comprehensive Project
Two of the following:
ART 2263 Graphic Design II
ART 2303 Interactive Design I
ART 3203 History of Advertising and Design
4. Electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for Minor in Photography

The student must successfully complete a minimum of 21 hours.
Offered to a limited number of students with priority going to students majoring in Journalism and Public Relations.

## ART 1133 Visual Art Foundation

ART 2403 Photo 1: Introduction to Photography

ART 4133 Fine Art Photography
ART 4183 Social Documentary Photography
ART 4353 Commercial Studio Photography
Six hours from among the following:
ART 2233 Art History I
ART 2463 Photo 2: Traditional Darkroom
ART 3153 Photo 3: Digital Darkroom
ART 3523 Lighting for Photography and Cinema

## DIVISION OF

## EDUCATION

(SYMBOL: ED)
Bricker, Davis, Gale, Lamborn, Van Thiel (chair)
The mission of the Division of Education is to develop teachers who are skilled professionals and reflective decision makers while exhibiting Christ-like characteristics.

The Education Division 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), the foremost accrediting agency for teacher education in the United States [http://ncate.org], phone (202) 466-7496. Successful completion of an Education Program at John Brown University prepares candidates for an initial license in the State of Arkansas. 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. The majority of states have reciprocity with Arkansas, which means licensure officials in these states will automatically grant initial license to individuals transferring their initial/standard Arkansas license.

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 teacher preparation and the P-12 programs of the school district. Beginning in their sophomore year, candidates actively participate in local preschools and in the P-12 classrooms of the school district, where they provide valuable assistance to preschool and $\mathrm{P}-12$ programs. At the same time, experienced teachers in the schools serve as clinical faculty providing important practical experiences and instruction for the candidates.

The Education Division, in keeping with the overall goals of the university, expects graduates to demonstrate the following broad learner outcomes based on the Pathwise Performance Standards used with the Praxis Series of Professional Assessments for Beginning Teachers. The Pathwise outcomes adopted by the Education Division include:

- Domain A: (Pathwise) Proficiency in organizing content knowledge for differentiated, optimum learning for all students.
- Domain B: (Pathwise) Multiple ways to create physically and emotionally safe diverse environments with optimum learning for all students.
- Domain C: (Pathwise) Consistent, skilled implementation of teaching methodologies and strategies with optimum learning for all students.
- Domain D: (Pathwise) Teacher professionalism exhibited through reflective practice and partnering with colleagues and parents/guardians.

NOTE: John Brown University 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 the registrar's office.

## 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 advisor. Candidates are required to maintain a portfolio in order to pass through four "Gates." The following sequence and policies are applicable to all levels and fields of licensure:

1. Gate One: Assistant Level. Admission to courses requiring Gate One and field experience. Specific requirements include the following:
a. Meet minimum JBU 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. Gate Two: Associate Level. Admission to courses requiring 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 ECE Program will take ED 3121: ECE Educational Communications in lieu of the speech course before internship. A grade of 'C/2.0' or better must be attained in this course.)
c. Completion of ED 1114: Educational Foundations and Technology, 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 (reading-174, math-174, writing-173). Information and test administration schedules are available on the Educational Testing Service (ETS) web site [www.ets.org]. Costs are the responsibility of the candidate. Candidates whose scores do not meet the JBU Praxis I minimums must submit an approved Professional Development

Plan to improve these basic skills, or may meet the JBU cut-off scores by retaking the appropriate Praxis I test(s).
e. Formal approval of the teacher candidate's portfolio by the education advisor before registration for education classes requiring Gate Two.

## 3. Formal admission:

a. A 2.7 cumulative grade point average.
b. Passed JBU Praxis I scores (reading-174, math-174, writing-176) or completed Professional Development Plan with state cut off.
c. Passed Gates One and Two.
d. Approved by Education Division and PDS Advisory Committee.
4. Continuation in the program. Candidates must maintain the 2.7 grade-point standard throughout the program and demonstrate commitment to professional growth. A candidate failing to maintain these requirements will be placed on divisional probation and must meet the conditions of a Professional Development Plan specified by the Division, or admission will be rescinded.
5. Gate Three: Internship. 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 (and corresponding paperwork) by the specified date during the semester prior to internship. (Application forms and dates for submission are sent via 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 2.7 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 ' $\mathrm{C} / 2.0$ ' 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 Siloam Springs Public School and Education faculty.
i. Praxis II Series - (Documentation of passing the Praxis II Content Knowledge and having registered for Praxis II Pedagogy.) All candidates are required to take the Educational Testing Service 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 Education Division 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. Costs are the responsibility of the candidate.

Due to the nature of the internship (a full-time responsibility) candidates are not to be concurrently enrolled for other course work (including correspondence or online courses). 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. Other responsibilities (work, leadership, and required involvement) may not exceed 10 hours and may not conflict with school responsibilities.

## 6. Gate Four: Graduation requirement.

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 2.7 cumulative grade-point average.
e. A 2.5 in Teaching field requirements, with a grade of ' $\mathrm{C} / 2.0$ ' or higher in each course.
f. A 2.5 in Professional Education courses, with a grade of ' $\mathrm{C} / 2.0$ ' or higher in each course.

## 7. Program completion and eligibility for an initial license.

a. Graduation.
b. Evidence of meeting all Arkansas qualifying scores on the Praxis II Series for licensure.

## Endorsement Options:

1. TESOL (Teaching English to Speakers of Other Languages) Endorsement for all licenses:

ED 3563 Second Language Acquisition for Teachers
ED 3583 Curriculum and Instruction: TESOL
EGL 3363 Advanced English Grammar
ICS 2113 Intercultural Communications
2. Early Childhood Education - 5th/6th Endorsement for P-4 license:

English/Social Studies:
ED 4563 Curriculum and Instruction: Middle School

EGL 3363 Advanced English Grammar
EGL 2393 Advanced Composition
One of the following:
HST 2113 U.S. History to 1865
HST 2123 U.S. History since 1865
Math/Science:
ED 4563 Curriculum and Instruction: Middle School
GSC 1143 Earth Science
MTH 1113 College Algebra
MTH 1123 Survey of Calculus

NOTE: In order to receive the TESOL or 5th/6th Endorsement, candidate must maintain a grade of "C" (2.0) or better in the courses.

## Education Minor

The Education Division 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.

Content areas other than English, mathematics, or social studies must be approved by the Division of Education.

Required Courses - 18 hours
ED 2113 Human Growth and Development
ED 2133 Educational Psychology

ED 2713 Differentiated Learning
ED 3153 Reading in the Content Areas
ED 3183 Educational Assessment
ED 4652 Curriculum and Instruction: Secondary General Methods
One of the following:
ED 4661 Curriculum and Instruction: Secondary English Pedagogy
ED 4671 Curriculum and Instruction: Secondary Mathematics Pedagogy
ED 4691 Curriculum and Instruction: Secondary Social Studies Pedagogy
ED 4901 Selected Topics

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 4652.

## Transfer Students

The credentials of students transferring from an accredited college or university will be evaluated by the registrar's office and by the chair of the Education Division for appropriate placement. Transfer students or JBU students transferring from another major may take restricted Professional Education courses their first semester with the approval of the education advisor. All exceptions required due to transfer or change of major will be submitted to the Division within the first semester for approval. All students transferring to Education will be expected to complete all program requirements in effect at the time of the transfer. Candidates must complete all four Gate requirements in effect at the time of transfer.

Transfers from another college or university must spend a minimum of two semesters before application for internship. Transfers to Early Childhood Education (P-4) must successfully complete the JBU Education Spring Block II semester courses as one of the two semesters. Transfers to Secondary Education must successfully complete Reading in the Content Area, Curriculum and Instruction: Secondary General Methods courses and content specific pedagogy courses during the required semesters.

## 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

The Arts and Social Science electives 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-31 hours

ED 1114 Educational Foundations and Technology
ED 2113 Human Growth and Development

ED 2133 Educational Psychology
ED 2713 Differentiated Learning
ED 3183 Educational Assessment

ED 4890 Internship: P-12
ED 4891 Seminar: P-12
4. Music Teaching Field - 46-47 hours

MUS 1000 Recital Attendance

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 3101* Survey of Instruments
MUS 3213 History of Music I

MUS 3223 History of Music II
MUS 3241 Musicianship III
MUS 3243 Theory III
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 4113 Harmonic Form and Analysis
MUS 4382 Vocal Pedagogy
MUS 4573 Public School Music Methods, 7-12
MUS 4900 Senior Recital (half recital)
Ensemble Participation: 4 hours (Ensemble requirements)
One of the following:
MUS 1731 Music Theatre Methods: Drama I
MUS 1732 Music Theatre Production
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 Masterclass (each semester of Applied Voice)
MUS 1931/41*, 2931/41* Class Piano I-IV (See other options in Piano Proficiency)
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 3781* Applied Accompanying
MUS 3991* Applied Piano: 1 hour
MUS 1990/3990 Piano Masterclass (each semester of Applied Piano)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 4261 Piano Pedagogy
MUS 1951/61* Class Voice (or two hours of Applied Voice)

Organ:
MUS 1971* Applied Organ: 4 hours
MUS 3971* Applied Organ: 3 hours
MUS 1990/3990 Piano Masterclass (each semester of Applied Organ)
MUS 3151 Functional Keyboard Skills I
MUS 3161 Functional Keyboard Skills II
MUS 1951/61* Class Voice (or two hours of Applied Voice)
*See Music Fee Schedule

## 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

The Social Science elective and EGL 1013, $\underline{1023}$, and $\underline{4003}$ 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-37 hours

ED 1114 Educational Foundations and Technology

ED 2113 Human Growth and Development
ED 2133 Educational Psychology

ED 2713 Differentiated Learning
ED 3153 Reading in the Content Areas
ED 3183 Educational Assessment

ED 4652 Curriculum and Instruction: Secondary General Methods
ED 4661 Curriculum and Instruction: Secondary English Pedagogy
ED 4880 Internship: Secondary
ED 4881 Seminar: Secondary
4. English Teaching Field-30 hours

EGL 1013 English I: Composition
EGL 1023 English II: Literary Analysis And Research
EGL 2243 Young Adult Literature

EGL 2393 Advanced Composition

EGL 2413 American Literature to 1900
EGL 3333 Shakespearean Drama
EGL 3363 Advanced English Grammar
EGL 3713 Literary Theory
LS 3173 Introduction to Linguistics
One of the following:
EGL 2213 World Literature I

EGL 2223 World Literature II
5. One of the following Emphases (grades included in Teaching Field GPA)-7 hours

## A. Literature

EGL 3321 Writing Center Practicum
EGL 4483 Selected Topics: Literature
One of the following:
EGL 3313 Medieval Literature
EGL 3323 Renaissance Literature
EGL 3343 Restoration and Eighteenth Century Literature
EGL 3353 Nineteenth Century British Literature

## B. Writing

EGL 2273 Introduction to Creative Writing
EGL 3341 Literary Magazine Practicum
EGL 4473 Creative Writing Workshop: Selected Genres (Fiction, Poetry, or Nonfiction)

## MATHEMATICS EDUCATION

1. University Core Curriculum- 46 hours

The Mathematics, Physical Science, and Social Science electives 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-37 hours

ED 1114 Educational Foundations and Technology
ED 2113 Human Growth and Development
ED 2133 Educational Psychology
ED 2713 Differentiated Learning
ED 3153 Reading in the Content Areas
ED 3183 Educational Assessment
ED 4652 Curriculum and Instruction: Secondary General Methods
ED 4671 Curriculum and Instruction: Secondary Mathematics Pedagogy
ED 4880 Internship: Secondary
ED 4881 Seminar: Secondary
4. Mathematics Teaching Field-41 hours

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 Calculus
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 I

## MUSIC EDUCATION

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

## SOCIAL STUDIES EDUCATION

1. University Core Curriculum- 37 hours

HST 1013 and 1023, POL 2013, the Philosophy, Social Science, and Global Studies electives 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-37 hours

ED 1114 Educational Foundations and Technology
ED 2113 Human Growth and Development
ED 2133 Educational Psychology

ED 2713 Differentiated Learning
ED 3153 Reading in the Content Areas

ED 3183 Educational Assessment
ED 4652 Curriculum and Instruction: Secondary General Methods

ED 4691 Curriculum and Instruction: Secondary Social Studies Pedagogy
ED 4880 Internship: Secondary
ED 4881 Seminar: Secondary
4. Social Studies Teaching Field-51 hours

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 2013 American Government
POL 3003 Political Philosophy
SST 1113 Introduction to Sociology
SST 1133 Cultural Geography
SST 1143 World Regional Geography
SST 2123 Cultural Anthropology
One of the following:

BBL 3363 History of the Christian Church I
BBL 3373 History of the Christian Church II

HST 2111 Selected Topic: Language lab
HST 2112 Selected Topic: Great Books

HST 2213 Study of History

HST 2243 Middle Ages
HST 2323 Poverty and Welfare in American History
HST 2523 Classical World
HST 3253 British Empire

HST 3263 American Slavery in Comparative Perspective
HST 3273 America at War, 1861-1919
HST 3313 Second World War
HST 3423 Leaders in History
HST 3433 History of the Middle East, 600-1800
HST 3443 Modern Middle East
HST 3463 African Civilization to 1850

HST 3473 African Civilization since 1850
One of the following:
HST 4613 Seminar in History
POL 4613 Seminar in United States Politics
One of the following:
POL 3353 International Relations
POL 4243 Constitutional Law

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

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

1. University Core Curriculum- 40 hours

The Arts, Social Science, and Global Studies electives are covered by program requirements.
EGL 4003 and the Mathematics elective are not required.
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
KIN 1002 Wellness
KIN 10_1 Wellness Activity
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 2013 American Government
Philosophy- 3 hours
2. Other Required Courses

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

HST 2413 Arkansas History
3. Professional Education-53 hours

ED 1114 Educational Foundations and Technology
ED 2113 Human Growth and Development
ED 2133 Educational Psychology
ED 2713 Differentiated Learning
ED 3121 ECE Educational Communications

ED 3183 Educational Assessment
ED 3353 ECE Instructional Methods
ED 3343 Curriculum and Instruction: ECE Language Development and the Language Arts
ED 3373 Curriculum and Instruction: ECE Reading I

ED 3393 Children's Literature
ED 3763 ECE Behavior Management
ED 4373 Curriculum and Instruction: ECE Reading II
ED 4383 Curriculum and Instruction: ECE Mathematics
ED 4850 Internship: Early Childhood Education
ED 4851 Seminar: Early Childhood Education
4. Early Childhood Teaching Field-25 hours

ECN 2003 Basic Economics (micro- and macro-economics)
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 Preschool Through Grade 6 Teachers

## MTH 2143 Mathematics Structures I

MTH 2183 Mathematics Structures II
One of the following:
SST 1133 Cultural Geography
SST 1143 World Regional Geography
5. Endorsement/Emphasis-12 hours (choose one of the following):

NOTE: All courses in both Endorsement and Emphasis must have a grade of " $C$ " (2.0) or better.
A. Endorsement in Teaching English to Speakers of Other Languages (TESOL)-12 hours

ED 3563 Second Language Acquisition for Teachers
ED 3583 Curriculum and Instruction: TESOL
EGL 3363 Advanced English Grammar
ICS 2113 Intercultural Communications
B. Emphasis in Language Studies-12 hours of a modern language, as approved by education advisor.
C. Emphasis in Fine Arts-12 additional hours in ART and/or MUS, as approved by education advisor.
D. Endorsement for 5th and 6th grades-12 hours

Courses for 5th/6th English/Social Studies:
ED 4563 Curriculum and Instruction: Middle School

EGL 2393 Advanced Composition
EGL 3363 Advanced English Grammar
One of the following:
HST 2113 United States History to 1865
HST 2123 United States History since 1865

Courses for 5th/6th Math/Science:
ED 4563 Curriculum and Instruction: Middle School

## GSC 1143 Earth Science

MTH 1113 College Algebra
MTH 1123 Survey of Calculus

## DIVISION OF

# ENGINEERING AND CONSTRUCTION MANAGEMENT 

Bland (chair), Caldwell, Faust, Holmes, Macfarlan, Norwood, Setian, Terrill

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

## 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 major.

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 graduates to function effectively in advanced technical positions or to enter graduate studies.

## Accreditation

The Bachelor of Science in Engineering degree with electrical/computer, mechanical, or renewable energy 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, phone: (410) 347-7700.

The Bachelor of Science in Construction Management degree is accredited by the American Council for Construction Education (ACCE), phone: (210) 495-6161.

## Facilities

The division facilities are in three buildings, providing 25,000 square feet. Laboratories occupy 10,000 square feet and shops 4,000 square feet. 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. The Renewable Energy majors have exterior sites for study of solar and wind energy experiments.

## 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 Endowed Engineering Scholarship, the Engineering Excellence Endowed Scholarship, the Harold C. and Mildred B. Ward Endowed Engineering Scholarship, the Charles Willis Endowed Scholarship, the Robert D. Nabholz Construction Scholarship, the Milton and Leila Levy Endowed Scholarship, the National Association of Women in Construction Scholarship, the American Society of Professional Estimators Endowed Scholarship, the Jeff Scholtens Memorial Endowed Scholarship, the Barnabas (An Encourager) Endowed Scholarship (Acts 4:36), the Engineering Opportunity Endowed Scholarship, and the Dennis Schumacher Engineering Scholarship.

## DEPARTMENT OF CONSTRUCTION MANAGEMENT

(SYMBOL: CM)
The vision of the Department of Construction Management is to prepare graduates to influence the built environment through a balanced application of technical expertise, ethics, stewardship, creativity, craftsmanship, work, community, and leadership. The education is 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
gain experience in managing an actual construction project on lots owned by JBU in a local housing 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. Students may choose between a Business Administration option or the International Construction option.

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), phone: (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

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 Field-86 hours

ATG 1163 Accounting for Decision Making
BUS 2113 Financial Spreadsheet Applications
BUS 2153 Financial Mathematics
BUS 2193 Business Statistics
BUS 4143 Business Law

CHM 1014 Fundamentals of Chemistry
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 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
ECN 2123 Principles of Macroeconomics
MTH 1122 Trigonometry

## MTH 1123 Survey of Calculus

PHY 1114 Fundamentals of Physics I
3. One of the following Options-10 hours:

## A. Business Administration

BUS 3153 Applied Business Ethics
CM 2441 Construction Internship B
COM 2523 Public Speaking
MGT 2173 Principles of Management

## B. International Construction

CM 2541 International Construction Internship B
ICS 2113 Intercultural Communication

INT 2183 International Management
INT 3153 International Marketing
Minimum total semester hours133

# Possible Four-Year Plan for Bachelor of Science in Construction Management degree 

Freshman Year - Fall
BBL 1013 Old Testament Survey
CM 1112 Construction Techniques I

CM 1313 Materials of Construction
COR 1002 Gateway Seminar Christian Scholarship
EGL 1013 English I: Composition
KIN 1002 Wellness

## 15 hours

## Freshman Year - Spring

ATG 1163 Accounting for Decision Making
CHM 1014 Fundamentals of Chemistry
CM 1122 Construction Techniques II
CM 1223 Graphic Communication Skills
EGL 1023 English II: Literary Analysis and Research
MTH 1122 Trigonometry

## 17 hours

## Sophomore Year - Fall

BBL 1023 New Testament Survey0
CM 2213 Construction Methods I

CM 2513 Surveying
HST 1013 Western Civilization I
PHY 1114 Fundamentals of Physics I

16 hours
Sophomore year - Spring
BUS 2193 Business Statistics
CM 2223 Construction Methods II
CM 2322 Statics and Strength for Technology
CM 2431 Construction Internship A
HST 1023 Western Civilization II
MGT 2173 Principles of Management (or INT 2183-Fall)
MTH 1123 Survey of Calculus

## 18 hours

## Summer

## CM 2441 Construction Internship B (or CM 2541)

1 hour

Junior Year - Fall

BUS 2153 Financial Mathematics

CM 3213 Construction Safety and Quality

CM 3413 Estimating I

CM 3613 Architectural Design I

COM 2523 Public Speaking (or ICS 2113-Spring)
$\underline{\text { POL } 2013 \text { American Government }}$

18 hours

Junior Year - Spring

BUS 2113 Financial Spreadsheet Applications

CM 3233 Structural Systems for Buildings

CM 3603 Mechanical/Electrical Systems for Buildings

CM 3623 Architectural Design II

ECN 2123 Principles of Macroeconomics

15 hours

Senior Year - Fall

BBL 3003 Evangelical Theology

BUS 3153 Applied Business Ethics

BUS 4143 Business Law

CM 4613 Construction Project Scheduling and Cost Control

## CM 4713 Construction Management I

_ 3 Philosophy elective
18 hours

Senior Year - Spring
BBL 4002 Capstone Seminar in Christian Life

CM 4323 Construction Contracting

CM 4423 Estimating II

CM 4723 Construction Management II

KIN 10_1 Wellness Activity

3 Arts elective

15 hours

## Requirements for minor in Construction Management

The student must successfully complete a minimum of 19 hours.
CM 1112 Construction Techniques I

CM 1122 Construction Techniques II
CM 1223 Graphic Communication Skills
CM 1313 Materials of Construction
CM 3413 Estimating I
One of the following:
CM 2213 Construction Methods I
CM 2223 Construction Methods II

One of the following:

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

# 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
EGL 1013 English I: Composition
EGL 1023 English II: Literary Analysis and Research
KIN 1002 Wellness
Core Electives
Wellness Activity-1 hour
Natural Science-3 hours
Social Science-3 hours
One of the following:
HST 1013 Western Civilization I
HST 1023 Western Civilization II
2. Courses Specified by this Department-33 hours

ATG 1163 Accounting for Decision Making
BUS 2113 Financial Spreadsheet Applications

## BUS 2193 Business Statistics

CM 1112 Construction Techniques I
CM 1122 Construction Techniques II
CM 1223 Graphic Communication Skills
CM 1313 Materials of Construction
CM 2431 Construction Internship A
CM 2441 Construction Internship B
CM 3413 Estimating I
One of the following:
CM 2213 Construction Methods I
CM 2223 Construction Methods II
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 total hours

Minimum total semester hours . 62

## 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. Renewable energy is an emerging technical area driven by the need to replace fossil fuels with an energy efficient and environmentally friendly alternative.

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. Renewable energy engineers will integrate both the mechanical and electrical for state-of-the-art energy developments.

## Mission of the Department

The Engineering Department 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 JBU 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 fouryear plan in consultation with their advisor.

## Certification for Additional Concentration

A student who completes all requirements for the B.S.Eng. degree with one concentration may receive an enhancement certification from the chair of the Division of Engineering and Construction Management certifying the additional work done in second concentration area by completing at least nine hours of additional course work from the second concentration's required courses (this does not include electives).

A student who completes all the common requirements for a B.S.Eng., all the required courses from two concentrations, and four electives from those two concentrations may receive a B.S.Eng. degree with double concentration in those two areas.

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

## 1. University Core Curriculum-34 hours

The Mathematics, Physical Science, and Global Studies electives are covered by program requirements.

EGL 4003, KIN 1002, KIN 10_1, and the Biological Science and Social Science electives are not required.
2. Engineering Core-78 hours

CHM 1124 General Chemistry I
CS 1113 Introduction to Computing
EE 2213 Digital Electronics
EE 2223 Electrical Circuits

## EE 3313 Electronics I

EN 1112 Engineering Concepts and Design
EN 1223 Concepts in Mechanical Engineering
EN 1323 Concepts in Electrical Engineering
EN 2322 Engineering Economics
EN 3213 Engineering Materials Science
EN 3222 Design Lab
EN 3413 Linear Signals and Systems
EN 3513 International Problem Solving
EN 4113 Engineering Design I
EN 4123 Engineering Design II
EN 4323 Control Systems
ME 3113 Thermal Sciences
ME 3313 Statics and Strength of Materials
MTH 1134 Calculus I
MTH 1144 Calculus II
MTH 2114 Linear Algebra and Differential Equations
MTH 2123 Vector Calculus
MTH 3183 Probability and Statistics
PHY 2114 General Physics I
PHY 2124 General Physics II
3. One of the following Concentrations- 23 or 24 hours

## A. Electrical/Computer Concentration

EE 3123 Embedded Systems
EE 3323 Digital Systems
EE 3423 Signal Processing
EE 4123 Electromagnetics
EE 4413 Digital Communications Theory
Technical Electives-9 hours from the following:
EE 3501/02/03 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
EN 3501/02/03 Selected Topics
EN 4303 System Design with Microprocessors
EN 4403 Engineering Management
EN 4503 Electro-Optics

## 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 3501/02/03 Selected Topics
EN 4303 System Design with Microprocessors
EN 4403 Engineering Management
EN 4503 Electro-Optics
ME 3501/02/03 Selected Topics
ME 4103 Advanced Strength of Material
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

## C. Renewable Energy Concentration

CHM 2154 General, Organic, and Biochemistry
RE 1113 Introduction to Renewable Energy
RE 2121 Practicum in Renewable Energy
RE 3123 Bio-fuels and Biomass

RE 3143 Wind Energy
RE 3163 Solar Energy
Technical Electives-6 hours from the following:
EE 4213 Electronics II
EN 3501/02/03 Selected Topics

## EN 4403 Engineering Management

ME 3123 Dynamics
ME 3223 Thermodynamics
ME 4103 Advanced Strength of Material
ME 4113 Machine Design
ME 4203 Mechanical Vibrations
ME 4213 Heat Transfer
ME 4303 Finite Element Analysis
ME 4323 Fluid Mechanics
ME 4603 Advanced Thermodynamics
B.S.Eng. with Electrical/Computer, or Mechanical Concentration-

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . 136
B.S.Eng. with Renewable Energy Concentration-

Minimum total semester hours

# Possible Four-Year Plan for Bachelor of Science in Engineering degree with Electrical/Computer Concentration 

Freshman Year - Fall
CHM 1124 General Chemistry (L)
COR 1002 Gateway Seminar in Christian Scholarship
EGL 1013 English I: Composition
EN 1112 Engineering Concepts and Design
MTH 1134 Calculus I (L)

15 hours
Freshman Year - SpringBBL 1013 Old Testament SurveyEGL 1023 English II: Literary Analysis and Research
EN 1223 Concepts in Mechanical Engineering
EN 1323 Concepts in Electrical Engineering
MTH 1144 Calculus II (L)
16 hours
Sophomore Year - Fall
CS 1113 Introduction to Computing
EE 2213 Digital Electronics (L)
HST 1013 Western Civilization I
MTH 2114 Linear Algebra Differential Equations (L)
PHY 2114 General Physics I (L)
17 hours
Sophomore Year - $\underline{\text { Spring }}$
BBL 1023 New Testament Survey
EE 2223 Electrical Circuits
EN 2322 Engineering Economics
HST 1023 Western Civilization II
MTH 2123 Vector Calculus
PHY 2124 General Physics II (L)
18 hours
Junior Year - Fall
BBL 3003 Evangelical Theology

EE 3313 Electronics I (L)
EN 3413 Linear Signals and Systems
ME 3113 Thermal Sciences
ME 3313 Statics and Strength of Materials
POL 2013 American Government

18 hours

Junior Year - Spring
EE 3123 Embedded Systems
EE 3423 Signal Processing (L)
EN 3222 Design Lab (L)
MTH 3183 Probability and Statistics
3 Philosophy elective
3 Technical elective

17 hours

Senior Year - Fall
EE 3323 Digital Systems (L)
EE 4413 Digital Communications Theory (L)
EN 3213 Engineering Materials Science
EN 3513 International Problem Solving
EN 4113 Engineering Design I
3 Technical elective
18 hours
Senior Year - Spring
BBL 4002 Capstone Seminar in Christian Life

## EE 4123 Electromagnetics

EN 4123 Engineering Design II
EN 4323 Control Systems
3 Arts elective
3 Technical elective

17 hours

## Possible Four-Year Plan for Bachelor of Science in Engineering degree with Mechanical Concentration

Freshman Year - Fall<br>CHM 1124 General Chemistry I (L)<br>COR 1002 Gateway Seminar in Christian Scholarship<br>EGL 1013 English I: Composition<br>EN 1112 Engineering Concepts and Design<br>MTH 1134 Calculus I (L)<br>15 hours<br>Freshman Year - Spring<br>BBL 1013 Old Testament Survey<br>EGL 1023 English II: Literary Analysis and Research<br>EN 1223 Concepts in Mechanical Engineering<br>EN 1323 Concepts in Electrical Engineering<br>MTH 1144 Calculus II (L)<br>16 hours<br>\section*{Sophomore Year - Fall}

CS 1113 Introduction to Computing
EE 2213 Digital Electronics (L)
HST 1013 Western Civilization I
MTH 2114 Linear Algebra Differential Equations (L)
PHY 2114 General Physics I (L)
17 hours
Sophomore Year - Spring
BBL 1023 New Testament Survey
EE 2223 Electrical Circuits
EN 2322 Engineering Economics
HST 1023 Western Civilization II
MTH 2123 Vector Calculus
PHY 2124 General Physics II (L)
18 hours
Junior Year - Fall
BBL 3003 Evangelical Theology
EE 3313 Electronics I (L)
EN 3413 Linear Signals and Systems
ME 3113 Thermal Sciences
ME 3313 Statics and Strength of Materials
POL 2013 American Government
18 hours
Junior Year - Spring
EN 3222 Design Lab (L)

ME 3123 Dynamics
ME 3223 Thermodynamics
MTH 3183 Probability and Statistics
3 Philosophy elective
3 Technical elective
17 hours

## Senior Year - Fall

EN 3213 Engineering Materials Science
EN 3513 International Problem Solving
EN 4113 Engineering Design I
ME 4113 Machine Design
ME 4323 Fluid Mechanics (L)
3 Technical elective
18 hours
Senior Year - Spring
BBL 4002 Capstone Seminar in Christian Life
EN 4123 Engineering Design II
EN 4323 Control Systems
ME 4213 Heat Transfer
3 Arts elective
3 Technical elective
17 hours

## Possible Four-Year Plan for Bachelor of Science in Engineering degree with Renewable Energy Concentration

Freshman Year - Fall
COR 1002 Gateway Seminar in Christian Scholarship
EGL 1013 English I: Composition
EN 1112 Engineering Concepts and Design
MTH 1134 Calculus I (L)
RE 1113 Introduction to Renewable Energy
14 hours
Freshman Year - Spring
BBL 1023 New Testament Survey
EGL 1023 English II: Literary Analysis and Research
EN 1223 Concepts in Mechanical Engineering
EN 1323 Concepts in Electrical Engineering
MTH 1144 Calculus II (L)
16 hours
Sophomore Year - Fall
CHM 1124 General Chemistry I (L)
EE 2213 Digital Electronics (L)
MTH 2114 Linear Algebra and Differential Equations (L)
PHY 2114 General Physics I (L)
RE 2121 Practicum in Renewable Energy
16 hours
Sophomore Year - Spring

BBL 1013 Old Testament Survey
EE 2223 Electrical Circuits

EN 2322 Engineering Economics
HST 1013 Western Civilization I
MTH 2123 Vector Calculus
PHY 2124 General Physics II (L)
18 hours

## Junior Year - Fall

CS 1113 Introduction to Computing
EE 3313 Electronics I (L)
EN 3413 Linear Signals and Systems
ME 3113 Thermal Sciences
ME 3313 Statics and Strength of Materials
3 Philosophy elective
18 hours
Junior Year - Spring
BBL 3003 Evangelical Theology
CHM 2154 General, Organic, and Biochemistry (L)
EN 3222 Design Lab (L)
MTH 3183 Probability and Statistics
RE 3143 Wind Energy
3 Technical elective
18 hours
Senior Year - Fall

EN 3213 Engineering Materials Science
EN 3513 International Problem Solving
EN 4113 Engineering Design I
RE 3123 Bio-fuels and Biomass
RE 3163 Solar Energy
3 Technical elective

18 hours

Senior Year - Spring
BBL 4002 Capstone Seminar in Christian Life
EN 4123 Engineering Design II
EN 4323 Control Systems
HST 1023 Western Civilization II
POL 2013 American Government
3 Arts 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
KIN 1002 Wellness
EGL 1013 English I: Composition

EGL 1023 English II: Literary Analysis and Research
One of the following:
HST 1013 Western Civilization I
HST 1023 Western Civilization II
Core Electives

Wellness Activity-1 hour
Social Science-3 hours
2. Courses Specified by this Department-33 hours

CHM 1124 General Chemistry I
CS 1113 Introduction to Computing
EN 1112 Engineering Concepts and Design
EN 1121 Production Techniques Laboratory
EN 1223 Concepts in Mechanical Engineering
EN 1323 Concepts in Electrical Engineering
EN 2322 Engineering Economics
EN 3213 Engineering Materials Science
MTH 1134 Calculus I
PHY 2114 General Physics I
PHY 2124 General Physics II
3. Electives as necessary to complete minimum total hours

Minimum total semester hours . 62

## DEPARTMENT OF RENEWABLE ENERGY

(SYMBOL: RE)
The Department of Renewable Energy prepares students for the challenges of designing, promoting, and implementing renewable energy systems in society's rapidly-changing energy-related industries. Energy, in its many abundant forms, is the driving physical factor upon which industrial societies are founded. Renewable energy resources include wind power, solar power, biomass and bio-fuels, fuel cells, ground-source heat pumps, geothermal resources, hydroelectric power, tidal and wave power. The Bachelor of Science in Renewable Energy will prepare students for success in these rapidly developing fields and disciplines.

The Renewable Energy Program is a cross-disciplinary program grounded in the belief that students who understand the fundamentals of science and energy conversion, its application to international sustainable development, and the business and management skills to drive its growth market can be effective agents for sustainable change. The department will draw from existing strengths in the Science, Engineering, Business, and Biblical Studies divisions to offer the Bachelor of Science Degree in Renewable Energy with two distinct emphases: Management and International Development, in addition to the renewable energy emphasis with in an Engineering degree.

## Requirements for the Bachelor of Science (B.S.) degree with major in Renewable Energy

## 1. University Core Curriculum- 46 hours

The Global Studies, Mathematics, and Physical Science electives are covered by program requirements.
2. Courses Specified by this Department - 65-69 hours
A. Renewable Energy Common Courses-27 hours

CHM 2154 General, Organic, and Biochemistry
EN 3513 International Problem Solving
RE 1113 Introduction to Renewable Energy
RE 2113 Introduction to Energy Science
RE 2121 Practicum in Renewable Energy

## RE 3123 Bio-fuels and Biomass

RE 3143 Wind Energy
RE 3163 Solar Energy
RE 4124 Renewable Energy Capstone
B. One of the following:

1) Management Option-38 hours

ATG 1163 Accounting for Decision Making
BUS 1123 Business Communication
BUS 2193 Business Statistics
BUS 3153 Applied Business Ethics
BUS 4143 Business Law
CHM 1014 Fundamentals of Chemistry
EN 2322 Engineering Economics
LDR 3563 Organizational Leadership
MGT 2173 Principles of Management
MTH 1123 Survey of Calculus
PHY 1114 Fundamentals of Physics I
PHY 1124 Fundamentals of Physics II
2) International Development Option-42 hours

CHM 1014 Fundamentals of Chemistry
ICS 2113 Intercultural Communications
ICS 3133 Cultural Research Methods
ICS 3163 Geo-Cultural Studies

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
INT 2183 International Management
MTH 1123 Survey of Calculus
MTH 2103 Applied Statistics for Scientists
PHY 1114 Fundamentals of Physics I
PHY 1124 Fundamentals of Physics II
One of the following:
BBL 3303 Theology of Missions
BBL 3583 Perspectives on the World Christian Movement
3. Electives as necessary to complete minimum total hours

Minimum total semester hours. 124

## Possible Four-Year Plan for Bachelor of Science in Renewable Energy degree with Management Option

Freshman Year - Fall
BBL 1023 New Testament Survey
COR 1002 Gateway Seminar in Christian Scholarship
EGL 1013 English I: Composition
HST 1013 Western Civilization I
RE 1113 Introduction to Renewable Energy
14 hours
Freshman Year - Spring
ATG 1163 Accounting for Decision Making
CHM 1014 Fundamentals of Chemistry
EGL 1023 English II: Literary Analysis and Research
MTH 1123 Survey of Calculus
RE 2113 Introduction to Energy Science
16 hours
Sophomore Year - Fall
BBL 1013 Old Testament Survey
KIN 1002 Wellness
PHY 1114 Fundamentals of Physics I
RE 2121 Practicum in Renewable Energy
$\qquad$ Electives - 6 hours

## 16 hours

Sophomore Year - Spring
BIO 1003 Biological Science
BUS 1123 Business Communication
CHM 2154 General, Organic, Biochemistry
KIN 10_1 Wellness Activity
PHY 1124 Fundamentals of Physics II
15 hours
Junior Year - Fall
BUS 3153 Applied Business Ethics
EN 3513 International Problem Solving

POL 2013 American Government
PSY 1013 Psychology
RE 3123 Biofuels/Biomass

15 hours

Junior Year - Spring
BBL 3003 Evangelical Theology
BUS 2193 Business Statistics
EN 2322 Engineering Economics
HST 1023 Western Civilization II
LDR 3563 Organizational Leadership
RE 3143 Wind Energy
17 hours
Senior Year - Fall
BUS 4143 Business Law
EGL 4003 Masterpieces of Literature
RE 3163 Solar Energy
RPH 3003 Introduction to Philosophy
__3 Elective

15 hours

Senior Year - Spring
BBL 4002 Capstone Seminar in Christian Life
COM 2083 Masterpieces of Film
MGT 2173 Principles of Management
RE 4124 Renewable Energy Capstone
__3 Elective
15 hours
Note: on the schedule above, the hours total 123; therefore additional hours are needed to meet the minimum total semester hours requirement of 124 .

## Possible Four-Year Plan for Bachelor of Science in Renewable Energy degree with International Development Option

## Freshman Year - Fall

BBL 1023 New Testament Survey
COR 1002 Gateway Seminar in Christian Scholarship
EGL 1013 English I: Composition

HST 1013 Western Civilization I

RE 1113 Introduction to Renewable Energy
14 hours

Freshman Year - Spring
CHM 1014 Fundamentals of Chemistry
EGL 1023 English II: Literary Analysis and Research
ICS 2113 Intercultural Communications
MTH 1123 Survey of Calculus
RE 2113 Introduction to Energy Science

16 hours

Sophomore Year - Fall
BBL 1013 Old Testament Survey
INT 2183 International Management
KIN 1002 Wellness
PHY 1114 Fundamentals of Physics IRE 2121 Practicum in Renewable Energy
__3 Elective
16 hours
Sophomore Year - Spring
BIO 1003 Biological ScienceCHM 2154 General, Organic, BiochemistryICS 3133 Cultural Research Methods
PHY 1124 Fundamentals of Physics II

$\qquad$
3 Elective
17 hours
Junior Year - FallICS 3243 Community Development
HST 1023 Western Civilization II
KIN 10_1 Wellness Activity
POL 2013 American Government
PSY 1013 Psychology
RE 3123 Biofuels/Biomass
16 hours
Junior Year - Spring
BBL 3003 Evangelical Theology
BBL 3583 Perspectives
GSC 3003 Global Stewardship
ICS 3263 Appropriate Technology I

RE 3143 Wind Energy
15 hours
Senior Year - Fall
EGL 4003 Masterpieces of Literature
ICS 3283 Appropriate Technology II
RE 3163 Solar Energy
RPH 3003 Introduction to Philosophy
__3 Elective
15 hours
Senior Year - Spring
BBL 4002 Capstone Seminar in Christian Life
COM 2083 Masterpieces of Film
RE 4124 Renewable Energy Capstone
$\qquad$ Electives - 6 hours
15 hours

## Requirements for minor in Renewable Energy

The student must successfully complete a minimum of 20 hours.
CHM 1014 Fundamentals of Chemistry
CHM 2154 General, Organic, and Biochemistry
RE 1113 Introduction to Renewable Energy
RE 2113 Introduction to Energy Science
Two of the following:

RE 3123 Bio-fuels and Biomass
RE 3143 Wind Energy
RE 3163 Solar Energy

## DIVISION OF

## HUMANITIES AND SOCIAL SCIENCES

Cater, Froman (chair), Guinn, A. Himes, J. Himes, Iglesias, D. Johnson, P. Jones, Kirk, R. Moore, Niles, C. Pastoor, J. Pastoor, Posey, Roby, Stratman

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 Education Division, 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, which include publishing, editing, writing for business and industry, management, and many more.

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

EGL 4003 is covered by program requirements.
2. English Major Core-25 hours

EGL 1221 Introduction to English Studies
EGL 2393 Advanced Composition
EGL 2413 American Literature to 1900
EGL 3313 Medieval Literature

EGL 3333 Shakespearean Drama
EGL 3353 Nineteenth Century British Literature
EGL 3363 Advanced English Grammar
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-11 hours
A. Literature

EGL 3321 Writing Center Practicum (to be taken twice)
EGL 3713 Literary Theory

EGL 4483 Selected Topics: Literature in two of the following:

1) Author 2) Period 3) Genre 4) Topic
B. Writing

EGL 2273 Introduction to Creative Writing

EGL 3321 Writing Center Practicum (may be repeated for additional credit)
EGL 3341 Literary Magazine Practicum

EGL 4473 Creative Writing Workshop: Selected Genres
EGL 4473 Creative Writing Workshop: Selected Genres (2nd genre)
4. Foreign Language-12 hours in one language or six hours each in two languages. Completion of an Intermediate course meets the Global Studies requirement of the Core Curriculum. English majors are encouraged to consider Spanish or French as a minor.
5. Electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in English

The student must successfully complete a minimum of 21 hours of course work in EGL, including at least six hours of upper-division courses.

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

The student must successfully complete the following courses for a minimum of 21 hours.
ICS 2113 Intercultural 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 B.S.E. degree with major in English under Education Division.

## Requirements for minor in Education

English majors whose professional plans may include teaching in public (grades 7-12 with a nontraditional licensure), private, international, or college settings are encouraged to consider the 18hour 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.

## 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 department offers courses within the 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
2. Courses Specified by this Department-36 hours

HST 2113 United States History to 1865
HST 2123 United States History since 1865
HST 2213 Study of History
HST 4613 Seminar in History
Twenty-four hours from the following (at least 15 hours must be upper-division courses):
BBL 3363 History of the Christian Church I
BBL 3373 History of the Christian Church II
HST 2111 Selected Topics: Language Lab
HST 2112 Selected Topics: Great Books
HST 2153 Twentieth Century World History
HST 2243 Middle Ages
HST 2323 Poverty and Welfare in American History
HST 2523 Classical World
HST 3253 British Empire
HST 3263 American Slavery in Comparative Perspective

HST 3273 America at War, 1861-1919
HST 3313 Second World War
HST 3411/12/13 Selected Topics
HST 3423 Leaders in History
HST 3433 History of the Middle East, 600-1800
HST 3443 The Modern Middle East
HST 3463 African Civilization to 1850
HST 3473 African Civilization since 1850
HST 4511/12/13 Independent Study
POL 3143 The American Presidency
PSY 3383 History of Psychology
3. Foreign Language-12 hours (or equivalent) in one or more languages. At least six hours must focus on a single language. Completion of an intermediate language course meets the Global Studies requirement of the Core Curriculum.
4. Minor field or electives as necessary to complete minimum total hours. At least 12 hours must be upper-division courses.

Minimum total semester hours 124

## Requirements for minor in History

The student must successfully complete a minimum of 18 hours beyond the Core.
Required Courses- 6 hours
HST 2113 United States History to 1865
One of the following:
HST 2123 United States History since 1865
HST 2153 Twentieth Century World History

A minimum of 12 additional hours in HST.
At least six hours must be upper-division courses.

## U.S. History CLEP Examinations

History majors and minors may not use CLEP examinations to substitute for HST 2113 or HST $\underline{2123}$ 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 Biblical Studies, English, History, Intercultural Studies, International Business, Music, and Political Science 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's language facility provides 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 Seville, Spain. In order to be eligible to participate in Semester in Spain (Seville), students must successfully complete LS 3163 Professional Spanish. LS 3173 Introduction to Linguistics or an equivalent course is strongly recommended. Performing well in these courses is directly linked to success in Spain where all instruction is in Spanish.

Financial aid funds for Semester in Spain (Seville) may be limited based on student demand. Students interested in majoring in Spanish should consult with the department chair as early as possible about their future participation in Seville.

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.

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 \& 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 elementary 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 the Bachelor of Arts (B.A.) degree with major in Spanish

1. University Core Curriculum- 52 hours

The Global Studies elective is covered by program requirements.
2. Courses Specified by the Department-21 hours

LS 2113 Intermediate Spanish I

LS 2123 Intermediate Spanish II
LS 3163 Professional Spanish
LS 3173 Introduction to Linguistics
LS 4113 Readings in Spanish I
LS 4123 Readings in Spanish II
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. Semester in Spain (Seville)-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 Semester in Spain (Seville) courses may be substituted only upon approval of the Department of Language Studies.
4. Minor field or electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . . 124

## Requirements for minor in Spanish

The student must successfully complete the following courses for a minimum of 18 hours.

## LS 2113 Intermediate Spanish I

LS 2123 Intermediate Spanish II

LS 3163 Professional Spanish
LS 3173 Introduction to Linguistics

LS 4113 Readings in Spanish I
LS 4123 Readings in Spanish II

## Requirements for minor in French

The student must successfully complete the following courses for a minimum of 21 hours.
LS 1213 Elementary French I
LS 1223 Elementary French II
LS 2213 Intermediate French I
LS 2223 Intermediate French II

LS 3173 Introduction to Linguistics
LS 3213 Readings in French I
LS 3223 Readings in French II

## Requirements for minor in Linguistics

The student must successfully complete a minimum of 22 hours.
Required Courses-6 hours
EGL 3363 Advanced English Grammar
LS 3173 Introduction to Linguistics
Intermediate Language Study or Latin-6 hours
Summer Institute of Linguistics-10 semester hours minimum, offered through the University of North Dakota or Trinity Western University (Langley, British Columbia, Canada).

## DEPARTMENT OF POLITICAL SCIENCE

(SYMBOL: POL)

The Department of Political Science offers courses leading to a major in Political Science. Minors are available in International Relations, Political Science, and Pre-Law. The curriculum is international in scope, theoretically grounded, and academically rigorous. Courses within the department introduce students to the theory and practice of political science with particular
emphasis on political philosophy, international relations, comparative politics, political behavior, and political institutions. At the same time, students are equipped with the skills necessary to excel in any post baccalaureate pursuit, including graduate school, law school, missions, or business.

Faculty in the department take seriously the integration of faith and learning. Students are encouraged to view themselves as active participants in the flow of history with a God-given mandate to serve others in the local community and the world. Graduates will be able to apply a Christian worldview to public life and integrate their faith with their chosen vocation.

## Requirements for the Bachelor of Arts (B.A.) degree with major in Political Science

## 1. University Core Curriculum- 49 hours

The Philosophy elective and POL 2013 are covered by program requirements.
2. Courses Specified by this Department-36 hours

POL 2013 American Government
POL 2213 Comparative Politics
POL 2473 Methods of Political Analysis
POL 3003 Political Philosophy
POL 3133 Politics of Social Policy
POL 3143 The American Presidency
POL 3213 Faith and Politics
POL 3353 International Relations
POL 3423 Selected Topics in American Politics
POL 4243 Constitutional Law
POL 4313 Christianity and the Law
POL 4613 Seminar in United States Politics
3. Foreign Language-12 hours (or equivalent) in one or two languages. Completion of an Intermediate language course meets the Global Studies requirement of the Core Curriculum.
4. Minor field or electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in Political Science

The student must successfully complete a minimum of 21 hours.
Required Courses-12 hours
POL 2013 American Government
POL 2213 Comparative Politics
POL 3003 Political Philosophy
POL 3213 Faith and Politics
A minimum of nine additional hours in political science.

## Requirements for minor in International Relations

The student must successfully complete a minimum of 18 hours.
Required Courses- 9 hours
HST 2153 Twentieth Century World History
POL 2213 Comparative Politics
POL 3353 International Relations
Nine hours from among the following:
ECN 2043 Economies of the European Union
ECN 2113 Principles of Microeconomics
ECN 2123 Principles of Macroeconomics

ECN 4103 International Economics
HST 3253 British Empire
ICS 4133 Intercultural Leadership Skills
SST 2123 Cultural Anthropology
At least six hours must be upper division.

## American Studies Program (ASP) option

Students successfully participating in ASP (four-month internship/seminar program) in Washington, D.C., may fulfill the requirements of the Political Science minor by the additional completion of POL 2013 and 3003. Consult Political Science faculty for details.

## Requirements for minor in Pre-Law

The student must successfully complete a minimum of 21 hours.
Required Courses-15 hours
BUS 2153 Financial Mathematics
EGL 2393 Advanced Composition
POL 2013 American Government
POL 4243 Constitutional Law
POL 4313 Christianity and the Law
Two of the following:
BUS 4143 Business Law
COM 4293 Communication Law and Ethics
FAM 4453 Family Law and Society

## 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 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 the Pre-Law advisor;
> an annual spring semester mock LSAT test and score analysis;
> an introduction to the integration of faith and the practice of law as well as contact with currently practicing legal professionals in JBU's Christianity and the Law course;
> exposure to the law through JBU's Constitutional Law, Communication Law and Ethics, Family Law and Society, and/or Business Law 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 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

The Mathematics and Social Science electives are covered by program requirements.
2. Courses Specified by this Department-40 hours

PSY 1013 Introductory Psychology
PSY 1101 Orientation to Psychology
PSY 2383 Statistics for the Behavioral Sciences
PSY 2393 Research Methods

PSY 3203 Psychological Testing
PSY 3383 History of Psychology
PSY 3493 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 or students may complete the following Concentration in Family and Human Services as an alternative to completing a minor.

Family and Human Services Concentration:
FAM 2133 Introduction to Family Science
FAM 3133 Marriage and Family Living
FAM 3243 Family Sexuality
FAM 4253 Family Communication
4. Electives as necessary 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 Human Physiology

COM 2523 Public Speaking
EGL 2393 Advanced Composition
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

The student must successfully complete a minimum of 18 hours.
Required Courses-9 hours
PSY 1013 Introductory Psychology
PSY 2383 Statistics for the Behavioral Sciences
PSY 2393 Research Methods
An additional nine hours selected from PSY.

At least six hours must be upper-division 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 Education Division, 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, History, Political Science, and Social Studies-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 B.S.E. with major in Social Studies under the Education Division.

## Requirements for minor in Social Studies

The student must successfully complete 21 hours from courses in Economics,
History, Intercultural Studies, Social Studies, and Political Science. Of these, at least six hours must be in History and at least six hours each from any other two of these five departments. At least six hours must be upper-division courses.

## DIVISION OF

## INTERDISCIPLINARY STUDIES

Confer, Gambill, B. Lambert, Norwood (chair), Vila (Gateway Coordinator), Whitmore

The Division of Interdisciplinary Studies offers the Bachelor of Science or Bachelor of Arts degree in Interdisciplinary Studies, an Associate of Arts degree in General Education, and a minor in Military Science. It houses the Gateway Seminar in Christian Scholarship, certain Honors Scholars courses, and courses relating to learning assistance 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 general academic advisor and the Career Development Director who guide the student in a career exploration process.

## DEPARTMENT OF INTERDISCIPLINARY STUDIES

(SYMBOLS: COR, IDS)

## Requirements for the Bachelor of Arts (B.A.), Bachelor of Science (B.S.), or Associate of Arts (A.A.) 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 or associate's 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.

Baccalaureate Interdisciplinary Studies Programs must conform to general university degree requirements, including the following:
> Full Core Curriculum, possibly employing substitutions allowed within existing degrees;
> 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 in the major field, with no presumption of waiver of specified prerequisites;
> Stated minimums for major, minor, and cumulative grade-point averages;
> Minimum credit of 124 total semester hours.

Associate's Interdisciplinary Studies Programs must conform to general university two-year degree requirements, including the following:
> Full 28-hour Core Curriculum as stated for associate's degrees, possibly employing existing exceptions;
> Major field consisting of at least 27 semester hours;
> Bachelor's degree students seeking a tandem associate's degree must propose at least 18 unique hours in the associate's major field;
> Stated residency requirements;
> Stated minimums for major, minor, and cumulative grade-point averages;
> Minimum credit of 62 total semester hours.
A student considering an Interdisciplinary Studies degree should begin discussion with the general academic advisor 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. One of the FAC members must also agree to be the student's academic advisor. 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 the catalog;
> Current transcript showing a grade-point average of at least 2.8;
> Signatures of members of the Faculty 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. degree- 28 hours
2. Courses Specified by the Division-21 hours

BBL 3003 Evangelical Theology
BBL 4002 Capstone Seminar in Christian Life
EGL 4003 Masterpieces of Literature
KIN 10_1 Wellness Activity
POL 2013 American Government
Core Electives

## Natural Science-3 additional hours

The Arts- 3 hours
Philosophy-3 hours
3. Electives as necessary to complete minimum total hours

Minimum total semester hours .62

The Associate of Arts degree in General Education is not available to students pursuing fouryear degrees.

## DEPARTMENT OF MILITARY SCIENCE

(SYMBOLS: ARO, MSC)

By cross-town agreement with the University of Arkansas-Fayetteville, 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. Refer to the Reserve Officer Training Corps section of this catalog 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 six hours of upper-division courses.

## DIVISION OF

# NATURAL AND HEALTH SCIENCES 

J. Beers, Blume, Bowden, Essary, Funk, Greuel (chair), Main, Newton, Piston, Siemens, Swearingen, Umesiri, Wakefield

The Division of Natural and Health Sciences, consisting of the Departments of Biology, Chemistry, General Science, Kinesiology, Mathematics, and Physics is equipped to give students excellent training in the indicated fields. Majors are offered in Biology, Chemistry, Biochemistry, Exercise Studies, Mathematics, and Sports Medicine; a minor field may be selected 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, industry, 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 that 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, Biochemistry, or Sports Medicine 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 Student Handbook of the Division of Natural and Health Sciences.

## 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 worldview.

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. A degree in Biology 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

The Mathematics and Natural Science electives are covered by program requirements.
2. Courses Specified by this Department
A. Biology Major Core-33-34 hours

BIO 1124 Cell Biology
BIO 1134 Plant Biology
BIO 2134 Animal Biology
BIO 2174 Genetics
BIO 3301 Field Experience (required of all students in the Pre-Health Professions Program)

CHM 1124 General Chemistry I
CHM 1134 General Chemistry II

## MTH 1123 Survey of Calculus

MTH 2103 Applied Statistics for Scientists
One of the following:

## BIO 4103 Bioethics

## GSC 4133 Faith and Science

B. Biology Major Electives: 20 hours of upper-division Biology courses, which may include CHM 3164 and as many as four hours of research (BIO 4221, 4222, or 4223)
3. Additional courses, selected in consultation with academic advisor, for completion of a minor or fulfillment of prerequisites for graduate school, medical school, dental school, or other professional schools. May also include additional upper-division Biology courses, including additional hours of research (BIO 4221, 4222, or 4223), or courses applied toward completion of a second major.

## 4. Complete a standardized achievement test designated by the department

5. Electives as necessary to complete minimum total hours

Minimum total semester hours

## Requirements for minor in Biology

The student must successfully complete a minimum of 20 hours.
BIO 1124 Cell Biology
An additional 16 hours selected from BIO.
At least eight hours must be upper-division courses.

## Minor in Education

Students interested in teaching should complete a minor in Education.

## 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

The Mathematics and Physical Science electives are covered by program requirements.
2. Courses Specified by this Department-58 hours

CHM 1124 General Chemistry I
CHM 1134 General Chemistry II
CHM 3114 Introduction to Analytical Chemistry
CHM 3134 Organic Chemistry I
CHM 3144 Organic Chemistry II
CHM 3183 Inorganic Chemistry
CHM 4124 Physical Chemistry I
CHM 4134 Physical Chemistry II
GSC 4133 Faith and Science
MTH 1134 Calculus I

MTH 1144 Calculus II
MTH 2103 Applied Statistics for Scientists
PHY 2114 General Physics I

PHY 2124 General Physics II

Five hours from among the following (three hours maximum in research):
CHM 1101 Chemistry Practicum: Glassblowing
CHM 2151 Seminar: Nanotechnology
CHM 3101 Chemistry Practicum: Teaching
CHM 3164 Biochemistry
CHM 4221/22/23 Chemistry Research
3. Complete a standardized achievement test designated by the department
4. Electives as necessary to complete minimum total hours

Minimum total semester hours .124

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

1. University Core Curriculum- 46 hours

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 General Chemistry I
CHM 1134 General Chemistry II
CHM 3114 Introduction to Analytical Chemistry
CHM 3134 Organic Chemistry I
CHM 3144 Organic Chemistry II
CHM 3164 Biochemistry
CHM 3183 Inorganic Chemistry
CHM 4124 Physical Chemistry I
CHM 4134 Physical Chemistry II
MTH 1134 Calculus I
MTH 1144 Calculus II
MTH 2103 Applied Statistics for Scientists
PHY 2114 General Physics I
PHY 2124 General Physics II
One of the following:
BIO 4103 Bioethics
GSC 4133 Faith and Science
Eight hours from the following (including no more than four hours of research):
BIO 3314 Molecular Genetics
BIO 3334 Microbiology
BIO 3514 Human Anatomy
BIO 3524 Human Physiology
BIO 4221/22/23 Biological Research
CHM 2151 Seminar: Nanotechnology
CHM 4221/22/23 Chemistry Research
3. Complete a standardized achievement test designated by the department
4. Electives as necessary to complete minimum total hours

Minimum total semester hours . . . . . . . . . . . . . . . . . . . . . 124

## Requirements for minor in Chemistry

The student must successfully complete a minimum of 20 hours, selected from the following:
CHM 1124 General Chemistry I
CHM 1134 General Chemistry II
CHM 3114 Introduction to Analytical Chemistry
CHM 3134 Organic Chemistry I
CHM 3144 Organic Chemistry II
CHM 3164 Biochemistry
CHM 3183 Inorganic Chemistry

## Minor in Education

Students interested in teaching should complete a minor in Education.

## DEPARTMENT OF GENERAL SCIENCE (SYMBOL: GSC)

## Requirements for minor in General Science

The student must successfully complete a minimum of 18 hours.

Required courses-must be taken in at least two of the following departments: Biology, Chemistry, Physics, and General Science (excluding GSC 3103).

At least eight hours must be upper-division courses.

## 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 programs in the allied health professions 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

Social Science - PSY 1013 needed as prerequisite for PSY 2383 and 2413. The Mathematics and Natural Science electives are covered by program requirements.
2. Courses Specified by this Division-70-75 hours

BIO 1124 Cell Biology
BIO 3514 Human Anatomy
BIO 3524 Human 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
MGT 3323 Management in Health and Sport
MTH 1113 College Algebra (waived by ACT Math score of 24 or SAT Math score of 580)
MTH 1122 Trigonometry (waived by ACT Math score of 24 or SAT Math score of 580, and B or better in high school Trigonometry)

PHY 1114 Fundamentals of Physics I
PHY 1124 Fundamentals of Physics II
PSY 2383 Statistics for Behavioral Sciences
PSY 2413 Developmental Psychology
One of the following:
BIO 4103 Bioethics

GSC 4133 Faith and Science
3. Electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for the Bachelor of Science (B.S.) degree with major in Exercise Studies

1. University Core Curriculum- 45 hours

The Natural Science and Wellness Activity electives are covered by program requirements.
2. Courses specified by this Department-52 hours

BIO 1124 Cell Biology

BIO 3514 Human Anatomy
BIO 3524 Human Physiology
CHM 1014 Fundamentals of Chemistry
COM 2523 Public Speaking
KIN 1081 Aerobic Walking/Jogging
KIN 1091 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
MGT 3323 Management in Health and Sport
3. Electives as necessary to complete minimum total hours

Minimum total semester hours 124

## Requirements for minor in Kinesiology

The student must successfully complete a minimum of 19 hours.
KIN 1103 First Aid and CPR

KIN 1283 Athletic Training Techniques
KIN 3392 Personal Training Course

An additional eleven hours from among the following:
KIN 2181 Medical Terminology
KIN 2233 Lifeguarding
KIN 2242 Drugs in Society
KIN 2283 Injury Evaluation and Rehabilitation
KIN 3303 Nutrition for Fitness and Sport
KIN 3353 Theory and Techniques of Coaching
KIN 3483 Therapeutic Exercise and Modalities
KIN 4423 Biomechanics
KIN 4433 Exercise Physiology
KIN 4492 Internship
MGT 3323 Management in Health and Sport
At least six hours must be upper-division courses.

## DEPARTMENT OF MATHEMATICS

(SYMBOL: MTH)
The Department of Mathematics offers courses which provide a solid foundation in the mathematical sciences consistent with a Christian worldview. 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

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
MTH 3103 Foundations of Mathematics
MTH 4101 Readings
MTH 4123 Abstract Algebra
MTH 4143 Real Analysis
One of the following:
MTH 3173 Mathematical Modeling and Simulation
MTH 3183 Probability and Statistics
An additional six hours of upper-division mathematics courses.

CS 1113 Introduction to Computing
GSC 4133 Faith and Science

PHY 2114 General Physics I

PHY 2124 General Physics II
3. Minor field
4. Complete a standardized achievement test designated by the department
5. Electives as necessary to complete minimum total hours

Minimum total semester hours124

## Requirements for minor in Mathematics

The student must successfully complete a minimum of 21 hours.
MTH 2123 Vector Calculus
An additional 18 hours selected from MTH.

At least six hours must be upper-division courses.

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

See B.S.E. degree with major in Mathematics in Education Division.

## 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


At least six hours must be upper-division courses.

## 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.

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.

## Courses:

- Aerospace Studies ~ Air Force ROTC (ARO)
- Art and Design (ART)
- Accounting (ATG)
- Bible (BBL)
- Biology (BIO)
- Business Administration (BUS)
- Chemistry (CHM)
- Construction Management (CM)
- Christian Ministries (CMN)
- Communication (COM)
- Core Curriculum (COR)
- Computer Science (CS)
- Economics (ECN)
- Education (ED)
- Electrical Engineering (EE)
- English (EGL)
- Engineering (EN)
- Family and Human Services (FAM)
- General Science (GSC)
- History (HST)
- Honors
- Intercultural Studies (ICS)
- Interdisciplinary Studies (IDS)
- International Business (INT)
- Kinesiology (KIN)
- Leadership (LDR)
- Language Studies (LS)
- Language Studies ~ Semester in Spain (LSS)
- Mechanical Engineering (ME)
- Management (MGT)
- Marketing (MKT)
- Military Science ~ Army ROTC (MSC)
- Mathematics (MTH)
- Music (MUS)
- Physics (PHY)
- Political Science (POL)
- Psychology (PSY)
- Renewable Energy (RE)
- Religion and Philosophy (RPH)
- Social Studies (SST)


# 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 are also required. One hour of classroom and two hours of lab per week.

1011 and 1010L offered fall semester
1021 and 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. Corequisites to the course work are leadership labs, ARO 2010L and 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 regiment and testing are also required. One hour of classroom and two hours of lab per week. Wellness Activity requirement of the Core Curriculum will be waived upon completion of both of these courses.

2011 and 2010L offered fall semester
2021 and 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 and 3020L offer concrete leadership practice, including the planning and controlling of military activities of the cadet corps, and preparing various communications. Standard fitness regiment and testing are also required. Three hours of classroom and three hours of lab per week.

3013 and 3010L offered fall semester
3023 and 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 and ARO 4020L include dispensing interviews, guidance, and information, which will increase the understanding, motivation, and performance of other cadets. Physical fitness regiment and testing are also required. Three hours of classroom and three hours of lab per week.

4013 and 4010L offered fall semester
4023 and 4020L offered spring semester

## ART (Visual Arts)

## ART 1123 Computer Graphics

Introduction to current professional software programs used in the fields of graphic design, illustration, digital media, and photography. Taught on the Macintosh platform. An additional fee associated with this course.

Offered each semester

## ART 1133 Visual Art Foundation

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

## ART 1243 Drawing I

## Three hours

An experience in developing visual perception through observation and then translating threedimensional 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

This is the Digital Media Art student's introduction to film and video editing using non-linear digital editing tools. Course work utilizes both progressive instruction in Final Cut Pro and work on major projects that will form the basis of student's digital media portfolio. An additional fee associated with this course.

## 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 associated with this course. Prerequisite: ART 2103.

Offered spring semester

## ART 2123 Cinematography

## Three hours

An introduction to digital cinema through classroom lecture and hands-on workshops, and major film-making assignments. Students gain experience as visual storytellers while learning to create mood and evoke emotion through the combination of cinematic techniques, camera operation, cinematic lighting and sound acquisition. An additional fee 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 course work with visits to important cultural sites in Germany, Austria, and Italy. Meets the Arts requirement of the Core Curriculum.

Offered summer, German Studies Program

## ART 2163 Irish Art and Culture

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 course work with visits to important cultural sites in Ireland as well as guest lecturers from contemporary artists.

Offered Irish Studies Program

## 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. Other related topics will be the psychology of color and current trends. The information gained through this study is essential for those entering any major in the Department of Visual Arts.

Offered each semester

## ART 2233 Art History I

Three hours

An introduction to the major people and works responsible for our visual heritage. Students will work toward the goal of developing visual literacy, in the areas of fine art, design, and architecture. Visual Arts majors or minors only.

Offered each 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 Art 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 associated with this course. Prerequisite: ART 1123.

Offered fall semester

## ART 2303 Interactive Design I

Three hours
This class builds on the principles of design presented in Graphic Design I, with an introduction to practicing design within an interactive perspective. Topics covered will include 2D animation and interactive design principles and practice, in addition to design concepts developed specifically with an interactive approach. An additional fee associated with this course. Prerequisite: ART 2253.

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.

## 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 Photo 1: Introduction to Photography

## Three hours

A beginner's overview to the mechanical and digital tools and skills required for the modern art of photography. Emphasis is placed on exposure, composition, formal aesthetics, and lighting 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. Visual Arts majors have priority for this course. An additional fee 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 2463 Photo 2: Traditional Darkroom

## Three hours

Students refine and expand photographic skills by learning classical (traditional) printing, handcoloring, and toning. Alternative processes such as platinum, palladium, and gum bichromate black and white, or Polaroid transfers may be included in alternating media. Instructor approval is required. An additional fee associated with this course. Prerequisite: ART 2403.

Offered fall 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 1123.

Offered fall semester

## ART 2613 Digital Illustration I

## Three hours

An introduction to creating illustrations on the computer using various image editing software. Various techniques of image manipulation or creation in Photoshop will be covered. Emphasis is given to aesthetic designs and software techniques. Strong drawing skills and digital photography skills recommended. An additional fee associated with this course. Prerequisite: ART 1123.

Offered fall semester

## ART 3153 Photo 3: 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 associated with this course. Prerequisites: ART 1123 and 2403 .

Offered each 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 Art 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 modeling and rendering. Various 3D modeling applications will be explored. An additional fee associated with this course. Prerequisite: ART 2273.

Offered spring semester

## ART 3233 Art History II

## Three hours

This class continues the visual literacy begun in Art History I with topics that are beyond the scope of the general survey in Art History I. Instruction will focus on specific themes such as Eastern art history, modern art history, religious studies in art history, etc.

Offered spring semester (odd-numbered years)

## 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 and $\underline{2503}$.

Offered fall semester

## ART 3283 Graphic Design in Social Context

## Three hours

In the context of a study abroad program, Graphic Design in Social Context focuses on the integration of graphic design education and practical hands-in experience in social and cultural setting. Students will study formal design principles and theories, and apply their knowledge to projects suited for the culture in which they are engaged. Design students will need to consider how their conceptual design direction, compositional layout, image creation or selection, and typography will inform their intended message within the context of the culture. Graphic Design in Social Context will often, but not always, include a missions component to the course. Students will have the opportunity to work with a missions organization designing "live" projects, which will aid the visual communication needs of those organizations. This will provide students with quality "real life" experience which could enhance the student's portfolio.
Prerequisites: ART 2263 and $\underline{2503 .}$
Offered summer

## ART 3323 Figure Drawing I

## Three hours

A visual study of the human anatomical construction. Emphasis on gesture, form, light source, shadow-mass, and composition. Prerequisite: ART 1243.

## ART 3333 Interactive Design II

## Three hours

This class is an extension of the principles and practices presented in Interactive Design I. The class furthers knowledge and practice in interactive design with particular emphasis on producing work for the web. An additional fee 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.

Offered fall semester (odd-numbered years)
Offered 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)
Offered 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)

Offered spring semester (odd-numbered years)

## 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)

Offered 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 associated with this course. Prerequisites: ART 2103, 2113, and 2123.

Offered fall semester

## ART 3423 Figure Drawing II

Three hours
A focus on the experimental and expressive use of the figure. Prerequisite: ART 3323.
Offered spring semester

## ART 3453 Illustration I

## Three hours

An exploration of foundational illustration techniques. Rendering in various media is emphasized.

## 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

## ART 3503 Motion Graphics

An introduction to motion graphics utilizing video and/or animation technology to create the illusion of motion or a transforming appearance. The course will focus primarily on developing a proficiency in Adobe AfterEffects working on assignments and projects for use in multimedia and digital media projects. An additional fee associated with this course. Prerequisites: ART $\underline{1123}$ and 2253; ART 2303 or $\underline{2103}$ recommended.

Offered fall 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 4133 in Visual Arts curricula. An additional fee associated with this course. Prerequisites: ART 2403 and 3523 .

Offered summer

## ART 3523 Lighting for Photography and Cinema

Three hours

This course is designed to build on the introductory lighting coursework for Photography and Cinema majors. Topics addressed include: lighting theory, varied lighting equipment, light modeling, and staging on set or location. Projects would favor major emphasis. An additional fee associated with this course. Prerequisite: ART 2403 or $\underline{2123 .}$

Offered spring 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 associated with this course. Prerequisites: ART 2403 and 3523.

Offered summer

## ART 3553 Social Documentary Photography Abroad

## Three hours

In the context of a study abroad program, an introduction to documentary photography and the society of a host country. Students make careful observation of the habits and purposes of a people group and document those observations through photography. Participants often have opportunity to apply the knowledge as they work for a local publication and/or ministry, gaining both quality experience and portfolio enhancement. May substitute for ART 4183 in Visual Arts curricula. An additional fee associated with this course. Prerequisites: ART 2403 and 3523.

Offered summer

## ART 3613 Digital Illustration II

Three hours

A continuation of Digital Illustration I. This course will expand the knowledge of digital illustration to various projects. Matte painting and integration of 3D modeling will be explored. An additional fee associated with this course. Prerequisite: ART 2613.

Offered spring semester

## ART 3623 Advanced Studio I

## Three hours

Advanced independent study in the student's choice of media. This course will provide the opportunity for focused research, conceptualization, and application in the student's area of interest. Prerequisites: completion of required courses in the area and consent of instructor.

Offered each semester

## ART 3633 Advanced Studio II

## Three hours

Continued advanced independent study in the student's choice of media. This course will provide the opportunity for focused research, conceptualization, and application in the student's area of interest. Prerequisites: completion of required courses in the area, ART 3623, and consent of instructor.

Offered each semester

## ART 3643 Introduction to Printmaking

Three hours
This studio course introduces basic printmaking processes and equipment, with equal emphasis on concept and technique. Students are introduced to a variety of printmaking methods such as monotype, relief and intaglio, and various approaches to making and printing plates in each medium. An additional fee associated with this course. Prerequisites: $\underline{\text { ART } 1133 \text { and } \underline{1243} .}$

## ART 3653 Screenprinting

## Three hours

This studio course introduces the basic concepts and technical skills of screenprinting. Students learn fine art applications of screenprinting, as well as registration, stencil, drawing, and digital output application. This history of screenprinting is also discussed. An additional fee associated with this course. Prerequisites: ART 1123 and 1243.

Offered spring semester

## ART 3703 Scriptwriting

Three hours
An introduction to and overview of dramatic writing for film as expressed in professional screenplay form. This course utilizes exercises in dramatic writing: theme, plot, character, dialogue, and images as well as analysis of award-winning screenplays and their cinematic rendering. Integration of these elements into scenes and sequences with expected outcome of a screenplay for a short form narrative. Prerequisite: ART 3403.

Offered spring semester (even-numbered years)

## ART 3743 Interactive Design III

## Three hours

The third in the Interactive Design course sequence, this class continues to advance knowledge and practice begun previously, with special emphasis paid to portfolio and presentation topics. An additional fee associated with this course. Prerequisites: ART 2303 and $\underline{3333}$.

Offered spring semester

## ART 3881, 3882, 3883 Selected Topics

## One to 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 content differs.

## 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 4133 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 associated with this course. Prerequisites: ART 2403 and 3523.

Offered spring semester

## ART 4163 Non-Fiction Film Production

## Three hours

The analysis of the methods, genre, and history of non-fiction film, for application to hands-on documentary production. Progressive assignments through the semester focus on personal student-led filmmaking, culminating in several finished films worthy of entry in documentary film festivals nationwide. An additional fee associated with this course. Prerequisites: ART 2103, 2113, 2123, and consent of instructor.

Offered fall semester (even-numbered years)

## ART 4173 Narrative Film Production

## Three hours

The application of traditional narrative film production roles and techniques using digital cinema. Students are given the opportunity to fill various crew assignments as they work in teams to complete a short form narrative in one semester. An additional fee associated with this course. Prerequisite: ART 3403.

Offered spring semester (odd-numbered years)

## ART 4183 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 associated with this course. Prerequisite: ART 2403.

Offered spring semester

## ART 4253 3D ART III

## Three hours

Application of advanced 3D character design and modeling skills. Strong drawing and anatomy skills are required. Various 3D character modeling applications will be explored. An additional fee associated with this course. Prerequisites: ART 3223, and 3323 or consent of instructor.

Offered fall semester (odd-numbered years)

## 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.

## 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, 35 mm , medium format, and professional $4 \times 5$ view cameras. Studio lighting experience is gained with both strobe and hot light setups. An additional fee associated with this course. Prerequisites: ART 2403 and 3523.

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 spring semester

## ART 4423 Internship

Three hours
On-the-job work experience in a creative position/business, as approved by the student's advisor.
Offered each semester

## ART 4953 Capstone Exhibition

Three hours
Guided planning, preparation, and production of an art exhibit to be mounted in the JBU Art Gallery or other appropriate gallery space. Students will learn professional art business practices
in the development of their exhibitions. Prerequisite: senior Fine Art Concentration majors in their final semester.

Offered spring 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 associated with this course. Prerequisite: senior standing.

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 2173 Principles of Financial Accounting

## Three hours

A study of accounting vocabulary and skill building in the applications of Generally Accepted Accounting Principles to areas such as the accounting cycle, financial statement preparation, cash and inventory control, fixed asset analysis, liabilities and stockholder's equity.

Offered fall semester

## ATG 2183 Principles of Managerial Accounting

Three hours
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 2173.

Offered spring semester

## ATG 3103 Intermediate Accounting I

Three hours
An in-depth study of accounting concepts and procedures relating to assets. Prerequisite: $\underline{\text { ATG }}$ 2183.

Offered fall semester

## ATG 3113 Intermediate Accounting II

Three hours
Advanced topics in accounting including in-depth study of liabilities and equities, income determination, and financial reporting. Prerequisite: ATG 3103.

Offered spring semester

## ATG 3153 Federal 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 2183.

Offered fall semester (odd-numbered years)

## ATG 3163 Advanced Federal Income 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 2183 or consent of instructor.

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 2183.

Offered spring semester (odd-numbered years)

## ATG 3183 Government and Not-for-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 2183.

Offered fall semester (even-numbered years)

## ATG 3213 Managerial Information Systems

## Three hours

A study of current information systems concepts including web technology, online auditing issues, compliance, controls, and contemporary accounting issues. Specific topics include ebusiness, computer hardware and software, accounting cycles, systems development, computer crime, auditing, and expert systems.

Offered spring semester (odd-numbered years)

## ATG 3993 Accounting Internship

## Three hours

Supervised learning involving field experience in an accounting position. 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. (Same as BUS 3993). Prerequisite: junior standing.

Offered fall semester

## 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. Prerequisites: junior standing and consent of instructor.

Offered upon sufficient request

## ATG 4153 Auditing and Attestation Services

## 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. Prerequisites: $\underline{\text { ATG } 3103 \text { and BUS }}$ $\underline{2193 .}$

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 3113.

## 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 1083 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 1093 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 the canonical history and reliability of the New Testament documents as well as the historical and cultural background, major themes, and issues for each book including the challenges and applications to Christian faith and discipleship. Prerequisite: admission to the Honors Program or permission of the Honors Committee.

Offered spring semester

## BBL 1513 Biblical Language Tools I

## Three hours

This course will train students to use the most valuable reference tools indexed in koine Greek, without expecting that student will necessarily learn to read the language. These tools will include concordances and dictionaries indexed in Greek. Students will also learn enough grammar to follow the grammatical arguments made in technical commentaries based on the Greek text. They will also be exposed to enough text criticism to be able to explain the text critical footnotes that appear in many translations and to understand the text critical arguments in technical commentaries. They will not be expected to do textual criticism. Students who want to read the Greek New Testament should take BBL 2513 and 2523. Prerequisite: consent of instructor.

Offered summer, upon sufficient request

## BBL 1523 Biblical Language Tools II

## Three hours

This course will build on BBL 1513 by applying all the resources and skills learned in that course to sustained passages of the Greek New Testament (and at the instructor's option, Greek translations of the Old Testament). Finally, Biblical Language Tools II will introduce the Hebrew Alphabet and identify for students the Hebrew tools similar to the Greek tools used in BBL 1513 and BBL 1523. Interested and ambitious students will then be able to cultivate these same skills with Hebrew resources on their own. Students who want to read the Greek New Testament should take BBL 2513 and 2523. Prerequisites: BBL 1513 and consent of instructor.

Offered summer, upon sufficient request

## 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

Evangelical Theology is a study of the essential doctrines of the Christian faith, including Scripture, the triune God, salvation, the Church, creation, and the eternal Kingdom. The unity of divine revelation and the contemporary applicability of the Scriptures are emphasized. By studying the method of theological formation, students should be able to discern primary and secondary theological concepts and apply them properly to their personal lives as well as to their involvement in the Church and the world. Prerequisites: BBL 1013, and $\underline{1023}$ or equivalent.

Offered each semester

## BBL 3083, 4083 Honors: Integrated Theology I, II

## Each course, three hours

A six-hour course sequence studying the development of Christian faith and practice from the early Christian centuries down to the present. The course will be historical, in that the faith and practice of the Christian tradition will be studied in specific cultural and historical contexts and will also be theological, tracing the development of ideas and how they play themselves out in the practice of Christian faith. In addition, the course will present a brief survey of Islamic faith and practice under the assumption that Christian faith and practice is best understood when it is seen in the light of competing alternatives. At critical points throughout the study, similarities and differences in how a specifically Christian approach to theology and practice will be discussed in light of the theology and practice of Islam. The focus of the course is on primary sources. Prerequisites: admission to the Honors Program or permission of the Honors Committee, EGL 1023, HST 1013, 1023 (or Honors counterparts), BBL 1013, and $\underline{1023}$ (or Honors counterparts).

## 3083 offered fall semester (odd-numbered years)

4083 offered spring semester (even-numbered years)

## 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 fall semester

## 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 and 1023.

Offered fall semester (odd-numbered years)

## BBL 3363, 3373 History of the Christian Church I, II

## 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 New Testament 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 firstcentury Roman Empire.

3453 The General Epistles. An incisive examination of one or more of 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 study of the structure of the Greek language accomplished by 1) reading sustained New Testament passages and 2) understanding the syntactical functions which occur in them. Prerequisite for 3513: BBL 2523 or equivalent. Prerequisite for 3523: BBL 3513 or equivalent.

## 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. An additional fee associated with this course. Meets the Global Studies requirement of the Core Curriculum. Prerequisite: junior standing or consent of instructor.

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.

3663 Prophets. An analysis of one or more of the prophetic 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.

Offered each semester on a rotating basis

## BBL 3713, 3723 Elementary Biblical Hebrew I, II

Each course, three hours
A study of elementary biblical Hebrew grammar and basic vocabulary with some limited conversational drill. Prerequisite for 3723: BBL 3713.

Offered upon sufficient request

## BBL 4002 Capstone Seminar in Christian Life

A senior capstone course of the Core Curriculum designed to encourage critical and reflective thought about Christian formation. The Core Curriculum's role in the student's spiritual formation is considered and assessed. Prerequisites: BBL 1013, 1023, 3003, EGL 1023, and junior standing or consent of instructor.

Offered each semester

## BBL 4043 Capstone Seminar in Christian Formation: Ireland

## Three hours

A writing-intensive course designed to encourage critical and reflective thought about Christian formation. The 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 in the Core Curriculum. Prerequisites: BBL 1013, 1023, 3003, and EGL 1023.

Offered summer, Irish Studies Program

## BBL 4433 Christian Apologetics

## Three hours

An introduction to a major topic in the philosophy of religion, e.g., arguments for and against the existence of God, the problem of evil, or the relationship between God and morality. Students should be able to give an adequate defense of the Christian faith by the end of the semester. (Same as RPH 4433). Prerequisites or corequisites: RPH 3003 and POL 3003, or RPH 3013.

Offered fall semester (odd-numbered years)

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 area 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. May be repeated for credit 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. May be repeated for credit when content differs. Prerequisite: BBL 3523 or equivalent.

## 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 I, II

## Each course, three hours

An intermediate level study of Hebrew grammar and syntax. Expanded vocabulary and translation from Hebrew to English and English to Hebrew are also emphasized. Prerequisite to BBL 4723: BBL 4713.

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 cellular processes, 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 1093 Honors: Biological Science

A consideration of the fundamental principles of biology with an emphasis on cellular processes, ecological associations, biotechnical applications, genetics, and evolution. Prerequisite: 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, cell structure, energy processing, genetics, and molecular biology. 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

## 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 lecturediscussion 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 lecturediscussion and one two-hour laboratory per week. An additional fee associated with this course.

Offered fall semester

## BIO 2174 Genetics

## Four hours

A study of basic concepts in transmission genetics and population genetics with an introduction to molecular genetics. Laboratory exercises illustrate principles of inheritance in selected model organisms. Two hours lecture-discussions and 2 two-hour laboratories per week. An additional fee associated with this course. 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. An additional fee associated with this course. Prerequisites: BIO 1134 and 2134.

Offered spring semester (even-numbered years)

## BIO 3144 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. An additional fee associated with this course. Prerequisite: BIO 2134 or consent of instructor.

## 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. An additional fee associated with this course. Prerequisites: BIO 1124 and CHM 1134.

Offered fall semester

## 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. An additional fee associated with this course. Offered concurrently with the BIO 3514 laboratory.

Offered fall semester

## BIO 3302 Field Experience

Two hours
Job shadowing experience in a science- or health-related profession as approved by the Biology Department. A journal and/or paper is required. Prerequisites: junior standing and approval of major advisor.

Offered each semester

## BIO 3314 Molecular Genetics

## Four hours

A study of the structure, function, and regulation of the molecules involved in heredity - DNA, RNA, and proteins. Includes an introduction to genomics and bioinformatics. Lab exercises provide hands-on experience with several recombinant DNA techniques. Three hours lecturediscussion and one three-hour laboratory per week. An additional fee associated with this course. Prerequisite: BIO 2174.

Offered spring semester (even-numbered years)

## BIO 3334 Microbiology

Four hours
A study of the structure, function, control, physiology, and classification of prokaryotes and viruses. Two hours lecture and 2 two-hour laboratories per week. An additional fee associated with this course. Prerequisites: BIO 1124 and 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 lecturediscussion and one three-hour laboratory per week. An additional fee associated with this course. Prerequisite: BIO 1124.

Offered fall semester

## BIO 3524 Human Physiology

Four hours
A detailed study of the basic human physiology, including muscle, neural, cardiovascular, respiratory, urinary, digestive, endocrine, and reproductive systems. Laboratories include surgical procedures and experimental manipulations of live non-human vertebrate specimens to
observe and record various physiological functions. Three hours lecture-discussion and one three-hour laboratory per week. An additional fee associated with this course. Prerequisites: BIO 1124, and CHM 1124 or CHM 1014; BIO 3514 recommended.

Offered spring semester

## BIO 4103 Bioethics

## Three hours

A comparison of secular and Christian approaches to biomedical, environmental, and research ethics. Utilizes a highly interactive format to examine contemporary issues related to the beginning and end of human life, stem cells, cloning, genetic testing and manipulation, distribution of health care, experimentation on animal and human subjects, and care of the environment. Three hours of lecture-discussion per week. Prerequisite: junior/senior standing or consent of instructor.

Offered spring semester (odd-numbered years)

## BIO 4121, 4122, 4123 Selected Topics in Biology

## One to three 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 content differs. Prerequisites: junior/senior standing and consent of instructor.

Offered spring semester (odd-numbered years)

## BIO 4221, 4222, 4223 Biological Research

## One 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 for up to the maximum number of hours allowed for research credit in Biology or Biochemistry majors. An additional fee associated with this course.

# 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 $\underline{1163}$ or $\underline{2173}$.

Offered spring semester

## BUS 2153 Financial Mathematics

## Three hours

A study of mathematical tools and models used for time-value of money calculations. 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 study of 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 or consent of instructor.

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. (Same as ATG 3993). 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. Prerequisites: 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 2183 or 1163 , BUS 2153, and ECN 2123.

Offered fall semester

## 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: 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 spring semester (odd-numbered years)

## BUS 4993 Strategic Management

## Three hours

An integrative study of business strategy and policy involving the creation and presentation of a formal business plan. 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. An additional fee associated with this course. Prerequisite: senior standing or consent of instructor.

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 lecturediscussion and one two-hour laboratory per week. Prerequisite or corequisite: MTH 1113 or ACT Math score of at least 19 or SAT score of at least 480.

Offered spring semester

## CHM 1101, 3101 Chemistry Practicum

Each course, one hour
Experiences in chemistry, such as the following: glassblowing, analysis, teaching, research. An additional fee associated with this course. 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 $\underline{1124}$.

Offered fall semester (even-numbered years)

## CHM 2154 General, Organic, and Biochemistry

## Four hours

A combined study of General Chemistry, Organic Chemistry, and Biochemistry. Topics include general chemical reactions, the chemistry and nomenclature of the hydrocarbons, and the chemistry of carbohydrates, lipids, and proteins. The laboratory period is designed to have an emphasis on the synthesis and chemistry of the bio-fuels. Three hours lecture-discussion and one three-hour laboratory-quiz period per week. An additional fee associated with this course. Prerequisite: CHM 1014 or $\underline{1124 .}$

## 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. An additional fee associated with this course. Prerequisite: CHM 1134.

Offered spring semester (even-numbered years)

## CHM 3134, 3144 Organic Chemistry I, II

## 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. An additional fee associated with this course. 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 content differs. 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. An additional fee associated with this course. Prerequisite: CHM 3144 or consent of instructor.

Offered spring semester (odd-numbered years)

## CHM 3183 Inorganic Chemistry

## Three hours

Coverage of the bonding and properties of the main group and transition metal elements with a focus on their coordination and sold-state chemistry. Molecular symmetry principles, spectroscopy, and catalytic applications of these substances are discussed. Prerequisite: CHM 1134.

Offered fall semester (odd-numbered years)

## CHM 4124, 4134 Physical Chemistry I, II

## Each course, four 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. An additional fee associated with this course. Prerequisites: CHM 3144 and PHY 2124. Prerequisite or corequisite: MTH 1144.

4124 offered fall semester (even-numbered years)
4134 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. An additional fee associated with this course. 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. An additional fee associated with this course.

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. An additional fee associted with this course.

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. An additional fee associated with this course.

## 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. An additional fee associated with this course. Prerequisite: MTH $\underline{1122}$ or equivalent.

## 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 advisor. 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. An additional fee associated with this course. Prerequisite: MTH 1122 or equivalent.

Offered fall semester

## CM 2541 International Construction Internship B

One hour

Ten weeks (a minimum of 400 hours) of work on an international construction project with prior approval of the major advisor. A written report of activities is required. Credit or equivalence for this course can be earned during the summer months. Prerequisite: CM 2431.

Offered summer

## 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 ten-hour Occupational Safety and Health Administration (OSHA) Certificate. Three hours lecture-discussion per week. An additional fee associated with this course. Prerequisite: CM 2213 or 2223 .

Offered fall 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. An additional fee associated with this course. Prerequisite: CM 2322 or ME 3313.

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. An additional fee associated with this course. Prerequisite: CM 2213 or $\underline{2223}$.

## 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 credit when content differs. 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 spring 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. An additional fee associated with this course. Prerequisites: 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. Course emphasis includes design intent, effective communication of problem-solving solutions, and an introduction to the integrated project delivery. Two three-hour laboratory periods per week. An additional fee associated with this course. Prerequisites: 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 twohour laboratory per week. An additional fee associated with this course. Prerequisites: CM 2223, 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 1-hour planning session and two four-hour laboratories per week. Prerequisite: senior standing.

Offered spring semester

## CMN (Christian Ministries)

## CMN 1213 Christian Leadership and Service

## Three hours

This course introduces God's Kingdom concerns and the students' role in His plan (Kingdom) by studying the biblical concepts of leadership and cultural engagement. Students will also evaluate how God might be calling them to serve and integrate their faith with their vocation.

Offered each 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 (odd-numbered years)

## 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 and 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. An additional fee associated with this course.

Offered upon sufficient request

CMN 2303 Creating Holistic Curriculum for Children in Crisis
Three hours

Students create intentional learning experiences that offer holistic support (emotional, psychological, and spiritual) to children who are facing traumatic or life-changing issues. The course addresses basic pedagogical, developmental, and biblical/theological principles for developing curriculum; students also have the opportunity to teach three lessons during the semester. Ultimately, students write a curriculum set focusing on children with a particular need, such as children going through a divorce, former child soldiers, or children recovering from abuse.

Offered fall semester (even-numbered years)

## CMN 2313 Christian Formation of Adolescents

## Three hours

A study of Christian spiritual development during the adolescent years. Focus is placed on the acquisition and application of biblical knowledge which leads to the formation of character. Insights from teaching and learning theories, the place of contexts and models and the role of the Spirit will all be discussed. Curriculum and activities appropriate for use in nonformal and informal settings will also be explored. An additional fee associated with this course. Prerequisites: CMN 1213 and 2463.

Offered spring semester

## CMN 2373 Principles and Practices of Experiential 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 settings, 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. Field trip required.

Offered fall semester (even-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. An additional fee associated with this course.

Offered fall semester (odd-numbered years)

## CMN 2463 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, worldview, and understanding of God. An additional fee associated with this course. Prerequisites: PSY 1013 and CMN 1213, or consent of instructor.

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 consent of instructor. 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. An additional fee associated with this course. Open to Outdoor Leadership Ministries majors or minors or by consent of instructor. 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. An additional fee associated with this course. Open to Outdoor Leadership Ministries majors or minors or by consent of instructor. 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. An additional fee associated with this course. Open to Outdoor Leadership Ministries majors or minors or by consent of instructor. Prerequisite: CMN 2383.

## 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 required. Credit available to students other than Outdoor Leadership Ministries majors and minors only by consent of instructor. An additional fee associated with this course. Prerequisite: CMN 2383.

Offered upon sufficient request

## 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. A local camp, New Life Ranch, hosts the course and serves as a model for observation and learning.

Offered spring semester (even-numbered years)

## 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 3273 Critical Concerns with Children

Three hours
An examination of critical issues facing child advocates, social and ministry workers, educators, and counselors, both globally (children with HIV/AIDS, child laborers, child soldiers, sexually
exploited children) and domestically (inner city children, children of divorce, child abuse, and children with special needs such as autism). Theologically, this course focuses especially on justice and mercy issues related to children and God's heart for the fatherless, the orphans, and the powerless.

Offered fall semester (odd-numbered years)

## 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. Prerequisites: CMN 2373 and 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.

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 3473 Ministry Resources

## Three hours

Focus is on the raising of support, the development and maintenance of ministry partnerships, the presentation and communication of ministry goals and vision, and the use of personal and public resources in a non-profit ministry setting.

Offered fall semester (odd-numbered years)

## 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 National Outdoor Leadership Schools (NOLS) and a two year American Heart Association Adult Heartsaver CPR Certification. An additional fee associated with this course.

Offered summer, upon sufficient request

## CMN 4221 Introduction to Senior Seminar

One hour

This course introduces the student to the fundamentals of research for their Senior Seminar project. Course work includes development of a topic and research methodology.

Offered spring semester

## CMN 4433 Capstone in Christian Ministry

## Three hours

A capstone course in 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; to continue personal and professional growth; to refine their knowledge base; and to increase capacity for personal reflection. An additional fee associated with this course. Prerequisite: completion of one semester 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 each semester

## CMN 4463 Senior Seminar

## Three hours

A capstone course in Christian Ministries in which students 1) integrate their previous academic and internship experiences, 2) demonstrate competence in their discipline, and 3) create a professional vita reflecting their work, academic accomplishments, and leadership experiences. The senior project requires a major study and formal paper written for a professional program (social service organization, church, or ministry agency) that provides family life education
and/or service. It is to be taken during the student's final fall semester of study. Prerequisites: senior standing and completed internship.

Offered fall semester

## CMN 4481, 4482, 4483 Selected Topics

## One to three hours

Topics are chosen from some areas of Christian Ministries. 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 Ministering to Families across the Life Span

## Three hours

This course addresses psychosocial development, faith development, and other developmental issues of emerging adulthood, young adulthood, middle adulthood, and older adulthood. The course also addresses the significance of generational identities (e.g. silent generation, boomers, and millennials), the importance of cross-generational ties, and the key role of forgiveness in adult and family relationships. A special emphasis on the difficult transitions of young adulthood as well as a unit on grief, death, and dying are included.

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.

## 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. An 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 Outdoor Bound School. An additional fee associated with this course. Prerequisite: CMN 2383.

Offered each semester, as arranged with OLM advisor

## CMN 4611, 4612, 4613, 4614 Internship in Christian Ministry

## One to four hours

Participation in an approved and supervised local or international ministry activity. Credit is available only to majors and minors within the Division of Biblical Studies. Credit for the international ministry activity must meet the Global Studies Elective requirement in the Core Curriculum, with instructor approval. May be repeated for credit as needed to fulfill necessary requirements. Grading: 'S' or 'U'

Offered each semester

## CMN 4663 Internship in Cross-Cultural Ministry

Three hours
Participation in an approved and supervised cross-cultural ministry activity. Credit is available only to majors and minors within the Division of Biblical Studies. Credit will fulfill the Global

Studies Elective requirement. May be repeated for credit as needed to fulfill necessary requirements. 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 (FCC) regulations.

Offered each semester

## COM 1112 Freshman Theatre Workshop

Two hours

A study of the technical and theoretical aspects of theatre arts by means of participation in a stage production. This class will be specifically geared to incoming freshman. A not-for-credit enrollment option is available.

Offered fall semester

## COM 1131, 2131 Radio/TV/Web Performance Practicum

## Each course, one hour

Five hours weekly in performance for radio, television, and other electronic media productions.
Offered spring semester

## COM 1133 Mass Communication and Society

## Three hours

This course examines mass media development and its role in society and culture. It examines the historic foundations and current trends in the media business, including television, cinema, newspapers, books, magazines, plus the internet and various multimedia platforms.

Offered fall semester

## COM 1153 Introduction to Video and Audio Production

## Three hours

An introduction to the principles, procedures, and techniques of video and audio production. The course covers the fundamentals of producing, scripting, directing, and editing video and audio. Students gain proficiency in the operation of video switchers, cameras, sound recording, and computer-based equipment while gaining studio and field production experience. An additional fee associated with this course.

Offered spring semester

## COM 1163 Communication Technologies

Three hours

Practical experience is gained in producing, editing, and publishing in various technical communication media, including online video, blogging, social media, web production, and the latest innovations in communication technology.

Offered fall semester

## COM 1233 Audio Production

## Three hours

An intermediate study of audio production for broadcast radio, television, web, and podcasting utilizing Adobe Audition. Music recording, sound effects, and post-production sound for TV and film will also be explored. An additional fee associated with this course. Prerequisite: COM 1101.

## COM 2083 Masterpieces of Film

## Three hours

A study of how filmmakers communicate and convey meaning to audiences through movies. Critically acclaimed and culturally relevant films throughout the history of the American film industry are analyzed, with emphasis on understanding Hollywood's various filmmaking techniques and philosophies. The motion picture's role in shaping society is also considered.

Offered each semester

## COM 2101 Intermediate Radio Practicum

## One hour

Five hours of weekly practice in practical broadcast experience on KLRC. Proficiency in announcing, control operation, handling of equipment, and other typical radio station duties are developed. Practical experience is offered through live shifts on the university's internet radio station and/or voice-tracking on KLRC. Prerequisite: COM 1101.

Offered each semester

## COM 2111, 2112 Practicum in Journalism

## One or two hours

Work as a staff member for a university publication in 1) reporting, proofreading, advertising, editing, photography and layout on the Threefold Advocate student newspaper or 2) working in other university journalism functions. Prerequisite: COM 2123.

Offered each semester

## COM 2121 Practicum in Forensics

## One hour

Students participating on the speech and debate team may take this course for up to three semesters of credit. Students will participate in competition, judging, peer coaching, or service projects during the course of the practicum. Students will attend at least one speech or debate tournament. A not-for-credit option is also available.

## COM 2123 News Writing and Reporting I

Three hours
Introduction to news for the print and electronic media, development of new concepts; laboratory in news-gathering tools and writing skills.

Offered fall semester

## COM 2333 Editing

Three hours
Copy editing, headline writing, graphic principles and processes, and new media technology. Students will become familiar with AP Style and learn how to do a newspaper layout. The importance of headlines and proper grammar and spelling will also be discussed. Students will finish this course better able to edit their own copy and the copy of others. (Same as COM 2343). Prerequisite: COM 2123 or consent of instructor.

Offered spring semester

## COM 2343 News Editing for Public Relations

## Three hours

Copy editing, graphic principles and processes for public relations. (Same as COM 2333). Prerequisite: COM 2123 or consent of instructor.

Offered spring semester

COM 2353 Public Relations Writing and Technology
Three hours

Students will learn the basics of how to write in any Public Relations form. Copy produced will include press releases, memos, a PR crisis plan, newsletter and a brochure. Students will also discuss what PR moments there are in the news and how they, as PR professionals, would respond. Prerequisite: COM 2123.

Offered fall semester

## COM 2433 Diversity and Media Issues

## Three hours

A study of the cultural communication climate in the United States and its depiction in news, entertainment, and other media.

Offered spring semester

## COM 2523 Public Speaking

Three hours
Students will gain the knowledge of the many different types of speeches. They will also learn the many components of a good speech. Each student will give a speech of every type, so that they will become more comfortable speaking in front of others. Students will finish the course knowing how to effectively give any type of speech comfortably in front of a crowd.

Offered each semester

## COM 2533 Oral Interpretation

Three hours

A study of the theory, principles, and techniques of the interpretation of literature for oral performance.

Offered spring semester (even-numbered years)

## COM 2563 Argumentation and Debate

## Three hours

Debate theory and argumentation techniques are discussed and practiced, leading to actual exhibition debates within the course.

Offered spring semester (odd-numbered years).

## COM 3101 Advanced Radio Practicum

One hour
Five hours of weekly responsibilities at KLRC. Students will develop advanced proficiency in announcing, control room skills, production, promotions, or other related radio station duties. May be repeated for credit. Prerequisites: COM 1101, 2101, and consent of instructor.

Offered each semester

## COM 3111, 3112 Advanced Practicum in Journalism

## One to two hours

Advanced responsibility as a staff member for a university publication. 1) reporting, proofreading, photography, advertising, editing, and layout of the Threefold Advocate student newspaper. 2) work in other university journalism functions. Prerequisites: respective experience in COM 2111 or $\underline{2112}$ and consent of advisor.

Offered each semester

## COM 3113 Theatre Workshop

## Three hours

A study of the technical and theoretical aspects of theatre arts by means of participation in a stage production. A not-for-credit enrollment option is available.

## COM 3121 Radio/TV/Web Sports Practicum

## One hour

Five hours weekly in performance and/or production of broadcast sports content for Golden Eagle Productions. Content also may appear on radio, cable television, and/or the Internet. May be repeated for credit.

Offered each semester

## COM 3131 Radio News Practicum

One hour
Five hours weekly in performance and/or production of broadcast sports content for Golden Eagle Productions. Content also may appear on radio, cable television, and/or the Internet. May be repeated for credit. Prerequisite: COM 3423 or consent of advisor.

Offered each semester

## COM 3141 Television Program Assistant

One hour

Assists the faculty supervisor in the operations of TV5, TV Studio, and Sports Broadcasting Lab. May also assist with web content. May be repeated for credit. Prerequisites: COM 1153 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. Prerequisites: COM 1101, 2101, 3101, and consent of instructor.

Offered each semester

## COM 3153 Advanced Digital Reporting

Three hours

Principles and practices of news reporting; covering news beats and other news sources, including researching a news story for accuracy, comprehensiveness and interpretation. (Same as COM 3653). Prerequisite: COM 2123.

Offered spring 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. Prerequisites: COM 1153 and consent of instructor.

Offered each semester

## COM 3363 Magazine Writing

Three hours
Study explanatory journalism techniques applied to complex subjects (such as science, economics, and large scale social change) for books, magazines, and newspaper series. Prerequisite: COM 2123 or consent of instructor.

> Offered fall semester (even-numbered years)

## COM 3421 JBU-TV EagleBreak Practicum

Experiential learning in writing, producing, and presenting stories for radio, television, video on demand, and podcasts. Students will write and produce for the EagleBreak program on a regular basis throughout the semester. May be repeated for credit. Prerequisites: COM 1153, 2123, 3423, or consent of instructor.

Offered each semester

## COM 3423 EagleBreak

## Three hours

Instruction in writing, reporting, and producing news for radio, television, and the internet. Students will write and produce newscasts for multiple media platforms on a regular basis throughout the semester. An additional fee associated with this course. Prerequisites: COM 1153 and $\underline{2123}$ or consent of instructor.

Offered fall semester (even-numbered years)

## COM 3433 Persuasive Communication

## 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 fall semester (odd-numbered years)

## COM 3453 Social Movements

A survey of social movements and the rhetorical strategies used to further those causes, including analysis of Abolition, Suffrage, Civil Rights, and other significant events.

Offered spring semester (odd-numbered years)

## COM 3463 Online Editorial Journalism

Three hours

Reporting and writing analytical articles, columns, editorials and blogs online, using Web attributes of interactivity, individualization, immediacy, and multi-media applications. Prerequisite: COM 2123 or consent of instructor.

## COM 3543 Rhetoric of Popular Culture

Three hours
Rhetoric criticism and evaluation of communicative messages in film, television, theatre, popular music, the popular press/books, and Internet.

Offered spring semester (even-numbered years)

## COM 3653 Specialized Writing in Public Relations

## Three hours

Public relations writing for science, technology, health, medicine, corporate finance, educational policy, law and government in broadcast and technical media, as well as newspapers and magazines, also including proposals, speeches, and correspondence. (Same as COM 3153). Prerequisites: COM 2123 and 2353.

Offered spring semester

## 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 4211, 4212 Online News Bureau Practicum

## One to two hours

Advanced online journalism training. Students work as online reporters, editors, and producers for an online news magazine. Students also package copy from the print and broadcast. Prerequisites: COM 3463 and consent of instructor.

## COM 4253 Integrated Media

## Three hours

This course studies the Internet and Web 2.0 principles as they intersect with video and audio content delivery. It surveys current developments in social networking, use of existing technologies, recent online business models and the changing face of broadcasting. Instruction will include production techniques for placing student work on the internet due to its vital role in the global distribution of media content today. An additional fee associated with this course. Prerequisites: COM 1163 or consent of instructor, and junior/senior standing.

Offered spring semester (odd-numbered years)

## COM 4273 Narrative Performance

## Three hours

Analysis of human narratives discovered through ethnographic and performance studies methods. Discovered human narratives are shared through dramatic performance.

Offered fall semester (even-numbered years)

## COM 4293 Communication 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 of information, invasion of privacy, copyright, regulation of materials produced, and telecommunication regulation. Prerequisite: COM 1133.

Offered spring semester (odd-numbered years)

## 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.

## COM 4333 Advanced Television Production

## Three hours

Advanced principles, procedures, and techniques of television and video production. Students also gain an analytical framework for understanding industry trends in media programming, and how those trends are influenced by audience research. Students create and schedule programs, apply programming strategies and philosophies, and learn relevant terminology and audience measurement techniques. Prerequisite: COM 4293 or consent of instructor.

Offered spring semester (even-numbered years)

## COM 4343 Programming and Promotion for Radio/TV/Web

## Three hours

This course focuses on principles, strategies and approaches for creating, scheduling and promoting content for radio, television and the Web. Students also gain an analytical framework for understanding industry trends in media programming, and how those trends are influenced by audience research. Students create and schedule programs, apply programming strategies and philosophies, and learn relevant terminology and audience measurement techniques. Prerequisite: COM 4293 or consent of instructor.

Offered spring semester (even-numbered years)

## COM 4363 Political Communication

## Three hours

A study of the role of communication in the American political process. Campaign strategies, political oratory, grass roots activism, and other forms of political rhetoric will be explored.

Offered fall semester (even-numbered years)

## COM 4373 Online Advocacy

Three hours

A survey of the interaction of the Internet and its use as a medium for social change. The evolving role of social media is explored as a means of increasing public involvement in advocacy processes.

Offered fall semester (odd-numbered years)

## COM 4413 Selected Topics in Radio/TV/Web

Three hours

A seminar that offers students the opportunity for critical examination of a particular issue in contemporary electronic media from a Christian worldview. Prerequisite: consent of instructor.

Offered upon sufficient request

## COM 4453 Public Relations Planning

## Three hours

Analysis of eight major programs typically carried out by public relations professionals: employee relations, media relations, financial relations, member relations, governmental relations, community relations, fundraising, and dealing with activist publics. Prerequisite: COM 3653 or consent of instructor.

Offered fall semester (odd-numbered years)

## COM 4463 Internship in Radio/TV/Web

## 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.

## COM 4473 Internship in Journalism

Three hours
Practical experience working under a qualified professional in journalism or public relations. Prerequisites: COM 2123, 3153, 2333, and approval of 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, $\underline{3153}, \underline{2333}, \underline{2353}$, junior standing, and approval of advisor.

Offered each semester

## 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 JBU.

Offered each semester

## 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 3093, 4093 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, HST 1013 and $\underline{1023}$ (or Honors counterparts).

3093 offered fall semester (even-numbered years)
4093 offered spring semester (odd-numbered years)

## COR 3111 Honors: Introduction to the Honors Capstone Project

## One hour

Designed to prepare students for the honors capstone project. This course will guide students in selecting a topic, conducting a literature review, finding a faculty mentor, and completing the capstone proposal. May be offered on a group basis in a classroom setting or as independent study under faculty supervision. This course will normally be taken during a student's junior year.

Offered fall semester

## COR 3691, 3692, 3693 Honors: Practicum

## 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.

## 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. An additional fee associated with this course. Prerequisite: MTH 1113 or equivalent.

Offered fall semester

## 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 macro-economic 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.

Offered summer, Irish Studies Program

## ECN 2093 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. Meets the Social Science option of the Core Curriculum.

Offered spring semester (odd-numbered years)

## ECN 2113 Principles of Microeconomics

## Three hours

A study of financial markets and how supply and demand interact to direct the allocation of resources. Topics include market structure, the role of competition, price theory, output determination, and income distribution. Pollution, poverty, and farm income are briefly considered.

Offered fall semester

## ECN 2123 Principles of Macroeconomics

## Three hours

A study of national income accounting, the determination of national output and employment levels, the monetary system, monetary theory, and stabilization policy. Inflation, unemployment, productivity, economic growth, balance of payments, and the public debt are considered from the perspectives of various schools of thought. 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. Meets the Social Science requirement of the Core Curriculum.

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 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. Prerequisite: ECN 2123.

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 global economy with emphasis on the role of the United States. Topics include trade theory, trade restrictions, monetary systems, exchange rates, and the effect of domestic economic policies on global trade. Trade issues such as trade deficits, job displacement, economic sanctions, emerging nations, environmental issues, immigration, and currency crises are covered. Meets the Global Studies requirement of the Core Curriculum. Prerequisite: ECN $\underline{2123 .}$

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. Prerequisites: junior standing and consent of 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 human development from prenatal through adolescence. Emphasis is placed on the theories of Piaget, Vygotsky, Erikson, and Kohlberg in addition to emergent theories.

Offered each 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 experience required. Prerequisites: Gate One, ED 1114, and $\underline{2113 .}$

Offered each semester

## ED 2713 Differentiated Learning

Three hours
Orientation to the types of exceptionalities in children including those with pervasive cognitive delays, specific learning disabilities, emotional disturbances, other health impairments, lower SES considerations, giftedness, and culturally and linguistically diverse factors. This course includes an overview of the legal responsibilities and support systems necessary to provide services for these various populations. Designed to orient candidates to the diverse learning needs within the classroom. Field experience required. Prerequisites: Gate One and ED
2113. Prerequisite or corequisite: ED 2133.

Offered spring semester

## ED 3121 ECE 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 required. Prerequisite: Gate Two.

Offered fall semester

## ED 3153 Reading in the Content Areas

Three hours

Secondary (7-12) 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 ELL's 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, and assessment. Lab and field experiences required. Prerequisites: Gate Two, ED 2113, and 2133. Prerequisite or corequisite: ED 3183.

Offered spring semester

## ED 3183 Educational Assessment

## Three hours

An investigation of the principles of assessment, including assessments for the culturally and linguistically diverse classroom. Emphasis placed on relating objectives to assessment and the use, construction, and analysis of assessments in the educational setting. Candidates practice creating and/or utilizing a variety of assessment formats including, but not limited to pre and post, diagnostic, formative, summative standardized, performance, and other authentic assessments. Prerequisites: Gate One 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, 2133, and 3353 .

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. Infant through pre-school field experience required (including Head Start). Prerequisites: Gate One and ED 2113. Corequisite: ED 2133.

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 field experience in a kindergarten classroom. Prerequisites: Gate Two, ED 2133, 3263, 3353, 3373, and 3393. Prerequisite or corequisite: ED 3183.

Offered spring semester

## ED 3343 Curriculum and Instructional: ECE Language Development and the Language Arts

Three hours
ECE candidates will study language development and its importance with an emphasis on the use of methods and materials to facilitate learning in the six components of the language arts curriculum. How language arts components support learning in all areas of the curriculum is addressed. A language case-study and a review of current literature in language arts are required. Prerequisites: Gate Two, ED 1114, 2113, and 2133. Prerequisites or corequisites: ED $\underline{3183}$ and 3353 . Corequisites: ED 3373 and 3393 .

Offered fall semester

## ED 3353 ECE Instructional Methods

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. Developmental strategies for teaching mathematical concepts such as graphs, timelines, etc. are included. Field experience required. Prerequisites: Gate One, ED 2113, and 2133, or consent of instructor for non-ECE majors.

Offered spring semester

## ED 3373 Curriculum and Instruction: ECE Reading I

## Three hours

ECE candidates will become familiar with various literacy models and the theories that support them. This course provides a balanced overview of instruction and assessment and is designed to encompass both the theoretical and practical aspects of learning how to teach reading with an emphasis on balanced literacy. Included are studies of the stages of reading development, reading strategies (word identification, phonics, fluency, and comprehension), assessment and technology. Field experience required. Prerequisites: Gate Two, ED 2113 and 2133. Prerequisites or corequisites: ED 3183 and 3353. Corequisites: ED 3343 and 3393.

Offered fall semester

## ED 3393 Children's Literature

## Three hours

An introduction to quality children's literature, which reflects today's multicultural society. This course provides a review of the foundations of the field, an overview of the genres, and experiences with representative samples of the literature, focusing on books which are national and state award winners, i.e., Newbery, Caldecott, Coretta Scott King, etc. Development of a classroom library and a cross curriculum unit are required. Corequisites: ED 3343 and 3373 .

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 culturally and linguistically diverse learners. Candidates are introduced to the dynamics of the educational process and the social, cultural, economic considerations, which affect second language development. Field experience required. Prerequisite or corequisite: 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 (content and language development), adult community education (literacy), and intensive English (academic) settings are analyzed. Candidates develop skills in the evaluation, selection, and implementation of appropriate ESL materials and teaching strategies. Field experience required. (Same as EGL 3583). Prerequisites: Gate One and ED 3563. Prerequisite or corequisite: ED 2133.

Offered spring semester

## ED 3763 ECE Behavior Management

## Three hours

Focuses on various techniques for the changing/managing of behavior. Emphasis on analysis of behavioral needs and the design of appropriate classroom management strategies. Designed to meet the needs of grade level/inclusion classrooms. Field experience required. Prerequisites: Gate Two, ED 2113, and 2133. Corequisites: ED 4373 and 4383.

Offered spring semester

## ED 3861, 3862 Field Experience in a Multicultural Environment

One to 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 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: Gate Two, ED 2113, and 2133.

Offered upon sufficient request

## ED 4373 Curriculum and Instruction: ECE 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. Also addressed are skills and strategies necessary for reading content material. Candidates must submit an integrated unit plan that includes lesson plans, learning objectives, handouts, transparencies, the use of technology, and assessment. Field 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: Gate Two and ED 3373. Corequisites: ED 3763, 4383, GSC 3103, and taking Praxis II ECE Content Knowledge.

Offered spring semester

## ED 4383 Curriculum and Instruction: ECE Mathematics

Three hours

ECE candidates will study methods and materials for teaching mathematics (based upon NCTM standards) to diverse students. Emphasis is placed on constructive principles and the use of mathematics manipulatives. Field and lab experience required. Prerequisites: Gate Two, ED 2113, 2133, 3183, 3353, MTH 2143, and 2183. Corequisites: ED 3763, ED 4373, and GSC 3103. Prerequisite or corequisite: taking Praxis II ECE Content Knowledge.

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 experience. Prerequisites: Gate Two, ED 2113, 2133, and 3153 or 3353 . Prerequisite or corequisite: ED 3183.

Offered fall semester

## ED 4652 Curriculum and Instruction: Secondary General Methods

Two hours
General methods of teaching for secondary majors include objectives, lesson plans, teaching techniques, models of teaching, learning theories, motivation, classroom management, and differentiated instruction as applied to secondary grades. Field experience required. Prerequisites: passing Praxis II Content Knowledge component, Gate Two, ED 2113, 2133, $\underline{2713}, \underline{3153}$, and 3183. Corequisites: ED 4661, 4671, and 4691.

Offered fall semester

## ED 4661 Curriculum and Instruction: Secondary English Pedagogy

One hour

A consideration of the secondary school English curriculum, teaching strategies, and utilization of instructional materials based on NCTE standards. Included will be a study of the methods of teaching literature, language, and oral and written composition in English classes. Field
experiences/field assignments consist of a minimum of 50 hours of classroom experience with secondary English teachers, managed by ED 4652. Prerequisites: passing Praxis II English Content Knowledge component, Gate Two, ED 2113, 2133, 2713, 3153, and 3183. Corequisite: ED 4652.

Offered fall semester

## 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/assignments consist of a minimum of 50 hours of classroom experience with secondary English teachers. Prerequisites: passing Praxis II English Content Knowledge component, Gate Two, ED 2113, 2133, 2713, 3153, and 3183.

Offered fall semester

## ED 4671 Curriculum and Instruction: Secondary Mathematics Pedagogy

## One hour

Candidates will explore the secondary school Mathematics curriculum; consider multiple teaching strategies, instructional resources, and NCTM standards; use a constructivist approach in planning lessons and teaching math concepts; and diagnose learning difficulties and use strategies in helping students overcome them. Field experience/field assignments consist of a minimum of 50 hours of mathematics classroom experiences. These experiences will consist of time spent in the high school, supervised by secondary Mathematics teachers, and in the college development algebra classroom, supervised by the Mathematics professor. These experiences will be managed through ED 4652. Prerequisites: passing Praxis II Mathematics Content Knowledge component, Gate Two, ED 2113, 2133, 2713, 3153, and 3183. Corequisite: ED 4652.

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/assignments consist of a minimum of 50 hours of classroom experience with secondary Mathematics teachers. Prerequisites: passing Praxis II Mathematics Content Knowledge component, Gate Two, ED 2113, 2133, 2713, 3153, and 3183.

Offered fall semester

## ED 4691 Curriculum and Instruction: Secondary Social Studies Pedagogy

## Three hours

A consideration of the secondary school Social Studies curriculum, teaching strategies, and utilization of instructional materials. Reviewing the Social Studies curriculum as it relates to learning and development, differences in learning styles, critical thinking, problem solving and performance skills, active learning and motivation, inquiry collaboration, supportive classroom interaction, reflection, professional growth and professional leadership (based on NCSS pedagogical standards). Field experience/field assignments consist of a minimum of 50 hours of classroom experience with secondary Social Studies teachers, managed by ED
4652. Prerequisites: passing Praxis II Social Studies Content Knowledge component, Gate Two, ED 2113, 2133, 2713, 3153, and 3183. Corequisite: ED 4652.

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/assignments consist of a minimum of 50 hours of classroom experience with secondary Social Studies teachers. Prerequisites: passing Praxis II Social Studies Content Knowledge component, Gate Two, ED 2113, 2133, 2713, 3153, and 3183.

Offered fall semester

## 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 Education Division approval required. Education Division approval of Gate Three requirements including an interview and review of the program portfolio. An additional fee associated with this course. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three), ED 2713, 3183, 3263, 3273, 3343, 3353, 3373, 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 Education Division approval of Gate Three requirements including an interview and review of the program portfolio. An additional fee associated with this course. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three), ED 2713, 3183, 3343, 3353, 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 Division approval of Gate Three requirements including an interview and review of the program portfolio. An additional fee associated with this course. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three), ED 2713, 3153, 3183, Curriculum and Instruction 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.

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 Education Division approval of Gate Three requirements including an interview and review of the program portfolio. An additional fee associated with this course. Prerequisites: verification of having passed Content Knowledge component of Praxis II, admission to Internship (Gate Three), ED 2713, 3183, and Curriculum and Instruction 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, current school issues, 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. Education Division 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. An additional fee associated with this course.

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 1323 and MTH 2114.

Offered spring semester

## EE 3123 Embedded Systems

## Three hours

An introduction to the design of embedded systems including their hardware and software architectures, design methodologies and tools, and communication protocols. Three hours lecture-discussion per week. An additional fee associated with this course. Prerequisites: CS 1113 and EE 2213.

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. An additional fee associated with this course. 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. An additional fee associated with this course. 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. An additional fee associated with this course. 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, waveguide, and antennas. Includes antenna design. Three hours lecture-discussion per week. (Same as PHY 4123). Prerequisite: EN 3413.

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. An additional fee associated with this course. Prerequisite: EN 3413.

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 2223.

Offered upon sufficient request

## 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 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. An additional fee associated with this course. Prerequisite: EE 3423.

Offered fall semester

## 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 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 3413.

Offered upon sufficient request

## EGL (English)

EGL 1003 Basic Writing

## Three hours

Basic writing is a course designed for students who need to improve written communication prior to taking the Core Curriculum requirement (EGL 1013). This course equips students with a firm knowledge of the fundamentals of composition, standard English grammar, punctuation, and style. The course develops college-level reading, writing, and thinking skills; practical writing skills such as generating and focusing ideas for essays, composing drafts, and polishing (revising and editing) drafts; critical reading skills such as annotating, summarizing, responding, discussing, and synthesizing assigned readings; and critical thinking skills such as analysis; argumentation, and persuasion. Prerequisite: below a 20 on the ACT-English.

Offered fall semester

## 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 1083 Honors: English I, 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 1093 Honors: English II, 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 1221 Introduction to English Studies

## One hour

A seminar that explores the disciplines of language and literature, exposes students to departmental faculty and to graduates in the discipline, and prepares students for their work at JBU and for the decisions they will make regarding the professional world.

## EGL 2213 World Literature I

## Three hours

Readings from the major writers of the Western World from antiquity 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. Prerequisite: EGL 1023.

Offered fall semester (odd-numbered years)

## EGL 2273 Introduction to Creative Writing

Three hours

This course will provide a forum for the beginning writer to learn and explore the conventions of creative nonfiction, short fiction, and poetry. Students will read widely and write extensively, learning to appreciate the creative process and developing a vocabulary for the craft. Prerequisite or corequisite: EGL 1023.

Offered fall semester (odd-numbered years)

## EGL 2393 Advanced Composition

## Three hours

This course offers rhetorical techniques and practice in different styles of writing. The course provides an overview of rhetoric and composition pedagogy, acquainting students with the ways college English has been taught as well as its origins within American universities. Assignments, which emphasize professional and educational writing conventions, include exercises on the rhetorical effects of word choice, syntax, and paragraph organization; a series of essays and professional papers; a lesson plan and oral report on one of the assigned readings; and daily reading and writing homework. Prerequisite: EGL 1023 or equivalent.

Offered spring semester

## EGL 2413 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 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, plus web reports on each shift. Prerequisite: EGL 2393. Prerequisite or corequisite: EGL 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

Three hours
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

The production of a literary magazine designed, planned, organized, edited, executed, and disseminated entirely by students. Prerequisites: EGL 2393 and sophomore standing.

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 2393.

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 Core Curriculum. Prerequisites: EGL 1023, HST 1013, 1023, and RPH 3003.

Offered each semester

## EGL 4043 Masterpieces of Literature: Ireland

## 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, and 1023.

Offered summer, Irish Studies Program

## EGL 4473 Creative Writing Workshop: Selected Genres

## Three hours

Study of and practice in a designated genre or subgenre of creative writing, such as poetry, fiction, nonfiction, writing from faith, or screenwriting. Students submit original work for class critique. Significant writing, reading, and participation are required. May be repeated for credit in a different genre/subgenre. Prerequisite: EGL 2273.

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. Topics will be chosen from a wide variety of possibilities stemming from the interest of the professor or from requests by students. Prerequisite: EGL 1023 or equivalent.

Offered each semester

## 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 consent 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. An additional fee associated with this course.

## EN 1121 Production Techniques Laboratory

## One hour

Basic training in the areas of welding, metal fabrication and machine tools. Two 2-hour laboratory periods per week. An additional fee associated with this course.

Offered spring semester

## EN 1223 Concepts in Mechanical Engineering

## Three hours

An introduction to the Mechanical Engineering profession. Course will provide an overview of: forces in structures, engineering materials, fluid mechanics, thermal and energy systems, power transmission, and machine design. Two hours lecture-discussion and one two-hour laboratory per week. An additional fee associated with this course.

Offered spring semester

## EN 1323 Concepts in Electrical Engineering

Three hours

An introduction to electrical circuits: Ohm's Law, Kirchoff's Laws, Thevenin and Norton equivalent circuits, superposition, resistors, capacitors, and inductors. Two hours lecturediscussion and one two-hour laboratory per week. An additional fee associated with this course.

Offered spring semester

## EN 2322 Engineering Economics

Two 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 acquiring basic knowledge of microstructure and processes that relate to properties and performance of engineering materials. Three hours lecture-discussion-laboratory per week. Prerequisite: CHM 1124.

Offered fall semester

## EN 3222 Design Lab

Two hours
Student works on design projects in a team context. Four hours laboratory per week. An additional fee associated with this course. Prerequisite: EN 1223 and 1323.

Offered spring semester

## EN 3413 Linear Signals and Systems

Three hours
Mathematical foundation for signal and systems in continuous ( t ) and discrete ( n ) time domains. Develop mathematical synthesis of signals and systems including linearity, time invariance, casualty, stability, etc., and interpret and translate equations in both time/discrete and frequency domains. To include Fourier, Laplace, and Z-transforms. System modeling includes formulation of differential equations, signal flow diagrams, and stability theory. Three hours lecture-discussion per week. Prerequisite or corequisite: MTH 2114.

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

## 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 multicultural, diverse professions. Meets the Global Studies requirement of the Core Curriculum. An additional fee associated with this course.

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. An additional fee associated with this course. 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. An additional fee associated with this course. 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 lecturediscussion and one two-hour laboratory per week. Prerequisites: CS 1113 and EE 2213.

Offered upon sufficient request

## 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

## 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 3313. Corequisite: EN 3313.

Offered upon sufficient request

## FAM (Family and Human Services)

## FAM 2123 Psychology of Relationship Development

## Three hours

A foundational course that integrates biblical and psychological literature in the area of interpersonal, marriage, and family relationships. Course work 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 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.

## 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 3223 Principles of Effective Parenting

Three hours
The course focuses on principles of effective parenting including theoretical approaches to understanding parent/child relations, parenting styles, the etiology of child behaviors, and mechanisms of behavior change. Various family structures and interactions over the family lifespan are considered. The course will also explore biblical and theological principles of parenting. Prerequisites: FAM 2133 and 3133 .

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: junior/senior standing, a human development course, and BBL 3003 or consent of instructor.

Offered each semester

## FAM 4221 Introduction to Senior Seminar

## One hour

This course introduces the student to the fundamentals of research for their Senior Seminar project. Course work includes development of a topic and research methodology.

Offered spring 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 associated with this course. Prerequisites: FAM 2133, 3133, and senior standing.

Offered each semester

## FAM 4433 Senior Seminar

## Three hours

A capstone course in Family and Human Services 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 parachurch) that provides family life education and/or services. To be taken during the student's final semester of study. Prerequisites: senior standing, FAM 2133, and 3133 or consent of instructor.

Offered fall 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 each 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 and Human Services. 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. May
be repeated for credit as needed to fulfill the necessary requirements. 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. Prerequisite: ACT math score of at least 19 or SAT math score of at least 480, or MTH 0153.

Offered each semester

## GSC 1033 Astronomy

## Three hours

A general education course consisting of the study of the basic concepts in astronomy and space science including a study of Newtonian mechanics, Kepler's laws, solar phenomenon, the near earth space environment, stellar evolution, classification and spectra, types of galaxies, and cosmology. Prerequisite: ACT math score of at least 19 or SAT math score of at least 480, or MTH 0153.

Offered fall semester

## GSC 1143 Earth Science

## Three hours

Introductory survey of topics in geology, astronomy, and meteorology. Earth materials and processes of geology are emphasized. Prerequisite: ACT math score of at least 19 or SAT math score of at least 480, or MTH 0153. Meets the Physical Science option of the Core Curriculum.

## 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 the Global Studies requirement of the Core Curriculum. Prerequisite: Life Science Core.

Offered spring semester (even-numbered years)

## GSC 3103 Science for Preschool Through Grade 6 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. Prerequisites: BIO 1003 and GSC 1023; GSC 1143 strongly recommended.

Offered spring semester

## 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

## HONORS

4193 Honors Capstone Project in $\qquad$

## 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

## 4593 Honors Tutorial in

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## 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

4693 Honors Class Contract in $\qquad$

## 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.
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## 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

4913 Honors Co-Teaching: Readings in $\qquad$

## 4923 Honors Co-Teaching: Classroom Practicum in

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## 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

## 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 1083 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 Program or permission of the Honors Committee.

Offered fall semester

## HST 1093 Honors: Western Civilization II

Three hours
A survey of the development of Western civilization in its global context from the Renaissance, focusing on major issues and turning points as highlighted in original documents. Prerequisite: admission to the Honors Program or permission of the Honors Committee.

Offered spring 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 spring semester

## HST 2112 Selected Topics: Great Books

## Two hours

A two-hour course devoted to a single great work or author. Examples of the kinds of works focused on: Aristotle's Nichomachean Ethics; Booker T. Washington, Up from Slavery; The Federalist Papers; Tocqueville's Democracy in America.

Offered spring 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.
Offered fall semester (odd-numbered years)

HST 2213 Study of History

## Three hours

A course that introduces students to the skills needed for historical study, as well as to historiographical topics and challenges.

Offered fall semester (even-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 spring semester (even-numbered years)

## HST 2323 Poverty and Welfare in American History

## Three hours

A study of poverty and welfare in American history from the colonial period to the present. Particular attention is paid to the theology of poverty in the American context.

Offered spring 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.

## HST 2523 Classical World

## Three hours

A study of the ancient Western world from the development of Greece to the fall of the Roman Empire. The military, social, and political consequences of Greek and Roman rule are considered.

Offered fall semester (odd-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 spring semester (odd-numbered years)

## HST 3263 American Slavery in Comparative Perspective

Three hours
A study of the development of American slavery in comparative context. Topics include early forms of slavery and the slave systems of the Atlantic world and United States. American slavery is compared with slavery in the British, Dutch, Spanish, and French colonies in the Caribbean and Latin America.

Offered fall semester (odd-numbered years)

## HST 3273 America at War, 1861-1919

## Three hours

A study of the causes, course, and consequences of the American Civil War, Spanish-American War, and First World War. Attention is also given to smaller conflicts, as well as to warfare associated with the settlement of the American West.

## HST 3313 Second World War

## Three hours

A study of the causes, course, and consequences of the Second World War. Special attention is given to the Nazi regime and to the experience of frontline combatants.

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, American Founding, American West, and Nazi Germany. Prerequisite: consent of the History Department.

Offered upon sufficient request

## HST 3423 Leaders in History

## Three hours

A study of leaders, well-known and lesser known, in their historical contexts. The efforts of leaders in business, politics, social and cultural movements, and warfare are examined. Consideration is given to success and failure, personality strengths and flaws, and leadership characteristics and styles.

Offered upon sufficient request

HST 3433 History of the Middle East, 600-1800
Three hours

A study of the major political, religious, and social forces that shaped life in the Middle East from the time of Muhammad to the early modern period. Special attention is given to the development of the Islamic tradition and the interactions between Muslims, Jews, and Christians.

Offered fall semester (even-numbered years)

## HST 3443 The Modern Middle East

## Three hours

An examination of the political and social environment of the Middle East from the beginning of the nineteenth century to the present. Topics that will be discussed include European colonization, the Ottoman Empire, Arab nationalism, the Arab-Israeli Conflict, the rise of the Islamist movement, and the U.S. involvement in the Gulf War. Meets the Global Studies requirement of the Core Curriculum.

Offered spring semester (odd-numbered years)

## HST 3463 African Civilization to 1850

Three hours
A study of the development of Africa to 1850. Attention is given to Africa in the global context. Areas of inquiry include Islam in Africa, sub-Saharan "stateless" societies, the slave trade, and colonization in South Africa.

Offered fall semester (even-numbered years)

## HST 3473 African Civilization since 1850

## Three hours

A study of the development of Africa since 1850. Topics include colonial ideology and rule, independence movements and African nationalism, post-colonial culture and politics, inter-and intra-state conflict, and contemporary issues in Africa. Meets the Global Studies requirement of the Core Curriculum.

Offered spring semester (odd-numbered years)

## HST 4511, 4512, 4513 Independent Study

One to three hours

Supervised study of topics of special interest to the student and professor.
Offered upon sufficient request

## HST 4613 Seminar in History

## Three hours

The course brings psychological, philosophical, and theological reflections to bear on the study of history. All students will write a sophisticated research paper between 15-25 pages in length. Prerequisite: senior standing or consent of History Department.

Offered spring semester (even-numbered years)

## 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 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. Meets the Global Studies requirement of 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, and trends in ethnographic research. Prerequisite: ICS 2113 or SST 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. Prerequisite: ICS $\underline{2113}$ or SST 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.

Offered summer (May)

## 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. Meets the Global Studies requirement of the Core Curriculum.

Offered spring semester

## 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 SST $\underline{2123}$ and consent of instructor.

## 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 SST 2123.

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; by consent of the instructor. Prerequisite: ICS 2113 or SST 2123.

## 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 career guidance inventories, valuable web-based resources, and exercises.

Offered spring semester

## 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

A study of the role of management in directing and improving organizational performance in a global environment. Topics discussed include various types of risk, strategic planning, operations, communications, negotiations, legal and socio-ethical issues. Meets the Global Studies requirement of the Core Curriculum. (Same as MGT 2183). Prerequisite: ECN 2123.

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). Meets the Global Studies requirement of the Core Curriculum. Prerequisite: ECN 2003 or 2113.

Offered spring semester

## INT 3173 International Finance

Three hours

Study of methods and processes of financial management for multinational organizations. Prerequisites: ATG 2183, and ECN 2003 or 2113.

Offered spring semester

## INT 4113 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). Prerequisite: BUS 2193.

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.
Prerequisites: junior standing and consent of instructor.
Offered upon sufficient request

## KIN (Kinesiology)

## KIN 1002 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

## KIN 1011 Wellness Activity: Selected Topic

One hour
An activity course other than those offered on a regular basis.
Offered upon significant request

## KIN 1021 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

## KIN 1031 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

## KIN 1041 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. An additional fee associated with this course.

Offered each semester

## KIN 1051 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.

## KIN 1061 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. An additional fee associated with this course.

Offered each semester

## KIN 1071 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

## KIN 1081 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

## KIN 1091 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.

## KIN 1102, 1103 First Aid and CPR

## Two to 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 40 hours of field experience per credit hour. Students are introduced to the professions in areas related to kinesiology 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 2233 Lifeguarding

## Three hours

Knowledge and advanced skill in swimming with training in lifeguarding. Prerequisite: advanced swimming skills.

Offered upon sufficient request

## 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/lower extremities.

Offered fall semester (odd-numbered years)

## 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 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, or fitness in an approved setting. Prerequisite: consent of advisor.

Offered each semester

## LDR (Leadership)

## LDR 1511, 1521, 1531, 1541, 1551, 1561 Leadership Colloquium

Each course, one hour
This course offers academic credit for the LSI curriculum of leadership events and activities.
One credit may be awarded for the successful completion of each year of the program.
Furthermore, special intensive leadership learning events or opportunities for specific application may be available for credit in addition to the regular curriculum. Course credit available only to LSI students who began Fall of 2009, or thereafter.

Offered each semester

## LDR 2121 Student Leadership

## One hour

The purpose of this course is to increase the effectiveness of student leaders. It is designed for those students planning to be in leadership positions on the JBU campus. Topics surrounding campus leadership issues are the focus.

Offered spring semester

## LDR 2552 Service Learning

## Two hours

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 spring semester

## LDR 2563 Leadership Competencies

Three hours

Focused analysis of leadership skill sets necessary to ensure good individual and organization performance: modeling the way, inspiring a shared vision, challenging the process, enabling others, and encouraging the heart. 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 (SIFE)

## 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 2991-93).

## LDR 3563 Organizational Leadership

## Three hours

A capstone study of emotional intelligence and organizational behavior and how those concepts impact today's organizational challenges. Students analyze specific leadership situations, gleaning insight into such topics as conflict resolution, the four quadrants of EQ organizational behavior theory and practice. Using experiential learning methods, students analyze team and organizational processes in work situations increasing understanding of the concepts of consensus building, small group life-cycles, leading teams, and group dysfunction.

Offered spring semester

## LDR 3651, 3652, 3653 Leader Scholars Institute Capstone Practicum

## One to three hours

Designed to offer a pragmatic, culminating experience in applied leadership, this course provides a venue in which students design, implement, and evaluate an individual hands-on leadership project. Projects involve at least 50 hours of independent work for one credit, 100 hours for two credits, and 150 hours for three credits. This course is required of all LSI students and it is preferred that it be taken in their junior year. Exceptions to this policy may be granted by the instructor only.

Offered each 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. Prerequisites: junior standing and consent of instructor.

Offered upon sufficient request

## 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 folk songs 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 upon sufficient request
1423 offered upon sufficient request

## 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 Introduction to Latin America

## Three hours

An examination of the commonalities as well as the unique national experiences of each country in Latin America. There is a significant historical component. The changing religious situation in the region is discussed as well as important current events. Much attention is given to Brazil. No knowledge of the Spanish language is required. Meets the Global Studies requirement of the Core Curriculum.

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. Meets the Global Studies requirement of the Core Curriculum.

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 LS 2223. Meets the Global Studies requirement of the Core Curriculum.

# LS 2513, 2523 Selected Topics: Intermediate Language I, II 

Each course, three hours
Intermediate study of a language other than those regularly offered. Meets the Global Studies requirement of the Core Curriculum.

Offered upon sufficient request

## LS 3163 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 2113 and 2123 .

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. Meets the Social Science option of the Core Curriculum.

## LS 3213 Readings in French I

## Three hours

Readings about the culture of Francophone countries, with emphasis on societal issues in Frenchspeaking 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 2223; 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 4113 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 (even-numbered years)

## LS 4123 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 2123; LS 4113 recommended.

Offered spring semester (odd-numbered years)

## 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 4193 Language Internship

## Three hours

A minimum of 150 hours of contact time in a professional or ministry setting in the greater Siloam Springs area or other Spanish-speaking context. Students keep a journal of their experiences, documenting specific vocabulary and grammatical forms they frequently used and a summary of their observations. Students begin logging internship hours early in their career at JBU, but register, pay, and receive credit for the internship during their senior year. See department chair for details. A final summary is due the semester of graduation. Students may earn two additional hours of credit for service learning if they participate in the Acción Solidaria projects available in Sevilla.

Offered upon sufficient request

## LSS (Language Studies ~ Semester in Spain) <br> 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, "Clarin"; and Ignacio Aldecoa.

Offered each semester

## 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 Dalí. Videos, slides, and field trips supplement classroom instruction. An additional $\$ 100$ fee is associated with this course to cover field trip expenses.

Offered each semester

## 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.

Offered each semester

## LSS 3514 Advanced Spanish Grammar and Composition

## Four hours

Grammatical structures and specific vocabulary, used in a series of composition and conversation themes.

Offered each semester

## 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. (Same as PHY 3113). Prerequisites: MTH 1144 and PHY 2114.

## 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 lecturediscussion per week. Prerequisite: 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. (Same as PHY 3223). 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 lecturediscussion per week. An additional fee associated with this course. Prerequisites: EN 1223, PHY 2114, 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 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 spring semester

## 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. An additional fee associated with this course. Prerequisites or corequisites: MTH 2114 and PHY 2124.

Offered fall 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 3413.

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 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 3223.

Offered upon sufficient request

## MGT (Management)

## MGT 2173 Principles of Management

Three hours
A study 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 in today's organizations.

Offered spring semester

## MGT 2183 International Management

Three hours
A study of the role of management in directing and improving organizational performance in a global environment. Topics discussed include various types of risk, strategic planning, operations, communications, negotiations, legal and socio-ethical issues. (Same as INT 2183). Meets the Global Studies requirement of the Core Curriculum.

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 2991-93). A not-for-credit option is also available.

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)

## MGT 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. Prerequisites: junior standing and consent of instructor.

Offered upon sufficient request

## MKT (Marketing)

## 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 ecommerce retailing strategies.

Offered fall semester (odd-numbered years)

## MKT 3143 Principles of Marketing

Three hours

A study of the marketing process for identifying a need and selecting target markets; developing a product to satisfy the need; and the distribution, promotion, and pricing of the product. Prerequisite: ECN 2003 or 2113.

Offered spring semester

## 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). Meets the Global Studies requirement of the Core Curriculum. Prerequisite: ECN 2003 or 2113.

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 Marketing Research

## Three hours

Applied study of marketing research using projects supplied by 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). Prerequisite: BUS 2193.

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. Prerequisites: 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. Wellness Activity requirement for the Core Curriculum will be waived upon completion of both of these courses.

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 "handson" 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.

## 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. Intermediate Algebra does not satisfy any college math requirements; credit does not apply toward minimum hours required for graduation.

Offered fall 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, SAT math score of at least 480, 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: ACT math score of at least 24 , or SAT math score of at least 580 , or 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 SAT math score of at least 580, 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 SAT math score of at least 580, or MTH 1113 and $\underline{1122 .}$

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 2003 Introduction to Statistics

## Three hours

A course to give students an understanding of the concepts of statistics and tools to become critical readers of current issues involving quantitative data. Applications of the use of data from a wide variety of professions, public policy, and everyday life are made. The course focuses on methods of producing data, organizing data, and drawing conclusions from data. Topics include descriptive statistics, frequency distributions, correlation, regression, inference, and significance. Selected topics in research design and the consumer price index are also taught. Prerequisite: ACT math score of at least 19 or SAT math score of at least 480, or MTH 0153.

Offered each semester

## MTH 2103 Applied Statistics for Scientists

## Three hours

A study of the essential statistical techniques needed to analyze your own experiments and understand the work of others with applications in medicine, biology, chemistry, and other scientific fields. Topics include descriptive statistics, probability distributions, sampling techniques, hypothesis testing (t-tests, z-tests, chi-square tests, and ANOVA), correlation, and regression. Extensive use of statistical software packages is included. Prerequisites: MTH 1113, or ACT math score of 23 or SAT score of at least 560 .

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. Prerequisites: MTH 1134 and MTH 1144.

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 SAT math score of at least 480, or Passing Score (State Level) on Praxis I Math, or MTH 0153 with grade of 'C' or better. Prerequisite for 2183: MTH 2143.

## 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

## Each course, 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 content differs. 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. Prerequisites: 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. Prerequisites: MTH 1134 or MTH 1123, and $\underline{2183 .}$

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; MTH 2123 is strongly recommended but not required.

Offered spring semester

## MTH 4101 Readings

One hour

A directed experience in reading in the mathematical literature. Prerequisite: MTH 1144.
Offered fall 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 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 $\underline{3103}$.

Offered spring semester (odd-numbered years)

## MUS (Music)

## MUS 0890, 1890, 3890 Masterclass in Instrumental Music

## No credit

Required of all students taking instrumental music. 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 upon sufficient request

## MUS 0891 Applied Instrument

One hour
One half-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 Instrument credit. Credits do not count toward Applied Instrument requirements or graduation hours. May be repeated each semester.

Offered each semester

## MUS 0971 Applied Organ

One hour

One half-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. Prerequisite: consent of instructor.

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 half-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 half-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 1000 Recital Attendance

No credit
Satisfactory completion of a specified number of recitals and concerts each semester. Full-time music and worship arts majors must register every semester in order to complete the Recital Attendance requirements for graduation. Students in the B.Mus.Ed. program are exempted the semester of internship. Two semesters are required of students minoring in music or worship arts. Graded "S" or "U."

Offered each semester

## MUS 1103 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 software used in subsequent music theory course work. Credit does not count toward graduation hours or toward any Music Department field of study, or toward the Youth and Worship Ministries major. May be waived by examination.

Offered fall 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 1103 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 1103 or waiver. Corequisite: MUS 1111.

Offered spring semester

## MUS 1203 Liberal Arts Foundations for the Musician

Three hours
An introduction to the music curriculum. 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. An additional fee associated with this course. Prerequisite or corequisite: EGL 1013.

Offered spring semester

## MUS 1731, 3731 Music Theatre Methods: Drama I

## 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 spring semester

## 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 fall semester

## MUS 1781, 3781 Applied Accompanying

## Each course, 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 four times 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 Recreational Guitar

## One hour

One half-hour private lesson per week. Student must supply guitar for practice and lessons. Minimum amount of daily practice to be determined by instructor. Available for students not concentrating in guitar as part of a major or minor in either music or worship arts. Prerequisite: consent of instructor.

Offered upon sufficient request

MUS 1831, 3831 Women's University Chorus

Each course, 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-forcredit 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

## Each course, 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 1850, 1851 JBU Chapel Band

## One hour

This ensemble seeks to develop the musicianship and character of all students participating in JBU Chapel Bands. Students will rehearse music to be used in leading weekly chapel services, as well as participate in team building exercises and discussions about the corporate worship culture of JBU. This course also serves as an opportunity for Chapel Leaders to practice pastoral care and leadership to a small group of student musicians. Online application and 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, 3891 Applied Instrument

## Each course, one hour

One half-hour private lesson per week. Minimum amount of daily practice to be determined by instructor. Available for majors and minors admitted into the Instrumental Concentration. Prerequisite: see requirements to enter each level of work in Applied Instrument as listed in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam.

Offered upon sufficient request

## MUS 1892, 3892 Applied Instrument

## Each course, two hours

One 1-hour or two half-hour private lessons per week. Minimum amount of daily practice to be determined by instructor. Available for majors and minors admitted into the Instrumental Concentration. Prerequisite: see requirements to enter each level of work in Applied Instrument as listed in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam.

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.

## MUS 1911 Lyric Diction I

## One hour

Foreign language pronunciation for singers through application of the International Phonetic Alphabet with emphasis on Italian and introduction to German. Two fifty-minute sessions per week.

Offered spring semester (odd-numbered years)

## MUS 1921 Lyric Diction II

## One hour

Continuation of German pronunciation study with emphasis on French. Two fifty-minute sessions per week. Prerequisite: MUS 1911.

Offered fall semester (odd-numbered years)

## MUS 1931, 1941 Class Piano I, II

## Each course, 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. Two hours of class each week and a half-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

## Each course, one hour

Group instruction with emphasis on foundational vocal techniques, practice skills, and beginning song literature. Two hours of class weekly and half-hour of practice daily.

1951 offered fall semester
1961 offered spring semester

## MUS 1971, 3971 Applied Organ

## Each course, one hour

One half-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 in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam.

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

## Each course, two hours

One 1-hour or two half-hour private lessons per week. Minimum amount of daily practice to be determined by instructor. Prerequisites: see requirements to enter each level of work in organ as listed in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam.

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

Each course, one hour

One half-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 in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam, 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

## Each course, two hours

One 1-hour or two half-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 in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam, 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

## Each course, one hour

One half-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 in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam, 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

## Each course, two hours

One 1-hour or two half-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 in Departmental Requirements for the major/minor and Upper-Division Applied Admittance Exam, 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 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 2503 Worship Arts I: Orientation

## Three hours

Worship I is the first of two foundation courses placed at the beginning of the worship arts core curriculum sequence. This course seeks to discover each student's "worship starting point," identifying local church background and other worship experiences that have shaped this initial perspective. From there, lectures, discussions, and readings in the areas of theology, ecclesiology, and spiritual formation aim to broaden this worship perspective by cultivating an appreciation for various leadership, planning, and music styles that may or may not align with the student's personal preference. In conjunction, the student is challenged to evaluate his or her worship leadership off the stage through candid group discussion and individual analysis. These exercises aim to broaden the student's worship perspective by viewing all facets of life as genuine acts of worship. Prerequisites: MUS 1111 and $\underline{1113}$.

Offered fall semester

## MUS 2513 Worship Arts II: Materials and Methods

## Three hours

Worship II seeks to give a practical face to the concepts learned in Worship I. The student learns much about the reality of actually serving as a worship pastor in a local congregation. This course teaches various fundamentals of corporate worship planning, such as song selection, transitions, and exhortations. However, it also equips the student with keen observation and critical thinking skills; the student can utilize these skills to evaluate the theological integrity and pastoral effectiveness of any corporate worship gathering. In addition, this course requires the student to serve several times with various non-profit organizations that aim to help the disenfranchised people of Northwest Arkansas through music. This component of the course seeks to encourage the student to continue to view worship as a lifestyle, far more than a Sunday morning activity. Prerequisites: MUS 1113 and $\underline{2503 .}$

## 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

## Each course, 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. Two hours of class each week and half-hour practice daily. Prerequisite for 2931: MUS 1941. Prerequisite for 2941: MUS 2931.

2931 offered fall semester
2941 offered spring semester

## MUS 3003 Masterpieces of Music

## 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, HST 1013, and $\underline{1023}$.

## 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 laboratory per week. Prerequisites: MUS 1111 and 1113 .

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 4113 and consent of instructor.

Offered upon sufficient request

## MUS 3151 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 3161 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 3151 or 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 including jazz, folk, and pop influences.

Offered upon sufficient request

## MUS 3213, 3223 History of Music I, II

Each course, three hours
The first course surveys the historical development of music from the pre-Christian era to 1750 . The second covers music from 1750 to the present. Both courses include a major researchanalysis project. Prerequisite: MUS 1203.

3213 offered fall semester (even-numbered years)
3223 offered spring semester (odd-numbered years)

## MUS 3232 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, and $\underline{3101 .}$

## MUS 3241 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 laboratory per week. Prerequisite: MUS 2111.

Offered spring semester

## MUS 3243 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 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. Prerequisite: MUS 3243 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 required. For Music majors only. (Same as MUS 3323). Prerequisites: MUS 2111, 2113, and Gate One.

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. Field observations required. (Same as MUS 3313). Prerequisite: MUS 1113 or consent of instructor.

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 1111 and $\underline{1113}$ or consent of instructor.

Offered fall semester

## 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 associated with this course.

# MUS 3601 Music Practicum: Accompanying 

## One hour

Student accompanies voice students at their lessons and rehearsals, musical theatre workshop rehearsals, or other accompaniment opportunities with the consent by 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. Prerequisites: MUS 3421 and consent of instructor.

## MUS 3651 Music Practicum: Chapel Leader

## One hour

Student serves the Chapel Program in a variety of capacities including participating with the music teams, attending planning meetings and rehearsals, assisting with overall set-up and programming, and evaluating the services. Student reports directly to the Instructor of Worship Arts. Prerequisites: MUS 2503, 2513, 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 postproduction 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 3850, 3851 The Red Steps

One hour
This ensemble exists to serve the University by leading worship at schools and churches throughout the country for the purpose of recruitment, marketing and overall encouragement to the body of Christ This ensemble may also play a broader repertoire of music at coffee ships, bookstores, and churches for special events sponsored by the Admissions Department or area schools. This ensemble is filled through an invitation only audition and includes a small stipend. A not-for-credit enrollment option is available.

## 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 Corporate Worship Techniques

## One hour

A "masterclass" covering elements of vocal and piano technique and pedagogy using modern worship repertoire. Topics covered include improvisation, stylistic interpretation, harmonization, and stage presence. Students will also study various audio and visual aspects of corporate worship. Prerequisites: ART 1123 or 2253, and MUS 2941.

Offered fall semester (even-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 associated with this course. Prerequisite: consent of instructor.

Offered spring semester (even-numbered years)

## MUS 4113 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 and a brief introduction to contrapuntal procedures. This course also includes a major research-analysis project. Prerequisites or corequisites: MUS 1203 and 3243.

Offered fall semester (odd-numbered years)

## MUS 4191 Senior Presentation Preparation

One hour
Course designed to provide faculty mentoring for students enrolled in MUS 4910 Senior Presentation or MUS 4920 Senior Presentation in Worship Arts. An additional fee associated with course. Corequisite: MUS 4910 or 4920.

Offered each semester

## 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 4491, 4492, 4493 Selected Topics

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 4553 Internship in Worship Arts

## Three hours

An internship under the guidance of an experienced and qualified minister of music in an approved church music program. Prerequisite: consent of Worship Arts 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 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 and/or observations are required. Prerequisites: MUS 3313 and Gate Two.

Offered upon sufficient request

## 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 4113, 3213, and 3223. Corequisite: MUS 4191.

Offered each semester

## MUS 4920 Senior Presentation in Worship Arts

## No credit

Presentation of a corporate worship service demonstrating musical, pastoral, and leadership skills gained over the student's academic career. The student is responsible for assembling a team of people to help execute the planned service (musicians, speakers, other artists). Presentation must be approved by the department chair, and faculty mentor. An additional fee associated with this course. Prerequisites: MUS 2503 and 2513. Prerequisite or corequisite: MUS 4191.

Offered each semester

## 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 and $\underline{1122}$.

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 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 (Same as ME 3113). Prerequisites: MTH 1144 and PHY 2124.

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 content differs. Prerequisite: consent of instructor

Offered upon sufficient request

## PHY 3223 Thermodynamics

Three hours

A continuation from ME 3113 or PHY 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. (Same as ME 3223). Prerequisites: ME 3113 or PHY 3113, and MTH 1144.

## PHY 4123 Electromagnetics

## Three hours

Application of Maxwell's equations to transmission lines, waveguides, and antennas. Include antenna design. Three hours lecture-discussion per week. (Same as EE 4123). Prerequisite: EN 3413.

Offered spring semester

## POL (Political Science)

## POL 2013 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. 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 summer, Irish Studies Program

## POL 2093 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 Program or permission of the Honors Committee.

Offered fall semester (even-numbered years)

## 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. Meets the Global Studies requirement of the Core Curriculum.

Offered fall semester (odd-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 worldview 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). Meets the Philosophy requirement of the Core Curriculum.

Offered each semester

## POL 3093 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 3093). Prerequisites: admission to the Honors Program or permission of the Honors Committee. Meets the Philosophy requirement of the Core Curriculum.

Offered spring 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. Areas explored include income support, poverty and welfare, social security, health care, and affirmative action. Particular emphasis is placed upon evaluating the competing goals of social policy from a Christian perspective. Students will learn how to apply their faith to matters of public policy.

Offered fall semester (even-numbered years)

## 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 2013.

Offered spring semester (even-numbered years)

## POL 3213 Faith and Politics

## Three hours

A study of the relationship between faith and politics with particular attention devoted to understanding the role of Christians in the democratic process. Specific topics discussed include the normative role of faith and politics, religion and political behavior, religion and the Constitution, and the historical and current role of religious individuals and organization in the public square.

Offered fall 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 2013.

Offered fall semester (odd-numbered years)

## POL 3413 Selected Topics

Three hours
Special topics in Political Science are considered.
Offered upon sufficient request

## POL 3423 Selected Topics in American Politics

Three hours
An investigation of contemporary issues in American politics. Content for this course will vary by semester. Areas of study may include political parties, elections and voting behavior, and Congress. Prerequisite: POL 2013.

## 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. Prerequisite: POL 2213 or 3353 ; POL 2473 recommended.

Offered upon sufficient request

## 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 2013 and junior standing or consent of instructor.

Offered fall semester (even-numbered years)

## POL 4313 Christianity and the Law

## Three hours

An examination of how Christian principles have influenced law in the West, both historically and in the present day. Students will also interact with current practitioners in the fields of law and politics in order to gain insights into how faith can be integrated into a legal or political career. Prerequisites: junior/senior standing.

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 or 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 worldview. Students research a particular topic in U.S. politics. Prerequisites: POL 2473 and nine additional hours of Political Science.

Offered spring semester (even-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 1093 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 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. Course work 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. This course may not be audited. (Same as FAM 2123).

Offered spring semester

## PSY 2203 Theories of Personality

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 Statistics for the Behavioral Sciences

## 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. Prerequisites: PSY 1013 and either an ACT Math score of at least 19, or an SAT score of at least 480, or MTH 0153.

## 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 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. Prerequisites: 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. Prerequisites: 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 3493 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 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 to 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' or '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. Prerequisites: 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.

## 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 $\underline{3493}$ and consent of a supervising instructor.

Offered upon sufficient request

## PSY 4493 Seminar in Psychology

Three hours
A capstone in the discipline emphasizing contemporary issues and an approach to psychology from a Christian perspective. Prerequisites: PSY 2393 and six hours of BBL. Prerequisite or corequisite: PSY 3383.

Offered spring semester

## RE (Renewable Energy)

## RE 1113 Introduction to Renewable Energy

## Three hours

An exploration of the technologies of renewable energy emphasizing scientific principles and practical conversion applications as well as the economic, environmental, and political aspects of energy production and use from fossil fuels to renewable energy resources.

Offered fall semester

RE 2113 Introduction to Energy Science
Three hours

A review of electrical systems, thermodynamics, heat transfers and fluid mechanics concepts necessary to prepare the student for an understanding of the Renewable Energy courses. Basic energy economics and an overview of the existing and future energy supply systems. Prerequisite: RE 1113.

Offered spring semester

## RE 2121 Practicum in Renewable Energy

One hour
An introduction to lab and field testing with renewable energy measurement instrumentation, as well as field testing of power performance of photovoltaic, solar thermal, wind, and biomass energy systems. An additional fee associated with this course.

Offered fall semester

## RE 3123 Bio-fuels and Biomass

## Three hours

Introduction to power production from different biomass resources. Topics include: bio-energy sources (agricultural crops and organic wastes), combustion of solid biomass, production of gaseous and liquid fuels from biomass, environmental benefits and economic impacts of biomass conversion. An additional fee associated with this course. Prerequisites: RE 2113 or corequisite ME 3113), and CHM 2154.

Offered fall semester

## RE 3143 Wind Energy

Three hours
This lecture covers all relevant subjects of wind energy systems. Concepts of wind meteorology, wind resource analysis and aerodynamics applied to wind turbines are covered. Students will utilize wind related software packages and perform lab sessions on power turbine performance and wind related measurements. Prerequisite: RE 2113 or ME 3113.

## RE 3163 Solar Energy

Three hours
This lecture covers all relevant subjects of solar thermal energy and solar photovoltaic system design. Subtopics include solar geometry, solar meteorology and physical principles of radiation conversion, and radiation laws and heat transfer. Solar PV and solar thermal laboratory sessions are included. Prerequisite: RE 2113 or ME 3113.

Offered fall semester

## RE 4124 Renewable Energy Capstone

Four hours
This is a project-based course done under the supervision of a faculty member. The student develops a feasibility study for a renewable energy project for a specific site. They apply all the methods and know-how acquired during their classes and present their case study in a formal presentation or poster session. An additional fee associated with this course. Prerequisites: RE 3123, 3143, and 3163.

Offered spring semester

## RPH (Religion and Philosophy)

## RPH 2323 Logic

Three hours
An introduction to considering and evaluating arguments. Topics include formal and informal fallacies, syllogisms, truth tables, and statement or propositional logic. The course can include an introduction to predicate logic as well.

Offered fall semester (even-numbered years)

RPH 3003 Introduction to Philosophy
Three hours

A survey of the main areas of philosophy, including metaphysics, epistemology, ethics, and philosophy of religion. Students should develop their critical reading skills, their ability to analyze difficult but rewarding philosophical texts, and their ability to advance a single, clear argument on philosophical issues. Additionally, students should become more comfortable speaking about philosophical problems and concerns, and they should know more about the relationship between the Christian faith and contemporary philosophy. Prerequisites: EGL 1023, HST 1013, and 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 worldview 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 3093 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 3093). Prerequisites: admission to the Honors Program or permission of the Honors Committee. Meets the Philosophy requirement of the Core Curriculum.

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.

## RPH 3343 Ancient \& Medieval Philosophy

Three hours
A survey of the development of the Western philosophical tradition, based on a close reading of primary texts, from the Presocratics to Ockham.

Offered spring semester (odd-numbered years)

## RPH 3353 Modern Philosophy

Three hours
A survey of the development of the Western philosophical tradition, based on a close reading of primary texts, from Descartes to Nietzsche.

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. Meets the Global Studies requirement of the Core Curriculum. Prerequisite: junior standing or consent of instructor.

Offered spring semester (even-numbered years)

## RPH 3543 Introduction to Hinduism and Buddhism

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. Meets the Global Studies requirement of the Core Curriculum. Prerequisite: junior standing or consent of instructor.

Offered spring semester (odd-numbered years)

## RPH 4423 Ethics

Three hours
A comprehensive and critical study of morality. Topics include metaethics, normative ethics, and applied ethics. Prerequisites: RPH 3003, or POL 3003, or RPH 3013.

Offered each semester

## RPH 4433 Philosophy of Religion

Three hours
An introduction to a major topic in the philosophy of religion, e.g. arguments for and against the existence of God, the problem of evil, or the relationship between God and morality. Students should be able to give an adequate defense of the Christian faith by the end of the semester. (Same as BBL 4433). Prerequisites or corequisites: RPH 3003, or POL 3003 or RPH 3013.

Offered fall semester (odd-numbered years)

## RPH 4481, 4482, 4483 Selected Topics

## One to three hours

Topics are chosen from some area within religion and philosophy and may include a close reading of a major religious or philosophical work, e.g., Nicomachean Ethics or the Koran; a thorough study of a major figure in religion or philosophy, e.g., Martin Luther or Descartes; a select topic in religion or philosophy, e.g., metaphysics, or an issue, e.g., just war theory. The
student may also do an independent study and research under the supervision of an 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. Meets the Global Studies requirement of the Core Curriculum.

Offered spring semester

## 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. Meets the Global Studies requirement of the Core Curriculum.

## 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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