CBU

Academic Catalog

2017-2018

CATALOG
2017-2018

Christian Brothers University is a private, independent, Catholic University for men and women with baccalaureate programs in Arts, Business, Engineering, and Sciences and with specialized graduate programs. The University is not financed in any way by the hierarchy of the Church.

LOCATION

Christian Brothers University is located on nearly 75 acres in the heart of Greater Memphis. The University is ideally situated, as it is only four miles from downtown Memphis and four miles from Memphis International Airport. The University is just a few steps from the Liberty Bowl Memorial Stadium, home of the Liberty Bowl Football Classic and other top attractions.

INFORMATION

In the list below are the officials to whom inquiries of various types may be sent.

General Interests of the University..... *President*
Academic Work of Students, Transcripts and Withdrawals ..... *Registrar*
The Academic Program, Housing, Health,
Campus Activities, and International Students ..... *Vice President for Academics*
Athletics ..... *Director of Athletics*
Day Admission Applications and Information..... *Dean of Admissions*
College of Adult Professional Studies Applications and Information..... *Dean of College of Adult Professional Studies*
Graduate Program Applications and Information ..... *Directors of Graduate Programs*
Payment of University Bills ..... *Controller*
Scholarships and Financial Aid..... *Director of Student Financial Aid*

THE UNIVERSITY MAILING ADDRESS IS

Christian Brothers University
650 East Parkway South
Memphis, Tennessee 38104-5581

Telephone: (901) 321-3200
Toll-free: (877) 321-4CBU
Internet: http://www.cbu.edu

OFFICE OF DAY ADMISSIONS
(901) 321-3205
(800) 288-7576
FAX: (901) 321-3202

Christian Brothers University does not discriminate on the basis of race, age, color, religion, sex, sexual orientation, national and ethnic origin, or handicap in its education programs or activities, including employment and admissions.

CATALOG INFORMATION ACCURACY

The information contained herein is accurate according to the best information available at the time of review; however, all statements regarding offerings, requirements, tuition charges and fees, academic regulations, and student life are subject to change without notice or obligation.

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GENERAL INFORMATION

MISSION STATEMENT

Educating minds.
Touching hearts.
Remembering the presence of God.

HERITAGE

Let us remember that we are in the holy presence of God.
Live Jesus in our hearts . . . forever.
As a Catholic institution of higher learning, Christian Brothers University brings the timeless wisdom and religious heritage of centuries into an encounter with the twenty-first century. Universities are dedicated to teaching, to fostering research and to the education of students who freely associate with their teachers in a common love of knowledge. The privileged task of a Catholic university is to bring together in one community the intellectual search for truth in the context of faith based on the gospel and mission of Jesus Christ. St. John Paul II described the Catholic university as "an incomparable center of creativity and dissemination of knowledge for the good of humanity . . . born from the heart of the Church."

At CBU, the rich intellectual heritage of the Catholic university is expressed within the Lasallian tradition. St. John Baptist de La Salle is the patron saint of teachers and an educational innovator who founded the Brothers of the Christian Schools in seventeenth century France. Now a worldwide community of vowed religious brothers and dedicated associates, the Lasallian family remains committed to the vision of the founder: "… not only is God so good as to have created us, but God desires all of us to come to the knowledge of the truth." St. John Baptist De La Salle, therefore, made it his life's work to bring the blessings of a practical education beyond the privileged classes of French society, to all people, especially the young, who have an inherent dignity as those created in the image and likeness of God. A Lasallian institution continues to affirm the dignity of all people and embraces the presence of God.

THE BROTHERS IN MEMPHIS

The De La Salle Christian Brothers arrived in Memphis in 1871 from Chicago, and immediately opened a Catholic school that, within a few years, contained elementary and secondary grades, college classes and granted graduate degrees. Christian Brothers College, as it was then, became the first Catholic college in West Tennessee. The First World War brought an end to the college program as men went off to war. The elementary school declined and closed in 1926, while the high school prevailed. The college came into existence once more in 1940, and moved to its current location on East Parkway South. In 1965, the high school program moved to its present location on Walnut Grove Road, and the college, later to become a university, stood alone on East Parkway. In 2000, the Brothers agreed to the request of the Diocese of Memphis to administer one of the Jubilee Schools, De La Salle Blessed Sacrament. The circle was once more complete, with the Christian Brothers offering elementary, secondary and college programs with graduate degrees, continuing the tradition of committed Catholic education throughout the city of Memphis for more than 145 years.

OUR IDENTITY

Christian Brothers University is a Catholic university founded on the heritage of Lasallian education. While large enough to provide educational opportunities in the arts, business, education, engineering and sciences, the University is small enough to promote teaching as ministry and to provide challenging student-centered learning and personal growth. Students of diverse cultures and religious traditions are encouraged to grow in their own faith. The University welcomes students into an educational community of faith and service, one that is committed to academic excellence, the betterment of society and the care of God's creation.

INSTITUTIONAL GOALS

EDUCATING MINDS

1. CBU will provide the resources and expertise required to nurture and sustain the intellectual and academic formation of its students.
2. CBU will offer innovative, accessible programs and resources to ensure that all students are prepared for career success.

TOUCHING HEARTS

3. CBU will offer academic and enrichment experiences in support of students' ethical formation.
4. CBU will provide opportunities for students to engage with the wider community.

REMEMBERING THE PRESENCE OF GOD

5. CBU will provide academic opportunities for students to investigate matters of faith and religious experience and will provide experiences in support of students' spiritual formation.
6. CBU will offer academic and enrichment experiences promoting its Catholic and Lasallian heritage.

NOTICE OF NON-DISCRIMINATORY POLICY AS TO STUDENTS

Christian Brothers University admits students of any race, age, color, religion, sex, sexual orientation, national and ethnic origin, or disability to all the programs and activities of the University with the rights and privileges generally accorded to students. It does not discriminate on the basis of race, age, color, religion, sex, sexual orientation, national and ethnic origin, or disability in its education programs or activities, including employment and admissions.

HISTORICAL SKETCH

Christian Brothers College was founded November 19, 1871, by members of the Institute of the Brothers of Christian Schools, a Roman Catholic religious teaching congregation. The Brothers came to Memphis at the request of the people and clergy of the city, a move which culminated more than a decade of efforts to persuade the Brothers to open a college in Memphis. Brother Maurelian was appointed the first President.

Brother Maurelian's two terms as President totaled 33 years. During his presidency, the Brothers purchased the 612 Adams Street building which was to house the college until 1940 when the college moved to its present location at Central Avenue and East Parkway South. The college functioned as a combined elementary school, high school, and college, granting high school diplomas as well as Bachelor's and Master's Degrees from 1871 to 1915, when the college division was suspended. Elementary classes were dropped in 1922, and the institution operated as a high school only until 1940. Reopened at that time as a Junior College, the college began granting Associate of Arts Degrees in 1942.

In 1953, the decision was made to expand the Junior College into a four-year institution to more adequately serve the needs of the community. The four-year curriculum began with degrees in Business Administration and Electrical Engineering, with the first graduates in recent times receiving their degrees in 1955.

The curriculum was soon expanded to meet the needs for new programs in the fields of Mechanical Engineering and Chemistry. Through the ensuing years the following degree programs were added: Biology, Civil Engineering, Mathematics, English, Physics, Chemical Engineering, History, Psychology, Natural Science, Engineering Physics, Computer Science, and Religion & Philosophy. Teacher Preparation Programs in Secondary Education were added in 1969. Christian Brothers College became coeducational in 1970. Currently, women make up approximately fifty-five percent of the student body. An accelerated Evening Program offering a degree in Business Administration was added in 1978 to meet the needs of the adult student, and the Applied Psychology degree was added in 1999. Officially, Christian Brothers College became Christian Brothers University in June of 1990.

Programs at the graduate level were reinstituted in 1987 with the Master's program in Telecommunication and Information Systems. The Master of Business Administration and the Master of Engineering Management were added in 1989. A Master of Education was added in 1997, and in 2001 a Master of Arts in Teaching and a Master of Science in Educational Leadership were added. Masters of Arts in Catholic Studies and Executive Leadership and a Master of Science in Engineering Management were added in 2005. In 2012, a Master of Physician Assistant Studies was added.

In 2017, the university initiated a Master of Science in Computer Information Systems degree program.

ACCREDITATION AND RECOGNITION

Christian Brothers University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane; Decatur, Georgia 30033-4097; telephone number 404-679-4501) to award the bachelor's degree and the master's degree. The three-fold purpose for publishing the Commission's address and contact number is to enable interested constituents (1) to learn about the accreditation status of Christian Brothers University, (2) to file a third-party comment at the time of Christian Brothers University's decennial review, or (3) to file a complaint against Christian Brothers University for alleged non-compliance with a standard or requirement. Normal inquiries about Christian Brothers University, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to Christian Brothers University and not to the Commission's office.

Christian Brothers University is a member of the National Catholic Educational Association and the Tennessee Association of Colleges. Most programs are approved for veterans' training. Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (111 Market Place, Suite 1050; Baltimore, MD 21202-4012; telephone number 410-347-7700). The University is accredited by the National Council for Accreditation of Teacher Education and approved by the State Department of Education of Tennessee as a Teacher Training Institution. Christian Brothers University is in full compliance with Title II Teacher Education Report Card reporting mandates. Information on the University's performance levels may be obtained through the Department of Education.

The CBU Nursing Program is fully accredited by the TN Board of Nursing and the Commission on Collegiate Nursing Education (CCNE).

CONSUMER INFORMATION

One of the policies of the Administration at Christian Brothers University is to provide facilities that will increase the success of each student. Opportunities for individual instruction are available at the University through appointments made with instructors. As a consequence, one who chooses to seek individual aid can easily secure the help needed.

To comply with the Family Education Rights and Privacy Act of 1974 (FERPA), Christian Brothers University allows students full access to their own records with 48 hours written notice and requires written consent by students before their records are transmitted to third parties except to the extent that FERPA authorizes disclosure without consent. Opportunity is afforded the student for correction of inaccurate, misleading, or inappropriate data. A complete statement on the confidentiality of records may be found in *The Compass* (the student handbook). Information regarding the following is available in the Office of the Registrar during normal business hours:

1. Annual Security Reports,
2. Athletic Participation Rates and Financial Support,
3. Athletic Graduation Rates,
4. Drug-Free Workplace.

PHOTOGRAPHY STATEMENT

The University reserves the right to photograph (including film and videotape) students, faculty, staff and visitors on campus. Such photography is limited to non-commercial purposes representing CBU. Expected uses of photography can include, but are not limited to, newspaper and television coverage, and officially recognized university published materials such as brochures, slide shows, videotapes, displays, and websites.

CAMPUS POLICE & SAFETY

Christian Brothers University strives to provide a secure environment for its students. The Department of Campus Police & Safety patrols the campus, provides assistance when requested, and coordinates any need for emergency assistance such as ambulance, police, and fire departments. The officers can be reached at (901) 321-3550.

Crime statistics for the campus and the surrounding area are available in the Campus Police & Safety Office and on the University's Website under Campus Police & Safety, as are tips on crime prevention.

LIBRARY SERVICES

Plough Memorial Library is a three-story building centrally located on campus. Contemporary and historical print, multimedia, and electronic resources are provided to support all academic programs. The library's online resources are available remotely to students, faculty, and staff. The library staff helps with research needs and provides information literacy instruction. Plough Library also offers reciprocal borrowing privileges in cooperation with many Memphis-area libraries, including the University of Memphis, Rhodes College, and the Memphis College of Art. Books and journals held at libraries outside of Memphis may be accessed via interlibrary loan service. For more information, see http://www.cbu.edu/library.

STUDENT GRIEVANCE POLICY AND PROCEDURE

The University has a grievance policy and procedure for a student who may have a complaint with any aspect of the University. Details are to be found in the online student handbook, *The Compass,* under Section 8, Student Code of Conduct. Any complaint, whether formal or informal, should be filed with the Dean of Students in the Office of Student Life located in the Rozier Center. The Dean of Students will address the student's complaint and will be responsible for contacting the appropriate administrators on campus to resolve the issue. A file on complaints will be kept in the Dean of Students' office.

For more information about these policies and others, as well as procedures on how to deal with harassment and discrimination, please refer to *The Compass* at www.cbu.edu/myCBU under Student Resources/Student Affairs.

GRADE APPEALS

The University has a policy and procedure for a student who wishes to appeal a grade for a course. Details are to be found in *The Compass,* Section 5, Academic Policies, Learning Communities & Support Services, on the myCBU intranet under Student Resources > Student Affairs.

INFORMATION TECHNOLOGY SERVICES

Information Technology Services (ITS) is located in the Rosanne Beringer Center for Computer Studies (St. Joseph Hall). The CBU computing environment consists of a mixture of Windows and Linux/Unix servers and Windows computers for clients. ITS supports ten general purpose computer labs and four academic specific computer labs, in addition to providing Internet, email service with antivirus protection, wireless networking, telephone service, cable TV, residence hall network access, and a help desk for the campus community. Computer guidelines, policies, and additional general information may be viewed at http://www.cbu.edu/it-services.

POLICY FOR STUDENTS WITH DISABILITIES

It is the policy of Christian Brothers University to comply with Section 504 of the Rehabilitation Act of 1973 and with the Americans with Disabilities Act of 1990 in providing reasonable accommodations to qualified students with disabilities.

A qualified student with disabilities is defined as a person who meets the academic and non-academic admission criteria essential to participate in the program in question and who, with or without reasonable accommodation, can perform the essential functions of the program or course requirements. Students who meet these conditions should contact the Dean of Students in the Office of Student Life.

STUDENT LIFE

Christian Brothers University, through its Student Life Division, provides a comprehensive series of co-curricular programs and activities that promote the human development of each student. These are designed to complement the curricular education of a student and, as such, are an essential part of a student's education at Christian Brothers University.

COUNSELING CENTER

The Counseling Center offers assistance and services to all students affiliated with Christian Brothers University. Confidential, professional services include personal counseling, crisis counseling/intervention, personal development forums/seminars, study skills assistance, consultation and referrals. Relevant reading and reference materials are available in the Counseling Center. Services of the University's consulting clinical psychologist are available by appointment through the Director of Counseling.

Further information about the Counseling Center can be found at the University's website at http://www.cbu.edu/counseling.

CAREER SERVICES

Career Services provides comprehensive services to assist students throughout the career development process. Services are provided free of charge to all undergraduates, graduate students and alumni of the University. Career Services coordinates an array of programs and services, such as Career Assessments, Career Counseling, Career Seminars/Panels, and Internship & Job Listings. Students also have the opportunity to connect with employers and graduate school recruiters via the Career & Internship Expo, Graduate School Expo, On-Campus Recruiting, Externship Program, and Academic Internship Program. We conduct programs that target the career needs of each class year, from first years to seniors. Additionally, Career Services maintains current listings of local and national career opportunities through the NACE-Link/Simplicity online database. Further information about Career Services can be found at the University's Website (www.cbu.edu/career) and in the weekly Career Services e-newsletter.

HEALTH RESOURCES

Health Resources provides health services and health information to all students attending Christian Brothers University. A part-time registered nurse and nurse practitioner are on staff. Office hours are Monday-Friday, 9:00 a.m. - 3:00 p.m. during the fall and spring semesters when classes are in session. For further information regarding specific services, please contact the Health Resources Office. For more information, please visit: https://www.cbu.edu/health-resources.

DEAN OF STUDENTS

The Dean of Students is the University's chief judicial affairs officer. The office is also designed to accommodate the needs of international students, students with disabilities, commuter and minority students, as well as to assist the University in its goal of supporting diversity. Specific programs include coordinating the non-academic disciplinary process, programs honoring nationally celebrated holidays, multicultural programs and immigration services. The office is located in the Rozier Center, and the phone number is (901) 321-3536.

The Dean of Students also oversees the University's policies which govern the use of alcohol on campus and at University sponsored functions. These policies also prohibit the use of controlled substances. Policies regarding the use of alcohol and controlled substances are contained in the student handbook, *The Compass.*

STUDENT ACTIVITIES

Christian Brothers University provides broad co-curricular activity programs. A wide range of organizations, events, and other activities exist for the benefit and fulfillment of students. These include various social, cultural, and developmental events.

The Thomas Center contains facilities for student exercise, student food service, and student community. Other recreational facilities include an outdoor basketball court, a volleyball court, a swimming pool, and a fire pit. The Office of Student Life is located in the newly renovated Rozier Center.

Student Life staff plan events in conjunction with the Student Activities Council, which serves as a voice for the student body. The Student Activities Council, along with the Director of Student Activities, plans, coordinates, and implements a variety of activities for the students, which it publicizes on campus bulletin boards, in various campus publications, through social media outlets, and through special events posters on campus.

Some of the more than 40 clubs and organizations in which a student may participate include the Student Government Association, social and service fraternities and sororities, professional groups, men's and women's organizations, and support groups. There are also clubs whose purpose is to assist the student in his or her major field of study. Opportunities are present for student participation in University theatre, art, music, and publications. Following is a listing of some of the various student clubs, groups, and organizations that are active each year on campus:

Alpha Chi Honor Society
Alpha Kappa Alpha
Alpha Phi Alpha Fraternity, Inc.
Alpha Xi Delta
American Chemical Society
American Institute of Chemical Engineers
American Society of Civil Engineers
American Society of Mechanical Engineers
Beta Beta Beta (Biology Honor Society)
Black Student Association
Buccaneer E-Sports Team (B.E.S.T.)
Catholic Student Association
CBU Cheer
CBU Dance - Ruby Buccaneers
Chess Club
Creative Writing Club
Debate Club
Delta Sigma Pi (Business Society)
Divine Voices Gospel Choir
Drama Club
English Club
ENVISION
Fellowship of Christian Athletes
Food Recovery Network
Gay-Straight Alliance
HOLA CBU
Honors Program
Institute of Electrical & Electronic Engineers
Institute of Electrical Engineers
Intercultural Club (ICC)
Kappa Alpha Psi
Kappa Delta Pi
Kappa Sigma
Mathematical Association of America
Mock Trial Team
Muslim Student Association
NAACP, CBU Chapter
National Society of Black Engineers
Phi Alpha Delta (Pre-Law Fraternity)
Phi Alpha Theta (History Honor Society)
Phi Beta Sigma Fraternity, Inc.
Physician Assistants Student Society (PASS)
Pi Kappa Phi
Pre-Law Society
Psi Chi (Psychology Honor Society)
Psychology Club
Rotaract CBU
Sigma Alpha Epsilon
Sigma Gamma Rho Sorority, Inc.
Sigma Tau Delta
Society of Women Engineers
STARS (Students Tackling Autism-Related Syndromes)
Student TN Education Association (STEA)
Student Athlete Advisory Committee
Student Sustainability Coalition
Students With Artistic Talents (SWAT)
T.L.C. - Weekly Bible Study
Tau Beta Pi (Engineering Honor Society)
Tau Kappa Epsilon
Theta Tau (Engineering Honor Society)
Young Ladies United
Zeta Phi Beta
Zeta Tau Alpha

Christian Brothers University believes these activities allow students to grow spiritually, socially, and physically as well as promoting active citizenship.

CAMPUS MINISTRY

The Office of Campus Ministry at Christian Brothers University fosters the integration of faith and education. It does this by assisting the entire campus community in the formation of human and religious values and by supporting dialogue, harmony, and interpersonal relationships among students, faculty, and staff.

Although the University is a Catholic institution, Campus Ministry provides an important focus for nurturing an understanding of the ecumenical dimension of its Catholic identity. In addition to Sunday liturgies, provision is made throughout the year for special worship services, welcoming people of all faiths and religious traditions.

Personal and communal growth is encouraged through a variety of prayer experiences, retreats, and pastoral counseling to assist students especially in the development of their respective gifts for the pursuit of peace and social justice within a multi-religious and multi-cultural world.

RESIDENCE LIFE

UNIVERSITY RESIDENCE POLICY: All Freshmen and Sophomores are required to live on campus, unless they are released from this expectation. All incoming freshman exemptions should be addressed to the Office of Admissions; any current student requests should be addressed to the Associate Vice President for Student Life.

Campus living at Christian Brothers University is an important aspect of a student's experience. It affords the opportunity for growth and development outside the classroom environment. It is the expressed purpose of Christian Brothers University to provide an atmosphere in which each resident may realize his/her potential-- intellectually, socially, and culturally.

Contracts for residence hall living may be obtained online by visiting https://www.cbu.edu/reslifeapps. Contracts will be considered complete only with the proper down payment on file with the Director of Residence Life and the Business Office. During the summer, requests for an assignment to a particular room or with a particular roommate will be honored whenever possible. Housing contracts filed by returning students during their published registration times will be given priority over new residents. Housing assignments are prioritized by class rank, years of residency, and date of completed contract; however, designated spaces are reserved for freshmen and transfers at the beginning of the assignment process. Housing assignments are made without regard to race, creed, color, or national origin. Contracts with the appropriate deposit should be submitted to the Director of Residence Life by May 1.

The Director of Residence Life makes every effort to assign each resident to his/her preference in the residence halls; however, if a resident is currently being billed for a double room assignment and does not have a roommate, consolidation may begin. The Residence Life Office may offer the option for single rooms wherever possible. If the resident wishes to remain in double occupancy, then the resident may be required to move to another double room assignment. Consolidation may begin during the third week of classes in a semester.

The residence halls are operated primarily for use by CBU full-time students. Fall assignments/contracts are for the full academic year (both fall and spring semesters). The academic year begins on the first day of the Day Program Orientation and ends 24 hours after the resident's last exam during the spring semester. The contract does not include housing for fall, Christmas, and spring breaks. All residence halls will be locked and bladed during fall, Christmas and spring break. Special living arrangements during these periods are possible and may require additional fees. Please contact the Director of Residence Life for availability and pricing.

Each resident is under the supervision of the Director of Residence Life, Resident Directors, and Resident Assistants. The residence hall staffs' duties include hall management, policy enforcement, and programming. For additional information about Residence Life, go to the Website at http://www.cbu.edu/housing. Students residing off campus must keep a current local address on file with the Office of the Registrar.

ATHLETICS

Christian Brothers University has a long history of athletic competition and is a member of NCAA Division II and the Gulf South Conference. The University sponsors seven sports for men and eight sports for women. Men's sports are baseball, basketball, cross country, golf, soccer, tennis and track and field. Sports for women are basketball, cross country, golf, soccer, softball, tennis, track and field and volleyball. Information regarding CBU's Equity in Athletics Disclosure Act reporting is available at http://ope.ed.gov/athletics/index.aspx.

EDUCATION USING VETERANS SERVICES BENEFITS

Christian Brothers University is approved by the Tennessee Higher Education Council to offer both undergraduate and graduate level courses to students utilizing Veterans Benefits. In partnership with the Veterans Administration, Christian Brothers University participates in the Yellow Ribbon program for both undergraduate and graduate level. Attendance is certified after the Add/Drop period. Veterans and students using transferred benefits (ToE) who wish to attend Christian Brothers University should contact the Veteran's Certification Specialist at (901) 321-3880 for more information.

All students utilizing VA Benefits are required to submit a DD214, military transcript, VA Certificate of Eligibility (COE) or Notice of Basic Eligibility (NOBE) as applicable. Also, all students using these benefits must notify the Veteran's Certification Specialist every semester that they are enrolled by completing the Enrollment Certification form. No VA certifications can be performed without this form.

POLICY ON CHILDREN ON CAMPUS

CBU recognizes that non-students under 18 years of age often accompany adults during visits to campus. To ensure the safety and security of children and to safeguard the educational and work environment of the University, no employee, student, or visitor may leave a child unattended. This policy includes all CBU facilities, grounds, and vehicles located in the CBU parking lots. Children are not permitted in classrooms except in

emergency situations with permission of a faculty member.

CAMPUS FACILITIES *(see map on Page 289)*

■ **Assisi Hall Science Learning Center**: Includes offices, laboratories, and classrooms for Biology, Chemistry, Nursing, Physician Assistant Studies and Physics

■ **Avery Apartments**: Designated residence hall for graduate students only.

■ **Barry Hall**: The first floor (entrance level) houses the Executive Offices of the President, the Administrative Vice President, and the Vice President for Advancement; it also includes the Office for Advancement, Alumni Office, and St. Joseph Chapel. The lower level houses the Office of the Registrar, Academic Services & Faculty Development, Student Financial Aid, and the Business Office. The upper level houses offices for the School of Arts faculty and the Physician Assistant Studies Program.

■ **Battersby Hall**: Physical Plant storage.

■ **Buckman Hall**: The first floor (lower level) houses the Admissions Office, College of Adult Professional Studies offices, classrooms, and Spain Auditorium. The second floor includes the Office of the Vice President for Academics, the Montesi Executive Center, Career Services, classrooms, and information technology laboratories. The third floor houses the administrative offices of the School of Business, Graduate Business Programs, International Initiatives, and the Nursing Program, as well as the School of Business faculty offices, classrooms, and the Barret School of Banking.

■ **Capstone Apartments**: Residence hall apartments for men and women (three buildings, including O'Hara Hall, Pender and 170).

■ **University Theater**: Provides facilities for assemblies, lectures, plays, movies, etc.

■ **Cooper-Wilson Center for Life Sciences:** Laboratories for Biology, Chemistry, and Computer Science with classrooms, Math Center, Science faculty offices, and science student group rooms.

■ **De La Salle Hall & Canale Arena:** Provides arena and practice space for intercollegiate basketball and volleyball, with seating capacity of 1,000, along with training and fitness facilities. Also includes offices for the Athletic Department, the Canale Cafe, and a conference room.

■ **Lambert Hall:** Campus residence of the Christian Brothers who are members of the faculty and staff at CBU and at Christian Brothers High School.

■ **Living Learning Center:** Known as the LLC, this residence hall for men and women provides opportunities for a living-learning environment in a variety of disciplines – complete with a full size lounge and classroom.

■ **Maurelian Hall:** Residence hall for men and women.

■ **Nolan Engineering Center:** Houses the offices of the faculty of the undergraduate and master's programs of the School of Engineering, plus the engineering computation facility and classrooms.

■ **Plough Memorial Library:** Located in the center of campus, the library provides reference service and access to print, multimedia, and online resources. There are study areas and comfortable seating throughout the building in addition to the InfoLab, the Curriculum Library, and the Beverly & Sam Ross Gallery.

■ **Rosa Deal School of Arts:** The first floor houses studios and faculty offices for Visual & Performing Arts, the Writing & Communications Corner, Language Lab, and a multipurpose meeting/presentation room. The second floor houses the administrative offices of the School of Arts, faculty offices and classroom/lab facilities for Behavioral Sciences, the Malham Theatre, classrooms, and gathering spaces. The third floor houses the Department of Education, the Honors Program, the Phillips Lounge, and classrooms.

■ **Rozier Hall:** Residence hall for men and women. Rozier also houses the Student Life Offices including the Associate Vice President, the Dean of Students, the Office of Student Activities, the Office of Recreation, the Office of Residence Life and the Student Government Association.

■ **St. Benilde Hall:** Includes laboratory and shop facilities for the School of Engineering.

■ **St. Joseph Hall:** Houses the Rosanne Beringer Center for Computer Studies (ITS offices and student computer labs) plus Printing & Mail Services and offices for Campus Police & Safety, and Communications & Marketing.

■ **Stritch Hall:** Provides limited student housing (for men and women) during the Fall and Spring semesters. Also houses the O'Donnell Archives and includes De La Salle Chapel, a separate structure for religious services.

■ **Thomas Center:** Houses Campus Ministry, the Counseling Center, and Health Resources. Also includes the Alfonso Dining Hall, Sabbatini Lounge, recreational facilities, Buccaneer Snack Bar, Bookstore, the Swashbuckler fitness center, and Human Resources. Provides facilities for assemblies, lectures, plays, movies, etc.

REGISTRATION STATISTICS 2016-17

Freshmen	374	Adult Professional Studies	153
Sophomores	350	Other Adult Programs	55
Juniors	257	Graduate Programs	454
Seniors	266		
Total Day Program	1,236	**TOTAL STUDENTS**	1,898

PERSONNEL

Dr. John Smarrelli Jr.
PRESIDENT

Mr. Stephen T. Dunavant
BOARD CHAIRMAN

BOARD OF TRUSTEES

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Dr. John Smarrelli Jr., *President of the University*

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Dr. Paul A. Haught
ACADEMICS &
STUDENT LIFE

Carolyn Head
ADMINISTRATION
& FINANCE

Deborah Blanchard
COMMUNICATIONS
& MARKETING

Dr. Anne Kenworthy
ENROLLMENT
MANAGEMENT

Br. Dominic Ehrmantraut
SPECIAL ASST. TO THE PRESIDENT
DIRECTOR OF MISSION

UNIVERSITY ACADEMIC DEANS

Dr. Scott D. Geis
ROSA DEAL SCHOOL OF ARTS

Dr. Bjoern A. Claassen
SCHOOL OF BUSINESS

Dr. Siripong Malasri
GADOMSKI SCHOOL OF ENGINEERING

Dr. James McGuffee
SCHOOL OF SCIENCES

UNIVERSITY ADMINISTRATION

President ..... John Smarrelli Jr., PhD
Senior Executive Assistant to the President ..... Donna Freeman
Special Assistant to the President, Coordinator of University Events, Director of Mission ..... Brother Dominic F. Ehrmantraut, FSC, EdD

ACADEMICS

Vice President for Academics ..... Paul A. Haught, PhD
Associate Vice President of Academics and Strategic Initiatives ..... John M. Hargett, PhD
Director of Career Services ..... Amy Ware, MS
Director of Institutional Research & Effectiveness ..... Melissa S. Andrews, MBA
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Dean of the School of Business ..... Bjoern A. Claassen, PhD
Dean of the Gadomski School of Engineering ..... Siripong Malasri, PhD
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Dean of Academic Services & Faculty Development ..... Cory L. Major, MSL
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Director of MA Catholic Studies Program ..... R. Bruce Cinquegrani, DMin
Director of Graduate Business Programs ..... M. Scott Lawyer, JD
Director of Master of Accountancy ..... Jennifer Weske, PhD
Director of Nursing Program ..... Jennifer M. Hitt, PhD
Director of Physician Assistant Studies ..... Teresa R. Preston, MBA, MPAS, PA-C
Registrar ..... Scott A. Summers, MS
Associate Registrar ..... Dawn E. Carpenter, BA
Director of the Plough Library ..... Kay Cunningham, MLS
Director of Honors Program ..... Tracie L. Burke, EdD
Director of Living Learning Communities ..... Benjamin R. Jordan, PhD
Director of International Initiatives ..... Emily Forsdick, EdD
Director of Dual Enrollment ..... Jordan Douglas, BA
Veteran's Certification Specialist ..... Randall G. Pelham, BS

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CFO, Executive Vice President for Administration & Finance ..... Carolyn Head, MBA
Senior Executive Administrative Assistant for Administration & Finance ..... Melanie Bremer, BA
Director of Business Services ..... Ray Karasek III, EdD
Director of Financial Reporting ..... Tami Manes, MBA
Coordinator of Business Services ..... Michelle Jenner, AS
Director of Events Management ..... Kristie Rosenblum, BA
Controller ..... Thomas Cochran, BSBA
Director of Food Service ..... Johnathon Hixon
Director of Human Resources ..... Greg Eller, MBA
Director of Physical Plant ..... Phil Yelvington
Bookstore Manager ..... Shannon Davis, MA

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Senior Director of Development ..... Jordan Scarleski, BA
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Director of Creative Services ..... Jacob Edwards, BFA

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Director of Admissions ..... Kristi Forman, MEd
Director of Student Financial Aid ..... John H. Lewis, EdD

INFORMATION TECHNOLOGY

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Director of Applications ..... David Corlew, BS
Director of Networking ..... TBA

STUDENT LIFE

Vice President for Student Life ..... Paul A. Haught, PhD
Associate Vice President for Student Life ..... Tim Doyle, EdD
Dean of Students and Director of Student Disability Services ..... Karen Conway-Barnett, MS
Directors of Campus Ministry ..... Brother Thomas Sullivan, FSC, PhD
Brother Ryan Anderson, FSC, MA
Wilson Phillips, BA
Director of Campus Police & Safety ..... John Lotrionte
Director of Counseling ..... Sadie Lisenby, MA, LPC
Director of Health Services ..... Heather Harrington BSN, RN
Director of Student Activities ..... Connie Beck, MS
Recreation Coordinator ..... Chad Lassiter, MS
Director of Residence Life ..... Alton Wade, MSM
Coordinator of International Student Services ..... Stephanie Mathis, MS

ADMISSIONS & REGISTRATION

REQUIREMENTS FOR UNDERGRADUATE ADMISSION

Christian Brothers University admits students of any race, age, color, sex, religion, and national or ethnic origin.

Freshman Standing: The following qualifications are required of those seeking admission with regular freshman standing:

1. Graduation from an approved secondary school.
2. A scholastic average of at least "C" and rank in the upper 2/3 of the graduating class.
3. Satisfactory scores on the American College Testing Program (ACT) or on the Scholastic Assessment Test (SAT) of the College Entrance Examination Board.

Statistics for the 2014 freshman class were the following:
68% ranked in the upper 25% of their class; 91% attained a grade point average of 3.0 or higher; 54% had an ACT score of 24 or higher for those who reported this data.

Homeschool Students: The following qualifications are required for homeschooled students seeking admission to CBU.

1. Graduation from secondary school.
2. A scholastic average of at least a "C".
3. Satisfactory scores on the American College Testing Program (ACT) or the Scholastic Assessment Test (SAT) of the College Entrance Examination.
4. Course descriptions and listing of curriculum strongly preferred.

Transfer Students: Students who wish to transfer from other colleges will be considered if they are in good standing at the college of last attendance. Transfer students are defined as students seeking admission to CBU with 24 or more transferable credits. (see page 31 regarding transfer of credit from other institutions.)

International Students: International Students who intend to enter the University must have the equivalent of a high school education and have sufficient command of English to enable them to do the prescribed work. Proof of English proficiency may be shown by means of the TOEFL , IELTS, CAE or CPE exams. Minimum scores are TOEFL (520 for the paper version; 185 for the computer-based test; or 60 for the internet-based test); or IELTS (6.0); or CAE grade of C; or CPE grade of C. Students may use the SAT Critical Reading test prior to March 2016 with a score of at least 450, SAT Reading test after March 2016 with a score of 25, or the ACT English sub score of 21. Students graduating from a U.S. high school or students who have earned a 2.5 or greater in at least 30 semester hours of a U.S. regionally accredited college will also show proof of English proficiency

Adult Students: Students may seek admission to the traditional program or College of Adult Professional Studies. For admissions requirements for the College of Adult Professional Studies, refer to that section of the catalog.

Special Students (non-degree seeking): Qualified applicants who desire to take one or more courses but in general do not intend to earn a degree at Christian Brothers University may be accepted as Special students. Application for admission should be made to the Office of Admissions or the Dean of Adult Professional Studies. Special students may accumulate no more than 36 semester hours of credit at Christian Brothers University. Special students will not be able to have any transfer credit, including challenge exams, granted while classified as special students. *Special and Transient students are not eligible for financial aid.*

In exceptional circumstances, the Admissions Committee may invite a candidate who does not qualify for degree status to enter the University as a Special Student (non-degree seeking) for a limited period of time. In this time, the student must demonstrate adequate preparation and motivation to pursue the degree program of studies for which he/she has applied.

To seek a change of status to that of a degree-seeking student, a Special student must have completed at least 12 hours of credit at the University and be in good academic standing.

Qualified Special students who wish to pursue a degree must reapply to the Day or Professional Studies programs for a change of status after they have demonstrated their qualifications. Students who are enrolled at another institution and wish to take a course or courses for credit at Christian Brothers University should present official correspondence from that institution to the Office of Admissions or the Adult Professional Studies Office noting good standing and authorization to enroll in specific courses.

Dual Enrollment Students: Christian Brothers University participates in the Tennessee Dual Enrollment program. This program partially funds high school students' study at eligible postsecondary institutions. Participating students receive college credit and can receive credit toward high school graduation. Students remain enrolled at their current high school and are also enrolled at CBU as a special part time student.

To be eligible to participate in Dual Enrollment you must:

1. Be a rising Junior or Senior.
2. Have satisfactory scores on the American College Testing Program (ACT) or the PLAN test if the ACT has not been taken.
3. Meet the minimum GPA standard.
4. Enroll in 100 and 200 level courses.
5. Maintain the minimum grade point requirement of 2.75 in the college coursework (which means the student must achieve a grade of A or B in the course(s) attempted). If the minimum grade point is not achieved, the student will no longer be able to participate in the dual enrollment program.

Admissions Committee: A limited number of entering freshman and transfer students who do not meet the minimum requirements for regular admission may be considered by the Admissions Committee for entrance into the University. If a student is accepted by the Admissions Committee, he/she will be admitted under one of the following conditions:

1. Accepted with a limitation on the number of hours and/or specific courses that may be attempted during the first semester or two evening terms or
2. Accepted as a regular student.

The decision of the Admissions Committee may be appealed to the Academic Vice President upon the initiation of the Dean of Admissions or the Dean of Adult Professional Studies.

ADMISSIONS PROCEDURES

Freshmen:
The applicant should send the following items to the Office of Admissions:
1. Completed application form.
2. Official high school transcript with sixth semester grades; then final official high school transcript with graduation date, or acceptable GED
3. Official ACT or SAT scores.
4. Student Essay or Personal Statement.
5. Letter of Recommendation.
6. Any additional items and information requested by Admissions.

Transfer Students:
The applicant should send the following items to the Office of Admissions:
1. Completed application form.
2. Complete official transcripts* from all colleges attended.
3. *Incoming students transferring less than 24 hours of college credit must submit the final official high school transcript with graduate date or acceptable GED scores and official ACT or SAT score.
4. Any additional items and information requested by Admissions.

Returnee/Transfer Returnees:
The applicant should send the following items to the Office of Admissions:
1. Completed application form.
2. Complete official transcripts* from all colleges attended since last attendance at CBU.
3. Any additional items and information requested by Admissions.

International Students:
The applicant should send the following items to the Office of Admissions:
1. Completed application form and $100 application fee.
2. Official transcripts* of all work done at the secondary level or above. Transcripts from non-American universities must be evaluated by World Education Services (WES).
3. Proof of English proficiency.
4. Any additional items and information requested by Admissions.

A declaration of finance and supporting bank statements are required before CBU can issue an I-20.

Deans and Department Chairs establish equivalency between transfer courses and courses taught at Christian Brothers University. Credit for both traditional and non-traditional college level work is evaluated for acceptance by the Dean of Academic Services. Only courses with a grade of "C" or better will be accepted for transfer credit. (See Page 31).

Special Students / Transient Students (no financial aid available):
The applicant should send the following to the Office of Admissions:
1. Completed application form.
2. College Graduate or Previous College Student—official transcript(s)* from previous institution(s).
3. New Freshman—proof of high school graduation or concurrent enrollment or acceptable GED.
4. Student in a Special Course/Program—official high school transcript or complete official transcripts of other institutions attended; acceptance by the director of that program.
5. Non-matriculated Students—proof of high school graduation or GED, as requested. If student completed college work, the most recent transcript showing good standing and appropriate prerequisites.
6. Any additional items and information requested by Admissions.

Mature Students seeking admission to the traditional program:
The applicant should send the following to the Office of Admissions (Day or Evening):
1. Complete official transcripts* from all colleges attended; official high school transcript.
2. Personal letter of request for admission, including relevant details for consideration.
3. Completed Health Form.
4. Any additional items and information requested by Admissions.

RN to BSN Students:
1. An active/unrestricted multistate license as a Registered Nurse (RN) allowing practice in the state of TN or successful completion of the NCLEX before the start of the semester. Prospective students may apply in the last semester of the Associate degree program.
2. A minimum of 2.0 grade point average.
3. Official transcripts* of all previous academic credits from each of the schools, colleges or universities previously attended.
4. One letter of recommendation preferably from former college faculty or immediate supervisors qualified to attest to the applicant's preparation for and ability to perform higher education study.
5. A completed Application Form with application fee.
6. A successful interview with the Director or Assistant Director.
7. Proof of immunizations from vaccine preventable diseases, including proof of current TB surveillance and influenza.
8. Current certification in the American Heart Association Basic Life Support for Healthcare Providers (BLS) course as evidenced by submission of a copy of the student's BLS provider card.
9. Any other requirements as set by the Director, the Dean and the Academic Vice President.

It is strongly recommended the student have a personal computer and high-speed Internet access.

*** Official transcripts must be received by mail directly from a previous institution to CBU. CBU will also accept electronic transcripts via approved vendors. Faxed copies, hand delivered, or "Issued to Student" transcripts will not be accepted as official documents.**

Disciplinary Admissions:

1. No student shall be admitted to Christian Brothers University who is under the disciplinary sanction of suspension or expulsion from another institution. Once a student is again in good standing at the institution of previous enrollment, she/he may be admitted through the regular Christian Brothers University admission policy, providing the admission is approved by the Admissions Disciplinary Committee.
2. All applicants with prior felony charges must go through a background check. Admittance to the University must then be approved by the Admissions Disciplinary Committee.
3. All First Time Freshmen with high school suspensions of violent nature must be approved by the Admissions Disciplinary Committee prior to acceptance to the University.

ACCEPTANCE PROCEDURE

Admission is selective and students are encouraged to apply as early as possible. The preferred application date is May 1 for the Fall semester and January 1 for the Spring semester. Students who apply after this date will be considered for admission on a space available basis. Applications will be reviewed on a rolling admissions basis. When a student has filed a completed application (official high school transcript, official college transcripts when applicable, letters of recommendation when applicable, and official ACT or SAT scores) with the Office of Admissions, the Admissions Committee will act upon it. Students will be notified of the decision by the committee shortly thereafter. When accepted, students must submit a completed health form and are required to confirm a place within the entering class with a deposit of $450.00 (includes $150 housing deposit) for those who plan to reside on campus or a deposit of $300.00 for commuter students. This deposit is non-refundable after May 1 for students entering in the Fall semester or January 1 for those entering in the Spring. Freshmen and others wishing to live on campus should also submit a housing application.

No acceptance will be considered final until the above fee and forms are returned, and final transcripts of work in progress at the time of application are received by the Admissions Office.

Applications for the Adult Professional Studies programs are accepted throughout the year. Applications are reviewed when they are complete, and students are notified of the decision by mail.

ACT SCORES AND PLACEMENT INFORMATION FOR FIRST-YEAR STUDENT REGISTRATION

MATH

- MATH ACT 19 or lower: ALG 115/120
- MATH ACT 20, 21 or 22: MATH 103
- MATH ACT 23, 24 or 25: MATH 107/110 or MATH 105
- MATH ACT 26: MATH 117 or MATH 105
- MATH ACT 27 or higher: MATH 131

MATH ACT score of 19 or lower student must take Math Placement test at Orientation:

1. If score qualifies for MATH 103 or higher, student is allowed to also register for CHEM 101.
2. If score does NOT qualify for MATH 103, student will register for ALG 115/ALG 120 combo. Once these courses are passed, they can register for CHEM 101 and MATH 103 the next semester.

ENGLISH

- ACT ENGLISH 19 or lower: ENG 100 (if ESL/International= ENG 101)
- ACT ENGLISH 20 or higher: ENG 111

ENGLISH ACT score of 19 or lower student and the English Placement test at Orientation:

1. International students who do not speak English as their first language are required to take the English placement test at Orientation.
2. Domestic students have the option to take the English Placement test at Orientation to see if they can place into ENG 111.

BIOLOGY

- COMPOSITE ACT 22 or higher: BIOL 111/L
- MATH ACT 23 or higher: BIOL 107

CHEMISTRY

- MATH ACT score of 19 or lower: start with ALG 115/120 before taking any Chemistry
- MATH ACT score of 20, 21, 22, 23 or 24: CHEM 101
- MATH ACT 25 or higher & COMPOSITE ACT 25 or higher: CHEM 113/L
- MATH ACT 27 or higher: CHEM 115/L

MATH ACT score of 24 or lower student and the Chemistry Placement test at Orientation:

Students have the option of taking the Chemistry Placement test at Orientation to try to place into CHEM 113/113L.

COMPUTER SCIENCE

- MATH ACT 23 or higher: CS 112/L

Declaring a Science Major

- MATH ACT 20 or higher: student can declare any science major
- MATH ACT 19 or lower: student must be an Unspecified Science major

Declaring the ABET Engineering Majors (Chemical, Civil, Electrical, or Mechanical)

- MATH ACT 23 or higher OR test into MATH 107/110 or 117: student can declare any ABET ENGR major
- MATH ACT 22 or lower: student must be an Unspecified Engineering major

CREDIT FOR MILITARY SERVICE AND SCHOOLING

All post-secondary education / training including military will be evaluated, and credit granted appropriately.

ADDITIONAL MEANS OF TRANSFERRING CREDIT

Students who have successfully passed one or more of the Advanced Placement Tests of the College Entrance Examination Board, TN Statewide Dual Credit, the College Level Examination Program (CLEP) of the CEEB (including DSST-CLEP) and/or International Baccalaureate (IB) may ask for advanced standing and / or credit when they submit their applications for admission to Christian Brothers University. The maximum number of credit hours that can be granted through any combination of the above is 30. Only official scores reports sent directly from the issuing agency / institution to CBU are acceptable.

A) ADVANCED PLACEMENT (AP): The Department Chair where the course resides will decide on the type of credit to be granted and the college course or courses to be granted, based on the AP score report. The actual decision to grant credit is based on such factors as the content of courses in the University's curriculum and the applicability of the submitted area of advanced study to the prescribed or elective requirements of the program in which the student is enrolled.

AP TESTS	SCORE ON AP TEST		
	5	4	3
Arts			
Art History	ART Elective, 3 hrs.	ART Elective, 3 hrs.	No Credit
Studio Art: 2-D Design	ART Elective, 3 hrs.	ART Elective, 3 hrs.	No Credit
Studio Art: 3-D Design	ART Elective, 3 hrs.	ART Elective, 3 hrs.	No Credit
Studio Art: Drawing	ART Elective, 3 hrs.	ART Elective, 3 hrs.	No Credit
English			
English Language & Comp.	ENG 111 & 112	ENG 111	No Credit
English Literature & Comp.	ENG 211 & 212	ENG 211	No Credit
History & Social Science			
Comparative Government & Politics	POLS 210	POLS 210	No Credit
European History	HIST Elective, 3 hrs. (Freshman Level)	HIST Elective, 3 hrs. (Freshman Level)	No Credit
Human Geography	GEOG 340	GEOG 340	No Credit
Macroeconomics	ECON 215	ECON 215	No Credit
Microeconomics	ECON 214	ECON 214	No Credit
Psychology	PSYC 105 & Elective, 3 hrs.	PSYC 105	No Credit
U.S. Government & Politics	POLS 112	POLS 112	No Credit
U.S. History	HIST 151 & 152	HIST 152	No Credit
World History	HIST 107 & 108	HIST 107	No Credit
Math & Computer Science			
Calculus AB	MATH 131	MATH 131	MATH 131
Calculus BC	MATH 131 & 132	MATH 131 & 132	MATH 131
Computer Science A	CS 171 & 172/L	CS 171	No Credit
Computer Science Principles	CS 171 & 172/L	CS 171 & 172/L	No Credit
Statistics	STAT 221	STAT 221	No Credit
Sciences			
Biology	BIOL 111/L & 112/L	BIOL 111/L	No Credit
Chemistry	CHEM 113/L & 114/L	CHEM 113/L	No Credit
Environmental Science	BIOL 107/L	BIOL 107/L	No Credit
Physics C: Electricity & Magnetism	PHYS 251/L	PHYS 251/L	No Credit
Physics C: Mechanics	PHYS 150/L	PHYS 150/L	No Credit
Physics 1: Algebra-Based	PHYS 201/L	PHYS 201/L	No Credit
Physics 2: Algebra-Based	PHYS 202/L	PHYS 202/L	No Credit
World Languages & Cultures			
French Language & Culture	FREN 101 & 102	FREN 101	No Credit
Spanish Language & Culture	SPAN 101 & 102	SPAN 101	No Credit
Spanish Literature & Culture	SPAN 201 & 202	SPAN 201	No Credit

B) INTERNATIONAL BACCALAUREATE (IB): Christian Brothers will evaluate higher level International Baccalaureate courses for college credit for students scoring between a 4 and 7. An official transcript from the IB school must be sent to CBU before credit can be evaluated.

INTERNATIONAL BACCALAUREATE (HL Higher Level Only)				
	7	6	5	4
Biology	BIOL 111 & 111L BIOL 112 & 112L	BIOL 111 & 111L BIOL 112 & 112L	BIOL 111 & 111L BIOL 112 & 112L	BIOL 111 & 111L
Chemistry	CHEM 113 & 113L CHEM 114 & 114L	CHEM 113 & 113L CHEM 114 & 114L	CHEM 113 & 113L CHEM 114 & 114L	CHEM 113 & 113L CHEM 114 & 114L
Computer Science	CS 171, 172 & 172L	CS 171, 172 & 172L	CS 171, 172 & 172L	CS 171, 172 & 172L
Economics	ECON 214 & 215	ECON 214 & 215	ECON 214 & 215	ECON 214 & 215
English	ENG 211 & 212	ENG 211 & 212	ENG 211	ENG 211
French	FREN 101 & 102 FREN 201 & 202 FREN 301	FREN 101 & 102 FREN 201 & 202	FREN 101 & 102 FREN 201	FREN 101 & 102
German	GERM 101 & 102 GERM 201 & 202 GERM 301	GERM 101 & 102 GERM 201 & 202	GERM 101 & 102 GERM 201	GERM 101 & 102
History (American)	HIST 151 & 152	HIST 151 & 152	HIST 151 & 152	HIST 151 & 152
History (European)	HIST 107 & 108	HIST 107 & 108	HIST 107 & 108	HIST 107 & 108
Mathematics	MATH 131 & 132	MATH 131 & 132	MATH 131 & 132	MATH 131 & 132
Philosophy	PHIL 220	PHIL 220	PHIL 220	PHIL 220
Physics	PHYS 150 & 150L PHYS 251 & 251L	PHYS 150 & 150L PHYS 251 & 251L	PHYS 150 & 150L PHYS 251 & 251L	PHYS 150 & 150L PHYS 251 & 251L
Psychology	PSYC 105	PSYC 105	PSYC 105	PSYC 105
Spanish	SPAN 101,102, 201, 202 & 301	SPAN 101, 102, 201 & 202	SPAN 101, 102 & 201	SPAN 101 & 102
Theatre	THEA Elective (Freshman Level)	THEA Elective (Freshman Level)	THEA Elective (Freshman Level)	THEA Elective (Freshman Level)
Visual Arts	ART 101	ART 101	ART 101	ART 101

C) TN STATEWIDE DUAL CREDIT: Students who pass their statewide dual credit challenge exam are eligible to receive college credit at CBU. A student is responsible for providing his/her official statewide dual credit course/exam information in order for postsecondary credits to be awarded. That Department Chair presiding over the course will decide on the type of credit to be granted Below are the score requirements for Dual Credit:

Statewide Dual Credit Course	Cut Score
Pre-Calculus	75%
Greenhouse Management	70%
Agribusiness Finance	70%
Statistics	75%
Health Information Technology	75%
Sociology	70%
Criminal Justice I	80%

D) DANTES SUBJECT STANDARDIZED TEST (DSST): Credit may be allowed for college courses satisfactorily completed through the Defense Activity for Non-Traditional Education Support (Dantes-Military CLEP), subject to the recommendation of the course Departmental Chair. Below are the available CLEP Exams and recommendations for credit by the CBU Department Chairs:

E) COLLEGE LEVEL EXAMINATION PROGRAM (CLEP) OF THE COLLEGE ENTRANCE EXAMINATION BOARD (CEEB):
Christian Brothers University participates in the College Level Examination Program (CLEP) of the College Entrance Examination Board (CEEB). Students who, by virtue of study or travel abroad, work experience, independent study, advanced work in high school, or study in non-accredited institutions, believe that they might already possess knowledge comparable to that expected in certain courses may receive credit and placement based on acceptable scores of selected Subject Examinations administered by CLEP. Acceptable CLEP scores on specified exams are determined by individual departments. A student may not receive CLEP credit for any course which was previously failed either at Christian Brothers University or elsewhere. Only official scores reports sent directly from the issuing agency / institution to CBU are acceptable. CLEP tests, the minimum scores and CBU course equivalencies are as follows:

CLEP TESTS	SCORE	CBU EQUIVALENT
Composition and Literature		
American Literature	50	ENG 331 & 332
Analyzing and Interpreting Literature	50	ENG 211 & 212
College Composition	50	ENG 111
English Literature	50	ENG 221 & 222
World Languages		
French Language (Level 1)	50	FREN 101 & 102
French Language (Level 2)	62	FREN 101, 102 & 201
German Language (Level 1)	50	GERM 101 & 102
German Language (Level 2)	63	GERM 101, 102 & 201
Spanish Language (Level 1)	50	SPAN 101 & 102
Spanish Language (Level 2)	63	SPAN 101, 102 & 201
History & Social Sciences		
American Government	60	POLS 112
History of the United States I	60	HIST 151
History of the United States II	60	HIST 152
Human Growth & Development	50	PSYC 218
Introduction to Education Psychology	50	PSYC 315
Introductory Psychology	50	PSYC 105
Introductory Sociology	50	SOC 101
Principles of Macroeconomics	60	ECON 215
Principles of Microeconomics	60	ECON 214
Western Civilization I: Ancient Near East to 1648	60	HIST 107
Western Civilization II: 1648 to the Present	60	HIST 108
Science & Mathematics		
Calculus	54	MATH 131
Precalculus	54	MATH 117
Business		
Financial Accounting	60	ACCT 260
Introductory Business Law	60	BLAW 301
Principles of Marketing	50	MKTG 311
Principles of Management	50	MGMT 337

EXPERIENTIAL LEARNING ASSESSMENT

Students may apply for and be granted college-level credit for knowledge and understanding related to the student's degree program which was gained from work-site or other experiences. The student must work with their Department Chair who oversees the area in which credit is being sought to initiate the paperwork and to pay the assessment fee. The Department will complete the evaluation form detailing what, if any, credit should be awarded. Upon completion of the form, the student must make the appropriate payment with the Business Office for any credit being granted. Upon payment of appropriate fees and receiving the Experiential Learning Assessment paperwork, the Office of the Registrar will post the credit. There is no GPA associated with awarding this type of credit, and is not subject to the maximum of 30 allowable credits for non-traditional credit. The credit awarded will not be posted to the student's transcript until the student has earned 12 hours of academic credit at Christian Brothers University.

REGISTRATION

During an announced advisement period, a student meets with his/her advisor to plan a schedule of courses for the upcoming semester. Students register themselves via Banner Web. The Business Office will bill the student at the beginning of each term or semester for the courses chosen. Registration is finalized or completed only after making payment or arrangements for payment in the Business Office.

Students must settle their accounts with the Business Office prior to the first day of classes. Students whose accounts are not settled by the deadline will be dropped from their classes, and they will be assessed a $250 late fee upon reregistration for classes. Original schedules will not be maintained, and the reregistration is subject to class availablility.

It is the student who is ultimately responsible for knowing and following the courses and graduation requirements published in the catalog.

EXPENSES & FINANCIAL AID

UNDERGRADUATE EXPENSES PER SEMESTER 2017-18

Tuition $15,500.00
Tuition for part-time students (i.e., taking fewer than 12 hours)
or for each additional credit-hour above 18 (per credit hour) $1,100.00
Tuition for course audit is half the price of regular credit courses on a per credit hour basis.
Summer School Tuition (per credit hour, 2017 session) $450.00
Summer School Lab Fees per Class $75.00
Dual Enrollment Tuition
On-Campus Tuition (per credit hour) $170.00
Off-Campus Tuition (per credit hour) $166.67
Single Occupancy Room and Board (per semester)
Maurelian Hall Single and All Access $4,900.00
Rozier Hall Single and All Access (w/Lounge) $4,900.00
Rozier Hall Single (Traditional) and All Access $4,000.00
Stritch Hall Single and All Access $4,000.00
Living Learning Center Single and All Access $5,800.00
Avery Single (No Meal Plan) - Graduate Housing Only $4,500.00
New-Avery Single Room Double Occupancy (No Meal Plan) - Graduate Housing Only $2,900.00
Capstone Apartments and All Access $5,800.00
Capstone Apartments and 100 Block Plan $4,900.00
Double Occupancy Room and Board (per semester)
Maurelian Hall Double and All Access $3,600.00
Rozier Hall Double and All Access (w/Lounge) $3,600.00
Rozier Hall Double (Traditional) and All Access $3,600.00
Living Learning Center Double and All Access $4,900.00
Living Learning Center Triple and All Access $4,000.00

OTHER FEES

Activity & Services Fee, Full-Time Day Students, per semester $175.00
Activity & Services Fee, Part-Time Day Students, per semester $80.00
Enrollment Fee (Tuition Deposit, Refundable through 5/1) $300.00
Late Registration Fee $250.00
Returning Student Room Deposit $300.00
Challenge Examination and Posting Charges $100.00
Parking and Grounds Fee - All Students, per Semester $30.00
Technology Fee, Full-Time Day Student, per semester $230.00
Technology Fee, Part-Time Day Student, per semester $95.00
BUC Meal Dollars - Full Time Day - Non Residents $100.00
BUC Meal Dollars - Part Time Day $50.00
Experiential Credit Assessment Fee $50.00
Experiential Credit Posting Fee $100.00
Experiential Credit Undergraduate, per credit hour fee $100.00
Returned Check Charge $30.00
*Graduation Fee (Non-Refundable) $130.00
Security Deposit for Undergraduate Housing $150.00
Cancellation Fee - Breach of Contract $500.00
Payment Plan Enrollment (per semester) $40.00
Payment Plan Late Fee $20.00

RN TO BSN EXPENSES PER SEMESTER 2017-18

RN to BSN Tuition (per credit hour) $405.00

OTHER FEES

Activity & Services Fee, per semester $50.00
Technology Fee, per semester $50.00
Returned Check Charge $30.00
Late Registration Fee $250.00
Parking and Grounds Fee - All Students, per Semester $30.00

All tuition and fees are subject to change at any time when circumstances so warrant. Information on indirect costs (books, transportation, etc.) is available in the Student Financial Aid Office.

* *The graduation fee is applied at the beginning of the semester in which graduation is anticipated. This application fee is applicable for one year. After this time, students who have not completed their degree requirements will be removed from the graduation list, and they must reapply for graduation, as well as repay the graduation fee.*

SETTLING OF FINANCIAL ACCOUNTS

The Administration of Business and Financial Affairs is under the supervision of the Controller of the University.

Payment in full for tuition and fees or enrollment in a payment plan along with the designated initial payment is required for boarders, non-boarders, and APS & Graduate students, before classes begin each term or semester. All students must electronically accept the Business Office "Terms and Conditions Agreement" to complete their registration. Billing is done online through CashNet. Settling of accounts should be done online through Banner Web and CashNet. Payments should be made online through CashNet. Instructions are on the CBU Website and emailed to the students prior to the start of each term. CBU reserves the right to refuse payment plan option to students who did not honor the scheduled payments in previous terms. Any student who has not settled their financial account by the announced drop date will have their schedules dropped from the University. If a student re-registers after their classes have been dropped, there is an additional $250 LATE FEE that will be added to their account and that account must be settled at the time the student re-registers. No Student will be charged more than $250.00 in Late Fees.

Upon notification of acceptance, day applicants must submit an **ENROLLMENT DEPOSIT** of $300.00. This will ensure a place in the University.

Returning residence hall students are required to make a $300.00 room reservation deposit in the spring to reserve a residence hall room for the following academic year.

Students who enter at the second semester are subject to the same financial requirements listed herein.

A SECURITY DEPOSIT of $150.00 is required of all first time resident students. This must be paid regardless of the scholarship or student aid arrangements with the University. The security deposit will be refunded at the end of the senior year or at the time of withdrawal from the University.

CONTRACT CANCELLATION FEE: Fall housing contracts are for the full academic year. A $500.00 breach of contract fee will be assessed for students who do not return to the residence halls for the spring semester. Prior to August 1, any continuing student who wishes to cancel his/her residence hall contract must submit a letter in writing to the Office of Student Life and receive approval from the Director of Residence Life. All continuing students cancelling prior to the August 1st deadline will be responsible for a $300.00 cancellation fee. After the August 1 date, any resident student who enrolls in classes at the University will be responsible for room and board charges for the semester. Exemptions to this policy may be made only by the Vice President for Academics.

Any incoming freshman or transfer student who wishes to cancel his/her residence hall contract must submit a letter in writing to the Office of Student Life and receive approval from the Director of Residence Life. After May 1, deposits are non-refundable. After August 1, any freshman or transfer student will be responsible for room and board charges if he/she remains enrolled in classes. Exceptions to this policy may be made only by the Vice President for Academics.

No diploma, transcript of credit, or information concerning academic or disciplinary record is given until the student's account has been settled.

Students with accounts in arrears may be excluded from final examinations, graduation ceremonies, issuance of academic documents and records, and readmission to future academic programs until the accounts in arrears are paid in full. There is a one percent monthly interest charge on all delinquent accounts.

POLICY FOR WITHDRAWAL FROM CLASS

All requests for course withdrawals, both complete and partial, must be submitted to the Office of the Registrar by the student. Requests for a partial withdrawal(s) are completed via BannerWeb - Student Services - Registration - Withdraw From a Class. Anyone requesting a "complete withdrawal" will be required to come to the Office of the Registrar to secure the necessary signatures to complete the withdrawal process.

The dates provided on the "complete withdrawal" form will count as the official dates of notification for processing the withdrawal. These are the dates that will be used by all offices for processing the withdrawal, return to Title IV calculation, and tuition adjustments. There is no tuition adjustment on a withdrawal from any Dual Enrollment class or classes.

If a faculty member assigns a failing grade for a course due to academic misconduct (e.g. plagiarism, cheating, etc.), a grade of "F" will be immediately assigned, and a withdrawal will be prohibited. If the student wishes to appeal his or her final grade for the course, the student may immediately begin the grade appeal process.

TUITION ADJUSTMENT POLICY FOR WITHDRAWAL FROM CLASS

NO TUITION ADJUSTMENT CALCULATION WILL BE APPLICABLE UNLESS A STUDENT COMPLETELY WITHDRAWS FROM ALL REGISTERED CLASSES IN A SEMESTER.

The Institutional Tuition Adjustment Policy percentage for complete withdrawal from CBU is calculated by dividing the number of days completed in the semester (or applicable term), as of the date of official withdrawal (the date the student submits the withdrawal form to the Registrar), by the number of days in the semester (or applicable term) exclusive of breaks of five or more days.

No adjustment will be made if a student has completed more than sixty percent (60%) of a semester or an 8-week term. Advance deposits (including Application Fees and Tuition Deposits) are non-refundable.

The following schedules apply to Fall & Spring Terms ONLY. Summer sessions and special workshops will be on a TBA basis.

A. Day Undergraduate or MEM, MSEM, MACS and PA Graduate Students. The following schedule will be used when calculating tuition adjustments and institutional awards for all students classified as Day undergraduate or MEM graduate students regardless of when their classes begin*:

Official Notification Date During the Semester:	Percentage of Tuition
Drop/Add Period of Semester	100%
First 25% of Semester	50%
26-60% of Semester	25%
Over 60% of Semester	No Adjustment

B. Evening Undergraduate or MBA, MEd, MAT, or MSEL Graduate Students (First 8-Week Term Only). The following schedule will be used when calculating tuition adjustments and institutional awards for all students classified as Evening undergraduate or MBA, MEd, MAT, MSEL graduate students and who are ONLY enrolled in the first 8-week term of a semester*:

Official Notification Date During First 8-Week Term:	Percentage of Tuition
Drop/Add Period of 1st 8-Week Term	100%
First 25% of 1st 8-Week Term	50%
26-60% of 1st 8-Week Term	25%
60% of 1st 8-Week Term	No Adjustment

C. Evening Undergraduate or MBA, MEd, MAT, or MSEL Graduate Students (Second 8-Week Term Only). The following schedule will be used when calculating tuition adjustments and institutional awards for all students classified as Evening undergraduate or MBA, MEd, MAT, MSEL graduate students and who are ONLY enrolled in the second 8-week term of a semester*:

Official Notification Date During Second 8-Week Term:	Percentage of Tuition
Drop/Add Period of 2nd 8-Week Term	100%
First 25% of 2nd 8-Week Term	50%
26-60% of 2nd 8-Week Term	25%
Over 60% of 2nd 8-Week Term	No Adjustment

D. Evening Undergraduate or MBA, MEd, MAT, or MSEL Graduate Students (Both First & Second 8-Week Terms). The following schedule will be used when calculating tuition adjustments and institutional awards for all students classified as Evening undergraduate or MBA, MEd, MAT graduate students and who are enrolled in BOTH 8-week terms (first 8-week and second 8-week term) of a semester*:

Official Notification Date During First or Second 8-Week Terms:	Percentage of Tuition
Drop/Add Period of 1st 8-Week Term	100%
First 25% of 1st 8-Week Term	50% of 1st 8-Week Term Classes 100% of 2nd 8-Week Term Classes
26-60% of 1st 8-Week Term	25% of 1st 8-Week Term Classes 100% of 2nd 8-Week Term Classes
Over 60% of the 1st 8-Week Term and Prior to the Beginning of the 2nd 8-Week Term	No Adjustment for 1st 8-Week Term Classes 75% of 2nd 8-Week Term Classes
Drop/Add Period of 2nd 8-Week Term	No Adjustment for 1st 8-Week Term Classes 50% of 2nd 8-Week Term Classes
First 25% of 2nd 8-week Term	No Adjustment for 1st 8-Week Term Classes 25% of 2nd 8-Week Term Classes
After 25% of 2nd 8-Week Term	No Adjustment for 1st 8-Week Term Classes No Adjustment for 2nd 8-Week Term Classes

* There is an administrative fee retained by CBU for all complete withdrawals. It is the lesser of a) $100.00 or b) 5% of Institutional Charges.

RETURN OF FEDERAL TITLE IV FUNDS

If a student completely withdraws from CBU, the unearned amount of Federal Financial funds must be returned to the appropriate Federal Aid programs. The unearned amount of the Federal Financial Aid is calculated by dividing the number of days completed in the term by the number of days in the term, exclusive of breaks of five or more days. No refund is required if the student has completed more than sixty percent (60%) of the term. All unofficial withdrawals will be calculated using the fifty percent (50%) point of the term or the last known date of academic related activity provided by the Instructor.

An unofficial withdrawal happens when a student stops attending classes and/or receives a zero GPA for that term/semester. CBU is required to calculate a return of Title IV funds (Stafford, PLUS loans, Pell grants), which may create a tuition liability for the student, resulting in them owing CBU money, unless they can prove that they attended at least one class past the sixty percent point of the term/semester.

The United States Department of Education requires repayment of funds in the following order:

- Unsubsidized Direct Loans
- Subsidized Direct Loans
- Federal Perkins Loans
- Federal Plus Loans
- Federal Pell Grants
- Federal SEOG
- Other Federal Financial Aid programs

Examples of the refund calculations for the Federal Financial Aid are available in the Financial Aid Office during normal working hours.

DEFERRED PAYMENT OF EDUCATION COSTS

- For students and parents who find it necessary to pay educational expenses in installments, a payment plan is offered for each semester. Summer classes are handled differently. The semester payment plan is available online through Banner Web. The installments should be made through Cashnet. Instructions and details are emailed to the students. The payment plan charges 1% monthly interest on any unpaid balance.
- Traditional Day students and CAPS students (registered in both terms) will be required to pay 30% of the balance due after Financial Aid and scholarships as an initial payment for the payment plan. International students will be required to pay 50% of the balance due after Financial Aid and scholarships as an Initial payment for the payment plan. In both cases the balance due after the initial payment should be paid in 3 monthly payments. Second term classes and summer classes are handled differently due to the short schedule. CBU reserves the right to refuse payment plan option to students who did not honor the scheduled payments in previous terms.
- All Federal Student Loan checks and institutional loan checks must be deposited into the student's account. If the posting of any check(s) creates a credit balance on the student's account, the student may request a refund following the Add/Drop period, after all charges and financial aid have been posted. Students are encouraged to sign up online for ERefunds through CashNet to receive any excess funds.

ACADEMIC SCHOLARSHIPS AND OTHER AWARDS

Academic scholarships are awarded by the Admissions Office based on performance in high school or in the case of transfers at a prior institution. Academic Scholarships are not based on need and are awarded at the time of acceptance to the University. Other scholarships are awarded on the basis of published criteria. Please contact the Admissions Office or the Student Financial Aid Office or visit http://www.cbu.edu/scholarships for more information.

Here are the basics that you need to know about Scholarships before deciding whether this is a Financial Aid option you would like to pursue:

- Scholarships listed below are subject to change. Information listed is based on 2017-18 scholarships available to first time freshmen entering the undergraduate day program. Scholarship and scholarships are subject to change.
- Scholarships don't have to be repaid.
- Student must meet certain criteria and deadlines.

CBU MERIT SCHOLARSHIPS

CBU offers academic scholarships ranging from $9,000 to $15,000 based on a student's academic success in his or her high school and college (if applicable). There is no separate application necessary for the CBU Merit Based Scholarships. Students are considered for scholarship upon completing an application—this includes submitting all transcripts and scores. Starred (*) scholarships are event-based and participation is by invitation. Information listed is based on 2017-18 scholarships available to first time freshmen entering the undergraduate day program. Scholarship and scholarships are subject to change.

SCHOLARSHIP	AMOUNT
Presidential Scholarship	$13,000-$15,000
Lasallian Scholarship	$12,000-$14,000
Maurelian Scholarship	$11,000-$13,000
Deans Scholarship	$11,000-$12,000
University Scholarship	$10,000-$11,000
Rozier Scholarship	$9,000

Eligibility: All full-time traditional undergraduate freshmen.

Scholarships and awards vary depending on cumulative high school GPA and admission test score of the ACT or SAT.

ACT	HS GPA 3.00-3.74	HS GPA 3.75 and above
28 and above	$14,000	$15,000
26-27	$13,000	$14,000
23-25	$12,000	$13,000
22	$11,000	$12,000
21	$10,000	$11,000
20 and below	$9,000	

SCHOLARSHIP EVENTS	SCHOLARSHIP AMOUNT	RENEWABLE CRITERIA
Trustee Scholarship*	Full Tuition and Fees	2.75 GPA
Leadership Scholarship*	Full Tuition and Fees	2.75 GPA
Pascal Fellowship in Computer	Full Tuition and Fees	2.75 GPA
Science and Mathematics sponsored by FedEx	(See program details for additional awards)	
Engage Scholarship	$20,000	2.75 GPA
Latino Student Success Scholarship	Approx. $28,000 total package	Good standing
Latino Achievement Award	$3,000	Good standing

CBU TRUSTEE SCHOLARSHIP

The Trustee Scholarship is the most prestigious academic scholarship available at CBU. This merit-based scholarship benefits outstanding students for academic performance.

THE LEADERSHIP SCHOLARSHIP PROGRAM (LSP)

The Leadership Scholarship Program is a leadership based scholarship awarded to two students each year for outstanding leadership and service in his or her community. Recipients of this scholarship will receive support from Student Life in developing a New Student Organization that can have a lasting impact on the university.

PASCAL FELLOWSHIP IN COMPUTER SCIENCE AND MATHEMATICS SPONSORED BY FEDEX

The Pascal Fellowship in Computer Science and Mathematics sponsored by FedEx is a unique program that awards students scholarships as well as internship opportunities. Students must major in Computer Science and Mathematics. CBU solicits applications and accepts students into the program on a competitive basis. Preference will be given to students from the region with a 30 or higher Math ACT and a minimum GPA of 3.5. Each year two students will receive full four-year scholarships to CBU offsetting all tuition and fees.

ENGAGE SCHOLARSHIP

The CBU Engage Scholarship is a competitive scholarship event designed for students who plan to become involved at CBU. Participants will be required to present ideas on what club they would like to see at CBU, and how they will work to be the leader in developing the new student club. Students who attend will also have the opportunity to take a campus tour, interview with a current student, and talk with representatives from our student clubs.

LATINO SCHOLARSHIPS

CBU recognizes the importance of supporting Latino students in their dreams of not only going to college but graduating from college. A joint competition is offered for students to compete for either the Latino Achievement Scholarship (LAS) or the Latino Student Success (LSS) Scholarship. The Latino Achievement Scholarship (LAS) is for Latino students who are FAFSA eligible. The Latino Achievement Scholarship (LAS), which is an additional $3,000 scholarship, will be awarded to two students. The Latino Student Success Scholarship (LSS) is for Latino students living in Memphis who are not FAFSA eligible.

ENGINEERING AWARD

CBU awards academic awards to high achieving engineering majors.

PHI THETA KAPPA

Transfer applicants who are members of the Phi Theta Kappa Honors Society will receive a $2,000 scholarship upon acceptance to the University. This scholarship is renewable annually. Students must show proof of membership and maintain good standing while a student at CBU.

GADOMSKI TRIANGLE SCHOLARSHIP

Annually, CBU and Tau Kappa Epsilon Fraternity provide a number of Triangle Scholarship Awards for high school seniors who have applied and been accepted to CBU. The awards are designed to encourage academic excellence, foster leadership skills, and enhance the personal development of deserving students in pursuit of their college degrees. Tau Kappa Epsilon Fraternity invites your application for consideration. Established by his father, Richard T. Gadomski, this award remembers Gregory Raymond Gadomski, who was initiated as the 70th member of the Pi-Epsilon chapter of TKE on November 20, 1982. As an undergraduate, Greg was an active member of his chapter, serving as a Big Brother to another member, serving on Chapter committees, and planning the Chapter's annual formal. Greg is remembered by those who knew him as "a kind soul and a good friend" and as being the type of person who was "never ever boring." Greg was recognized by CBU as the recipient of the Distinguished Young Alumnus Award in 1995. This scholarship is given in memory of Greg's love for TKE and CBU. It will recognize one or more incoming students who have demonstrated outstanding achievements in all areas of involvement.

Amount: Awards vary from year to year depending on the applicant pool and availability of funds. Awards can range from $500 to $1,000. All awards are made possible through contributions to the Tau Kappa Epsilon Fraternity-Gregory Raymond Gadomski Memorial Scholarship Endowment Fund.
Application Process: 1.) You need to have already been accepted to CBU to be eligible to apply. 2.) Complete Gadomski Triangle Scholarship Application
Deadline: The application needs to be received or postmarked by March 31, 2018.
Renewable Criteria: Triangle scholarships are one-time awards applied toward CBU tuition and fees

RETENTION OF SCHOLARSHIPS AND OTHER AWARDS

The Trustee, Leadership, Maurelian, Presidential and Lasallian Scholarships require a 2.75 cumulative GPA by the end of the sophomore year for renewal. The Engage Scholarship, Latino Student Success Program, Latino Achievement Award, University Scholarship, Dean's Scholarship, Rozier Scholarship, and Lasallian Achievement Awards require Satisfactory Academic Progress to be retained. These awards are renewable until graduation as long as the renewal criteria are met and the student is full-time in the same program (i.e., Day, Evening). Awards may be prorated during the last term for graduating seniors if they do not need a full-time course load to graduate. Students must notify the Student Financial Aid Office. Institutional scholarships and awards cannot be used during the summer term. Performance and athletic scholarships are renewable at the discretion of the person giving that award (i.e., performing arts directors and coaches).

NAMED SCHOLARSHIPS AND AWARDS

In many cases students will find that their CBU awarded scholarship has been given a particular name. This is done to honor those friends of the University who have donated some or all of the funding for a scholarship. These names come from two sources: established endowments or annual gifts. If a student's scholarship or academic award is given a name, this does not change the student's award but acknowledges the source of the resources making the scholarship possible. In most cases, the student will be encouraged to either write to or meet with the donor.

FINANCIAL AID

Christian Brothers University is committed to being a partner along with the student and family in financing a CBU education. Resources may also be supplied by the state, federal government, or private donors. After acceptance to the University, students are encouraged to fill out and submit the Free Application for Federal Student Aid (FAFSA) at www.fafsa.gov.

Components of the financial aid package may include scholarships, academic awards, federal or state grants, University and privately funded grants, federal, University or private loans, and student employment. The University will work with each student and family to find those packages best suited to individual needs and circumstances.

To continue federal and state awards once the student is enrolled, the student must maintain the requirements of the Financial Aid Satisfactory Academic Progress Policy and Letter of Scholarship renewal policy. This is available to students online.

The Federal Government selects approximately 33% of those who apply for Title IV aid to go through a process of verification. This will be indicated on the Student Aid Report the student receives from the central processor and communicated to the student from the Financial Aid Office. Documents needed to complete the verification process (such as an IRS tax transcript) will be requested from the student. Policies concerning the verification process are available in the Student Financial Aid Office.

UNDERGRADUATE ACADEMIC PROGRAMS & REGULATIONS

UNDERGRADUATE DEGREES OFFERED

Christian Brothers University offers Associate of Arts (AA), Associate of Science (AS), Bachelor of Arts (BA), Bachelor of Fine Arts (BFA), Bachelor of Science in Nursing (BSN), and Bachelor of Science (BS) degrees in the following fields:

Accounting (BS)
Applied Health Services (AS)
Applied Psychology (BA)
+Biochemistry (BS)
+Biology (BS)
+Biomedical Science (BS)
Business Administration (BS)
Areas of Concentration:
Banking
Finance
Hospitality & Tourism Management
Interdisciplinary Studies
International Business
Management
Management Information Systems
Marketing
Sport Management
***Business Studies** (AS)
***Business Studies** (BS)
Areas of Concentration:
Entrepreneurship
Industrial & Organizational Psychology
Information Security
Leadership
Management
Management Information Systems
Marketing
Nonprofit Management
Project Management
Public Health Administration
Servant Leadership

Chemical Engineering (BS)
Areas of Concentration:
Biochemical Engineering
Traditional Chemical Engineering
+Chemistry (BS)
Civil Engineering (BS)
Computer Science (BS)
Areas of Concentration:
Business
Engineering
Creative Writing (BA)
Cultural Studies (BA)
Cybersecurity & Forensics (BS)
Early Childhood Education, Grades PreK-4 (BA)
Ecology (BS)
Electrical Engineering (BS)
Areas of Concentration:
Computer Engineering
Electronics and Systems Engineering
Electrical Engineering & Computer Science (BS, dual degree)
Engineering Management (BS)
Areas of Concentration:
Information Systems
Packaging
Sustainability
+Engineering Physics (BS)
English (BA)
English Education (BA)
English for Corporate Communications (BA)
***General Studies** (AA)
History (BA)

History Education (BA)
Interdisciplinary Studies (BA or BS)
Liberal Studies, Grades K-5 (BA)
Liberal Studies Education, Grades K-5 (BA)
Mathematics (BA)
Mathematics Education (BA)
Mathematics (BS)
Mathematics & Computer Science (BS, dual degree)
Mechanical Engineering (BS)
+Natural Science (BS)
Natural Science Education (BS)
Nursing (BSN)
+Physics (BS)
***Professional Psychology** (AA)
***Professional Psychology** (BA)
Areas of Concentration:
Consumer Behavior
Criminal Justice
Organizational Psychology
Public Health
Psychology (BA)
Religion & Philosophy (BA)
Areas of Concentration:
Philosophy
Religious Studies
Special Education (BA)
Grades PreK-8 or 6-12
Visual Arts (BFA)
Areas of Concentration:
Art Therapy
Graphic Design
Studio Art

A student may be awarded a degree in two of the fields listed above provided that all the requirements for both majors are fulfilled. Courses from one major may serve as electives for the other. Completion of a double major normally requires additional attendance at the University following the completion of requirements for the first degree. For purposes of record-keeping, applicants are asked to indicate a "first" and "second" major.

Individuals seeking professional licensure as teachers have several options available at Christian Brothers University. Teacher licensure in Tennessee requires that a student have an academic major. For students who wish to become licensed as secondary teachers (grades 7-12) the available majors include: biology, chemistry, English, history, mathematics, or physics. Those who desire a license for elementary school (grades K-5) may choose the liberal studies major, and those desiring middle school licensure (6-8) may choose cultural studies. Individuals who already possess a bachelor's degree may acquire a teaching license through the post-baccalaureate teacher licensure program. Students must meet the requirements of one of the academic majors listed above and complete the professional studies component offered by the Department of Education. See page 59 for more details.

* CAPS majors/minors are specialized degree programs for students who have been admitted into the College of Adult Professional Studies. These programs are not offered for traditional students. For more information on these programs, please refer to the CAPS section of the catalog.

\+ A student that majors in Biochemistry, Biology, Biomedical Sciences, Chemistry, Engineering Physics, or Physics may not declare a double major in Natural Science.

OPTIONAL MINORS are offered in the following academic areas (some restrictions apply based on major):

Accounting
American Studies
Anthropology
Banking
Biology
Business Administration
Chemistry
Chinese
Cognitive Neuroscience
Computer Science
Creative Writing
*Criminal Justice
Criminology
Economics
Education
Electrical Engineering
Engineering Management
Engineering Psychology
English
Finance
Foreign Language
French
Global Studies
Graphic Design
History
Information Management
International Business
Management
Management Information Systems
Marketing
Mathematics
Packaging
Peace Studies
Philosophy
Physics
Political Science
Psychology
Public Health (Science Option)
Religious Studies
Sociology
Spanish
Sport Management
Sustainability Studies
Theatre Arts
Video Game Design
Visual Art
Women's and Gender Studies

THE DAY PROGRAM

The DAY PROGRAM presents curricula leading to degrees in fields listed above except the BS in Nursing. The day program calendar is 16-weeks per semester as well as optional two-week May session and two 5-week sessions in the summer.

CAPS PROGRAM (Refer to College of Adult Professional Studies section, pages 200-216)

The Adult Professional Studies Program presents a curriculum through which a student may earn an Associate's Degree or bachelor's degree by attending classes at times compatible with full-time employment. Degrees offered include an Associate of Arts in General Studies, an Associate of Science in Applied Health Services, an Associate of Arts or a Bachelor of Arts in Professional Psychology, and an Associate of Science or a Bachelor of Science in Business Studies. Available concentrations in Professional Psychology are: Consumer Behavior, Criminal Justice, Organizational Psychology and Public Health. In the Bachelor of Science in Business Studies Degree, concentrations include: Entrepreneurship, Industrial & Organizational Psychology, Information Security, Leadership, Management, Management Information Systems, Marketing, Nonprofit Management, Project Management, Public Health Administration, Real Estate, and Servant Leadership. Thirty semester hours of credit may be earned in each academic year (six hours in each eight-week term), making it possible for a student to complete all degree requirements in fewer than five years. Academic work transferred from other colleges will shorten this time proportionally.

The evening academic year is divided into four eight-week accelerated terms, which are bridged into two semesters. In addition, there is one eight-week session in the summer. Most classes meet for one night per week beginning at 5:45 P.M. or 7:55 P.M. Final exams are either incorporated into the course or scheduled following the last classroom meeting. To be considered full time in the Professional Studies program, a student must enroll for 12 hours each semester.

Although the Adult and Professional Studies program is designed for degree-seeking students, it makes provisions for students wanting to take prerequisites for a MBA degree, the CPA exam, or courses of special interest.

LIVING LEARNING COMMUNITIES

The Living Learning Communities (LLCs) at CBU witness to the values of the university and its Lasallian heritage-- holistic personal development, community-building, and service. Each of five LLCs represents these values through an intentional focus, engaged learning environment, and program of activities. The Living Learning Center, completed in July 2011, serves as a residence and meeting facility for each LLC.

Living Learning Communities at CBU:

Freshman Experience
Science & Engineering
Honors Program
Sustainability
Business

For more information, please refer to http://www.cbu.edu/housing/llc.

PRE-PROFESSIONAL PROGRAMS

In addition to the various degree programs offered by Christian Brothers University, there are also a number of curricula that are pre-professional in scope and that may be tailored for acceptance by professional schools. In general, a bachelor's degree in any field will be accepted as a prerequisite for admission to a professional school. Certain additional courses may be required by the various schools and programs. Interested students should, very early in their University career, consult the catalog of the school to which they will seek admission in order to determine these special requirements. Pre-professional counselors are available on campus in addition to the student's major advisor.

GUARANTEED INTERVIEW AGREEMENTS

Students interested in pursuing selected graduate-level clinical healthcare programs may be eligible for a guaranteed interview with a participating institution. In some cases, a qualified student may enroll in the graduate healthcare program prior to earning a degree at Christian Brothers University. Students who early enroll but wish to complete their bachelor's degree at CBU should inquire about reverse transfer credit with the Academic Vice President. For a list of participating institutions, please check the regularly updated page on the School of Sciences website.

PRE-HEALTH (DENTISTRY, MEDICINE, PHARMACY, ETC.)

While a major in Biology, Biomedical Science, Biochemistry, Chemistry or Physics present advantages for students interested in health-related professions, majors in other fields are equally acceptable, contingent upon the student completing the necessary prerequisites. Students interested in preparing for one of these fields should acquaint themselves with the requirements of the school to which they will seek admission. Each student should, in consultation with an appropriate pre-professional advisor, arrange a course of study which will fulfill the professional school admission

requirements while working for a degree. Generally, such requirements include courses in Principles of Biology, Anatomy and Physiology, Microbiology, Principles of Chemistry, Organic Chemistry, Biochemistry, and Physics. For further information about the prerequisites for graduate-level clinical healthcare careers, please visit the web page at facstaff.cbu.edu/~seisen/hc.html.

PRE-LAW

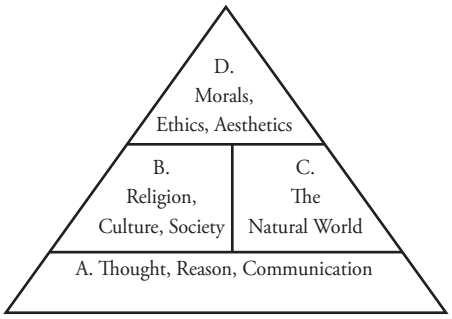
A Pre-Law major does not exist at the undergraduate level; however, Christian Brothers University offers personal counseling by the Pre-Law advisor through the School of Arts. This program is recommended for all students who intend to pursue a career in law. In addition, the advisor keeps appropriate Law School Admissions Test materials and stores a variety of law school catalogs in the Career Services. Students also are encouraged to participate in law school visitation days, recruitment interviews, and the Pre-Law Club.

PRE-MINISTRY

A student enrolled at Christian Brothers University may prepare for professional seminary work within any of the Liberal Arts majors. The Department of Religion & Philosophy provides a degree especially tailored for such specialization. Those students desiring to prepare for a career in religious education, professional Church work, or Protestant or Catholic graduate seminary programs will be assigned to an advisor who will direct their studies.

GENERAL EDUCATION REQUIREMENTS

In addition to meeting degree requirements for a particular major, a student at Christian Brothers University will be required to have a broad understanding of self, others, and the contemporary world. Furthermore, the graduate of Christian Brothers University shall have cultivated, through the arts and sciences, the necessary skills of reasoning and communication, and shall have developed an awareness of the religious dimension of human existence. In the tradition of the Christian Brothers, all students take a broad range of courses, thus providing the opportunity to experience the full breadth of the curriculum.



THE PYRAMID OF LEARNING

At CBU, the goals for student learning have been grouped into four major areas, represented by a pyramid. The most basic goals are at the base of the pyramid: critical thinking, quantitative reasoning, and effective communication. At the next level are knowledge of religion, culture, society, and self, and knowledge of the natural world, the scientific method, and its application. At the peak of the pyramid are moral, ethical, and aesthetic principles.

STUDENT OUTCOMES

Within each of the four major learning goals listed above are several student learning outcomes:

A. Critical thinking, quantitative reasoning, and effective communication

1. Quantitative Problem Solving. Students will demonstrate the appropriate use of mathematical, quantitative, and logical methods to solve problems.
2. Statistics. Students will demonstrate the appropriate use of statistical methods to analyze data, solve problems, and make decisions.
3. Effective Written Communication. Students will demonstrate their ability to write effectively, employing appropriate use of language, sentence structure, and grammar.
4. Effective Oral Communication. Students will demonstrate their ability to speak effectively.
5. Critical Reading. Students will demonstrate their ability to read critically.
6. Research Skills. Students will demonstrate their ability to access scholarly communication effectively, and locate, evaluate, and properly cite information resources both online and in print.

B. Knowledge of religion, culture, society, and self

1. Knowledge of World Religions. Students will demonstrate an understanding of the beliefs, principles, and practices of Christianity as well as those of other religions and cultures.
2. Impacts of World Religions. Students will demonstrate an understanding of the influence of religion on individuals, cultures, and societies from both historical and contemporary perspectives.
3. Knowledge of Cultural and Global Issues. Students will demonstrate an understanding of personal, cultural, social, and global issues from historical and contemporary perspectives.*

C. Knowledge of the natural world, the scientific method, and its application

Students will demonstrate an understanding of the Scientific Method and the ability to interpret data.

D. Moral, ethical, and aesthetic principles

1. Ethics and Judgments. Students will demonstrate an understanding of accepted ethical principles and their applicability in making ethical and moral judgments.
2. Aesthetic Principles. Students will demonstrate an understanding of aesthetic principles from the perspective of diverse academic disciplines.

The Matrix (Table) indicates in general terms which Student Learning Outcomes are met by each category. A more detailed list of course requirements in each category follows the Table.

MATRIX OF G.E.R. OUTCOMES

√ indicates this outcome is assessed in this category
* indicates that this outcome is reinforced in some of the courses in this category

	OUTCOMES												
CATEGORY	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**B1**	**B2**	**B3**	**C1**	**C2**	**D1**	**D2**
Mathematics	√	-	*	-	*	-	-	-	-	-	-	-	-
Statistics	*	√	-	-	*	*	-	-	-	-	*	-	-
English	-	-	√	-	√	√	-	-	-	-	-	-	*
Religious Studies	-	-	*	*	*	-	√	√	*	-	-	*	-
Social Sciences/History	-	*	*	*	*	*	-	*	√	*	*	*	*
Natural/Physical Science	*	*	*	-	*	*	-	*	*	√	√	-	-
Moral Values	-	-	*	*	*	-	-	-	-	-	-	√	-
Aesthetics	-	-	-	-	-	-	-	-	-	-	-	-	√

GENERAL EDUCATION COURSE REQUIREMENTS

MATHEMATICS (3 hours)
MATH 105, (107 & 110), 117, 129, 131 or 162. Not permitted: ALG 115, 120 or MATH 103.

STATISTICS (0-3 hours)
BIOL 340, CH E 120, ECE 400, HIST 498, 499, MATH 152, 162, 201, 308, NSCI 410, STAT 221, PHIL 201 or PSYC 354; this outcome can be challenged by the independent study course MATH 121.

ENGLISH (8-9 hours)
(a) Composition: ENG 111 & 112 (or equivalency examination).
(b) Literature: One of ENG 211, 212, 221, 222, 231 or 232.
Honors program students may fulfill the above English requirements by completing ENG 231 & 232 which is 8 hours.

RELIGIOUS STUDIES (6 hours)
RS 200, 217, 218, 220, 221, 230, 240, 260, 270, 271, 280, 285, 300, 320, 324, 326, 330, 331, 335, 340, 345, 355, 356, 372, 375, 377, 380 or 385.

SOCIAL SCIENCE / HISTORY (6 hours)
ANTH 160; HIST 107, 108, 151, 152; HUM 210; POLS 112, 113, 115, 356; PSYC 105; SOC 101.

NATURAL AND PHYSICAL SCIENCES (4 hours)
Any of the following courses and the accompanying lab ANTH 126, 128, BIOL 103, 107, 109, 111; CHEM 105, 113, 115; NSCI 111, 115, 122, 126, 128; PHYS 150, 201.

MORAL VALUES (3 hours)
PHIL 219, 220, 223, 224, 234, 322, 324, 325, or 340.

AESTHETICS (0 additional hours)
ENG 211, 212, 221, 222, 231, or 232.

The above courses have been approved to meet the outcomes as of printing. Courses may meet more than one outcome. However, each student must take a minimum of 30 hours of General Education Courses. Special Topics courses (courses without a permanent course number or description) may be used to satisfy general education requirements, but must be approved on an annual basis by the Faculty Assembly Curriculum Committee. Students should consult their advisor before assuming a Special Topics course will meet a requirement.

INSTITUTIONAL EFFECTIVENESS AND ASSESSMENT

Institutional Effectiveness is a key assessment strategy for Christian Brothers University. It is a cyclical process in which continuous improvements and refinements of goals and objectives are undertaken. Furthermore, institutional effectiveness is not static, but rather a dynamic and evolving process. Therefore, it needs to be revisited continuously to ensure that the needs, purpose, and mission of the University are being achieved. Together, planning and evaluation should result in a continual effort within each unit of the University to examine the degree to which the unit is fulfilling its purpose and to make improvements and reallocation of resources whenever necessary.

The Southern Association of Colleges and Schools (SACS) Commission on Colleges indicates that institutional effectiveness is central to the philosophy of accreditation, and it is a core component of its Criteria for Accreditation. "The institution identifies expected outcomes for its educational programs and its administrative and educational support services; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of those results" (Principles of Accreditation: Foundations for Quality Enhancement, 2004, p. 22). Furthermore, on page 5, the Commission on Colleges states, "Although evaluation of educational quality and its effectiveness in achieving its mission is a difficult task requiring careful analysis and professional judgment, an institution is expected to document quality and effectiveness in all its major aspects." The Commission on Colleges "expects institutions to dedicate themselves to enhancing the quality of their programs and services within the context of their missions, resources, and capacities, and to create an environment in which teaching, public service, research, and learning occur."

Assessment at Christian Brothers University is a process for educational improvement, benefiting both the institution and the student. Assessment results help determine how well the institution is meeting its mission and goals, what is successful and where improvements need to be made. Assessments also provide students with feedback that assists them in monitoring progress toward their own educational goals.

The Office of Institutional Research & Effectiveness administers two major surveys, HERI's Freshman Survey and College Senior Survey. The Office of Career Services conducts a survey of all graduates just before graduation and one year later. Educational Testing Service's Major Field Assessment Test is used by certain majors for outcomes assessment. The National Survey of Student Engagement (NSSE) is administered every three years. NSSE results yield important information about the quality of undergraduate learning and contribute to national benchmarks of effective educational practice. Additional surveys are also administered by individual departments, often with the assistance of the Office of Institutional Research & Effectiveness. Many of the University's assessment activities are tied to courses and majors utilizing embedded assessments, capstone projects, and standardized exams.

To qualify for a bachelor's degree from Christian Brothers University, students must successfully meet all conditions of the University's outcomes assessment requirements.

REQUIREMENTS FOR GRADUATION

To qualify for a bachelor's degree from Christian Brothers University, a student must complete all degree requirements as outlined in the Academic Catalog, while maintaining an overall Grade Point Average of at least 2.0, as well as a minimum Grade Point Average of 2.0 in satisfaction of major requirements. The 2.0 minimum Grade Point Average is also required in each of the optional minors. Specific course requirements in major and minor fields are listed under Degree Requirements for each school. Continuously enrolled students may graduate under the catalog in effect when they enter Christian Brothers University or any subsequent catalog. Students must submit an approved "Change of Degree Program" form to the Office of the Registrar when they want to update to a more recent catalog or change their major/minor.

All students planning to receive a diploma in May or August must "Apply to Graduate" via BannerWeb no later than December 1st. Students planning to receive a diploma in December must "Apply to Graduate" by September 15th. The graduation application is located via BannerWeb – Student Services – Student Records – Apply to Graduate. The $130 graduation fee is applied at the beginning of the semester in which graduation is anticipated. This fee is applicable for one year. After this time, students who have not completed their graduation requirements will be removed from the graduation list, and they must reapply for graduation, as well as repay the fee. Those filing after the stated deadlines will be assessed a non-refundable late fee of $50.00.

Students must "Apply to Graduate" in order for a degree to be conferred. If a student has completed his/her degree requirements but failed to complete the Graduation Application, the degree will be conferred at the end of the next semester once the Graduation Application is submitted.

GRADUATING STUDENTS

Christian Brothers University has only one graduation ceremony a year in May, although there are three official graduation dates. Students may graduate in May, August, or December. Only those students who can complete their course work by the end of the summer term can walk in the ceremony. Graduating students also have three business days after the official graduation date to remove any incomplete grades, send in any transcripts from other universities, or have a grade changed in order to be graduated for a particular graduation date. Once a student is graduated, his or her cumulative graduating GPA is locked in and no grade changes can be made. Once a student graduates and wants to come back to take courses at Christian Brothers University, he or she must go back through the appropriate admissions office and apply for re-admission.

GRADUATION HONORS

A graduating senior who has attained a Grade Point Average of 3.70 to a 4.00 will be awarded honors of SUMMA CUM LAUDE. A graduating senior who has attained a Grade Point Average of 3.50 to a 3.69 will be awarded honors of MAGNA CUM LAUDE. A graduating senior who has attained a Grade Point Average of 3.20 to a 3.49 will be awarded honors of CUM LAUDE

STUDENT RESPONSIBILITY

It is the student who is ultimately responsible for knowing and following the courses and graduation requirements published in this catalog. The student is also responsible for becoming familiar with the academic polices, curriculum requirements, and associated deadlines as outlined in the catalog, as posted to the University website. Although the Academic Advisor is there to aid the student with matters related to their program of study, it is ultimately the student's responsibility for meeting all stated requirements for the degree and the policies
associated with the degree. The CBU email address is the University's official channel of communication. The student is also responsible for any changes that might occur that are posted in the CBU Connection, sent through the official CBU email address, or posted to the University Website, as these are the primary forms of communication with all students.

ACADEMIC FRESH START

Academic Fresh Start is a system enabling former CBU students who encountered academic difficulty to return to the University and petition for a zero GPA. The petitioner must (1) have been absent from all institutions of higher education for a period of at least five years and (2) have a minimum of 35 hours remaining to complete a degree at the University. Academic Fresh Start is available only once and is irrevocable.

Upon returning to CBU, a student must complete a minimum of twelve semester hours with a cumulative GPA of 2.0 or higher. The student must submit a formal letter to the Vice President for Academics requesting an Academic Fresh Start during their second semester. The student is to explain their past academic record and any extenuating circumstances that may have contributed to their poor academic performance. As part of their appeal for an Academic Fresh Start, the student needs to include their current plan for academic success. The student's request for an Academic Fresh Start will be reviewed by the Vice President for Academics. Once the Academic Fresh Start is granted, the student will forfeit all credit earned prior to their return to CBU; however, the student's transcript will reflect all previous coursework with a notation beside it designating "Academic Fresh Start". The academic transcript will also denote that the GPA and credits are based on work beginning with the date of the Academic Fresh Start. A student utilizing financial aid must still meet the requirement for satisfactory progress in order to be eligible for financial aid.

COURSE LOAD

Fall and Spring Semesters: Under normal conditions each student is expected to register for no fewer than 12 semester hours of credit per semester and not more than 18 hours per semester. Any student who registers for fewer than 12 hours of credit will be classified as a part-time student. Permission of the School Dean is required to register for more than 18 credit hours per semester. There will be an additional tuition charge for each additional credit hour above 18.

Summer Sessions: A student may enroll in a total of four courses and accompanying labs in the June, July, and Evening sessions combined. Over the ten week period, to be considered a full-time student, the student must be enrolled in at least 12 semester hours. In any one term, a student cannot enroll for more than 7 hours. A student may not register for more than a total of 14 hours without the written permission of the Dean of the School in which the student is majoring. If a student takes a school-sponsored trip immediately after the May graduation date and needs the course for graduation, he or she will be an August graduate. If the course is not needed for graduation, he or she may be a May graduate. Tuition for summer session courses is charged by the credit hour.

CLASS ATTENDANCE

Every student is expected to attend classroom and laboratory periods regularly. All students are expected to attend class beginning with the first class meeting. CBU has no official Leave of Absence policy. A student who has been absent, even for a legitimate cause, is under obligation to make up the work by special assignment to the satisfaction of the instructor. Any student who has missed a total of eight (8) hours or approximately 20% of class time may be given a mark of "F" after the last day to withdraw from classes has passed. No faculty member is allowed to have an attendance policy which penalizes a student for absences due solely to participation in an official University sponsored activity including athletic competition which requires limited or occasional absences; however, the student must satisfy all academic work required for the course.

CODE OF CONDUCT

The scholarly studies in an institution of higher learning are best achieved when students strive to meet the challenges provided by the institution with maturity and honesty. This is especially applicable at Christian Brothers University, which stresses the maxim "Virtue and Knowledge." It is expected that all students conduct themselves in such a way as to model the mission of the institution. This conduct is required in the classroom, all parts of the campus, and all locales where students are identified as students of Christian Brothers University. Students should refer to *The Compass* (student handbook) for specific conduct policies as well as disciplinary procedures located on the Student Life webpage.

CLASSIFICATION OF STUDENTS

A student who has earned 24 semester hours of credit will be classified as a sophomore, 60 semester hours as a junior, and 90 semester hours as a senior. This classification is determined automatically as credits are earned.

TRANSFER OF CREDITS FROM OTHER INSTITUTIONS

1. To fulfill residency requirements, 35 of the last 70 hours and at least 25% of total hours applied toward a degree must be earned at Christian Brothers University. See school or department requirements for any further restriction on courses in the major area.
2. For optional minor, 50% of required courses must be taken at Christian Brothers University.
3. Only courses with grades of "C" or better (2.0 on a 4.0 scale) will be accepted for transfer from other accredited institutions.
4. Only the hours of credit in accepted courses will be posted on the student's permanent record with no grade point average transferring from other institutions.
5. Permission to take any courses off-campus must receive the prior approval of the student's Department Chair, Dean of the School, and the Associate Registrar. (Courses cannot be completed off-campus if they were previously attempted at CBU, including withdrawal.)
6. Waivers to any of these requirements must be made through the Vice President for Academics.
7. Technology intensive courses that are over seven (7) years old are subject to review and may not be applicable towards the major; however, such courses may be used as free electives in the overall program.

OFF-CAMPUS COURSES

After a student matriculates at Christian Brothers University, all courses must be taken at the University. The Dean of the School in which the student is majoring must approve any exception to this policy. Under certain circumstances, Christian Brothers University students may request to take courses at other regionally accredited colleges or universities, provided that the student is not repeating a course previously attempted at Christian Brothers University. CBU students who have attained junior status (60 or more credit hours) may request to take courses only at four-year regionally accredited colleges and universities, or through CBU-approved study abroad program.

A CBU student who wishes to enroll in a course at another institution must:

1. Complete a "Request for Off Campus Course" form available on the Office of the Registrar Web page, prior to taking the course, which includes written authorization of the student's Department Chair, the Dean of the School in which the student is majoring, and the Associate Registrar.
2. Request that an official transcript be sent to the Office of the Registrar at Christian Brothers University at the end of the session.

CHALLENGE EXAMINATIONS

Students who, by virtue of study or travel abroad, work experience, independent study, advanced work in high school, or study in non-accredited institutions, believe that they might already possess knowledge comparable to that expected in certain courses may receive credit and placement based on acceptable scores of selected Subject Examinations administered by CLEP. If there is no CLEP exam available for a specific course, the student may inquire with the Department Chair over the course to see if a Challenge Exam (a departmentally-administered examination) is permitted. The Department Chair after consultation with the department faculty will make that determination. The fee for taking the examination is $100.00, which is not refundable. There is no additional fee for posting, if credit is awarded. No Challenge Exam is allowed for any course which

was previously failed either at Christian Brothers University or elsewhere. A student may not retake a Challenge Exam after failure of a previous Challenge Exam in that course. The form for a Challenge Exam must be obtained from the Web page of the Office of the Registrar.

GRADES

Grades are listed at the mid-semester for day students and at the end of the semester for all students and programs. Grades are made available through Banner Web. Only semester grades are kept on permanent records. For the purpose of computing grade point averages, grades are converted to quality points.

The grades with their significance and the corresponding points are:

GRADE	SIGNIFICANCE	QUALITY POINTS PER CREDIT HOUR
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Barely Passed	1
F	Failed	0
FA	Failed - Excess Absences	0
FN	Failed - Never Attended	0
I	Incomplete (until removed)	0
AU	Satisfactory Audit	--
UA	Unsatisfactory Audit	--
W	Withdraw	--

Some programs require a grade of "C" or higher as a pre-requisite for the next course. The Grade Point Average is obtained by dividing total quality points by total hours attempted, with the exception of hours attempted in which the grades of "P" or "W" are given. The mark "P" is used to indicate passing, and the mark "F" to indicate failing or unsatisfactory work in certain specific courses. The hours in these courses are counted in the total load, but the mark of "P" is not used in the calculation of the Quality Point Ratio; whereas, the mark of "F" is. These marks are also used in some non-credit courses. "NR" grade is given when an instructor fails to turn in a grade report.

THE WITHDRAWAL GRADE

A grade of "W" is given for a course taken by the student who is allowed to withdraw from the course after the add/drop period and before the end of the withdrawal period. The last day for withdrawing from a course is listed in the University Calendar posted on the CBU website

THE INCOMPLETE GRADE "I"

Instructors will penalize a student for failing to submit required work by the end of the final grading period. Alternatively, if asked by the student in a timely fashion, an instructor may agree to give a student an incomplete grade of "I". Instructors are under no obligation to agree to give a grade of "I." The grade of "I" can only be given after the student, the instructor, and the dean of the particular school in which the incomplete grade is being given sign an "Incomplete Grade Contract" specifying the work to be completed and return it to the Office of the Registrar for the posting of the incomplete grade. Incompletes can only be given if the paperwork is submitted to the Office of the Registrar at least one week prior to the deadline for entering grades. Exceptions to this deadline may only be made by the Dean of Academic Services (Day students) or the Associate Registrar (all other students). These will only be granted for a documented illness, a serious family emergency, or another issue of comparable magnitude. Requests made by students for an exception to this deadline must be received by the Dean of Academic Services or Associate Registrar by the last day of exams. The "I" grade will not be computed in the GPA. When the "I" is changed to a grade, that grade will be calculated into the GPA, and the "I" will show next to the new grade. The "I" grade does not satisfy the prerequisite if the course is needed to continue to the next course. The grade is changed to "I/F" if all the work is not completed by the midterm of the following semester for 16-week courses or the end of the following term for 8-week courses. The "Incomplete Grade Contract" form is available online at the Registrar's page of the CBU website.

Failure to attend a class or ceasing to attend a class does not constitute a drop, and a grade of "F" will be recorded.

GRADE CHANGES

A change in grade, other than the removal of an incomplete, will require the approval of the faculty member, as well as the Department Chair and Dean of the school before the grade change can be processed by the Office of the Registrar. Grades may not be changed for work submitted after the final grade submission deadline, unless an incomplete grade contract for the course is on file with the Office of the Registrar.

Students who are graduating may not have a grade changed once the graduation is finalized and the graduating GPA is locked in. Graduating students only have three business days after the official graduation date to remove an incomplete grade and graduate. If this is not done, the student's graduation date is postponed, and the student must refile for graduation.

GRADE APPEALS

A student who has evidence that he or she has been assigned a final grade in a capricious, prejudicial, or arbitrary manner may appeal the assigned grade within two weeks after the beginning of the subsequent academic semester (or term). The student should discuss the grade in question with the Instructor involved. If not satisfied, the student should discuss the situation with his Academic Advisor. or Graduate Director. If the undergraduate student is still not satisfied, he or she should consult with the Department Chair. If no resolution is reached, the student should refer the matter to the Dean of the appropriate school. If the grade issue remains unresolved, the student may then appeal the case to the Grade Appeals Committee. The judgment of the Committee is final. The student should file for a grade appeal formally in the Academic Affairs Office.

REPEATING COURSES

Courses may be repeated in an attempt to improve a grade in any course taken at Christian Brothers University. Computation of the student's grade point average will be based upon the most recent grade earned in the course, although the record will reflect all grades earned in a course. If a student earns a failing grade in a repeated course, he will lose any previously earned credit in that course. No course may be repeated more than two times (a total of three enrollments). A semester or term in which the student withdraws from the course with a grade of "W" will be counted as an attempt. A student may not repeat any course off-campus that has been previously attempted at Christian Brothers University. RN to BSN students may only repeat a total of two nursing courses. Any student who receives financial aid should consult the Student Financial Aid Office regarding the effect repeating a course has on their financial aid.

COURSE AUDIT

Students may register to audit courses with the approval of their Academic Advisor (special students are assigned to the Department Chair) and the Instructor, during the first week of classes. Auditors are not required to prepare assignments, take examinations, or take part in class discussion.

Students wishing to audit courses must submit an approved "Course Audit Form". All audited courses will receive the "AU" grade if in the judgment of the instructor, they have attended a sufficient number of classes to deserve that grade. Faculty members will base their decisions for awarding the "AU" only on attendance.

If the student does not have an adequate attendance record, the "UA" (unsatisfactory audit) grade will be given.

Tuition for audited courses will be one-half of that charged for the regular credit courses on a per credit hour basis. For detailed policies regarding course audit, contact the Office of the Registrar.

DEAN'S LIST

Superior scholarship among full-time undergraduates is recognized by the publication of the Dean's List after each announcement of semester grades. Students awarded Dean's List honors have carried a minimum of 12 hours and have earned a minimum Grade Point Average of 3.4. Any grade of "D," "F," "I," or "U" automatically eliminates a student from this recognition, regardless of other grades. Courses in which the grade given is "P" (pass) are not included in any calculations for the Dean's List.

ACADEMIC CONTINUATION

To be eligible to continue at Christian Brothers University, a student must maintain a cumulative Grade Point Average (GPA) at or above the minimum acceptable level shown in the following chart:

TOTAL CREDITS	MINIMUM ACCEPTABLE GPA
1-23	1.50
24-59	1.70
60 or more	2.00

RN to BSN students must maintain a 2.0 grade point average overall and earn a grade of C or better in all nursing courses. RN to BSN students may repeat up to two courses in an attempt to earn the grade of C.

ACADEMIC PROBATION

A student whose cumulative GPA falls below the minimum acceptable level in any semester will be placed on Academic Probation for the subsequent semester. If the student attains at least the minimum acceptable cumulative GPA during the probationary semester, Academic Probation will be removed. A student who is returning on probation is limited to 15 hours per semester unless written permission to carry more hours has been obtained from the Vice President for Academics.

If the student does not attain the minimum acceptable cumulative GPA during the probationary semester but does attain a semester GPA of at least 2.00, the student will remain on Academic Probation and may continue at the University.

PROBATION FAILURE

If the student does not attain the minimum acceptable cumulative GPA during the probationary semester and does not attain a semester GPA of 2.00, the student has failed probation and will be suspended from the University for one semester (Fall or Spring).

Any student who has been suspended because of a failing average will not be eligible to reenter the University until he or she has stayed out at least one semester (Fall or Spring). Credits earned during the semester of suspension because of probation failure are not transferable for re-entry into the University. After the suspension semester, the student may reapply to the University; however, readmission is not guaranteed.

READMISSION

To be readmitted, a student who has been suspended or has been absent for a semester other than the Summer must make application for readmission to the Office of Admissions or the College of Adult Professional Studies . Any student applying for readmission who does not have a minimum acceptable GPA must have his or her records reviewed by the Vice President for Academics or an administrator delegated by the Vice President for this purpose. Readmission is not automatic; the Vice President for Academics or his or her delegate may approve or refuse the application.

Technology intensive courses that are over seven (7) years old are subject to review and may not be applicable towards the major; however, such courses may be used as free electives in the overall program.

A student who has been previously suspended and readmitted will be placed on Academic Probation during the first semester back at the University. Any student who has not attended CBU for one academic year or longer will be placed under the degree requirements and academic regulations listed in the catalog of the year of re-entry. Any prior work, whether transfer or CBU credits, will be re-evaluated.

Students in the RN to BSN program must complete a new Personal Statement and update the TB skin test, CPR, RN License, background test and drug screen.

CHANGE OF PROGRAM

Any currently enrolled student who wishes to change programs must complete a Change of Degree Program request form with the Office of the Registrar. Change of program requests will only be accepted during the interval between the end of each semester and prior to the end of the add/drop period for the next semester. Undergraduate students must declare a major by the time they begin their fifth full-time semester or attain junior status, whichever comes first.

ADD/DROP

The last day for adding and dropping classes is listed in the University Calendar. After this add / drop period, a student may withdraw from a course but may not add any new courses.

TRANSCRIPT OF CREDITS

Students who transfer from Christian Brothers University to another institution are entitled to a transcript of their record. Transcripts will not be issued unless a student's financial account is settled in full. Before a transcript can be released, the student must provide a written request with his/her signature and the required fee. All transcript requests must be submitted electronically. For additional information, refer to the CBU website.

HONORABLE DISMISSAL

To receive an honorable academic dismissal a student must either remain until the end of the semester or obtain written permission from the Dean of Academic Services (for Day students) or the Dean of the College of Adult Professional Studies (for CAPS students) to withdraw.

CONFIDENTIALITY OF STUDENT RECORDS

In accordance with the Family Educational Rights and Privacy Act of 1974, Christian Brothers University students have the right to review, inspect and challenge the accuracy of information kept in a cumulative file by the institution. It also ensures that records cannot be released without written consent of the student except in the following situations:

1. To school officials and faculty who have a legitimate educational interest, such as a faculty advisor;
2. Where the information is classified as "directory information." The following categories of information have been designated by Christian Brothers University as directory information: name, address, telephone listing, email address, date and place of birth, major field of study, enrollment status, classification (level), photo, electronic images, participation in officially recognized activities and sports, weight and height of athletic team members, dates of attendance, degrees and awards received, the most recent previous educational institution attended by the student, and information needed for honors and awards. Students who do not wish such information released without their consent should notify the Office of the Registrar in writing prior to the end of the first week of classes;
3. Exemptions as allowed by law.

A complete statement of the University's policy on the confidentiality of student records may be found in the student handbook, *The Compass,* located at http://www.cbu.edu/the-compass.

SPECIAL PROGRAMS

HONORS PROGRAM: The CBU Honors Program is designed to serve the capacities and needs of students with proven academic abilities who seek a more intensive and challenging educational experience. Students accepted into the Honors Program will be allowed to take special topics courses offered to only a limited number of Honors students by a teacher carefully chosen for his or her teaching expertise. These Honors courses will explore important topics in depth, often through a multi-disciplinary approach, and while the pace and the workload will demand self-motivated, self-reliant students, the small size of each Honors class will ensure ample group discussion and individual interaction with the instructor. Honors students earn an Honors Diploma by completing seven honors courses with a grade of "C" or better, including HUM 498, Honors Capstone, graduating with a 3.2 GPA, and participating in the required number of Honors Program activities each semester. Besides taking Honors classes, members of the program will participate in various extracurricular activities, including outings to cultural events and regional Honors conferences. Members of the Honors Program will have the option of living with other Honors Program students in the Honors Living Learning Community (LLC). For further information about the Honors Program, please consult the Honors Program Web page on the university website or contact the Honors Program Director at (901) 321-3357.

ENGINEERING INTERN PROGRAM: At the conclusion of their sophomore year, engineering students may be eligible to apply for a for-credit intern appointment with participating Mid-South industries. Eligibility requirements for each appointment are available in the Engineering School Office.

GREATER MEMPHIS CONSORTIUM AGREEMENT: Christian Brothers University is a charter member of the Greater Memphis Consortium. The other participating colleges include: LeMoyne-Owen College, Memphis College of Art, and Memphis Theological Seminary. The courses offered by each member school are open to enrolled full-time students in good standing at one of the consortium institutions on a space available basis for one course per semester (lecture and corresponding lab are considered "one course" provided they meet the prerequisite requirements). Students may register at a "host" school with an approved Greater Memphis Consortium Registration form, a letter of good standing from the Registrar of the student's "home" school, and a copy of the student's transcript. The limitation imposed by the American Association of Theological Schools on undergraduates in seminary class is recognized. There is no additional charge to full time students for courses taken at another consortium school except for course/laboratory/supplies required specifically for the registered course. Courses taken during summer sessions are not covered by the consortium agreement. To be eligible to take courses at other Memphis colleges under the Consortium, students taking undergraduate courses must have at least twelve (12) hours per semester at CBU to be considered full time; students taking graduate courses must have at least nine (9) hours per semester at CBU to be considered full time. While in some cases students categorized as graduate students may be taking undergraduate courses as prerequisites or for other reasons, at least twelve (12) of these undergraduate hours are required to be taken at CBU in order to be considered full time for Consortium purposes. If a student is taking a mix of undergraduate and graduate courses, at least twelve (12) hours are required in order to be considered full time for Consortium purposes.

RHODES COLLEGE CROSSTOWN AGREEMENT: Through an agreement with Rhodes College, full-time students at Christian Brothers University have the opportunity (on a space-available basis) to enroll in specific language courses taught at Rhodes College, provided that they meet the prerequisite requirements. Students must contact the Dean of the School of Arts, and appropriate forms must be completed prior to the beginning of the semester. Christian Brothers University will provide, on a space-available basis (to be determined by the relevant academic department), opportunities for full-time students at Rhodes College to enroll in certain science, engineering, and education courses. Students may not be "Crosstown" students when Rhodes College offers the required courses and there not any time conflicts within the student's schedule. There is no additional charge to full time (12 - 18 hours) students for courses taken that are covered under this agreement.

RESERVE OFFICERS TRAINING CORPS: Through an agreement with the Department of Aerospace Studies, The Department of Military Science, and the Department of Naval Science at the University of Memphis, students at Christian Brothers University may enroll in their Air Force Reserve Officers' Training Corps (AFROTC), the Army Reserve Officers' Training Corps (AROTC), or the Naval Reserve Officers' Training Corps (NROTC) programs. Under the terms of these agreements, freshmen and sophomores may register for AFROTC, AROTC, or NROTC courses at the same time they register for their other courses. Enrollment in either of these two years does not entail any commitment to the Army, Air Force, or Navy, and all uniform items are provided by the University of Memphis where the courses are held. Credit for these courses counts toward the degree being earned at Christian Brothers University. In addition, students are eligible to apply for AFROTC, AROTC, and NROTC scholarships.

STUDY ABROAD PROGRAM: Christian Brothers University views study abroad as a challenging educational and cross-cultural experience. Additionally, research confirms that in today's global economy, exploring one's worldview enhances employment opportunities. The purpose of the program is to expose students to the people and cultures of other nations, to provide on-site observation of historical, scientific, economic and cultural phenomena, and to provide opportunities for foreign language study within the cultural context of the target languages. Christian Brothers University maintains affiliation with a select group of study abroad programs in several countries. Students select a study abroad experience, semester or travel study (short trip), in consultation with their Academic Advisor and the Director of International Initiatives. Travel Study trips are open to all students with approval of the Director of International Initiatives. Final approval for semester study abroad comes from the student's advisor, the Department Chair of the student's major, and the Director of International Initiatives. Requirements for semester study abroad include:

1. Sophomore year standing or higher.
2. Minimum cumulative GPA and major GPA of 2.5.
3. Brief essay outlining the student's goals for study abroad.
4. Any additional requirements of the specific program.

Information may be obtained from the Director of International Initiatives at (901) 321-3461 or studyabroad@cbu.edu.

SCHOOL OF ARTS

ADMINISTRATION

DR. SCOTT D. GEIS, *Dean*

DR. NEAL A. PALMER, *Chair of History & Political Science*

DR. JEFFREY GROSS, *Chair of Literature & Languages*

DR. RODNEY J. VOGL, *Chair of Behavioral Sciences*

DR. SAMANTHA ALPERIN, *Chair of Education, Director of Undergraduate Education*

DR. JAMES B. WALLACE, *Chair of Religion & Philosophy*

MS. JANA TRAVIS, *Chair of Visual & Performing Arts*

FACULTY

BEHAVIORAL SCIENCES

TRACIE L. BURKE, *Professor*
BS, University of Montana; MS, MA, EdD, University of Memphis

MARY F. CAMPBELL, *Assistant Professor*
BS, MA, University of Memphis, PhD, University of Alabama

M. KELLY JAMES, *Assistant Professor*
BA, MA, University of Memphis; PhD, Louisiana State University

CHANDA S. MURPHY, *Instructor*
BA, Christian Brothers University; MS, PhD, The University of Memphis

MAUREEN E. O'BRIEN, *Associate Professor*
BA, Christian Brothers University; MS, The University of Memphis;
PhD, University of North Carolina Greensboro

JEFFREY J. SABLE, *Associate Professor*
BA, Drury College; MS, Kansas State University; PhD, University of Missouri-Columbia

COLBY D. TAYLOR, *Visiting Assistant Professor*
BA, MS, PhD, The University of Memphis

RODNEY J. VOGL, *Professor*
BS, University of Iowa; MS, PhD, Kansas State University

EDUCATION

SAMANTHA M. ALPERIN, *Professor*
BSBA, University of Tennessee; MAT, EdD, University of Memphis

WENDY ASHCROFT, *Associate Professor*
BA, Rhodes College; MEd, Memphis State University; EdD, Memphis State University

CORT CASEY, *Associate Professor*
BBA, University of Mississippi, MAT; University of West Alabama; EdD, University of Memphis

RICHARD POTTS, *Associate Professor*
BA, Southern Illinois University; MEd, MA, and EdD, The University of Memphis

BROTHER MICHAEL A. SCHMELZER, *Assistant Professor*
BA, Christian Brothers College; MAT, St. Mary's College; PhD, The Ohio State University

LAVERN TERRELL, *Associate Professor*
BM, Samford University; MA, Clark Atlanta University; EdD, East Tennessee State University

NANCY WILDER, *Assistant Professor*
BS, MEd, The University of Memphis

HISTORY & POLITICAL SCIENCE

MARIUS M. CARRIERE JR., *Professor*
BA University of Louisiana-Lafayette;
MA, Stephen F. Austin State University; PhD, Louisiana State University

BENJAMIN JORDAN, *Associate Professor*
BA Bard College, MA, PhD University of California San Diego

KARL LEIB, *Associate Professor*
BA, SUNY Albany; MA, SUNY Albany, PhD, Syracuse University

NEAL A. PALMER, *Associate Professor*
BA, Vanderbilt University; MA, The University of Memphis; PhD, University of Rochester

LITERATURE & LANGUAGES

KAREN B. GOLIGHTLY, *Associate Professor*
BA, Rhodes College; M.F.A., University of Memphis; PhD, Southern Illinois University

FEDERICO C. GOMEZ UROZ, *Assistant Professor*
BS, MS, University of Granada, Spain; MA, The University of Memphis

JEFFREY GROSS, *Associate Professor*
BA, Canisius College; MA, Indiana State University; PhD, University of Kentucky

ALISON A. LUKOWSKI, *Assistant Professor*
BA, Alma College; MA, Loyola University, Chicago; PhD, Northern Illinois University

KARYNA E. McGLYNN, *Visiting Assistant Professor*
BA, Seattle University; MFA, University of Michigan; PhD, University of Houston

VINCENT O'NEILL, *Visiting Professor*
BA, MA, University of Windsor, Ontario; PhD, University College of the University of London, England

CLAYANN GILLIAM PANETTA, *Professor*
BA, Blue Mountain College; MA, PhD, Old Dominion University

JULIETTE M. PAUL, *Assistant Professor*
BA, Providence College; MA, PhD, University of Missouri

TAWNY LEBOUEF TULLIA, *Visiting Assistant Professor*
BFA, University of Louisiana at Lafayette; MA, PhD, Texas Woman's University

SARAH K. WOODS, *Instructor*
BA, MA, University of Mississippi

ANN MARIE WRANOVIX, *Professor*
BA, Vanderbilt University; MA, PhD, Yale University

RELIGION & PHILOSOPHY

R. BRUCE CINQUEGRANI, *Visiting Assistant Professor*
BA, Assumption College (Worcester, MA); MDiv, St. Meinrad School of Theology; MA, University of Notre Dame; DMin, Barry University

J. BURTON FULMER, *Associate Professor*
BA, Georgetown University; MA, George Mason University; PhD, Vanderbilt University

SCOTT D. GEIS, *Professor*
BA, Bethel College; MDiv, Bethel Theological Seminary; MTh, Duke University; PhD, Marquette University

PAUL HAUGHT, *Associate Professor*
BA, Georgetown University; MA, University of North Texas; PhD, Tulane University

EMILY A. HOLMES, *Associate Professor*
BA, Tulane University; MPhil, University of Cambridge; M.T.S., Harvard University; PhD, Emory University

LEIGH M. JOHNSON, *Assistant Professor*
BA, University of Memphis; MA, Villanova University; PhD, The Pennsylvania State University

PHILIP J. MALONEY, *Professor*
BA, MA, University of Montana; PhD, University of Memphis

JAMES B. WALLACE, *Associate Professor*
BA, The University of the South; MDiv, PhD, Emory University

VISUAL & PERFORMING ARTS

MATTHEW HAMNER, *Associate Professor*
BSA, Auburn University; MFA, University of Central Florida

NICHOLAS PEÑA, *Associate Professor*
BFA, Southern Illinois University; MFA, University of Missouri

JANA B. TRAVIS, *Professor*
BFA, MFA, The University of Memphis

PROFESSORS EMERITI

ELIZABETH P. BROADWELL, *Literature & Languages*
BA, Guilford College; MA, PhD, University of North Carolina at Chapel Hill

CONRAD BROMBACH, *Behavioral Sciences*
BA, St. Mary's College (Winona); MEd, Loyola University (Chicago); MA, St. Louis University; EdD, University of New Orleans

MARY T. CARGILL, *Literature & Languages*
BA, MA, Memphis State University; PhD University of Mississippi

RENA DURR, Behavioral Sciences
BS, MA, PhD, Louisiana State University

STEPHEN E. GRICE, *Literature & Languages*
AB, University of Illinois, MA, PhD, University of Southern Illinois

PETER F. LIMPER, *Religion & Philosophy*
BA, MA, PhD, Yale University

MARGARET A. MILLER, *Behavioral Sciences*
BA, Carlow College; MEd, PhD, University of Pittsburgh

ELIZABETH M. NELSON, *Behavioral Sciences*
BA, MA, MS, PhD, Kansas State University

KRISTIN A. PRUITT, *Literature & Languages*
BA, Southwestern at Memphis; PhD, University of North Carolina

PART-TIME FACULTY

DOUGLAS CUPPLES, *Adjunct Assistant Professor of History*
BA, MA, PhD, The University of Memphis

MISSION

To advance the LaSallian synthesis of knowledge and service by teaching students to think, communicate, evaluate, and appreciate.

OVERVIEW

The School of Arts is the heart of the educational experience at Christian Brothers University. Through courses taken in the School of Arts, majors from all four Schools develop broad general knowledge in the arts, humanities, and social sciences. They develop skills in different forms of inquiry, abstract logical thinking, and critical analysis. Studies in the School of Arts provide an array of opportunities for students to enhance their abilities to think, read, write, and speak while cultivating historical, ethical, religious, literary, and social scientific consciousness.

In choosing a major within the School of Arts, students join a particular intellectual community of learners and take part in its special way of exploring the world and the self, thereby preparing for a wide variety of educational and professional choices. All School of Arts majors take a variety of courses from across departmental disciplines selected for the purpose of providing breadth, depth, and richness to their educational experience.

All of the courses needed to obtain a degree in each major are specified within the course requirement presentations that follow.

THE SIX DEPARTMENTS WHICH COMPOSE THE SCHOOL OF ARTS ARE:

BEHAVIORAL SCIENCES which includes study in Psychology and Sociology as well as Anthropology and Criminal Justice. The department offers a BA degree in both Applied Psychology and Psychology and minors in Anthropology, Cognitive Neuroscience, Criminology, Engineering Psychology, Psychology, and Sociology;

EDUCATION which includes undergraduate, post-baccalaureate, and graduate programs leading to licensure by the Tennessee Department of Education at both elementary and secondary levels. In conjunction with academic departments in the School of Arts and in the School of Sciences, the Department of Education prepares undergraduate students earning BS or BA degrees in a number of areas to meet teacher licensure requirements (see page 59 for details);

VISUAL & PERFORMING ARTS which includes studies in Art, Speech, and Theatre. The department offers a BFA in Visual Art with concentrations in Graphic Design, Studio Arts, and Art Therapy and minors in Art and Theatre Arts. Courses are offered under the following headings: Art, Speech, and Theater;

HISTORY & POLITICAL SCIENCE which offers a major in History and minors in History, Political Science, and American Studies;

LITERATURE & LANGUAGES which offers majors and minors in English, a major in English for Corporate Communications, a major in Creative Writing and minors in French and Spanish;

RELIGION & PHILOSOPHY which offers courses under the headings of Humanities, Philosophy, and Religious Studies, and programs in Peace Studies and Women's and Gender Studies. The Religion & Philosophy major offers concentrations in Philosophy and Religion.

The course of studies for each of the degrees offered within the School is designed to provide the student with opportunities to choose courses outside of his or her major either from among the many courses provided by the School of Arts or from among those provided by the other Schools. A faculty advisor is assigned to each student to assist in selecting courses and in shaping the total academic experience.

DEGREE REQUIREMENTS

All students majoring in disciplines within the School of Arts are required to complete courses in the Liberal Arts Core. The purpose of the Liberal Arts Core is to provide a common background of knowledge in the humanities and social sciences which serves as a context for more specialized study in the individual major. The core is intended to provide exposure to the differing methods and modes of inquiry appropriate to various disciplines as well as to the assumptions upon which the disciplines are grounded, their knowledge claims, and their limitations. It seeks to provide opportunities for students to make conscious connections between specialized learning and basic human concerns and to build a durable foundation for lifelong learning.

Core courses seek the development of skills in different forms of inquiry, abstract logical thinking, critical analysis and informed judgment. Particular emphasis is placed on the development of the ability to bring what one has learned in one context to another, from one discipline to another, and from one community to another. These goals are sought within an atmosphere of free inquiry, dialogue, and interfaith concern.

Some majors may require specific courses (see following pages) to fulfill the Liberal Arts Core or the University General Education requirements (see page 28). Students seeking Teacher Licensure must meet special requirements (see page 59). The Liberal Arts Core requirements are as follows:

Foreign Language Cluster[1]
FOREIGN LANGUAGE (12 hours)
Courses must be in a single language: Chinese, French, German, Greek, Latin, Russian or Spanish. Students must pass a foreign language course at the 202 level. If this requires less than 12 hours credit of course work as determined by a placement test, the remaining hours are free electives. Students may request a challenge exam for courses at the 202 level (or higher) in a foreign language. Challenge exams are not offered for foreign language courses below the 202 level, but students may take a placement test upon enrollment or anytime thereafter. For foreign languages not offered at CBU, please contact the chair of Literature and Languages to determine placement and credit options. School of Arts majors who take their foreign language courses at Rhodes College fulfill the language requirement by passing a foreign language class at the 201 level at Rhodes.

Humanities Cluster*
VISUAL & PERFORMING ARTS (6 hours)
Any combination of Art or Theatre courses except ART 475 or THEA 475

PHILOSOPHY OR HUMANITIES (3 hours)
HUM 150, 200, 210, 498, GS 200, PHIL 2@, 3@ or 4@ Except PHIL 497 or 498

LITERATURE (3 hours)
ENG 212, 211, 221, 222, 231, 315, 331, 332, 339, 340, 341, 342, 343, 351, 352, 354, 361, 362, 376, 432, 440, 441, 442, 443, 444, 445, 446, 447 or 450

HISTORY (6 hours)
Any HIST except HIST 498 or 499

Social Science Cluster*
POLITICAL SCIENCE (3 hours)
Any POLS Course

BEHAVIORAL SCIENCE (3 hours)
Any ANTH, CJ, PSYC, or SOC Course Except PSYC 110

*One course from Humanities or Social Science clusters must have a "global perspective". Choose from: ANTH 160, ART 101, 211, 212, ENG 231, 232, HIST 107, 108, HUM/GS 200, PHIL 324, 325, POLS 113, 115, RS 270, 355 or 360.

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN APPLIED PSYCHOLOGY

APPS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	PSYC 354		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, add 1 hr to Free Elect
Religious Studies (RS 200 Level)	#	3	
Religious Studies (RS 300 Level)	#	3	
Social Science or History	SOC 101		Fulfilled by Major Requirements
Social Science or History	PSYC 105		Fulfilled by Major Requirements
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics	#		Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**25**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language.
Fine Arts	*	6	ART 314/L Required for Consumer Behavior Concentration
Literature	*	3	
Philosophy / Humanities	*	3	
History	*	6	
Behavioral Science	ANTH 160		Fulfilled by Major Requirements
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**33**	

APPLIED PSYCHOLOGY MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Cultural Anthropology	ANTH 160	3	
Business Communications	ENG 371	3	Grade of "C" or Higher Required
Organizational Behavior & Management or Foundations of Management		3	Choose from MGMT 227 or 352
Human Resources Management	MGMT 412	3	
General Psychology	PSYC 105	3	Grade of "C" or Higher Required
Psychology Colloquium	PSYC 110	1	
Personality	PSYC 219	3	
Fundamentals of APA Writing Style & Ethics	PSYC 235	3	
Problem Solving & Decision Making	PSYC 305	3	Grade of "C" or Higher Required
Human Factors	PSYC 306	3	
Psychopathology	PSYC 317	3	
Industrial & Organizational Psychology	PSYC 350	3	
Social Psychology	PSYC 353	3	
Correlational Research Methods & Statistics	PSYC 354	3	
Industrial & Organizational Psychology	PSYC 355	3	
Psychology of Leadership	PSYC 420	3	
Personnel Psychology	PSYC 435	3	
Cognitive Psychology	PSYC 440	3	
Practicum in Psychology	PSYC 460	3	
Psychology Comprehensives	PSYC 497	0	
Behavioral Science or School of Business Elective		3	Recommended: BLAW 301, PSYC 275, 364, or 453
Introduction to Sociology	SOC 101	3	
TOTAL HOURS FOR APPS MAJOR		**61**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		3	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**3**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 122

2.0 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN CREATIVE WRITING

CRWT

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics			Fulfilled by SOA Support Requirements
English Composition I	ENG 111		Fulfilled by Major Requirements
English Composition II	ENG 112		Fulfilled by Major Requirements
British Literature I	ENG 221		Fulfilled by Major Requirements
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**22**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must Be in a Single Language
Fine Arts	*	6	
Literature	ENG 222		Fulfilled by Major Requirements
Philosophy / Humanities	*	3	
History	*	6	
Behavioral Science	*	3	
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**33**	

SCHOOL OF ARTS SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
History Upper Level Course		3	May Not Take HIST 401 or 402
Intro to Logic or Elem. Business Statistics	PHIL 201 or STAT 221	3	
Ancient, Modern **or** Contemporary Philosophy		3	Choose From PHIL 317, 318 or 320
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**9**	

CREATIVE WRITING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
English Composition I	ENG 111	3	
English Composition II	ENG 112	3	
Introduction to Literature I or II	ENG 211 or 212	3	
Survey of British Literature I	ENG 221	3	
Survey of British Literature II	ENG 222	3	
Creative Writing	ENG 376	3	
Jr Seminar Creative Writing Majors	ENG 478	3	May Take ENG 479
Sr Project Creative Writing Majors	ENG 481	3	If Completed ENG 479, May Take ENG 480
Creative Writing Major Courses		12	Choose 12 Hours of the Following: ENG 373, 374, 378, 379, 401, 451, 464, 486, or 499
Upper-Level Literature Course		15	Choose 15 Hours of the Following: ENG 315, 331, 332, 340, 341, 342, 343, 339, 340, 351,352,354,361,362,432, 440, 441, 442, 443, 444, 445, 446, 447, 450
TOTAL HOURS FOR CREATIVE WRITING MAJOR		**51**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES: (Elective hrs. must be outside the student's major. Only 3 hrs. of cross-listed courses may be used to satisfy Major Requirements. Transfer students must take half of their upper-level hrs. in English at CBU.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Major-Specific Electives		6	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**6**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 121 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN CULTURAL STUDIES

CUST

(Leading Toward Licensure at MAT Level Only)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 105	3	
Statistics	PHIL 201	3	
English Composition I	ENG 111	3	May AlsoTake ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Free Elect
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	HIST 151	3	
Social Science or History	PSYC 105	3	
Natural or Physical Science	BIOL 107/L	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**34**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language.
Fine Arts	*	6	
Literature	ENG 212	3	
Philosophy / Humanities	*	3	
History	HIST 107	3	
History	HIST 108	3	
Behavioral Science	SOC 101	3	
Political Science	POLS 112	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**36**	

CULTURAL STUDIES MAJOR REQUIREMENTS: (2.75 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Cultural Anthropology	ANTH 160	3	
Survey of British Literature I	ENG 221	3	
Survey of British Literature II	ENG 222	3	
English Electives in American Lit (300/400 Level)	*	6	
American History Since 1877	HIST 152	3	
Upper Level History Electives	*	6	
Survey of Science w/ Lab	NSCI 115/L	4	May Also Take NSCI 111IL
World Politics	POLS 113	3	
Human Development	PSYC 218	3	
Sociology of the Family	SOC 351	3	
TOTAL HOURS FOR CULTURAL STUDIES MAJOR		**37**	

PROFESSIONAL EDUCATION REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to Education	EDUC 211	3	
Practicum in Education	EDUC 402	3	
Geography Survey	GEOG 280	3	
Educational Psychology	PSYC 315	3	
Speech Communication	SPCH 125	3	
TOTAL HOURS FOR PROFESSIONAL EDUCATION		**15**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.75 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN EARLY CHILDHOOD EDUCATION, PRE-K-4

EACH

(Teaching Licensure PreK-4)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	PHIL 201		Fulfilled by SOA Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	ENG 211	3	Waived if ENG 231/232, Add 1 Hr. to Free Electives
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	HIST 151	3	
Social Science or History	PSYC 105	3	
Natural Science	#	4	Choose From: NSCI 111/L or 115/L
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**31**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language
Fine Arts	*	6	
Literature	ENG 212	3	Fulfilled by Major Requirements
Philosophy / Humanities	PHIL 201	3	
History	HIST 107	3	
History	HIST 108	3	
Behavioral Science	SOC 101	3	
Political Science	POLS 112	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**36**	

EARLY CHILDHOOD MAJOR REQUIREMENTS: (2.75 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Characteristics of Early Childhood Education	ECDV 430	3	
Methods of Teaching Early Childhood Education	ECDV 431	3	
Professional Foundations I	EDUC 303	3	
Professional Foundations II	EDUC 304	3	
Survey of Exceptional Learners	EDUC 331	3	
Portfolio & Practicum - TVAAS	EDUC 332	1	
Portfolio & Practicum I	EDUC 350	1	
Portfolio & Practicum II	EDUC 420	1	
Classroom Management & Methods	EDUC 407	3	
Curriculum & Methods in Lanaguage Arts, PreK-4	EDUC 405	3	
Curriculum & Methods in Science, PreK-4	EDUC 411	3	
Curriculum & Methods in Social Studies, PreK-4	EDUC 412	3	
Curriculum & Methods in Mathematics, PreK-4	EDUC 422	3	
Creative Expressions in Elementary Schhols, PreK-4	EDUC 424	1	
Teaching Practicum III	EDUC 473	4	
Professional Seminar & Portfolio III	EDUC 474	1	
Numerical Concepts for Elementary Teachers	MATH 151	3	
Rhythmic Activities & Games	PE 201	1	
Educational Psychology	PSYC 315	3	
Social Psychology	PSYC 353	3	
Sociology of the Family	SOC 351	3	
Speech Communication	SPCH 125	3	
TOTAL HOURS FOR EARLY CHILDHOOD MAJOR		**55**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		3	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**3**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 125 **2.75 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN ENGLISH

ENG

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	#		Fulfilled by SOA Support Requirements
English Composition I	ENG 111		Fulfilled by Major Requirements
English Composition II	ENG 112		Fulfilled by Major Requirements
British Literature I	ENG 221		Fulfilled by Major Requirements
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**22**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must Be in a Single Language
Fine Arts	*	6	
Literature	ENG 222		Fulfilled by Major Requirements
Philosophy / Humanities	*	3	
History	*	6	
Behavioral Science	*	3	
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**33**	

SCHOOL OF ARTS SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
History Upper Level Course		3	May Not Take HIST 401 or 402
Intro to Logic or Elem. Business Statistics	PHIL 201 or STAT 221	3	
Ancient, Modern **or** Contemporary Philosophy		3	Choose From PHIL 317, 318 or 320
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**9**	

ENGLISH MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
English Composition I	ENG 111	3	
English Composition II	ENG 112	3	
Introduction to Literature I or II	ENG 211 or 212	3	
Survey of British Literature I	ENG 221	3	
Survey of British Literature II	ENG 222	3	
Jr. Seminar for English Majors	ENG 479	1	
Sr. Seminar for English Majors	ENG 480	3	
Group 1 Upper Division English Major Courses		9	Choose 9 Hours From: ENG 331, 339, 432, 440, 441, 442, 443, 444, 445 or 447
Group 2 Upper Division English Major Courses		9	Choose 9 Hours From: ENG 332, 340, 341, 342, 343, 351, 352, 354, 361, 446 or 450
Upper-Level English Courses		9	Choose 9 Hours of ENG 3@ or ENG 4@
TOTAL HOURS FOR ENGLISH MAJOR		**46**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES: (Elective hrs. must be outside the student's major. Only 3 hrs. of cross-listed courses may be used to satisfy Major Requirements. Transfer students must take half of their upper-level hrs. in English at CBU.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		12	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**12**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN ENGLISH EDUCATION

ENGE

(Teaching Licensure 6-12)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	PHIL 201	3	
English Composition I	ENG 111		Fulfilled by Major Requirements
English Composition II	ENG 112		Fulfilled by Major Requirements
British Literature I	ENG 221		Fulfilled by Major Requirements
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	HIST 107	3	
Social Science or History	PSYC 105	3	
Natural or Physical Science	#	4	Choose from NSCI 115/L or NSCI Elective with Lab
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**25**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must Be in a Single Language
Fine Arts	*	6	
Literature	ENG 222		Fulfilled by Major Requirements
Philosophy / Humanities	*	3	
History	HIST 151	3	
History	HIST 152	3	
Social Science	SOC 101	3	
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**33**	

ENGLISH MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
English Composition I	ENG 111	3	
English Composition II	ENG 112	3	
Survey of British Literature I	ENG 221	3	
Survey of British Literature II	ENG 222	3	
300+ Level Writing Courses		6	Choose From: ENG 300, 301, 303, 371, 373 or approved Special Topics courses
300+ Level American Literature Courses		3	Choose From: ENG 331, 332, 341, 342, 343, 361 or approved Special Topics courses
300+ Level Literature		6	
Introduction to Education	EDUC 211	3	
Practicum in Education	EDUC 402	3	
Adolescent Literature	EDUC 428	3	
Literacy across the Curriculum	EDUC 429	3	
Speech Communication	SPCH 125	3	
Educational Psychology	PSYC 315	3	
TOTAL HOURS FOR ENGLISH MAJOR		**45**	

LICENSURE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Teaching English/Language Arts, 6-12	EDCI 435	3	
Professional Foundations I	EDUC 303	3	
Professional Foundations II	EDUC 304	3	
Survey of Exceptional Learners	EDUC 331	3	
Portfolio and Practicum - TVAAS	EDUC 332	1	
Classroom Management & Methods	EDUC 407	3	
Curriculum & Assessment In 6-12 Schools	EDUC 430	3	
Student Teaching - Elementary Level I	EDUC 431	6	
Student Teaching - Elementary Level II	EDUC 432	6	
Teaching Practicum III	EDUC 473	1	
TOTAL MAJOR & CONCENTRATION REQUIREMENTS		**32**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 135 **2.75 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN ENGLISH FOR CORPORATE COMMUNICATIONS

ECC

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	PHIL 201 or STAT 221		
English Composition I	ENG 111		Fulfilled by Major Requirements
English Composition II	ENG 112		Fulfilled by Major Requirements
British Literature I	ENG 221		Fulfilled by Major Requirements
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**22**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language.
Fine Arts	ART 314/L	3	
Fine Arts	*	3	
Literature	ENG 222		Fulfilled by Major Requirements
Philosophy / Humanities	*	3	
History	*	6	
Behavioral Science	*	3	
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**33**	

ENGLISH FOR CORPORATE COMMUNICATION MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
English Composition I	ENG 111	3	
English Composition II	ENG 112	3	
Introduction to Literature I or II	ENG 211 or 212	3	
Survey of British Literature I	ENG 221	3	
Survey of British Literature II	ENG 222	3	
Communication Theory	ENG 300	3	
Intercultural Communication	ENG 301	3	
ECC Junior Seminar	ENG 302	1	
Digital Rhetoric	ENG 303	3	
Business Communications	ENG 371	3	
ECC Internship	ENG 489	3	
Upper-Level Literature Courses		9	Choose 9 hours of ENG 315, 331, 332, 339, 340, 341, 342, 343, 351, 352, 354, 361, 362, 376, 432, 440, 441, 442, 443, 444, 445, 446, 447, 450, or approved special topics.
Business or Industrial & Organizational Psychology Elective		3	Choose one of the following: ACCT 260, ECON 215, PSYC 350, 420, 435, STAT 221, or 300/400 Level class in BUS, BLAW, ECON, HTM, MGMT, or MKTG
Creative Writing Elective		3	Choose any Creative Writing course
English Elective		3	Choose any Communications, Rhetoric, Writing, or Literature course
Speech Communication	SPCH 125	3	
Principles of Microeconomics	ECON 214	3	
Principles of Marketing	MKTG 311	3	
Intro to Logic or Elem. Business Statistics	PHIL 201 or STAT 221	3	
TOTAL HOURS FOR ECC MAJOR		**61**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES: (Elective hrs. must be outside the student's major. Only 3 hrs. of cross-listed courses may be used to satisfy Major Requirements. Transfer students must take half of their upper-level hrs. in English at CBU.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Major-Specific Electives		6	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**6**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN HISTORY

HIST

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	HIST 498 or 499		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	If Completed ENG 231, May Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Sciences / History	HIST 151		Fulfilled by Major Requirements
Social Sciences / History	HIST 152		Fulfilled by Major Requirements
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**25**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language.
Fine Arts	*	6	
Literature			Fulfilled by Major Requirements
Philosophy / Humanities	*	3	
History	HIST 107		Fulfilled by Major Requirements
History	HIST 108		Fulfilled by Major Requirements
Behavioral Science	*	3	PSYC 105, SOC 101 or ANTH 160 Recommended
Political Science	POLS 112		Fulfilled by Major Requirements
TOTAL HOURS FOR LIBERAL ARTS CORE		**24**	

HISTORY MAJOR REQUIREMENTS: (2.0 GPA in Major Required. One 200 level History course may substitute for 300/400 level History course. Transfer students majoring in History must take at least 15 hours of 300/400 level History at CBU. A maximum of 3 hours of internship credit can be used toward major requirements.)

COURSE	COURSE NUMBER	CREDITS	NOTES
World Civilization to 1500	HIST 107	3	
World Civilization Since 1500	HIST 108	3	
American Society to 1877	HIST 151	3	
American Society Since 1877	HIST 152	3	
Upper Division US History		9	Choose 9 hours from HIST 342, 343, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 360 or 375
Upper Division Non-US History		9	Choose 9 hours from HIST 301, 304, 305, 306, 309, 313, 315, 324, 336, 339, 340, 341, 376, 377, 385, 386, 387, 388, 389
Upper Division History Electives		6	Choose 6 hours from HIST 300-497
Research Seminar		3	Choose either HIST 498 or 499 –Grade of "C" or higher required
American Government	POLS 112	3	
World Politics or Nations & States		3	Choose either POLS 113 or 115
Upper Division Political Science Electives		3	Choose 3 hours in POLS 2@, 3@, or 4@
Upper Division English Electives		3	Choose 1 class from: ENG 300, 301, 303, 315, 331, 332, 339, 340, 341, 342, 343, 351, 352, 354, 361, 362, 371, 373, 374, 375, 376, 378, 379, 380-399, 401, 432, 440, 441, 442, 443, 444, 445, 446, 447 or 450
TOTAL HOURS FOR HISTORY MAJOR		**51**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		21	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**21**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 121 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN HISTORY EDUCATION

HISE

(Teaching Licensure 6-12)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	MATH 105 Recommended
English Composition I	ENG 111	3	
English Composition II	ENG 112	3	May Also Take ENG 231
English Literature	#	3	If Completed ENG 231, May Take ENG 232
Religious Studies--RS (200 Level)	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies--RS (300 Level)	#	3	
Social Sciences / History	HIST 151		Fulfilled by Major Requirements
Social Sciences / History	HIST 152		Fulfilled by Major Requirements
Statistics	PHIL 201		Fulfilled by Liberal Arts Core
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**25**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	
Fine Arts	*	6	
Philosophy / Humanities	PHIL 201	3	
World Civilization to 1500	HIST 107		Fulfilled by Major Requirements
World Civilization since 1500	HIST 108		Fulfilled by Major Requirements
Behavioral Science	PSYC 105	3	Recommended Course (Prerequisite for PSYC 315)
Political Science	POLS 112		Fulfilled by Major Requirements
TOTAL HOURS FOR LIBERAL ARTS CORE		**24**	

HISTORY MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to Education	EDUC 211	3	
Practicum in Education	EDUC 402	3	
Geography Survey	GEOG 280	3	
World Civilization to 1500	HIST 107	3	
World Civilization since 1500	HIST 108	3	
American Society to 1877	HIST 151	3	
American Society Since 1877	HIST 152	3	
Upper Division US History		6	Choose 6 Hours From HIST 342, 343, 345, 346, 347, 348, 349, 350, 351, 360 or 375
Upper Division Non-US History		6	Choose 6 hours from HIST 301, 304, 305, 306, 309, 313,315, 324, 336, 339, 340, 341, 376, 377, 385, 386, 387, 388 or 389
Upper Division History Elective		3	Choose from any of the above
American Government	POLS 112	3	
Nations & States	POLS 115	3	
Upper Division Literature Electives		3	Choose 1 Class From: ENG 315, 331, 332, 339, 340, 341, 342, 343, 351, 352, 354, 361, 362, 376, 432, 440, 441, 442, 443, 444, 445, 446, 447 or 450
Educational Psychology	PSYC 315	3	
Speech Communication	SPCH 125	3	
TOTAL HOURS FOR HISTORY MAJOR		**51**	

LICENSURE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Teaching History/Social Studies, 6-12	EDCI 436	3	
Professional Foundations I	EDUC 303	3	
Professional Foundations II	EDUC 304	3	
Survey of Exceptional Learners	EDUC 331	3	
Portfolio and Practicum - TVAAS	EDUC 332	1	
Classroom Management & Methods	EDUC 407	3	
Literacy across the Curriculum	EDUC 429	3	
Curriculum & Assessment In 6-12 Schools	EDUC 430	3	
Student Teaching - Elementary Level I	EDUC 431	6	
Student Teaching - Elementary Level II	EDUC 432	6	
Professional Seminar and Portfolio III	EDUC 474	1	
TOTAL MAJOR & CONCENTRATION REQUIREMENTS		**35**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 135 **2.0 CUMULATIVE GPA REQUIRED***

* 2.75 Cumulative GPA required for licensure.

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN LIBERAL STUDIES, GRADES K-5

LIBR

(Licensure at Master of Arts in Teaching Level)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 105	3	Recommended course
Statistics	PHIL 201	3	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	HIST 151	3	Recommended course
Social Science or History	PSYC 105	3	Recommended course
Natural or Physical Science	BIOL 107/L	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**34**	

LIBERAL ARTS CORE: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language
Fine Arts	*	6	
Literature	ENG 212	3	
Philosophy / Humanities	*	3	
History	HIST 107	3	
History	HIST 108	3	
Social Science	SOC 101	3	
Political Science	POLS 112	3	
TOTAL HOURS FOR LIBR CORE & TN LICENSURE		**36**	

LIBERAL STUDIES MAJOR REQUIREMENTS: (2.75 GPA in Major Required)

COURSE			
	BIOL 109/L	4	
Human Biology & Lab		6	
English Electives (300/400 Level)	HIST 152	3	
American History Since 1877	MATH 151	3	
Numerical Concepts for Elementary Teachers	MATH 152	3	
Math Topics for Elementary Teachers	NSCI 115/L	4	May Also Take NSCI 111/L or 118/L
Survey of Science: HIST & EXP w/ Lab	PSYC 353	3	
Social Psychology	PSYC 315	3	
Educational Psychology	PSYC 218	3	
Human Development	SOC 351	3	
Sociology of The Family	GEOG 280	3	
Geography Survey	SPCH 125	3	
Speech Communication		3	
Free Elective		3	
Upper Division Elective (ENG/HIST/LANG)		**47**	
TOTAL HOURS FOR LIBERAL STUDIES MAJOR			

PROFESSIONAL EDUCATION REQUIREMENTS	COURSE NUMBER	CREDITS	NOTES
COURSE			
Introduction to Education	EDUC 211	3	
Practicum in Education	EDUC 402	3	
TOTAL HOURS FOR PROFESSIONAL EDUCATION		**6**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 123

2.75 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN LIBERAL STUDIES EDUCATION, GRADES K-5

LBSE

(with Teaching Licensure K-5)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 105	3	
Statistics	PHIL 201	3	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	HIST 151	3	
Social Science or History	PSYC 105	3	
Natural or Physical Science	BIOL 107/L	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**34**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	#	12	
Fine Arts	#	6	
Literature	ENG 212	3	
Philosophy / Humanities	#	3	
World Civilization to 1500	HIST 107	3	
World Civilization since 1500	HIST 108	3	
Behavioral Science	SOC 101	3	
Political Science	POLS 112	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**36**	

LIBERAL STUDIES MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Intro to Education	EDUC 211	3	
Professional Foundations I	EDUC 303	3	
Professional Foundations II	EDUC 304	3	
Exceptional Learners	EDUC 331	3	
Practicum in Education	EDUC 402	3	
Methods of Language Arts K-6	EDUC 405	3	
Methods of Language Arts 4-8	EDUC 406	3	
Classroom Management	EDUC 407	3	
Methods of Science K-6	EDUC 411	3	
Methods of Social Studies K-6	EDUC 412	3	
Methods of Mathematics K-6	EDUC 422	3	
Geography Survey	GEOG 280	3	
Numerical Concepts for Elementary Teachers	MATH 151	3	
Math Topics for Elementary Teachers	MATH 152	3	
Educational Psychology	PSYC 315	3	
Speech Communication	SPCH 125	3	
TOTAL HOURS FOR LIBERAL STUDIES MAJOR		**48**	
LICENSURE REQUIREMENTS			
COURSE	**COURSE NUMBER**	**CREDITS**	**NOTES**
Student Teaching I	EDUC 431	6	
Student Teaching II	EDUC 432	6	
Portfolio III	EDUC 474	1	
TOTAL MAJOR & CONCENTRATION REQUIREMENTS		**13**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 131 **2.00 CUMULATIVE GPA REQUIRED***

* 2.75 Cumulative GPA required for licensure.

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN PSYCHOLOGY

PSYC

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	PSYC 354		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Sciences / History	SOC 101		Fulfilled by Major Requirements
Social Sciences / History	PSYC 105		Fulfilled by Major Requirements
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**25**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language.
Fine Arts	*	6	
Literature	*	3	
Philosophy / Humanities	*	3	
History	*	6	
Behavioral Science	ANTH 160		Fulfilled by Major Requirements
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**33**	

PSYCHOLOGY MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to Sociology	SOC 101	3	
General Psychology	PSYC 105	3	Grade of "C" or Better Required
Cultural Anthropology	ANTH 160	3	
Psychology Colloquium	PSYC 110	1	
Human Development	PSYC 218	3	
Personality	PSYC 219	3	
Biological Psychology	PSYC 225	3	
Fundamentals of APA Writing Style & Ethics	PSYC 235	3	
Psychopathology	PSYC 317	3	
Social Psychology	PSYC 353	3	
Correlational Research Methods & Statistics	PSYC 354	3	Grade of "C" or Better Required
Experimental Research Methods & Statistics	PSYC 355	3	
Cognitive Psychology	PSYC 440	3	
Practicum in Psychology	PSYC 460	3	
Psychology Comprehensives	PSYC 497	0	
Behavioral Science Elective		6	
Behavioral Science Non-Psychology Elective		3	
TOTAL HOURS FOR PSYCHOLOGY MAJOR		**49**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Electives		15	None Can Be in PSYC & One Must Be Outside of PSYC, SOC, ANTH or CJ
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**15**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN RELIGION & PHILOSOPHY

RELP

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	PHIL 201		Fulfilled by SOA Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Free Elect
Religious Studies	#	3	Any 2 RS Courses in Addition to Major Requirements
Religious Studies	#	3	Any 2 RS Courses in Addition to Major Requirements
Social Science or History	#	3	
Social Science or History	#	3	
Natural or Physical Science	#	4	
Moral Values	#	3	Any PHIL GER Course in Addition to Major Requirements
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**31**	

LIBERAL ARTS CORE REQUIREMENTS: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language.
Fine Arts	*	6	
Literature	*	3	
Philosophy / Humanities	*		Fulfilled by Major Requirements
History - U.S.	*	3	Choose From: HIST 151, 152, 342, 343, 345, 346, 347, 348, 349, 350, 351 or 375
History - Non-U.S.	*	3	Choose From: HIST 107, 108, 301, 305, 313, 315, 324, 336, 339, 340, 341, 376, 377 or 385-389
Behavioral Science	*	3	
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**33**	

SCHOOL OF ARTS SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
History		3	Non-U.S. History Preferred
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**3**	

RELIGION & PHILOSOPHY MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Total Hours for Concentration	See Next Page	36	
TOTAL HOURS FOR REL OR PHIL CONCENTRATION		**36**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		18	15 Hours Must Be in Courses Outside of Major
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**18**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 121 **2.0 CUMULATIVE GPA REQUIRED**

CONCENTRATION REQUIREMENTS FOR BACHELOR OF ARTS IN RELIGION & PHILOSOPHY RELP

PHILOSOPHY CONCENTRATION (2.0 GPA in Major Required) **PHIL**

COURSE	COURSE NUMBER	CREDITS	NOTES
Religious Studies--RS (200 Level)		3	
Religious Studies--RS (300 Level)		3	
PHIL 300-Level History Courses		9	Choose 3 Courses From: PHIL 317, 318, 320 or 340
PHIL 200-Level (or Higher) Elective		3	
PHIL 300-Level (or Higher) Topics Elective		3	Choose From: PHIL 317, 318, 320, 335, 350 or 491-496
PHIL 300-Level (or Higher) Ethics Elective		3	Choose From: PHIL 322, 324, 325, 340 or 391-396
PHIL 300-Level (or Higher)		6	
Introduction to Logic	PHIL 201	3	
Junior Seminar	PHIL 497	1	
Senior Project	PHIL 498	2	
TOTAL HOURS FOR PHILOSOPHY CONCENTRATION		**36**	

RELIGIOUS STUDIES CONCENTRATION (2.0 GPA in Major Required. 12 hours of Religion courses for the major must be 300 level or higher.) **RELS**

COURSE	COURSE NUMBER	CREDITS	NOTES
Religion / Scripture		3	Choose From: RS 217, 218, 375, 377, 380, 385 or 410
Religion / History		3	Choose From: RS 220, 221, 285, 300, 320, 324, 400, 402, 405, 420, 430, 440, 450 or 490
Religion / Morality		3	Choose from: RS 230, 240, 254, 260, 326, 330, 460, 470
Religion / Culture		3	Choose From: RS 200, 245, 270, 271, 280, 326, 340, 345, 355, 356, 360, 372 or 480
RS Elective		12	
Philosophy / History		3	Choose From: PHIL 317, 318 or 320
Philosophy / Topics		3	Choose From: PHIL 335, 340 or 350
Introduction to Logic	PHIL 201	3	
Junior Seminar	RS 497	1	
Senior Project	RS 498	2	
TOTAL HOURS FOR RELIGIOUS STUDIES CONC.		**36**	

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN SPECIAL EDUCATION

SPED

(Licensure In Special Education)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	#	3	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	ENG 211	3	Waived if ENG 231/232, Add 1 Hr. to Free Elect
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	HIST 151	3	
Social Science or History	PSYC 105	3	
Natural or Physical Science	NSCI 115/L	4	May Also Take NSCI 111/L
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**34**	

LIBERAL ARTS CORE & TN LICENSURE: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	*	12	Must be in a Single Language
Fine Arts	*	6	
Literature	ENG 212	3	
Philosophy / Humanities	*	3	
History	HIST 107	3	
History	HIST 108	3	
Social Science	SOC 101	3	
Political Science	POLS 112	3	
TOTAL HOURS FOR LIBR CORE & TN LICENSURE		**36**	

SPECIAL EDUCATION MAJOR REQUIREMENTS: (2.75 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Numerical Concepts for Elementary Teachers	MATH 151	3	
Rhythmic Games & Activities	PE 201	1	
Speech Communication	SPCH 125	3	
Social Psychology	PSYC 353	3	
Educational Psychology	PSYC 315	3	
Human Development	PSYC 218	3	
Sociology of the Family	SOC 351	3	
TOTAL HOURS FOR SPECIAL EDUCATION MAJOR		**19**	

PROFESSIONAL EDUCATION REQUIREMENTS: (2.75 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Portfolio & Practicum - TVAAS	EDUC 332	1	
Professional Foundations I	EDUC 303	3	
Professional Foundations II	EDUC 304	3	
Survey of Exceptional Learners	EDUC 331	3	
Portfolio & Practicum I	EDUC 350	1	
Direct Instruction for Exceptional Learners	EXCE 433	3	
Models of Instruction for Exceptional Learners	EXCE 434	3	
Assessment of Exceptional Learners	EXCE 440	3	
Classroom Mangement & Methods	EDUC 407	3	
Portfolio & Practicum II	EDUC 420	1	
Family Consultation & Support	EXCE 451	3	
Teaching Practicum III	EDUC 473	4	
Professional Seminar & Portfolio III	EDUC 474	1	
TOTAL HOURS FOR PROFESSIONAL EDUCATION		**32**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 121

2.75 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR BACHELOR OF FINE ARTS IN VISUAL ARTS

VISU

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	#	3	
Statistics	PHIL 201	0	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	If Completed ENG 231, May Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**31**	

LIBERAL ARTS CORE: (*One Course from Social Sciences or Humanities Cluster Must Have a "Global Perspective". Refer to Page 40 for course options.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Fine Arts	ART 102		Fulfilled by Major Requirements
Fine Arts	ART 204		Fulfilled by Major Requirements
Literature	*	3	
Philosophy / Humanities	*	3	
History	*	6	
Behavioral Science	*	3	
Political Science	*	3	
TOTAL HOURS FOR LIBERAL ARTS CORE		**18**	

VISUAL ARTS MAJOR REQUIREMENTS: (Visual Art Concentration Required)(2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
2-D Design	ART 102	3	
Drawing I	ART 111	3	
Oil Painting I	ART 200	3	
Concepts & Creation in the Visual Arts	ART 201	3	
3-D Design	ART 204	3	
World Art History I	ART 211	3	
World Art History II	ART 212	3	
Figure Drawing Or Drawing II		3	Choose from ART 233 or 309 (Waived for Graphic Design Majors)
Contemporary Art History	ART 302	3	
Introduction To Printmaking	ART 310	3	
Beginning Digital Imaging / Lab	ART 314/L	3	
Advanced Studio	ART 470	3	
Senior Seminar	ART 475	3	
TOTAL HOURS FOR VISUAL ARTS MAJOR		**39**	

ART THERAPY, GRAPHIC DESIGN AND STUDIO ARTS CONCENTRATION REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Total Hours For Concentration	See Next Page	24	
TOTAL MAJOR & CONCENTRATION REQUIREMENTS		**63**	

SCHOOL OF ARTS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Electives		9	For those seeking teaching licensure at the MAT (masters) level, recommended electives are EDUC 211, EDUC 402, and PSYC 315.
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**9**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 121 **2.0 CUMULATIVE GPA REQUIRED**

CONCENTRATION REQUIREMENTS FOR BACHELOR OF FINE ARTS IN VISUAL ARTS

(All Visual Arts majors are required to select one of the following concentrations)

ART THERAPY CONCENTRATION — ARTH

COURSE	COURSE NUMBER	CREDITS	NOTES
General Psychology	PSYC 105	3	
Human Development	PSYC 218	3	
Personality	PSYC 219	3	
Ceramics I	ART 208	3	
Introducation to Art Therapy	ART 210	3	
Art Therapy Practices	ART 214	3	
Art Therapy Workshop & Field Study	ART 306	3	
Art Electives		3	
TOTAL HOURS FOR ART THERAPY CONCENTRATION		**24**	

GRAPHIC DESIGN CONCENTRATION — GRPH

COURSE	COURSE NUMBER	CREDITS	NOTES
Advanced Digital Imaging / Lab	ART 315/L	3	
Typography / Lab	ART 316/L	3	
Graphic Design I / Lab	ART 415/L	3	
Graphic Design II / Lab	ART 418/L	3	
Graphic Design III / Lab	ART 419/L	3	
Graphic Design IV / Lab	ART 420/L	3	
Art Electives		6	
TOTAL HOURS FOR GRAPHIC DESIGN CONC.		**24**	

STUDIO ARTS CONCENTRATION — STAR

COURSE	COURSE NUMBER	CREDITS	NOTES
Ceramics I	ART 208	3	
Oil Painting II or Printmaking II	ART 308 or 311	3	
Drawing: Experimental or Painting: Experimental	ART 409 or 412	3	
Art 200+ Level Electives		15	
TOTAL HOURS FOR STUDIO ARTS CONCENTRATION		**24**	

MINORS WITHIN THE SCHOOL OF ARTS

MINOR IN AMERICAN STUDIES: A minor in American Studies consists of 18 hours including POLS 112, 6 hours required from ENG 331, 332, 341, 342, 361; 3 hours from RS 340 or 320; and 6 hours from HIST 342, 343, 345, 346, 347, 348, 349, 351, 375, or 490-497 (special topics American History courses).

MINOR IN ANTHROPOLOGY: A minor in Anthropology requires 19 credit hours. There are four required courses: ANTH 160, ANTH/NSCI 128 and 128L, ENG 301: Intercultural Communication, and ANTH/HIST 279: Archaeology and any two additional Anthropology courses may be selected.

MINOR IN COGNITIVE NEUROSCIENCE: A minor in Cognitive Neuroscience consists of 18 hours, including PSYC 105, 225, 372, 440, 470, and one course from the following: PSYC 218, 219, 241, 305, 306, 315, 317, 353, 364, 365, 370, 371, 416, 453. A student may not minor in both Cognitive Neuroscience and Psychology.

MINOR IN CREATIVE WRITING: A minor in Creative Writing consists of 18 hours of courses including ENG 376, and 15 hours selected from the following list: ENG 373, 374, 378, 379, 401, 451, 464, 486, and English Special Topic courses approved by the Chair of the Department.

MINOR IN CRIMINOLOGY: A minor in Criminology requires 18 credit hours. SOC 101 and CJ 200 are required and any four additional Criminal Justice and Sociology courses may be selected (however, no more than two Sociology courses including Sociology 101 will count towards this minor).

MINOR IN EDUCATION: A minor in Education requires the following: EDUC 211, 331, and 402, PSYC 315, and 9 hours of EDUC/EXCE/ECED courses at the 300/400 level. (*A minor in Education is NOT a license to teach – please see department for information regarding teacher licensure paradigms.)(Undergraduate courses in education MAY NOT be used toward graduate course work.)*

MINOR IN ENGINEERING PSYCHOLOGY: A minor in Engineering Psychology requires 30 credit hours including PSYC 105, 225, 306, 350, 440 and 15 hours of Engineering courses.

MINOR IN ENGLISH: A minor in English consists of 18 hours of courses, including 6 hours in any 2 of the following courses: ENG 211, 212, 221, and 222, and 12 hours of upper-level (300/400 level) English courses.

MINOR IN FOREIGN LANGUAGE: A minor in Foreign Language requires 12 credit hours above the 202 level in one language. A student with formal education delivered in a foreign language beyond age 10 may obtain a minor in his/her own language by earning 18 semester hours in courses above the 302 level. Completion of a minor in foreign languages may depend upon sufficient student demand.

MINOR IN GRAPHIC DESIGN: A minor in Graphic Design requires 21 hours of courses, which must include 3 hours in Art History and 3 hours in Drawing, Art 102. Twelve (12) hours will be in Graphic Design.

MINOR IN HISTORY: A minor in History consists of 18 credit hours including, 6 to 9 hours from HIST 107, 108, 151, 152 and 9 to 12 hours from any 300/400 level history courses (excluding HIST 401, 402 and History Internships). At least 9 hours of 300/400 level courses must be taken at CBU.

MINOR IN PEACE STUDIES: A minor in Peace Studies requires 18 credit hours. Please note the following requirements: (1) at least 6 of the 18 hours must be at the 300 level or above; (2) no more than 6 hours may be taken at the 100 level; (3) courses must be taken in at least two different disciplines; (4) no more than 12 of the 18 hours may be taken in any one department; (5) at least six hours must be taken in Religious Studies; and (6) these hours must be chosen from among the following courses: ANTH 160; GEOG 280, 340; GS 200; HIST 336, 339, 340, 341, 342, 343, 346, 377; PHIL 219; POLS 112, 113, 340, 356, 370, 375; PSYC 353; RS 254, 270, 326, 330; SOC 101. (Note: the Religion & Philosophy Department has oversight of the Minor in Peace Studies).

MINOR IN PHILOSOPHY: A minor in Philosophy requires 18 credit hours, including at least three courses at the 300 level.

MINOR IN POLITICAL SCIENCE: A minor in Political Science consists of 18 hours distributed as follows: 9 hours in Political Science (Students must take POLS 112 and either POLS 113 or POLS 115 required); 3 hours required from either PHIL 219 or PHIL 220; 6 hours chosen from Political Science and/or the following: ECON 215, GS/HUM 200, PHIL 219, PHIL 220, RS 326, SPCH 125. A maximum of 3 hours POLS internship credit can apply to a minor. Students are encouraged to take at least one 300 level Political Science course.

MINOR IN PSYCHOLOGY: A minor in Psychology requires 18 credit hours. PSYC 105 is required and any five additional Psychology courses may be selected. This minor is not available to Applied Psychology majors.

MINOR IN RELIGIOUS STUDIES: A minor in Religious Studies requires 18 credit hours, including at least three courses at the 300 level or higher.

MINOR IN SOCIOLOGY: A minor in Sociology requires 18 credit hours. SOC 101 is required and any five additional Sociology or Anthropology courses may be selected (however, no more than two Anthropology courses will count toward this minor).

MINOR IN THEATRE ARTS: A minor in Theatre Arts requires eighteen (18) credit hours, including THEA 115 or 315 (same as ENG 315), 221, 317, 475, 3 hours of Theatre Production Workshop and 3 hours of electives to be selected in consultation with the Visual & Performing Arts Department Chair.

MINOR IN VISUAL ART: A minor in Art requires 21 hours of courses, which must include 3 hours in Art History and 3 hours in Drawing and ART 102. Twelve (12) hours will be chosen in consultation with the fine Arts Chair. At least 50% of courses must be taken at CBU.

PROFESSIONAL WRITING CERTIFICATE: To earn a Professional Writing Certificate, students must take any four of the following classes: ENG 371 Business Communications, ENG 373 Advanced Composition, ENG 375 Scientific and Technical Writing, ENG 376 Creative Writing, ART 314 with ART 314L, or ENG 389 Creative Nonfiction. At least three of these courses must be taken at CBU.

Departments in the School of Arts also oversee interdisciplinary minors in Global Studies, Sustainability Studies, and Women's and Gender Studies. See page 112 for more information about these minors.

REQUIREMENTS FOR TEACHER LICENSURE

Christian Brothers University provides approved teacher licensure programs in the following areas: **Undergraduate:** Early Childhood (Pre-K-3), Special Education Interventionist (Pre-K-8 or 6-12), Elementary (K-5), English (6-12), Mathematics (6-12), History (6-12), and Natural Sciences (6-12); **Masters level** (undergraduate plus one year of graduate study toward the MAT degree): Cultural Studies, Secondary Education in English, Math, Natural Science, History, or Elementary Education in conjunction with a major in Liberal Studies. Please see the Director of Education in the Department of Education to learn about the degree and major requirements for your program.

An undergraduate student who wishes to receive Early Childhood, Elementary, Secondary Education in English, Math, Natural Science, History, or Special Education teaching licensure in the State of Tennessee should take the following steps:

For admission to the Early Childhood, Elementary, Special Education, or Secondary Education in English, Math, Natural Science, or History teacher licensure program:
(For those NOT choosing licensure in combination with the 5th year pre-licensure program.)

1. Have a 2.75 grade point average.
2. Complete EDUC 211 or equivalent.
3. Pass all sections of the Pre-Professional Skills Test (Praxis I or CORE).
4. File an application for admission to the Teacher Education Program with the Director of the Undergraduate Education Program.
5. Submit a well-written philosophy of education essay and an autobiographical essay.
6. Successfully complete spontaneous writing samples and other communication assessments.
7. Submit background check application.
8. Verify liability insurance.
9. Complete a successful interview with the Undergraduate Teacher Education Admissions Committee.

Those interested in the 5th year Master's track should contact the Director of Teacher Education for application to this program.

For remaining in the Early Childhood, Elementary, Special Education, or Secondary Education in English, Math, Natural Science, or History teacher licensure programs and be recommended for teacher licensure:

1. Maintain a 2.75 grade point average overall in professional education courses, and in each endorsement area. Grades in all areas must be a "C" or better. GPA of 3.0 required if on 5th year Master's track for licensure under Liberal Studies Pre-licensure program.
2. Pass an English proficiency test administered by the Department of Education as needed.
3. Complete, unconditional admission to the Undergraduate Education Program.
4. Successful completion and evaluation of early field experiences and other assessments.
5. Successful completion of required content knowledge and Principles of Learning and Teaching Praxis II tests when advised to do so by the Director of the Undergraduate Teacher Education Program and the Director of Assessment and Records.
6. Pass the appropriate Praxis II tests for the licensure sought and have the results sent to the Department of Education.
7. Present a portfolio of accumulated work in all professional education courses as assigned.
8. Before admission to enhanced student teaching, a student must:
    a. Complete any required departmental assessments or evaluations.
    b. Complete all required courses, unless approved by the Director of Education.
    c. Must take and pass all licensure tests or student will be put on compliance hold until all tests are passed.
    d. File an application for teacher licensure with the Department of Education.
    e. Have completed a background check.
    f. Have appropriate insurance coverage.
9. Once registered for EDUC 332 and automatic fee of $400.00 will be assessed ($100.00 portfolio & $300.00 edTPA).

For being recommended for teacher licensure:

1. Complete all licensure requirements for the State of Tennessee
2. Complete all University requirements for a baccalaureate degree.
3. Complete enhanced student teaching.
4. Pass the remaining Praxis II tests for licensure sought and have the results sent to the Department of Education.
5. Present a portfolio of accumulated work in all professional education courses as assigned.
6. Complete any required departmental assessments or evaluations.
7. File an application for teacher licensure with the Director of Assessment and Records, who is also the state licensing officer for Christian Brothers University, in the Department of Education.

Transfer Students: Title II teacher education report card requirements rely on Praxis II test scores on undergraduate studies in general education, the major, and professional studies. Transfer students who seek initial teaching licensure through CBU and who wish to have courses in general education, the major, and/or professional education studies transferred in for credit will be asked to take appropriate Praxis II tests to verify and confirm the courses according to the following guidelines:

1. The student must complete all the requirements for entrance to the Teacher Education Program.
2. In order for the transfer student to be recommended by CBU's Department of Education for an initial teaching license, a minimum of 12 credit hours of course work in professional education must be taken at CBU. In addition, the professional semester (enhanced student teaching plus seminar) must be completed at CBU.
3. All policies concerning admission to the Teacher Education Program, retention in Teacher Education, admission to enhanced student teaching, and recommendation for teacher license apply.

For those choosing licensure at the masters (MAT) level in Elementary, Middle, or High School: Undergraduate students seeking licensure at the MAT level will complete a 5th year program by meeting the requirements for an academic major and degree as outlined on pages 43, 44, 46, 49, 51, 55, 103 and 105 and also completing the Master of Arts in Teaching (MAT) degree as outlined on pages 241 and 242. Students interested should obtain special advising materials about early admissions into the MAT program during their senior undergraduate year. Early admission to the MAT program consists of an application with sufficient test scores and other items as outlined on page 239 and 240.

Students should check with the Department of Education about the approval status of any program or licensure area of interest to them.

Post-baccalaureate licensure programs and graduate degree with licensure programs are also available at Christian Brothers University and are not described in detail in the catalog. More information for these programs is available in the Department of Education. If you already hold a bachelor's degree, please see the Director of Graduate Education in the Department of Education to have your transcript evaluated and to develop an appropriate program of study.

Intern/Student Teaching Fee $150.00
LiveText online portfolio $100.00
EdTPA (third party evaluation as required by CAEP, our accrediting body..... $300.00

SCHOOL OF BUSINESS

ADMINISTRATION

DR. BJOERN CLAASSEN, *Interim Dean*

DR. SARAH T. PITTS, *Interim Chair, Accounting, Business Law, Finance, Management Information Systems, & Statistics*

DR. KRISTIN PRIEN, *Interim Chair, Management, Marketing, & Economics*

DR. M. SCOTT LAWYER, *Director of Master of Business Administration Program*

DR. JENNIFER WESKE, *Director of Master of Accountancy Program*

FACULTY

ACCOUNTING, BUSINESS LAW, FINANCE, MANAGEMENT INFORMATION SYSTEMS, STATISTICS

DANIEL M. BRANDON, JR., *Professor*
BS, Case Western Reserve University; MS, PhD, University of Connecticut; PMP

LINDA CHRISTENSEN, *Associate Professor*
B.S.B.A., University of Missouri; MBA, Memphis State University; PhD, University of South Carolina; CPA

BJOERN CLAASSEN, *Associate Professor*
BBA, University of Georgia; MBA in Finance, Kennesaw State University; PhD, University of Mississippi

RONALD H. EATON, *Associate Professor*
BBA, MBA, Memphis State University; PhD, University of Arkansas; CPA

JUDY RAMAGE LAWRENCE, *Professor*
BBA, Memphis State University; MS, University of Arkansas;
DBA, Nova Southeastern University; CPA

M. SCOTT LAWYER, *Associate Professor*
BPA, JD, The University of Mississippi

ANDREW J. MORGRET, *Associate Professor*
BSEd, MEd, MBA, Memphis State University; CPA, CGMA

JAMES PARKER, *Professor*
BBA, MA, JD, Memphis State University; M.L.T., Emory University

SARAH T. PITTS, *Professor*
BS, Lenoir Rhyne College; MBA, JD, University of Houston

JENNIFER WESKE, *Associate Professor*
BBA, Stephen F. Austin State University; MBA, The University of Memphis; PhD, Northcentral University; CPA, CGMA, CFE

MANAGEMENT, MARKETING, & ECONOMICS

DAVID L. ARCHER, *Associate Professor*
BS, Purdue University; MBA, MPH, Columbia University

JENNY COWELL, *Instructor*
BA, University of Tennessee; MBA, Union University

R. CAYCE LAWRENCE, *Associate Professor*
BA, St. Meinrad College; MBA, Memphis State University; PhD, University of Arkansas

PATRICIA T. PAPACHRISTOU, *Professor*
BA, Trinity College; MA, Duke University; MA, MBA, Memphis State University

KRISTIN O. PRIEN, *Professor*
A.B., Mount Holyoke College; MBA, PhD, University of Memphis

BEVALEE B. VITALI, *Associate Professor*
BBA, MBA, University of Central Arkansas; PhD, University of Memphis, CFA

FATHER PAUL WATKINS, OP, *Associate Professor*
BA, Tulane University; MA, Graduate Theological Union; M. Div., Dominican School of Philosophy and Theology;
MBA, University of Virginia; EdD, The University of Memphis

PART-TIME FACULTY

JOHN M. HARGETT, *Adjunct Assistant Professor*
BBA, MS, PhD, The University of Memphis

PROFESSORS EMERITI

ROBERT L. BRITTINGHAM, *Management, Marketing, & Economics*
BA, St. Mary's College; MS in C., PhD, St. Louis University

HOWARD J. LAWRENCE, *Accounting*
BS, Christian Brothers College; MBA, Memphis State University; PhD, The University of Mississippi; CPA.; CMA

FRANK M. MARION, *Marketing*
BSChE, South Dakota School of Mines & Technology; MBA, Baldwin Wallace College; DBA, Memphis State University; PMP

REGINALD PEYTON, *Management, Marketing, & Economics*
BS, Christian Brothers College; DBA, Memphis State University

JAMES N. TANSEY, *Accounting*
BBA, MBA, Memphis State University; CPA

DEAN EMERITUS

RAY S. HOUSE
BS, Union University; MBA PhD, University of Mississippi

MISSION

The School of Business at Christian Brothers University enacts the Lasallian mission of the University by providing our highly diverse student populations and the local business community with a learning environment that emphasizes teaching, practical scholarship, and the moral, intellectual, and social development of each individual.

DEGREE REQUIREMENTS

The School of Business offers two degrees designed to prepare graduates for leadership in the business world. The Bachelor of Science degree, with majors in Accounting and Business Administration, allows students to focus their academic experience on specific career paths in the traditional areas of Accounting, Finance, Management, Management Information Systems, and Marketing as well as specialized areas such as Banking, Hospitality & Tourism Management, International Business, and Sport Management.

All degree programs in the School of Business require students to complete 121 semester credit hours, maintain a 2.0 GPA overall and a 2.0 in their Business courses. Transfer students must take at least one-half of all upper division business courses (300-400 level) at Christian Brothers University.

The School of Business has partnered with the School of Engineering to offer the Bachelor of Science in Engineering Management. Students earning this degree must complete 122 hours. See pages 82-86.

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN ACCOUNTING

ACCT

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 105	3	
Statistics	STAT 221		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	PHIL 220	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**31**	

SCHOOL OF BUSINESS SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Speech Communication	SPCH 125	3	
Business Writing	ENG 371	3	
Mathematics Elective	MATH 106	3	May also take MATH 117, (107 & 110), 129 or 131
TOTAL HOURS FOR BUSINESS SUPPORT REQS		**9**	

SCHOOL OF BUSINESS CORE REQUIREMENTS: (Business Administration Concentration Required)(2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Accounting	ACCT 260	3	Grade of "C" or higher required.
Managerial Accounting	ACCT 270	3	
Business Law I	BLAW 301	3	
Business Law II	BLAW 302	3	
Principles of Microeconomics	ECON 214	3	
Principles of Macroeconomics	ECON 215	3	
Financial Management I	FIN 327	3	
Financial Management II	FIN 427	3	
Introduction to Computer Business Applications	MIS 153	3	
Foundations of Management	MGMT 227	3	
Business Policy	MGMT 498	3	
Principles of Marketing	MKTG 311	3	
Elementary Statistics	STAT 221	3	
Intermediate Business Statistics	STAT 222	3	
TOTAL HOURS FOR BUSINESS CORE		**42**	

ACCOUNTING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Intermediate Financial Accounting I	ACCT 264	3	
Accounting Systems	ACCT 312	3	
Cost Accounting	ACCT 319	3	
Federal Income Taxation I	ACCT 330	3	
Federal Income Taxation II	ACCT 331	3	
Intermediate Financial Accounting II	ACCT 364	3	
Intermediate Financial Accounting III	ACCT 366	3	
Government & Non-Profit Accounting	ACCT 376	3	
Financial Statement Analysis	ACCT 380	3	
Professional Accounting Ethics	ACCT 390	3	
Auditing	ACCT 412	3	
Advanced Accounting I	ACCT 465	3	
Accounting Exit Exam			
TOTAL HOURS FOR MAJOR		**36**	

SCHOOL OF BUSINESS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		3	
TOTAL HOURS FOR ELECTIVES		**3**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 121 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

BUAD

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 105	3	
Statistics	STAT 221		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	PHIL 220 Recommended
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**31**	

SCHOOL OF BUSINESS SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Speech Communication	SPCH 125	3	
Business Writing	ENG 371	3	
Mathematics Elective	MATH 106	3	May Also Take: MATH 117, (107 & 110), 129 or 131
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**9**	

BUSINESS ADMINISTRATION MAJOR REQUIREMENTS: (Business Administration Concentration Required)(2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Accounting	ACCT 260	3	Grade of "C" or higher required.
Managerial Accounting	ACCT 270	3	
Business Law I	BLAW 301	3	
Business Law II	BLAW 302	3	
Fundamentals Of Business	BUS 103	3	Not Allowed for Students with 24+ Hours in Business, Add 3 Hours to Business Electives
Principles of Microeconomics	ECON 214	3	
Principles of Macroeconomics	ECON 215	3	
Financial Management I	FIN 327	3	
Financial Management II	FIN 427	3	May Also Take ECON 420, except for FIN Concentration which requires FIN 427 and ECON 420
Foundations of Management	MGMT 227	3	
International Business	MGMT 320	3	
Operations & Supply Chain Management	MGMT 418	3	
Ethical Decision Making in Business	MGMT 430	3	
Business Policy / Strategic Planning	MGMT 498	3	
Introduction to Computer Business Applications	MIS 153	3	
Introduction to MIS	MIS 231	3	
Principles of Marketing	MKTG 311	3	
Elementary Business Statistics	STAT 221	3	
Intermediate Business Statistics	STAT 222	3	
TOTAL HOURS FOR BUSINESS ADMINISTRATION		**57**	

BUSINESS ADMINISTRATION CONCENTRATION REQUIREMENTS: (See Following Pages for Requirements)(2.0 GPA in Concentration Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Business Administration Concentration	See Next Page	15	
TOTAL MAJOR & CONCENTRATION REQUIREMENTS		**72**	

SCHOOL OF BUSINESS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		9	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**9**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 121 **2.0 CUMULATIVE GPA REQUIRED**

CONCENTRATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

(All Business Administration majors are required to select one of the following concentrations)

BANKING CONCENTRATION — BNKG

COURSE	COURSE NUMBER	CREDITS	NOTES
Capital Markets & Institutions	FIN 350	3	
Money & Banking	ECON 303	3	
Commercial Banking	FIN 411	3	
Practicum & Project in Finance	FIN 455	3	
Concentration Elective		3	Choose from: ACCT 380, FIN 340, FIN 437, FIN 440, MKTG 401 or ECON 420
TOTAL HOURS FOR BNKG CONCENTRATION		**15**	

FINANCE CONCENTRATION — FIN

COURSE	COURSE NUMBER	CREDITS	NOTES
Investments	FIN 340	3	
Capital Markets & Institutions	FIN 350	3	
Financial Management II	FIN 427	3	
Practicum & Project in Finance	FIN 455	3	
Finance Exit Exam		0	
Concentration Elective		3	Choose From: ACCT 380, FIN 410, 437 or 440
TOTAL HOURS FOR FIN CONCENTRATION		**15**	

HOSPITALITY & TOURISM MANAGEMENT CONCENTRATION (Courses For This Concentration Only Offered Through Study Abroad Program) — HSTR

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to Tourism	HTM 415	4	
Applied Project in Tourism	HTM 420	4	
Foundation in Hospitality Management	HTM 430	3	
Event Management	HTM 440	1	
Practicum	HTM 455	3	
TOTAL HOURS FOR HSTR CONCENTRATION		**15**	

INTERDISCIPLINARY STUDIES CONCENTRATION — INDS

COURSE	COURSE NUMBER	CREDITS	NOTES
Option 1: Minor outside the School of Business		18-30	Refer to minors available in the School of Arts (p.58), Engineering (p.86), Sciences (p.108), or Interdisciplinary Programs (p.112).
Option 2: A minimum of 5 courses outside the School of Business with at least 3 courses at 300+ Level		15+	Please Consult with your Academic Advisor regarding course options in this concentration. Selected courses will need to be approved by the School of Business Interdisciplinary Studies Committee.
TOTAL HOURS FOR INDS CONCENTRATION		**15-30**	

INTERNATIONAL BUSINESS CONCENTRATION — INTL

COURSE	COURSE NUMBER	CREDITS	NOTES
International Trade & Economics	ECON 422	3	
International Financial Management	FIN 437	3	
International Marketing	MKTG 438	3	
Practicum & Project in Management	MGMT 455	3	
Concentration Elective		3	Choose From: MGMT 453 or 460, ECON 346 or 460
TOTAL HOURS FOR INTL CONCENTRATION		**15**	

MANAGEMENT CONCENTRATION — MGMT

COURSE	COURSE NUMBER	CREDITS	NOTES
Organizational Behavior & Management	MGMT 352	3	
Human Resource Management	MGMT 412	3	
Seminar in Leadership	MGMT 490	3	
Management Quantitative Methods	MGMT 428	3	
Practicum & Project in Management	MGMT 455	3	
TOTAL HOURS FOR MGMT CONCENTRATION		**15**	

CONCENTRATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION CONT'D

(All Business Administration majors are required to select one of the following concentrations)

MANAGEMENT INFORMATION SYSTEMS CONCENTRATION — MIS

COURSE	COURSE NUMBER	CREDITS	NOTES
Management Quantitative Methods	MGMT 428	3	MIS 481/L may substitute for MGMT 428.
Systems Analysis & Design	MIS 351	3	
Application & Web Development	MIS 470	3	
Data Base Design & Business Intelligence	MIS 471	3	
Information Systems Practicum & Project Mgmt	MIS 455	3	
TOTAL HOURS FOR MIS CONCENTRATION		**15**	

MARKETING CONCENTRATION — MKTG

COURSE	COURSE NUMBER	CREDITS	NOTES
Marketing Research & Intelligence	MKTG 324	3	
Market & Consumer Behavior	MKTG 334	3	
Marketing Policy & Strategy	MKTG 411	3	
Promotional Strategy	MKTG 433	3	
Practicum & Project In Marketing	MKTG 455	3	
TOTAL HOURS FOR MKTG CONCENTRATION		**15**	

SPORT MANAGEMENT CONCENTRATION — SPRT

COURSE	COURSE NUMBER	CREDITS	NOTES
Management & Sport Industries	SMGT 410	3	
Marketing & Public Relations In Sport	SMGT 420	3	
Sport Industries & The Law	SMGT 430	3	
Financial Management For Sport Administration	SMGT 440	3	
Practicum & Project In Sport Management	SMGT 455	3	
TOTAL HOURS FOR SPRT CONCENTRATION		**15**	

MINORS WITHIN THE SCHOOL OF BUSINESS

Students inside and outside the School of Business may seek a minor. Students within the School of Business may not seek a minor in Business Administration. Students within the School of Business must declare a concentration before seeking a minor. Students may not declare a minor in their declared concentration. The School of Business is offering the following minors:

ACCOUNTING:

Students seeking a BS in Accounting may not declare a minor in Accounting.
A minor of Accounting consists of 21 hours including the following classes: ACCT 260 Financial Accounting, ACCT 270 Managerial Accounting; ACCT 264 Intermediate Financial Accounting I; ACCT 364 Intermediate Financial Accounting II; ACCT 380 Financial Statement Analysis; one of the following combination of two classes: ACCT 330 Federal Income Taxation I and ACCT 331 Federal Income Taxation II, or ACCT 312 Accounting Systems and ACCT 412 Auditing.

BANKING

A minor in Banking consists of 18 hours including the following classes: FIN 327 Financial Management I; FIN 427 Financial Management II; ECON 303 Money and Banking; FIN 350 Capital Markets and Institutions; FIN 411 Commercial Banking; one of the following: FIN 340 Investments, FIN 437 International Financial Management, FIN 440 Portfolio Management, ACCT 380 Financial Statement Analysis, MKTG 411 Introduction to Real Estate, ECON 420 Managerial Economics.

BUSINESS ADMINISTRATION

A minor in Business Administration consists of 21 credit hours of courses typically required for admission to MBA programs.
The courses are: STAT 221 Elementary Statistics (or equivalent); ECON 214 Principles of Microeconomics; ACCT 260 Financial Accounting; BLAW 301 Business Law; MKTG 311 Principles of Marketing; MGMT 227 Foundations of Management; FIN 327 Financial Management I.

ECONOMICS

A minor in Economics consists of 21 hours including the following classes: ECON 214 Principles of Microeconomics; ECON 215 Principles of Macroeconomics; ECON 343 Intermediate Macroeconomics; ECON 420 Managerial Economics; three of the following: ECON 344 Intermediate Microeconomics, ECON 303 Money and Banking, ECON 325 Environmental Economics, ECON 422 International Trade and Economics, ECON 346 Current Topics in Economics, ECON 460 Special Topics in Economics.

FINANCE

A minor in Finance consists of 18 hours including the following classes: FIN 327 Financial Management I; FIN 340 Investments; FIN 350 Capital Markets and Institutions; ECON 420 Managerial Economics; FIN 427 Financial Management II; One of the following: FIN 410 Derivative Securities, FIN 440 Portfolio Management, ACCT 380 Financial Statement Analysis, FIN 437 International Financial Management.

INTERNATIONAL BUSINESS

A minor in International Business consists of 18 hours including the following classes: MGMT 320 International Business; ECON 422 International Trade and Economics; Four of the following: ECON 346 Current Economic Topics or MGMT 453 Seminar in Global Business, ECON 420 Managerial Economics, FIN 437 International Financial Management, MKTG 438 International Marketing, two upper level classes in business or liberal arts as approved by School of Business.

MANAGEMENT

A minor in Management consists of 18 hours including the following classes: MGMT 320 International Business; MGMT 227 Foundations of Management; MGMT 418 Operations and Supply Chain Management; three of the following: MGMT 352 Organizational Behavior and Management, MGMT 412 Human Resource Management, MGMT 428 Management Quantitative Methods MGMT 430 Ethical Decision Making in Business, MGMT 490 Seminar in Leadership.

MANAGEMENT INFORMATION SYSTEMS

A minor in Management Information Systems consists of 18 hours including the following classes: MGMT 428 Management Quantitative Methods; MIS 153 Intro to Computer Business Applications; MIS 231 Intro to MIS; MIS 351 Systems Analysis and Design; MIS 470 Application and Web Development; MIS 471 Data Base Design and Business Intelligence.

MARKETING

A minor in Marketing consists of 18 hours including the following classes: MKTG 311 Principles of Marketing; MKTG 324 Marketing Research & Intelligence; MKTG 334 Market & Consumer Behavior; MKTG 411 Marketing Policy & Strategy; MKTG 438 International Marketing; one of the following: MKTG 338 Selling and Sales Management, MKTG 401 Introduction to Real Estate, MKTG 433 Promotional Strategy, MKTG 440 Entrepreneurship.

SPORT MANAGEMENT

A minor in Sport Management consists of 18 hours including the following classes: SMGT 301 Sport Sponsorship and Sales; SMGT 315 Sport Facility and Event Management; SMGT 410 Management of Sports Industries; SMGT 420 Marketing & Public Relations in Sports; SMGT 430 Sports Industry Law; SMGT 440 Financial Management for Sports Administration.

SCHOOL OF ENGINEERING

ADMINISTRATION

DR. SIRIPONG MALASRI, *Dean*

MR. R. EUGENE McGINNIS, *Chair, Civil & Environmental Engineering Department*

DR. RANDEL PRICE, *Chair, Chemical & Biochemical Engineering Department*

DR. ERIC WELCH, *Chair, Electrical & Computer Engineering Department*

DR. YEU-SHENG SHIUE, *Chair, Mechanical Engineering Department*

DR. SIRIPONG MALASRI, *Chair, Packaging, BSEM Packaging Concentration Coordinator*

DR. JOSE DAVILA, *BSEM Sustainability Concentration Coordinator*

DR. ERIC WELCH, *BSEM Information Management Coordinator*

DR. JOHN VENTURA, *Video Game Design Coordinator*

FACULTY

CHEMICAL & BIOCHEMICAL ENGINEERING

ALI POURHASHEMI, *Professor*
BS, MS, Howard University; PhD, University of Maryland (College Park)

RANDEL M. PRICE, *Associate Professor*
BS, University of Missouri (Columbia); MS, University of Arkansas;
PhD, Lehigh University

ASIT K. RAY, *Professor*
BS, Calcutta University; MS, PhD, Lehigh University

CIVIL & ENVIRONMENTAL ENGINEERING

ANDREW K. ASSADOLLAHI, *Assistant Professor*
BS, Christian Brothers University; MS, PhD, University of Memphis; PE

L. YU LIN, *Professor*
BS, Feng-Chia University; MS, University of Cincinnati;
PhD, University of Central Florida; PE

R. EUGENE McGINNIS, *Associate Professor*
BS, MS, Memphis State University; PE

ELECTRICAL & COMPUTER ENGINEERING

FALIH H. AHMAD, *Visiting Associate Professor*
BAE, University of Baghdad; MS, PhD, Mississippi State University

DIVYA CHOUDHARY, *Associate Professor*
BEE, Mumbai University; MS, PhD, University of Memphis

H. JOHN VENTURA, *Professor*
BS, Christian Brothers College; M.E., University of Florida;
Ed.S., PhD, Nova Southeastern University; PE

ERIC B. WELCH, *Professor*
BS, MS, PhD, Mississippi State University

MECHANICAL ENGINEERING

JAMES AFLAKI, *Professor*
BS, University of District of Columbia; MS, PhD, University of Maryland, MCSE

JOSE B. DAVILA, *Professor*
BSE, Princeton University; MS, Stanford University; PhD, University of Texas at Austin

MICHAEL S. JUNE, *Associate Professor*
BS, State University College at Fredonia New York; BS, MS, Rochester Institute of Technology; PhD, North Carolina State University

YEU-SHENG SHIUE, *Professor*
BS, Tatung Institute of Technology; MS, PhD, Memphis State University

PACKAGING
SIRIPONG MALASRI, *Professor*
B.E., Chulalongkorn University; M. Engr., Asian Institute of Technology (Thailand);
PhD, Texas A&M University; PE, CPLP Professional

PART-TIME FACULTY
CHADWICK BAKER, *Professor Emeritus*
BS, Christian Brothers College; MS, PhD, Duke University

RAY W. BROWN, *Professor Emeritus*
BS, Christian Brothers College; MS, PhD, University of Notre Dame

YONGQUAN ZHOU, *Lecturer*
BE., M.E., Wuxi Institute of Light Industry (China);
MS, Rochester Institute of Technology; CPP

PROFESSORS EMERITI
BROTHER LOUIS ALTHAUS, FSC
BS, St. Mary's College; MS, PhD, Notre Dame University

CHADWICK BAKER, *Electrical & Computer Engineering*
BS, Christian Brothers College; MS, PhD, Duke University

R. CRAIG BLACKMAN, *Graduate Engineering*
BA Park College; MA New Mexico State; MS, University of Colorado, Boulder

RAY W. BROWN, *Mechanical Engineering*
BS, Christian Brothers College; MS, PhD, University of Notre Dame

DONALD L. GLASER, *Electrical & Computer Engineering*
BS, Christian Brothers College; MEE, University of Louisville

NEAL F. JACKSON, *Engineering Management*
BS, Memphis State University; MS, University of Arkansas;
PhD, University of Mississippi

K. MADHAVAN, *Civil & Environmental Engineering*
BE, Annamalai University (India); M.Tech., Indian Institute of Technology;
MS, Memphis State University; PhD, University of Mississippi; PE

JUAN CARLOS OLABE-BASOGAIN, *Electrical & Computer Engineering*
MS, PhD, Universidad Politecnica de Madrid (Spain); IT

REGINALD J. RODRIGUEZ, *Electrical & Computer Engineering*
BS, MEngr, University of Florida; PE

L. MICHAEL SANTI, *Mechanical Engineering*
BS, Christian Brothers College; MS, University of Tennessee; PhD, Vanderbilt University

FRED H. TERRY, *Electrical & Computer Engineering*
BS, MS, Rose Polytechnic Institute; PhD, Case Institute of Technology; PE

MISSION

The mission of the School of Engineering at Christian Brothers University is threefold: (1) to continue the Lasallian tradition through excellence in teaching and focus on the individual student, (2) to prepare graduates for professional careers and advanced study in engineering, and (3) to encourage students to live with moral responsibility and constructive community involvement.

PROGRAM DESCRIPTION

Christian Brothers University offers ABET accredited undergraduate engineering programs in chemical, civil, electrical, and mechanical engineering. Each curriculum is sufficiently flexible to permit a student to tailor a course of study for entry into the engineering profession immediately or for continued study in graduate school. While most graduates do remain in the engineering profession, a significant number use their engineering background as a foundation for professional careers in law, medicine, business, education, science, and other fields.

In addition to the four ABET accredited engineering degrees, the School of Engineering also offers an undergraduate degree in engineering management. The School of Engineering and the School of Sciences offer a dual degree in electrical engineering and computer science.

The chemical, civil, electrical, and mechanical engineering degree programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, 410.347.7700.

EDUCATIONAL PHILOSOPHY

Because engineers apply scientific principles and practical judgment to the economic solution of many problems concerned with human welfare, their education must include, in addition to courses in engineering analysis and design, numerous courses in natural science, mathematics, and liberal studies. Thus, the engineering program at Christian Brothers University provides each student with a liberal education designed to prepare the graduate to make important contributions not only toward the solution of specific technical problems, but also in social and environmental issues found in transportation, communications, urban redevelopment, energy production and conservation, and air and water quality.

Through engineering design courses, students learn to integrate their technical knowledge, skills, and ingenuity with the wisdom to develop practical solutions for specific problems. Students at Christian Brothers University begin learning the design process during their first year, while gaining knowledge and skills in science, mathematics, and communication. This practice in design is integrated through all four years of the program, culminating in an independent design project during the senior year.

DEGREE REQUIREMENTS

The Engineering programs at Christian Brothers University are designed to graduate students who will be able to excel as engineering professionals as described previously. This requires an integrated program of mathematics, basic sciences, humanities and social sciences, engineering sciences, and engineering design. A balance is struck between breadth and depth, technical and non-technical content, and rigor and flexibility. Students must meet departmental requirements as listed in the paradigms that follow this section.

In the case of transfer students, at least one half of the upper division major courses (300-400 level courses in CH E, CE, ECE, or ME and upper division Chemistry in the case of CH E) must be taken at Christian Brothers University. Normally, junior and senior level courses from non-ABET accredited programs will not be transferred.

In order to graduate, a student must attain a 2.0 overall grade point average and a 2.0 in the major (CH E, CE, ECE, or ME courses and advanced Chemistry in the case of Chemical Engineering).

To complete an engineering degree in eight regular semesters, a student will need to be prepared to start the required math sequence their first semester at CBU. If a student does not meet the academic requirements to begin their studies at CBU with MATH 131 Calculus I, they are strongly encouraged to take MATH 117 Pre-calculus or an equivalent course prior to the fall semester of their freshman year. In the event that a student has any math deficiencies beyond pre-calculus, they will not be allowed to declare an engineering major within the School of Engineering until those deficiencies have been removed.

ACCEPTABLE PROGRAM OPTION COURSES FOR CHEMICAL ENGINEERING:

1. All Engineering 300/400 level 3-credit hours courses not otherwise required, excepting project and internship courses:
   - **CH E:** 319, 320, 400, 410, 412
   - **CE:** 305, 310, 311, 313, 318, 319, 322, 340, 345, 350, 400, 401, 402, 404, 410, 413, 418, 421, 425, 428
   - **ECE:** 309, 310, 331, 332, 335, 350, 370, 400, 401, 406, 450, 451, 452, 459, 460, 461, 470, 471, 477, 478
   - **ENGR:** 400, 441, 442, 443, 444, 481
   - **ME:** 306, 317, 318, 319, 320, 400, 413, 416, 419, 420, 421, 429, 432, 435, 442
   - **PKG:** 319, 321, 411
2. Upper level courses in Science and Mathematics (not otherwise required):
   - **BIOL:** 303, 304, 311, 312, 321, 335, 340, 346, 367, 369, 370, 381, 412, 413, 414, 415, 421, 430, 451, 460
   - **CHEM:** 311, 315, 316, 342, 410, 415, 420, 422, 439
   - **CS:** 301, 360, 370, 440, 471
   - **MATH:** 301, 308, 309, 329, 401, 402, 405, 413, 414
   - **PHYS:** 340, 347, 353, 380, 381, 415, 430, 447, 448

   Note: BIO 321 and CHEM 315 are required of students pursuing the biochemical track in CH E; however, these students do not have a program option slot. Traditional CH Es may use these as program options.
3. Upper level Business courses relevant to Engineering Practice:
   - **ACCT:** 312, 319, 330, 331, 364, 366, 376, 380, 385, 412, 465, 485, 491
   - **BLAW:** 301, 302, 345
   - **ECON:** 303, 323, 325, 343, 344, 346, 347, 420, 422, 450
   - **FIN:** 327, 340, 350, 410, 411, 412, 427, 437, 440
   - **MGMT:** 300, 320, 352, 412, 418, 428, 430, 450, 451, 452, 498
   - **MIS:** 351, 470, 471, 481, 482, 483
   - **MKTG:** 311, 324, 334, 338, 348, 401, 411, 433, 438, 440
4. Upper level 3-credit ROTC Classes (with Departmental Approval)
5. Other courses as approved by the Department
   - **HUM:** 306

ACCEPTABLE PROGRAM OPTIONS FOR CIVIL ENGINEERING:

- **ACCT:** 385
- **BLAW:** 301,302,345
- **CE:** 305,319, 345, 350, 401, 402, 404, 409, 410, 413, 418, 421, 490-494, 495, 496-498
- **CH E:** 319, 320, 328, 410, 412
- **CS:** 471
- **ECE:** 350, 471
- **ECON:** 325, 346, 347
- **FIN:** 346
- **MATH:** 301, 309, 329, 401, 402, 405, 413, 414
- **ME:** 419, 428
- **MGMT:** 320, 352
- **MKMT:** 401
- **PHYS:** 340, 380
- **PKG:** 319, 320, 410
- **ROTC:** Upper Level Courses

ACCEPTABLE PROGRAM OPTIONS FOR ELECTRICAL & COMPUTER ENGINEERING:

1. Engineering 300/400 level 3-credit hours courses not otherwise required, excepting project and internship courses:
   - **CH E:** 319, 320, 410, 412
   - **CE:** 305, 310, 313, 318, 319, 322, 345, 350, 401, 402, 404, 413, 425, 428
   - **ECE:** 370, 406, 451, 452, 459, 460, 461, 470, 471, 477, 478
   - **ME:** 306, 316, 317, 318, 319, 320, 413, 416, 419, 420, 421, 428, 432, 435, 442
   - **PKG:** 319, 320, 410
2. Upper level courses in Science and Mathematics (not otherwise required):
   - **CS:** 301, 360, 370, 440, 471
   - **MATH:** 308, 329, 401, 402, 413, 414
   - **PHYS:** 347, 353, 380, 381, 415, 430, 447, 448
3. Upper level Business courses relevant to Engineering Practice:
   - **ACCT:** 312, 319, 330, 331, 364, 366, 380, 385, 390, 412, 465, 485, 491
   - **BLAW:** 301, 302, 345
   - **ECON:** 303, 323, 325, 343, 344, 346, 347, 420, 422, 450
   - **FIN:** 327, 340, 350, 410, 427, 437, 440
   - **MGMT:** 300, 320, 337, 352, 412, 418, 428, 430, 450, 451, 452, 498
   - **MIS:** 351, 470, 471, 481, 482, 483
   - **MKTG:** 311, 324, 334, 338, 348, 401, 411, 433, 438, 440
4. Upper level 3-credit ROTC Classes (with Departmental Approval)

ACCEPTABLE PROGRAM OPTION COURSES FOR MECHANICAL ENGINEERING:

- All CH E, ECE, CE, & ME 300/400 level 3-credit hours courses:
  Specifically: **CH E** 319, 320, 328, 410, 412.**CE** 305, 313, 317, 318, 319, 322, 340, 345, 350, 401, 402, 404, 409, 410, 413, 418, 421, 425, 428. **ECE** 309, 310, 331, 332, 335, 350, 370, 401, 406, 450, 451, 452, 459, 461, 470, 471, 477, 478. **ME** 413, 416, 419, 428, 429, 432, 435, 495, 496 (3 credits), 497(3 credits), 498(3 credits).
- **ACCT** 312, 319, 330, 331, 364, 366, 376, 380, 385, 390, 412, 485, 491
- **BIOL** 303, 304, 311, 312, 321, 335, 340, 346, 367, 369, 370, 381, 412, 413, 414, 415, 420, 421, 430, 451,
- **BLAW** 301, 302, 345
- **CHEM** 311, 315, 316, 342, 351, 352, 410, 415, 420, 422, 439.
- **CS** 301, 360, 370, 440, 471
- **ECON** 303, 323, 325, 343, 344, 346, 347, 420, 422, 450
- **FIN** 327, 340, 346, 350, 410, 411, 412, 427, 437, 440
- **MGMT** 300, 320, 352, 412, 418, 428, 430, 450, 451, 452, 498
- **MIS** 351, 455, 470, 481, 482, 483.
- **MKTG** 311, 324, 334, 338, 348, 411, 433, 438,
- **MATH** 308, 309, 329, 401, 402, 405, 413, 414
- **PHYS** 340, 347, 353, 381, 415, 430, 447, 448
- **ROTC** Upper level classes

CROSSTOWN DUAL DEGREE

Christian Brothers University and Rhodes College offer a dual degree program wherein a student receives two degrees after five years of study: a Bachelor of Science from Rhodes and a Bachelor of Science in Engineering from Christian Brothers University. While at Rhodes the student majors in Physics, Chemistry, or Biochemistry/Molecular Biology, depending on the course of engineering study to be pursued at CBU. See pages 80 and 81 for program specifics.

DUAL DEGREE

The School of Engineering and the School of Sciences offer a dual degree program for students interested in electrical engineering and computer science. With careful coordination, this program allows students to earn both degrees in a normal undergraduate time frame. For specific degree requirements, see page 78.

JOINT DEGREE

The School of Engineering and the School of Business jointly offer a Bachelor of Science in Engineering Management for students interested in pursuing management positions at engineering firms or other technologically based businesses. For specific degree requirements, see pages 82-86.

SUMMARY OF COURSE REQUIREMENTS

Students must complete the University defined General Education requirements (see page 28).

Program Option (department approved 300/400 level courses in Mathematics, Science, Engineering, or Business or advanced ROTC courses—3 hours maximum is allowed for ROTC courses) courses should be part of an integrated sequence of courses consistent with the overall aims and objectives of the School of Engineering. The integrated sequence must receive approval from the student's advisor.

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING (BIOCHEMICAL) CHE/BICH

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Support Requirements
Statistics	CH E 120		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	PHYS 150/L		Fulfilled by Support Requirements
Moral Values	#	3	
TOTAL HOURS FOR GER		**24**	

CHEMICAL ENGINEERING MATH/SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Biology I / Lab	BIOL 111/L	4	
Principles of Biology II / Lab	BIOL 112/L	4	
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**36**	

CHEMICAL ENGINEERING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Microbiology/Lab	BIOL 321/L	4	
Organic Chemistry I / Lab	CHEM 211/L	4	
Organic Chemistry II / Lab	CHEM 212/L	4	
Biochemistry I / Lab	CHEM 315/L	4	
Physical Chemistry I / Lab	CHEM 351/L	4	
Electric Circuit Analysis I	ECE 221	3	
Chemical Engineering Project I	CH E 101	1	
Intro to Chemical Engineering	CH E 120	2	
Chemical Engineering Project II	CH E 201	1	
Elementary Thermodynamics	CH E 305	3	May Also Take ME 305
Material & Energy Balances	CH E 232	4	
Engineering Economy	CH E 314	3	May Also Take ME 314, CE 314 or ECE 314
Fluid Mechanics	CH E 323	3	
Heat Transfer	CH E 324	3	
Junior Laboratory I	CH E 325	1	
Junior Laboratory II	CH E 326	1	
Chemical Engineering Thermodynamics	CH E 327	3	
Mass Transfer & Separations	CH E 330	3	
Chemical Engineering Senior Project I	CH E 401	2	
Chemical Engineering Senior Project II	CH E 402	2	
Process Design I	CH E 425	3	
Process Design II	CH E 426	3	
Modeling & Control In Chemical Engineering	CH E 437	3	
Senior Laboratory I	CH E 441	1	
Senior Laboratory II	CH E 442	1	
Reactor Design	CH E 443	3	
Biochemical Engineering	CH E 446	3	
TOTAL HOURS FOR MAJOR		**72**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 132

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING (TRADITIONAL) CHE

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Support Requirements
Statistics	CH E 120		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	PHYS 150/L		Fulfilled by Support Requirements
Moral Values	#	3	
TOTAL HOURS FOR GER		**24**	

CHEMICAL ENGINEERING MATH/SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
General Chemistry I / Lab	CHEM 113/L	4	
General Chemistry I / Lab	CHEM 114/L	4	
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**28**	

CHEMICAL ENGINEERING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Organic Chemistry I / Lab	CHEM 211/ L	4	
Organic Chemistry II / Lab	CHEM 212/L	4	
Physical Chemistry I / Lab	CHEM 351/L	4	
Chemistry Elective 300+ Level / Lab	#	4	Choose From: CHEM 315, 352, or 422
Electric Circuit Analysis I	ECE 221	3	
Statics	CE 201	3	
Chemical Engineering Project I	CH E 101	1	
Intro to Chemical Engineering	CH E 120	2	
Chemical Engineering Project II	CH E 201	1	
Elementary Thermodynamics	CH E 305	3	May Also Take ME 305
Material & Energy Balances	CH E 232	4	
Engineering Economy	CH E 314	3	May Also Take ME 314, CE 314 or ECE 314
Fluid Mechanics	CH E 323	3	
Heat Transfer	CH E 324	3	
Junior Laboratory I	CH E 325	1	
Junior Laboratory II	CH E 326	1	
Chemical Engineering Thermodynamics	CH E 327	3	
Materials Science	CH E 328	3	
Mass Transfer & Separations	CH E 330	3	
Chemical Engineering Senior Project I	CH E 401	2	
Chemical Engineering Senior Project II	CH E 402	2	
Process Design I	CH E 425	3	
Process Design II	CH E 426	3	
Modeling & Control In Chemical Engineering	CH E 437	3	
Senior Laboratory I	CH E 441	1	
Senior Laboratory II	CH E 442	1	
Reactor Design	CH E 443	3	
Polymeric Materials	CH E 444	3	
Program Option		6	Refer to Page 70 For Course Options
TOTAL HOURS FOR MAJOR		**80**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 132

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING

CIV

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Support Requirements
Statistics	CE 400		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	PHYS 150/L		Fulfilled by Support Requirements
Moral Values	#	3	
TOTAL HOURS FOR GER		**24**	

CIVIL ENGINEERING MATH/SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Environmental Biology	BIOL 107	3	
General Chemistry I / Lab	CHEM 115/L	4	
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Statistics	MATH 308	3	
Mathematics Elective		3	Choose From: MATH 309, 329, 401, 402, 405, 413 or 414
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**33**	

CIVIL ENGINEERING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to Civil Engineering	CE 110	2	
Civil Engineering Graphics	CE 111	3	
Civil Engineering Analysis	CE 113	2	
Geomatics / Lab	CE 225/L	4	
Statics	CE 201	3	
Mechanics of Materials	CE 210	3	
Structural Analysis	CE 212	3	
Construction Materials/Lab	CE 251/L	4	
Hydraulics / Lab	CE 299/L	4	
Design of Steel Structures	CE 310	3	
Design of Reinforced Concrete Structures	CE 311	3	
Hydrology	CE 313	3	
Engineering Economy	CE 314	3	May Also Take CH E 314, ECE 314 or ME 314
Environmental Engineering I	CE 329	2	
Highway Engineering	CE 318	3	
Soil Mechanics / Lab	CE 322/L	4	
Junior Project	CE 331	1	
Design of Foundations	CE 340	3	
The Compleat Engineer	CE 400	3	May Also Take CH E 400, ECE 400 or ME 400
Environmental Engineering II	CE 429	2	
Senior Design Project I	CE 431	2	
Senior Design Project II	CE 432	2	
Fund Civil Engineering Exam	CE 489	0	
Major Electives in CE		9	Choose From CE at 300 or 400 Level (Excluding CE 495)
Dynamics	ME 202	3	
Program Option		3	Refer to Page 71 For Course Options
TOTAL HOURS FOR MAJOR		**77**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 134

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (COMPUTER SYSTEMS) EE/COMP

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Support Requirements
Statistics	ECE 400		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	PSYC 105	3	
Social Science or History	#	3	
Natural or Physical Science	PHYS 150/L		Fulfilled by Support Requirements
Moral Values	#	3	
TOTAL HOURS FOR GER		**24**	

ELECTRICAL ENGINEERING MATH/SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
General Chemistry I / Lab	CHEM 115/L	4	
Fundamentals of Computer Science / Lab	CS 172/L	4	
Data Structures / Lab	CS 234/L	4	
Object Oriented Programming	CS 360	3	
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Probability	MATH 309	3	
Discrete Math	MATH 405	3	
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
Physics III	PHYS 252	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**44**	

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Statics	CE 201	3	
Dynamics	ME 202	3	
Introduction to Engineering Problem Solving	ECE 101	3	
Introduction to Multimedia DSP	ECE 150	3	
Computers in Engineering Problem Solving / Lab	ECE 112/L	4	
Electric Circuit Analysis I	ECE 221	3	
Electric Circuit Analysis II	ECE 222	3	
Digital Design	ECE 250	3	
Microcontroller Interfacing & Prog w/ Lab	ECE 251/L	4	
Engineering Economy	ECE 314	3	May Also Take CH E 314, CE 314 or ME 314
Linear Control Systems	ECE 322	3	May Also Take ME 322 (Formerly ME 422)
Electronics I / Lab	ECE 331/L	4	
Electronics II / Lab	ECE 332/L	4	
Systems, Signals & Noise	ECE 335	3	
Computer Systems Design & Architecture	ECE 350	3	
Operating Systems	ECE 370	3	
The Compleat Engineer	ECE 400	3	May Also Take CH E 400, CE 400 or ME 400
Electromagnetic Field Theory	ECE 406	3	
ECE Project I	ECE 411	2	Formerly ECE 409
ECE Project II	ECE 412	1	Formerly ECE 410
Computer Networks	ECE 450	3	
Major Electives in ECE		3	Choose From ECE 300 or 400 Level
TOTAL HOURS FOR MAJOR		**67**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 135

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (ELECTRONICS & SYSTEMS) EE/ELSY

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Support Requirements
Statistics	ECE 400		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	PSYC 105	3	
Social Science or History	#	3	
Natural or Physical Science	PHYS 150/L		Fulfilled by Support Requirements
Moral Values	#	3	
TOTAL HOURS FOR GER		**24**	

ELECTRICAL ENGINEERING MATH/SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
General Chemistry I / Lab	CHEM 115/L	4	
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Probability	MATH 309	3	
Discrete Math	MATH 405	3	
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
Physics III	PHYS 252	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**33**	

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Statics	CE 201	3	
Dynamics	ME 202	3	
Engineering Thermodynamics I	ME 305	3	May Also Take CH E 305 (Formerly CHE 231)
Introduction to Engineering Problem Solving	ECE 101	3	
Introduction to Multimedia DSP	ECE 150	3	
Computers in Engineering Problem Solving / Lab	ECE 112/L	4	May Also Take ECE 172/L or CS 172/L
Electric Circuit Analysis I	ECE 221	3	
Electric Circuit Analysis II	ECE 222	3	
Digital Design	ECE 250	3	
Microcontroller Interfacing & Prog w/ Lab	ECE 251/L	4	
Engineering Economy	ECE 314	3	May Also Take CH E 314, CE 314 or ME 314
Linear Control Systems	ECE 322	3	May Also Take ME 322 (Formerly ME 422)
Electronics I / Lab	ECE 331/L	4	
Electronics II / Lab	ECE 332/L	4	
Systems, Signals & Noise	ECE 335	3	
The Compleat Engineering Manager	ECE 400	3	May Also Take CH E 400, CE 400 or ME 400
Electromagnetic Energy Conversion / Lab	ECE 401/L	4	
Electromagnetic Field Theory	ECE 406	3	
ECE Project I	ECE 411	2	Formerly ECE 409
ECE Project II	ECE 412	1	Formerly ECE 410
Computer Networks	ECE 450	3	
Major Electives in ECE		3	Choose From ECE at 300 or 400 Level
Program Option		3	Refer to Page 71 For Course Options
TOTAL HOURS FOR MAJOR		**71**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 128

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING & COMPUTER SCIENCE

EECS

(Computer Systems Curricula)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Support Requirements
Statistics	ECE 400		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	PSYC 105	3	
Social Science or History	#	3	
Natural or Physical Science	PHYS 150/L		Fulfilled by Support Requirements
Moral Values	#	3	
TOTAL HOURS FOR GER		**24**	

ELECTRICAL ENGINEERING MATH/SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
General Chemistry I / Lab	CHEM 115/L	4	
Intermediate Programming / Lab	CS 172/L	4	
Structured Programming / Lab	CS 234/L	4	
Object Oriented Design	CS 360	3	
Algorithms	CS 440	3	
Topics in Computer Science	CS 460	3	
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Probability	MATH 309	3	
Discrete Math	MATH 405	3	
MATH Elective		3	Choose from: MATH 301, 308, 329, 401, 402, 413, or 414
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
Physics III	PHYS 252	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**53**	

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Statics	CE 201	3	
Dynamics	ME 202	3	
Introduction to Engineering Problem Solving	ECE 101	3	
Computers in Engineering Problem Solving / Lab	ECE 112/L	4	
Introduction to Multimedia DSP	ECE 150	3	
Electric Circuit Analysis I	ECE 221	3	
Electric Circuit Analysis II	ECE 222	3	
Digital Design	ECE 250	3	
Micocontroller Interfacing & Prog w/ Lab	ECE 251/L	4	
Engineering Economy	ECE 314	3	May Also Take CH E 314, CE 314 or ME 314
Linear Controls	ECE 322	3	May Also Take ME 322 (Formerly ME 422)
Electronics I / Lab	ECE 331/L	4	
Electronics II / Lab	ECE 332/L	4	
Systems, Signals & Noise	ECE 335	3	
Computer Systems Design & Architecture	ECE 350	3	
Operating Systems	ECE 370	3	
The Compleat Engineer	ECE 400	3	May Also Take CH E 400, CE 400 or ME 400
Electromagnetic Field Theory	ECE 406	3	
ECE Project I	ECE 411	2	Formerly ECE 409
ECE Project II	ECE 412	1	Formerly ECE 410
Computer Networks	ECE 450	3	
Design of Database Systems	ECE 471	3	
TOTAL HOURS FOR MAJOR		**67**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 144

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

ME

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Support Requirements
Statistics	ME 400		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	PHYS 150/L		Fulfilled by Support Requirements
Moral Values	#	3	
TOTAL HOURS FOR GER		**24**	

MECHANICAL ENGINEERING MATH/SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
General Chemistry I / Lab	CHEM 115/L	4	
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Math Electives 300+ Level		6	May Not Take MATH 301
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
Physics III	PHYS 252	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**33**	

MECHANICAL ENGINEERING MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Statics	CE 201	3	
Electric Circuit Analysis I	ECE 221	3	
Scientific Programming	ME 112	3	
Solids Modeling	ME121	3	
Manufacturing Processes	ME 201	3	
Dynamics	ME 202	3	
Mechanics of Materials	ME 210	3	May Also Take CE 210
Engineering Instrumentation Laboratory	ME 301	2	
Energy Systems Laboratory	ME 302	2	
Engineering Thermodynamics I	ME 305	3	May Also Take CH E 305 (Formerly CH E 231)
Heat Transfer	ME 306	3	
Fluid Mechanics	ME 313	3	
Engineering Economy	ME 314	3	May Also Take CH E 314, CE 314 or ECE 314
Engineering Thermodynamics II	ME 316	3	
Kinematics	ME 317	3	
Dynamics of Machines	ME 318	3	
Control Systems Engineering	ME 322	3	May Also Take ECE 322
The Compleat Engineering Manager	ME 400	3	May Also Take CE 400, ECE 400 or CH E 400
Mechanical Systems Laboratory	ME 401	2	
Mechanical Engineering Project I	ME 407	3	
Mechanical Engineering Project II	ME 408	3	
Machine Design	ME 420	3	
Thermal Systems Analysis & Design	ME 421	3	
Major Electives		6	Choose From ME at 300 or 400 Level
Program Option		3	Refer to Page 71 For Course Options
TOTAL HOURS FOR MAJOR		**75**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 132

CROSS-TOWN DUAL DEGREE PROGRAM IN ENGINEERING WITH RHODES COLLEGE

In this program, a student receives two degrees after five years of study: a Bachelor of Science from Rhodes and a Bachelor of Science in engineering from Christian Brothers University. While at Rhodes the student majors in physics, chemistry, or biochemistry/molecular biology, depending on the course of engineering study to be pursued at CBU. A student completes all Rhodes courses required for this dual degree program in three years, and may take select courses at Christian Brothers University during that time. He or she applies to the engineering program at Christian Brothers University during the third year and becomes a full-time CBU student for two additional years. Both degrees are awarded at the completion of the five years of study.

The student must complete each of the following sets of courses to satisfy the Rhodes and CBU portions of the program:

I. GENERAL DEGREE REQUIREMENTS:
All twelve Rhodes foundation requirements with the following stipulations:
1. One of the F1 courses should be a philosophy course.
2. A minimum of 80 credits of the Rhodes BS portion must be fulfilled with Rhodes courses.

II. THE FOLLOWING PRE-ENGINEERING CORE COURSES:
1. Physics 111/111L, 112/112L (Fundamentals of Physics I & II, with lab)
2. Math 121, 122, 223 (Calculus I-III), Math 251 (Differential Equations)
3. Chemistry 111/111L (General Chemistry I with lab)

III. The following additional Rhodes courses depending on the Rhodes major and course of engineering study to be pursued at Christian Brothers University. Courses in parentheses are CBU courses that are suitable substitutes for the Rhodes courses and will satisfy the major requirements at Rhodes:

Physics Major / Mechanical Engineering
Physics 211, 250; Physics 304 (or CBU ECE 221- Circuit Analysis I); Physics 305 (or CBU ME 202- Dynamics); Physics 306 (or CBU program option course); Computer Science 141 (or CBU ME 112-Scientific Programming)

Physics Major / Civil Engineering
Physics 211, 211L, 250; Physics 305 (or CBU ME 202- Dynamics);

Physics Major / Electrical Engineering - Electrical Engineering Curriculum
Physics 211, 211L, 250; One upper level physics elective at the 300 level or higher; Physics 406 (or CBU ME 305 - Engineering Thermodynamics I); Computer Science 141 (or CBU ECE 172 - Intermediate Programming and Algorithms)

Chemistry Major / Chemical Engineering- Chemical Engineering Curriculum
Chemistry 112, 112L, 211, 212, 212L, 311, 312, 312L

Biochemistry Molecular Biology / Chemical Engineering- Biochemical Engineering Curriculum
Biology 130, 131L, 140. 141L, 307, 325, 325L; Biochemistry and Molecular Biology 310; Chemistry 112, 112L, 211, 212, 212L, 414

IV. The following CBU courses should be taken during the first three years of the program through the Rhodes-CBU exchange program (the Cross-town agreement), depending on the Rhodes major and course of engineering study to be pursued at Christian Brothers University:

Physics Major / Mechanical Engineering
ME 121 (Solids Modeling), CE 201 (Statics), ME 210 (Mechanics of Materials) and ME 305 (Engineering Thermodynamics I)

Physics Major / Civil Engineering
CE 110 (Introduction to Civil Engineering), CE 113 (Civil Engineering Analysis) and MATH 308 (Statistics)

Physics Major / Electrical Engineering - Electrical Engineering Curriculum
ECE 221 (Electric Circuit Analysis I) and ECE 222 (Electric Circuit Analysis II)

Chemistry Major or BCMB major / Chemical Engineering - either curriculum
CH E 305 (Elementary Thermodynamics) and CH E 232 (Material and Energy Balances)

V. The following courses at Christian Brothers University, depending on the course of engineering study to be pursued, are to be taken during years 4 and 5, after the student has been admitted to the School of Engineering:

Mechanical Engineering
ME 201 (Manufacturing Processes), ME 301 (Engineering Instrumentation Laboratory), ME 302 (Energy Systems Laboratory, ME 306 (Heat Transfer), ME 313 (Fluid Mechanics), ME 314 (Engineering Economy), ME 316 (Engineering Thermodynamics II), ME 317 (Kinematics), ME 318 (Dynamics of Machines), ME 400 (The Compleat Engineer), ME 401 (Mechanical Systems Laboratory), ME 407-408 (Senior Project), ME 420 (Machine Design), ME 421 (Thermal Systems Analysis and Design), ME 322 (Control System Engineering), 2 ME electives, 2 MATH electives, 1 program option course

Civil Engineering
CE 111 (Civil Engineering Graphics), CE 201 (Statics), CE 212 (Structural Analysis), CE 225/L (Geomatics/Lab), CE 251/L (Construction Materials/Lab) CE 299 (Hydraulics), CE 310 (Design of Steel Structures), CE 311 (Design of Reinforced Concrete Structures), CE 313 (Hydrology), CE 314 (Engineering Economy), CE 329 (Environmental Engineering I), CE 318 (Highway Engineering), CE 322/L (Soil Mechanics/Lab), CE 331 (Junior Project), CE 340 (Design of Foundations), CE 400 (The Complete Engineer), CE 429 (Environmental Engineering II), CE 431-432 (Senior Design Project), CE 489 (Fundamentals of Civil Engineering Exam), 3 CE electives, 1 program option course

Electrical Engineering

MATH 309 (Probability), CE 201 (Statics), ME 202 (Dynamics), ECE 250 (Digital Design), ECE 251 (Microprocessor Architecture and Processing), ECE 314 (Engineering Economy), ECE 322 (Linear Control Systems), ECE 331-332 (Electronics I, II), ECE 335 (Systems, Signals, and Noise), ECE 331L-332L (Junior Laboratory I, II), ECE 400 (The Compleat Engineer), ECE 401 (Electromechanical Energy Conversion), ECE 401L (Energy Conversion Laboratory), ECE 406 (Electromagnetic Field Theory), ECE 411-412 (Project I, II), 1 ECE elective

Chemical Engineering - Chemical Engineering Track

CE 201 (Statics), ECE 221 (Electric Circuit Analysis I), CH E 328 (Material Science), CH E 323 (Fluid Mechanics), CH E 325-326 (Junior Laboratory I, II), CH E 327 (Chemical Engineering Thermodynamics), CH E 314 (Engineering Economy), CH E 340 (Heat Transfer), CH E 330 (Mass Transfer and Separations), CH E 401-402 (Senior Project), CH E 425-426 (Process Design I, II), CH E 437 (Modeling and Control in Chemical Engineering), CH E 441-442 (Senior Laboratory I, II), CH E 443 (Reactor Design), CH E 444 (Polymeric Materials), 2 program option courses

Chemical Engineering - Biochemical Engineering Track

ECE 221 (Electric Circuit Analysis I), CH E 314 (Engineering Economy), CH E 323 (Fluid Mechanics), CH E 324 (Heat Transfer), CH E 325-326 (Junior Laboratory I, II), CH E 327 (Chemical Engineering Thermodynamics), CH E 330 (Mass Transfer and Separations), CH E 401-402 (Senior Project), CH E 425-426 (Process Design I, II), CH E 437 (Modeling and Control in Chemical Engineering), CH E 441-442 (Senior Laboratory I, II), CH E 443 (Reactor Design), CH E 446 (Biochemical Engineering)

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN ENGINEERING MANAGEMENT ENMT

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131	3	
Statistics	STAT 221		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	3	RS 200 level for SUST
Religious Studies	#	3	RS 331 for SUST
Social Science or History	#	3	PSYC 105 for Info Mgmt / ANTH 160 for SUST
Social Science or History	#	3	POLS 113 for SUST
Natural or Physical Science	PHYS 150/L	4	
Moral Values	#	3	PHIL 223 for IM / PHIL 324 or PHIL 325 for SUST
TOTAL HOURS FOR GER		**31**	

ENGINEERING MANAGEMENT SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Business Writing	ENG 371	3	
Physics II / Lab	PHYS 251/L	4	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**7**	

ENGINEERING MANAGEMENT CONCENTRATION REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Total Hours for Conentration	See Next Page(s)	84	
TOTAL HOURS FOR CONCENTRATION		**84**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 122

INFORMATION MANAGEMENT CONCENTRATION REQUIREMENTS FOR BSEM

ENMT

(Bachelor of Science in Engineering Management general requirements can be found on page 82)

INFORMATION MANAGEMENT CONCENTRATION REQUIREMENTS: (2.0 GPA in Major Required) ITM

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to Engineering Problem Solving	ECE 101	3	
Computers in Engineering Problem Solving & Lab	ECE 112/L	4	
Introduction to Multimedia DSP	ECE 150	3	
Electric Circuit Analysis I	ECE 221	3	
Digital Design	ECE 250	3	
Microprocessors / Lab	ECE 251/L	4	
Engineering Economy	ECE 314	3	May Also Take CH E 314, CE 314 or ME 314
Operating Systems	ECE/CS 370	3	
Computer Networks	ECE 450	3	
Design of Database Systems	ECE 471	3	
The Compleat Engineering Manager	ENGR 400	3	
Solids Modeling	ME 121	3	May Also Take CE 111
Calculus II	MATH 132	3	
TOTAL HOURS FOR INFORMATION MANAGEMENT		**41**	

SCHOOL OF BUSINESS CORE REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Accounting	ACCT 260	3	
Financial Statement Analysis	ACCT 380	3	
Principles of Microeconomics	ECON 214	3	
Principles of Macroeconomics	ECON 215	3	
Financial Management I	FIN 327	3	
Organization Mangement	MGMT 352	3	
Business Policy / Stategic Planning	MGMT 498	3	
Introduction to Computer Business Applications	MIS 153	3	
Introduction to MIS	MIS 231	3	
Principles of Marketing	MKTG 311	3	
Elementary Business Statistics	STAT 221	3	
Intermediate Business Statistics	STAT 222	3	
TOTAL HOURS FOR BUSINESS CORE		**36**	

FREE ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Elective		1	
Business and ECE Elective (200+ Level)		6	
TOTAL HOURS FOR FREE ELECTIVES		**7**	

TOTAL CREDITS REQUIRED FOR CONCENTRATION 84

PACKAGING CONCENTRATION REQUIREMENTS FOR BSEM

ENMT

(Bachelor of Science in Engineering Management general requirements can be found on page 82)

PACKAGING CONCENTRATION REQUIREMENTS: (2.0 GPA in Major Required) **PKG**

COURSE	COURSE NUMBER	CREDITS	NOTES
Exploring Engineering	ENGR 100	3	ENGR 100/101 can be substituted by CE 201/210
Principles of Engineering	ENGR 101	3	ENGR 100/101 can be substituted by CE 201/210
Materials Science	CHE 328	3	
General Chemistry I / Lab	CHEM 115/L	4	
The Compleat Engineering Manager	ENGR 400	3	
Solids Modeling	ME 121	3	May Also Take CE 111
Manufacturing Processes	ME 201	3	Can be substituted by ENGR 105
Intro to Packaging	PKG 101	1	
Packing Lab	PKG 202	2	
Principles of Packaging	PKG 319	3	May Also Take CH E 319 or ME 319
Healthcare Packaging	PKG 321	3	May Take CH E 321 or ME 321
Principles of Packaging Development	PKG 411	3	May take CH E 411 or ME 411
Professional Certification	PKG 489	0	
Packaging Project	PKG 490	2	
Packaging Internship	PKG 495	3	May Also Take ART 314/L
TOTAL HOURS FOR PACKAGING CONCENTRATION		**39**	

SCHOOL OF BUSINESS CORE REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Accounting	ACCT 260	3	
Managerial Accounting	ACCT 270	3	
Business Law I	BLAW 301	3	May Also Take CE 420
Principles of Microeconomics	ECON 214	3	
Principles of Macroeconomics	ECON 215	3	
Financial Management I	FIN 327	3	
Foundations of Management	MGMT 227	3	
Organizational Behavior & Management	MGMT 352	3	
Operations & Supply Chain Management	MGMT 418	3	
Business Policy / Strategic Planning	MGMT 498	3	
Intro to Computer Business Applications	MIS 153	3	May Also Take CS 171, ECE 101, 112, ENGR 107 or ME 112
Principles Of Marketing	MKTG 311	3	
Speech Communication	SPCH 125	3	
Elementary Business Statistics	STAT 221	3	May Also Take MATH 308
Intermediate Business Statistics	STAT 222	3	
TOTAL HOURS FOR BUSINESS CORE		**45**	

TOTAL CREDITS REQUIRED FOR CONCENTRATION 84

SUSTAINABILITY CONCENTRATION REQUIREMENTS FOR BSEM

ENMT

(Bachelor of Science in Engineering Management general requirements can be found on page 82)

SUSTAINABILITY CONCENTRATION SUPPORT REQUIREMENTS			SUSY
COURSE	**COURSE NUMBER**	**CREDITS**	**NOTES**
Environmental Biology w/ Lab	BIOL 107/L	4	
Chemistry I / Lab	CHEM 115/L	4	
Intro to Sustainability	HUM 210	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**11**	

SCHOOL OF ENGINEERING CORE REQUIREMENTS: (2.0 GPA in Major Required)			
COURSE	**COURSE NUMBER**	**CREDITS**	**NOTES**
Environmental Engineering I	CE 329	2	
Environmental Engineering II	CE 429	2	
The Compleat Engineering Manager	ENGR 400	3	
Sustainability Project I	ENGR 431	1	
Sustainability Project II	ENGR 432	2	
Solids Modeling	ME 121	3	May Also Take CE 111
Packaging Elective		3	PKG 319, 321, 411
Technical Elective		9	CE 201, 210, CH E 410, ECE 400, ENGR 100, 101, PKG/CH E 319, 321, 411, PKG 101 or
Program Option		3	202 ECON 325, 347, GS 200, or those listed under Engineering Elective above
TOTAL HOURS FOR ENGINEERING CORE		**28**	

SCHOOL OF BUSINESS CORE REQUIREMENTS: (2.0 GPA in Major Required)			
COURSE	**COURSE NUMBER**	**CREDITS**	**NOTES**
Financial Accounting	ACCT 260	3	
Managerial Accounting	ACCT 270	3	
Business Law I	BLAW 301	3	
Principles of Microeconomics	ECON 214	3	
Principles of Macroeconomics	ECON 215	3	
Financial Management I	FIN 327	3	
Intro to Computer Business Applications	MIS 153	3	May Also Take CS 171, ECE 101, 112, ENGR 107, or ME 112
Foundations of Management	MGMT 227	3	
Organizational Behavior & Management	MGMT 352	3	
Business Policy / Strategic Planning	MGMT 498	3	
Principles of Marketing	MKTG 311	3	
Operations & Supply Chain	MGMT 418	3	
Speech Communication	SPCH 125	3	
Elementary Business Statistics	STAT 221	3	May Also Take MATH 308
Intermediate Business Statistics	STAT 222	3	
TOTAL HOURS FOR BUSINESS CORE		**45**	

TOTAL CREDITS REQUIRED FOR CONCENTRATION 84

MINORS IN THE SCHOOL OF ENGINEERING

ELECTRICAL ENGINEERING: A minor in Electrical Engineering is open to students not part of the Electrical Engineering majors, and they must complete the following courses: ECE 101, 221, 222, 250, 251, 251L, 331, 331L, and 350.

INFORMATION MANAGEMENT: Information Management is open to students not part of the BSEM (Information Management) major and they must complete the following courses: ECE 411 and 412 (with approved project) and five of the following: ENGR 441, 442, 443, 444, CS/ECE 370, ECE 450, or CS/ECE/MIS 471.

PACKAGING: A minor in Packaging is open to students not part of the BSEM (Packaging) majors and they must complete the following courses: PKG 202, 319 (or CH E/ME 319), 321 (or CH E/ME 321), 411 (or CH E/ME 411) PKG 490 (or any engineering project course with approved packaging component), and one elective (CH E 328, CE/ME 210).

VIDEO GAME DESIGN: A minor in Video Game Design provides students the basic skills needed to pursue a career in video game design engineering, and research. Completion of this programs shows that a student understands the principles of game design, technology and has intermediate expertise in the use of a game engine. This minor or certificate is not intended to provide professional training on a game engine or teach a formal programming language. Students must complete the following courses: ECE 112, 112L, 150, 250, 309, 310 (or 452), 411 (or ENGR 421), and 412 (or ENGR 422).

SCHOOL OF SCIENCES

ADMINISTRATION

DR. JAMES W. MCGUFFEE, *Dean*

DR. DENNIS MERAT, *Chair, Chemistry Department*

DR. PASCAL BEDROSSIAN, *Co-chair, Mathematics & Computer Science*

CATHY GRILLI, *Co-Chair, Mathematics & Computer Science*

DR. STANLEY EISEN, *Director, Pre-Professional Health Programs*

DR. JAMES E. MOORE, *Chair, Biology Department*

DR. JOHN A. VARRIANO, *Chair, Physics & Natural Science*

DR. JENNIFER M. HITT, *Director, Nursing Program*

FACULTY

BIOLOGY

STANLEY EISEN, *Professor*
BS, State University of New York at Stony Brook; MA, PhD, Indiana University

MALINDA E. C. FITZGERALD, *Professor*
BS, MS, University of Memphis; PhD, University of Tennessee, Memphis

JAMES E. MOORE, *Associate Professor*
BS, West Virginia State College; MS, University of North Carolina Greensboro; PhD University of Memphis

MARY L. OGILVIE, *Professor*
BS, MS, PhD, Memphis State University

ANNA E. ROSS, *Professor*
A.B., Hope College; PhD, Clemson University

KATHLEEN SAUSER, *Associate Professor*
BS, University of Tennessee at Martin; MS, Florida Institute of Technology; PhD, Memphis State University

SANDRA THOMPSON-JAEGER, *Associate Professor*
BS, Ouachita Baptist University; MS, PhD, University of Munich (Germany)

CHEMISTRY

DAVID P. DAWSON, *Associate Professor*
BS, Rhodes College; PhD University of Arkansas

DENNIS MERAT, *Associate Professor*
BS, Southern Methodist University; PhD Texas A & M University

WILLIAM PEER, *Associate Professor*
BS University of Michigan; PhD University of Texas at Austin

ANTHONY TRIMBOLI, *Associate Professor*
BS, Muhlenburg College; PhD, University of South Carolina

JOHN YOUNG, *Associate Professor*
BA Hendrix College; PhD Mississippi State University

MATHEMATICS & COMPUTER SCIENCE

PASCAL BEDROSSIAN, *Professor*
BS, Christian Brothers University; MS, PhD, Memphis State University

SANDRA DAVIS, *Instructor*
BA, Cameron University; MS, Memphis State University

ANDREW M. DIENER, *Assistant Professor*
BA, St. Mary's University (San Antonio, TX); MS, PhD, Texas A&M University

CATHY W. GRILLI, *Professor*
BA, MA, University of Mississippi

JAMES W. MCGUFFEE, *Professor*
BS, Louisiana Tech University; PhD, Louisiana State University and A & M College

HOLMES PEACHER-RYAN, *Associate Professor*
AB, Princeton University; MS, PhD, University of Memphis

BROTHER WALTER SCHREINER, FSC, *Associate Professor*
BA, University of St. Thomas; MS, University of Notre Dame; PhD, University of Illinois

SERGE SALAN, *Assistant Professor*
BS, MS, St. Joseph Universite' (Lebanon); MS, PhD, University of Memphis

JING WANG, *Assistant Professor*
BS, University of Science and Technology of China; MA, PhD, The George Washington University

ARTHUR A. YANUSHKA, *Professor*
BA, Fordham University; MS, State University of New York at Stony Brook; PhD, University of Illinois

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NURSING

CHERYL BURNETT, *Assistant Professor*
BS, Lemoyne Owen College; BSN, MSN, University of Tennessee; DNP, University of Alabama

CECILIA GARRISON, *Assistant Professor*
BSN, University of Maryland; MS, University of Hawaii

JENNIFER M. HITT, *Associate Professor*
BA, University of Mississippi; BS, University of Memphis; MS, University of Mississippi Medical Center; PhD, University of Tennessee Health Science Center

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PHYSICS & NATURAL SCIENCE

TED CLARKE, *Assistant Professor*
BS, MS, PhD, University of Memphis

JOHNNY B. HOLMES, *Professor*
BS, Rockhurst College; MS, PhD, University of Miami

JOHN A. VARRIANO, *Professor*
BS, University of Pittsburgh; PhD, University of Rochester

PROFESSORS EMERITI

BROTHER JOEL BAUMEYER, FSC, *Mathematics, Director of Math Center*
BA, MEd, St. Mary's College; MA, PhD, St. Louis University

LEIGH C. BECKER, *Mathematics & Computer Science*
BS, Illinois Institute of Technology; MS, University of Illinois; MS, PhD, Southern Illinois University

WILLIAM J. BUSLER, *Chemistry*
BS, Christian Brothers College; PhD, University of Tennessee Center for the Health Sciences

STEWART MICHAEL CONDREN, *Chemistry*
BS, University of Arkansas; MS, PhD, University of Missouri-Rolla

LAWRENCE GULDE, *Mathematics*
BS, MAT, St. Mary's College; MA, Boston College; PhD, Memphis State University

RELBUE M. MORGAN, *Physics*
BS, Christian Brothers College; PhD, Iowa State University

BROTHER EDWARD SALGADO, FSC, *Biology*
BA, La Salle University; MS, St. Mary's University; PhD, University of the Philippines

LYLE D. WESCOTT JR., *Chemistry*
BS, Georgia Institute of Technology; PhD, Pennsylvania State University

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PART-TIME FACULTY

BROTHER THOMAS SULLIVAN, FSC, *Assistant Professor*
BS, MS, St. Mary's University of Minnesota; PhD, University of Minnesota

MISSION

In the LaSallian tradition, the School of Sciences promotes excellence in teaching to prepare students to meet the scientific and professional challenges of life in a changing world. The School teaches critical thinking and problem solving in a multidisciplinary scientific context.

VISION

The School of Sciences is an educational and scientific community, open and welcoming, creative and adaptable. It is renowned for excellence in education. It makes a positive impact on the world through its graduates as they leave to serve.

OVERVIEW

THE SCHOOL OF SCIENCES offers programs leading to Bachelor of Science degrees in Biochemistry, Biology, Biomedical Science, Chemistry, Computer Science, Ecology, Mathematics, Natural Science, Physics, and Engineering Physics; Bachelor of Arts degrees in Mathematics, Mathematics Education, and Natural Science Education; and a RN TO BSN completion program leading to a Bachelor of Science degree in Nursing. Students seeking to enter schools of medicine, dentistry, pharmacy, or any health-related professional school traditionally enroll in the School of Sciences. The baccalaureate degrees in Biochemistry, Biology, Biomedical Science, and Chemistry are designed to meet the entrance requirements of all health-related professional schools.

The degree programs are constructed to produce graduates who will be able to excel as professionals in science, who will succeed in pursuing further education in graduate or professional schools, and who will use their science background as a foundation for careers in other areas such as business, law, education, and engineering.

DUAL DEGREES

Dual degrees are being offered in the School of Science. See the CBU website for the various possibilities.

Currently, Christian Brothers University has agreements with the Southern College of Optometry, Union University School of Pharmacy, and University of Tennessee Health Science Center College of Pharmacy through which students majoring in Natural Science at CBU have the possibility of admission into the Professional School or Master's program after completing 3 to 3 ½ years of undergraduate study. Students are not guaranteed admission and must meet all admission requirements for the Professional School or Master's program. Upon completion of the Professional School or Master's program, two degrees may be awarded – one from the Professional School or Master's program and the BS in Natural Science from Christian Brothers University.

DEGREE REQUIREMENTS

In order to graduate, a student must complete 122 semester credit hours with an overall grade point average of 2.0 or above and a minimum 2.0 grade point average in the satisfaction of major requirements. In addition, every student must satisfy the requirements of 6 hours in English composition; a minimum of 18 hours in humanities/social science that must include at least 3 hours in literature, 6 hours in religious studies, 3 hours in moral values course work, and 6 hours in the social sciences. All Math and Natural Science requirements, and sometimes some of the other above requirements, are already specified for the majors in Science. Details on permitted or recommended courses can be found in the General Education section of this catalog.

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN BIOCHEMISTRY

BIOC

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		Satisfied by Major Requirements
Statistics	MATH 201		Satisfied by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	CHEM 113/L		Satisfied by Major Requirements
Moral Values	#	3	
Aesthetics			Satisfied by English Literature GER
TOTAL HOURS FOR GER		**24**	

BIOCHEMISTRY SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Calculus I	MATH 131	3	
Applied Statistics	MATH 201	3	
Introductory Physics I / Lab	PHYS 201/L	4	
Introductory Physics II / Lab	PHYS 202/L	4	
Speech Communication	SPCH 125	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**17**	

BIOCHEMISTRY MAJOR REQUIREMENTS: (Transfer students must take at least 15 hours of required CHEM courses numbered above 300 at CBU.)(2.0 GPA in Major Required)

CHEMISTRY REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Organic Chemistry I / Lab	CHEM 211/L	4	
Organic Chemistry II / Lab	CHEM 212/L	4	
Quantitative Analysis / Lab	CHEM 214/L	4	
Biochemistry I / Lab	CHEM 315/L	4	
Biochemistry II / Lab	CHEM 316/L	3	
Research Seminar I	CHEM 330	0	
Research Seminar II	CHEM 331	0	
Research Seminar III	CHEM 428	0	
Research Seminar IV	CHEM 429	2	
Program Electives		6	Choose From: CHEM 311, 342, 351/L, 410, 415/L, 420, 422/L or BIOL 415/L
Senior Comprehensive / Biochemistry	CHEM 498	0	
TOTAL HOURS FOR CHEMISTRY		**35**	

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN BIOCHEMISTRY (CONT'D)

BIOCHEMISTRY MAJOR REQUIREMENTS: (Transfer students must take at least 15 hours of required CHEM courses numbered above 300 at CBU.)(2.0 GPA in Major Required)

BIOLOGY REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Biology I / Lab	BIOL 111/L	4	
Principles of Biology II / Lab	BIOL 112/L	4	
Human Anatomy & Physiology I / Lab	BIOL 217/L	4	BIOL 212/L and 312/L may be substituted for BIOL 217/L and 218/L
Human Anatomy & Physiology II / Lab	BIOL 218/L	4	
Genetics / Lab	BIOL 311/L	4	
Microbiology / Lab	BIOL 321/L	4	
Cell / Molecular Biology / Lab	BIOL 421/L	4	
TOTAL HOURS FOR BIOLOGY		**28**	
TOTAL MAJOR REQUIREMENTS		**63**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		18	Excluding ALG 110, ALG 115, ALG 120, ENG 100, and MATH 103
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**18**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 122

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN BIOLOGY

BIOL

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		Satisfied by Major Requirements
Statistics	BIOL 340 or MATH 201		Satisfied by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	3	
Social Science or History	#	3	
Natural or Physical Science	BIOL 111/L		Satisfied by Major Requirements
Moral Values	#	3	
Aesthetics			Satisfied by English Literature GER
TOTAL HOURS FOR GER		**24**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Organic Chemistry I / Lab	CHEM 211/L	4	
Organic Chemistry II / Lab	CHEM 212/L	4	
Chemistry Elective / Lab		4	Choose From: CHEM 214/L, 315/L, 351/L, 352/L, 415/L or 422/L
Introductory Physics I / Lab	PHYS 201/L	4	
Introductory Physics II / Lab	PHYS 202/L	4	
Calculus I	MATH 131	3	
Applied Statistics		3	Choose From: MATH 201 or BIOL 340
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**34**	

BIOLOGY MAJOR REQUIREMENTS: (2.0 GPA in Major Required)(Transfer Students Must Take at Least 20 Hours of Biology at or Above the 300 level at CBU)

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Biology I / Lab	BIOL 111/L	4	
Principles of Biology II / Lab	BIOL 112/L	4	
Seminar	BIOL 362	1	
Genetics / Lab	BIOL 311/L	4	
Research II	BIOL 464	2	Students may substitute BIOL 461/466 Independent Research for the
Research III	BIOL 465	2	BIOL 464/465 sequence with permission of the Chair or Course Director
Comprehensive Examination	BIOL 499	0	
TOTAL HOURS FOR MAJOR		**17**	

STANDARD BIOLOGY MAJOR ELECTIVE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Group I: Biology Electives		3-4	Choose From: BIOL 211/L, 218/L, 236, 312/L, 414 /L or 451/L
Group II: Biology Electives		3-4	Choose From: BIOL 212/L, 216/L, 303/L, 335/L, 369/L, or 413/L
Group III: Biology Electives		3-4	Choose From: BIOL 304/L, 346, 381, 412/L or 430/L
Group IV: Biology Electives		3-4	Choose From: BIOL 321/L, 367, 370, 415/L or 421/L or select pre-approved Special Topics courses
Biology Electives 300+ Level		4-14	
TOTAL HOURS BIOLOGY ELECTIVES 200+ LEVEL		**31**	Students must have at least 20 hours at 300+ level.
TOTAL MAJOR REQUIREMENTS		**48**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		13	Excluding ALG 110, 115, 120, ENG 100, MATH 100, 101 and 103. Max 6 Hrs. in BIOL.
School of Arts Electives		3	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**16**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCES

BISC

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131	3	
Statistics	BIOL 340 or MATH 201	3	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	3	
Social Science or History	#	3	
Natural or Physical Science	CHEM 113/L		Satisfied by Major Requirements
Moral Values	#	3	
Aesthetics			Satisfied by English Literature GER
TOTAL HOURS FOR GER		**30**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Organic Chemistry I / Lab	CHEM 211/L	4	
Organic Chemistry II / Lab	CHEM 212/L	4	
Biochemistry I / Lab	CHEM 315/L	4	
Biochemistry II	CHEM 316	3	
Introductory Physics I / Lab	PHYS 201/L	4	
Introductory Physics II / Lab	PHYS 202/L	4	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**31**	

BIOMEDICAL SCIENCES MAJOR REQUIREMENTS: (2.0 GPA in Major Required)(Transfer Students Must Take at Least 20 Hours of Biology at or Above the 300 level at CBU)

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Biology I / Lab	BIOL 111/L	4	
Principles of Biology II / Lab	BIOL 112/L	4	
Genetics / Lab	BIOL 311/L	4	
Seminar	BIOL 362	1	
Research II	BIOL464	2	Students may substitute BIOL 461/466 Independent Research for the BIOL 464/465 sequence.
Research III	BIOL465	2	
Comprehensive Examination	BIOL 499	0	
Embryology / Lab	BIOL 211/L	4	
Human Physiology / Lab	BIOL 312/L	4	
Microbiology / Lab	BIOL 321/L	4	
Parasitology / Lab	BIOL 413/L	4	
Histology / Lab	BIOL 414/L	4	
Immunology / Lab	BIOL 415/L	4	
Group III Biology Elective (W/ Lab as appropriate)		3-4	Choose From: BIOL 304/L, 346, 381, 412/L or 430/L
Biology Elective 200+ Level		4	
TOTAL HOURS FOR MAJOR		**49**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		9	Excluding ALG 110, 115, 120, ENG 100, MATH 100, 101 and 103. Max 4 hours in BIOL
School of Arts Electives		3	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**12**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN CHEMISTRY

CHEM

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		
Statistics	MATH 308		
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	3	
Social Science or History	#	3	
Natural or Physical Science	CHEM 113/L		
Moral Values	#	3	
Aesthetics			Satisfied by English Literature GER
TOTAL HOURS FOR GER		**24**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Calculus I	MATH 131	3	
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Statistics	MATH 308	3	
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
Physics III / Lab	PHYS 252/L	4	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**27**	

CHEMISTRY MAJOR REQUIREMENTS: (Transfer Students Must Take at Least 15 Hours of Required CHEM Courses Numbered at or Above 300 at CBU.)(2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Organic Chemistry I / Lab	CHEM 211/L	4	
Organic Chemistry II / Lab	CHEM 212/L	4	
Quantitative Analysis / Lab	CHEM 214/L	4	
Biochemistry I / Lab	CHEM 315/L	4	
Research Seminar I	CHEM 330	0	
Research Seminar II	CHEM 331	0	
Physical Chemistry I / Lab	CHEM 351/L	4	
Physical Chemistry II / Lab	CHEM 352/L	4	
Analytical Chemistry / Lab	CHEM 415/L	4	
Inorganic Chemistry / Lab	CHEM 422/L	4	
Research Seminar III	CHEM 428	0	
Research Seminar IV	CHEM 429	2	
Senior Comprehensive / Chemistry	CHEM 499	0	
Upper Division Chemistry Electives		3	
TOTAL HOURS FOR MAJOR		**45**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		26	Excluding ALG 110, ALG 115, ALG 120, ENG 100 and MATH 103. Max 52 Hours Total in CHEM.
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**26**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN COMPUTER SCIENCE

CS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131	3	
Statistics	MATH 121	0	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	PHYS 150/L	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**31**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Calculus II	MATH 132	3	
Discrete Math	MATH 141	3	
Physics II / Lab	PHYS 251/L	4	
Digital Design	ECE 250	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**13**	

COMPUTER SCIENCE MAJOR REQUIREMENTS: (Computer Science Concentration Required)(2.0 GPA in Major Required)(Transfer Students Must Take at Least One Half of the Required Computer-Related Courses Numbered 300 or Above at CBU.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Computers in Problem Solving	CS 112/L	4	
Fundamentals of Computer Science / Lab	CS 172/L	4	
Data Structures / Lab	CS 234/L	4	
C Programming	CS 301	3	
Object Oriented Design	CS 360	3	
Operating Systems	CS 370	3	May Also Take ECE 370
Internship in Computer Science	CS 400	3	
Algorithms	CS 440	3	
Database Design	CS 471	3	May Also Take ECE 471
Computer Science Project I	CS 481	1	
Computer Science Project II	CS 482	3	
TOTAL HOURS FOR COMPUTER SCIENCE		**34**	

COMPUTER SCIENCE CONCENTRATION REQUIREMENTS: (Computer Science Concentration Required (See Next Page, 45-46 Hours)(2.0 GPA in Conc. Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Computer Science Concentration	See Next Page	33-44	
TOTAL FOR MAJOR, MINOR, AND CONC. REQUIREMENTS		**67-78**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives	*	0-11	* Max 47 hours total in Computer Science
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**0-11**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

CONCENTRATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN COMPUTER SCIENCE

(All Computer Science majors are required to select one of the following concentrations)

BUSINESS CONCENTRATION — CSBU

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to MIS	MIS 231	3	
Microeconomics	ECON 214	3	
Principles of Marketing	MKTG 311	3	
Principles of Macroeconomics	ECON 215	3	
International Business	MGMT 320	3	
International Marketing	MKTG 438	3	
Foundations of Management	MGMT 227	3	
Required Minor for Business Option		12-23	
TOTAL HOURS FOR CSBU CONCENTRATION		**33-44**	

ENGINEERING CONCENTRATION — CSEN

COURSE	COURSE NUMBER	CREDITS	NOTES
Differential Equations	MATH 231	3	
Circuits I	ECE 221	3	
Microprocessor Architecture & Programming Lab	ECE 251	4	
Computer Systems Design & Architecture	ECE 350	3	
Computer Networks	ECE 450	3	
CS/ECE Electives		6	Choose From: CS/ECE at 300 or 400 Level
Required Minor for Engineering Option		12-22	
TOTAL HOURS FOR CSEN CONCENTRATION		**34-44**	

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN COMPUTER SCIENCE & MATHEMATICS

CSMT

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131	3	
Statistics	MATH 121	0	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	PHYS 150/L		Fulfilled by Major Requirements
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**27**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Circuits I	ECE 221	3	
Digital Design	ECE 250	3	
Microprocessor Architecture / Lab	ECE 251/L	4	
Systems Architecture	ECE 350	3	
Computer Networks	ECE 450	3	
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
CS/ECE Electives		6	Choose From: CS/ECE at 300 or 400 Level
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**30**	

COMPUTER SCIENCE & MATH MAJOR REQUIREMENTS: (Transfer Students Must Take at Least One Half of the Required Math and Computer Science Courses Numbered at or Above 300 at CBU.)(2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Computers in Problem Solving	CS 112/L	4	
Fundamentals of Computer Science / Lab	CS 172/L	4	
Data Structures / Lab	CS 234/L	4	
C Programming	CS 301	3	
Object Oriented Design	CS 360	3	
Operating Systems	CS 370	3	May Also Take ECE 370
Internship in Computer Science	CS 400	3	
Algorithms	CS 440	3	
Database Design	CS 471	3	May Also Take ECE 471
Computer Science Project I	CS 481	1	
Computer Science Project II	CS 482	3	
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Applied Numerical Analysis	MATH 329	3	
Linear Algebra	MATH 401	3	
Abstract Algebra	MATH 402	3	
Discrete Math	MATH 405	3	
Complex Analysis	MATH 413	3	
Real Analysis	MATH 414	3	
Math Seminar I	MATH 481	1	
Math Seminar II	MATH 482	2	
Math Elective		3	Choose From: MATH 301, 308, 309 or 470-9
Math / CS Elective		3	MATH 300/400 or CS 300/400
TOTAL HOURS FOR MAJOR		**70**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 127 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN ECOLOGY

ECOL

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		Satisfied by Major Requirements
Statistics	BIOL 340		Satisfied by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	3	
Social Science or History	#	3	
Natural or Physical Science	BIOL 111/L		Satisfied by Major Requirements
Moral Values	PHIL 325	3	
Aesthetics			Satisfied by English Literature GER
TOTAL HOURS FOR GER		**24**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Organic Chemistry I / Lab	CHEM 211/L	4	
Organic Chemistry II / Lab	CHEM 212/L	4	
Introductory Physics I / Lab	PHYS 201/L	4	
Introductory Physics II / Lab	PHYS 202/L	4	
Calculus I	MATH 131	3	
Chemistry Elective / Lab		4	Choose From: CHEM 201/L, 214/L, 315/L or 351/L
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**31**	

ECOLOGY MAJOR REQUIREMENTS: (2.0 GPA in Major Required)(Transfer Students Must Take at Least 20 Hours of Biology at or Above the 300 Level at CBU)

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Biology I / Lab	BIOL 111/L	4	
Principles of Biology II / Lab	BIOL 112/L	4	
Experimental Design & Statistical Analysis	BIOL 340	3	
Genetics / Lab	BIOL 311/L	4	
Ecology / Lab	BIOL 412/L	4	
Research I	BIOL 440	2	
Research II	BIOL 441	2	
Comprehensive Examination	BIOL 499	0	
TOTAL HOURS FOR MAJOR		**23**	

STANDARD ECOLOGY MAJOR ELECTIVE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Group I Ecology Electives		3-4	Choose From: BIOL 312/L, 321/L, 370 or 421/L
Group II Ecology Electives		3-4	Choose From: BIOL 211/L, 212/L or 346
Group III Ecology Electives		3-4	Choose From: BIOL 216/L, 250, 303/L, 304/L, or Select Preapproved Special Topics Courses
Group IV Ecology Electives		3-4	Choose From: BIOL 335/L, 369/L, 381, 413/L, 420/L or Select Preapproved Special Topics Courses
Biology Electives 300+ Level		19	
TOTAL HOURS ECOLOGY MAJOR ELECTIVES		**31**	
TOTAL MAJOR REQUIREMENTS		**54**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		10	Excluding ENG 100, MATH 100, 101,103, ALG 110, 115, 120 & CHEM 101. Max 6 hours in BIOL.
School of Arts Elective		3	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**13**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN ENGINEERING PHYSICS

EPHY

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled bySupport Requirements
Statistics	MATH 121	0	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 hr to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	CHEM 115/L		Fulfilled by Major Requirements
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**24**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
General Chemistry / Lab	CHEM 115/L	4	
Calculus I	MATH 131	3	
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Probability	MATH 309	3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**19**	

ENGINEERING PHYSICS MAJOR REQUIREMENTS: (2.0 GPA in Major Required)(Transfer Students Must Take at Least 19 Hours of Required Courses Above the 300 Level at CBU)

COURSE	COURSE NUMBER	CREDITS	NOTES
Fundamentals of Computer Science	CS 172/L	4	
Engineering Instrumentation Lab	ME 301	2	
Electric Circuit Analysis I	ECE 221	3	
Electric Circuit Analysis II	ECE 222	3	
Solids Modeling	ME 121	3	
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
Physics III / Lab	PHYS 252/L	4	
Electromagnetic Fields	PHYS 340	3	
Solid State Physics	PHYS 353	3	
Advanced Mechanics I	PHYS 380	3	
Optics / Lab	PHYS 415/L	4	
Thermal Physics	PHYS 430	3	
Quantum Mechanics I	PHYS 447	3	
Advanced Physics Lab	PHYS 452	1	
Research I	PHYS 491	0	
Research II	PHYS 492	2	
Senior Comprehensives	PHYS 499	0	
Special Relativity	PHYS 347	2	
Electronics I	ECE 331/L	4	
Engineering Elective (300+ Level)		6	
ENGR/PHYS/MATH Elective (300+ Level)		3	
TOTAL HOURS FOR MAJOR		**64**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		15	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**15**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN MATHEMATICS

MATS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Major Requirements
Statistics	MATH 121	0	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**24**	

MAJOR-SPECIFIC SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Computers in Problem Solving	CS 112/L	4	
Science Electives		8	Choose From: BIOL, CHEM, PHYS or CS. Both courses must be in the same discipline.
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**12**	

MATHEMATICS MAJOR REQUIREMENTS: (Mathematics Concentration Required)(2.0 GPA in Major Required)(Transfer Students Must Take at Least One Half of the Required Mathematics Courses Numbered Above the 300 Level at CBU)

COURSE	COURSE NUMBER	CREDITS	NOTES
Calculus I	MATH 131	3	May Also Take MATH 129
Calculus II	MATH 132	3	
Introduction to Discrete Math	MATH 141	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Linear Algebra	MATH 401	3	
Abstract Algebra	MATH 402	3	
Complex Analysis	MATH 413	3	
Real Analysis	MATH 414	3	
Senior Seminar I	MATH 481	1	
Senior Seminar II	MATH 482	2	
Math Elective		9	Choose From: MATH 301, 308, 309, 329, 405 or 470-479
TOTAL HOURS FOR MATHEMATICS MAJOR		**39**	

MATHEMATICS CONCENTRATION REQUIREMENTS: (Mathematics Concentration Required (See Next Page, 19-27 Hours)(2.0 GPA in Conc. Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
MATH Concentrations	See Next Page	18-28	
TOTAL FOR MAJOR AND CONCENTRATION REQUIREMENTS		**57-67**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		0-29	For those seeking teaching licensure at the MAT (masters) level, recommended electives are EDUC 211, EDUC 402, and PSYC 315.
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**0-29**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

CONCENTRATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN MATHEMATICS

GENERAL SCIENCE CONCENTRATION

COURSE	COURSE NUMBER	CREDITS	NOTES
Required Minor		20-23	Choose From: BIOL, CHEM, CS, or PHYS. Must be in a different filed than Science Electives
TOTAL HOURS FOR GEN. SCIENCE CONCENTRATION		**20-23**	

BUSINESS CONCENTRATION

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Accounting	ACCT 260	3	
Principles in Microeconomics	ECON 214	3	
Principles in Macroeconomics	ECON 215	3	
Financial Management I	FIN 327	3	
Business Electives		12	Choose From: 300 or 400 level courses in ACCT, ECON, FIN, MKTG, MGMT, or SMGT
TOTAL HOURS FOR BUSINESS CONCENTRATION		**24**	

ENGINEERING CONCENTRATION

COURSE	COURSE NUMBER	CREDITS	NOTES
If a primary major has been declared in CE, CH E, EE, ECE, or ME, the concentration requirements are satisfied by completion of that degree.		18-28	Free electives can be applied toward primary degree
TOTAL HOURS FOR BUSINESS CONCENTRATION		**18-28**	

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN MATHEMATICS

MATA

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		Fulfilled by Major Requirements
Statistics	MATH 121	0	
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	Choose From: HIST 107, 108, 151 or 152
Natural or Physical Science	#		Fulfilled by School of Science Requirements
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**24**	

MAJOR-SPECIFIC SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language		12	Must Be The Same Language
Computers in Problem Solving / Lab	CS 112/L	4	
Science Elective & Lab		8	Choose From: BIOL, CHEM or PHYS. Both courses must be in the same discipline.
Philosophy Elective		3	Any PHIL Course
Literature Elective		3	Choose From: ENG 211, 212, 221 or 222
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**30**	

MATHEMATICS MAJOR REQUIREMENTS: (2.0 GPA in Major Required)(Transfer Students Must Take at Least Half of the Required Mathematics Courses Numbered Above 300 at CBU)

COURSE	COURSE NUMBER	CREDITS	NOTES
Calculus I	MATH 131	3	
Calculus II	MATH 132	3	
Introduction to Discrete Math	MATH 141	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Linear Algebra	MATH 401	3	
Abstract Algebra	MATH 402	3	
Complex Analysis	MATH 413	3	
Real Analysis	MATH 414	3	
Senior Seminar I	MATH 481	1	
Senior Seminar II	MATH 482	2	
Math Electives		9	Choose From: MATH 301, 308, 309, 329, 405 or 470-479
TOTAL HOURS FOR MAJOR		**39**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Major Specific Electives		12	Choose 12 Hours In Same Discipline From: PSYC, SOC, ANTH, CJ, ECON, POLS, PHIL, RS or HIST
Free Electives		17	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**29**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 122

2.0 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN MATHEMATICS EDUCATION

MATE

(Teaching Licensure 6-12)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131	0	Fulfilled by Major Requirements
Statistics	MATH 121	0	
English Composition I	ENG 111	3	May also take ENG 231
English Composition II	ENG 112	3	May also take ENG 232
English Literature	#	3	Waived if ENG 231/232, add 1 Hr. to Electives
Religious Studies--RS	#	6	
Social Science or History	PSYC 105	3	
Social Science or History	#	3	Choose From: HIST 107, 108, 151 or 152
Natural or Physical Science	#	4	Choose From: BIOL, CHEM or PHYS
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**28**	

MAJOR-SPECIFIC SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Computers in Problem Solving / Lab	CS 112/L	4	
Foreign Language		12	
Science Elective & Lab		4	Must Be Same Discipline as Science GER
Literature Elective		3	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**23**	

MATHEMATICS EDUCATION MAJOR REQUIREMENTS:
(2.0 GPA in Major Required)((Transfer Students Must Take at Least Half of the Required Mathematics Courses Numbered Above 300 Level at CBU)

COURSE	COURSE NUMBER	CREDITS	NOTES
Calculus I	MATH 131	3	
Calculus II	MATH 132	3	
Discrete Math	MATH 141	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Geometry & History of Mathematics	MATH 301	3	
Linear Algebra	MATH 401	3	
Abstract Algebra	MATH 402	3	
Complex Analysis	MATH 413	3	
Real Analysis	MATH 414	3	
Senior Seminar I	MATH 481	1	
Senior Seminar II	MATH 482	2	
Math Elective		6	Choose From: MATH 308, 309, 329, 405 or 470-479
TOTAL HOURS FOR MATH MAJOR		**39**	

LICENSURE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Teaching Mathematics, 6-12	EDCI 433	3	
Introduction to Education	EDUC 211	3	
Professional Foundations I	EDUC 303	3	
Professional Foundations II	EDUC 304	3	
Survey of Exceptional Learners	EDUC 331	3	
Portfolio and Practicum - TVAAS	EDUC 332	1	
Practicum in Education	EDUC 402	3	
Classroom Management & Methods	EDUC 407	3	
Literacy across the Curriculum	EDUC 429	3	
Curriculum & Assessment In 6-12 Schools	EDUC 430	3	
Student Teaching - Elementary Level I	EDUC 431	6	
Student Teaching - Elementary Level II	EDUC 432	6	
Teaching Practicum III	EDUC 473	1	
Educational Psychology	PSYC 315	3	
TOTAL SEC EDUCATION REQUIREMENTS		**44**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 134 **2.75 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN NATURAL SCIENCE

NSCI

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	#	3	MATH 117 or 131
Statistics	NSCI 410		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	BIOL 109/L or 111/L		Fulfilled by Major Requirements
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**27**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Math Elective	#	3	Choose from: MATH 106, 131 or 132
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**3**	

NATURAL SCIENCE MAJOR REQUIREMENTS: (2.0 GPA in Major Required)(Transfer Students Must Take at Least 15 of the Required Hours Numbered at or Above the 200 Level at CBU, and This Must Include at Least Two Courses (6 to 8 Hours Excluding NSCI 410) at or Above the 300 Level)

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Biology I / Lab		4	Choose From: BIOL 109/L or BIOL 111/L
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Introductory Physics I / Lab	PHYS 201/L	4	
Introductory Physics II / Lab	PHYS 202/L	4	
Natural Science Major Courses (100+ Level in BIOL, CHEM, NSCI or PHYS)		8	May Not Take CHEM 101
Natural Science Major Courses (200+ Level in BIOL, CHEM, NSCI or PHYS)		8	
Other Science Courses (300+ Level in BIOL, CHEM, NSCI or PHYS)		13	
Senior Seminar	NSCI 410	1	
TOTAL HOURS FOR MAJOR		**50**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		42	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**42**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 122

2.0 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN NATURAL SCIENCE EDUCATION

NSCE

(Teaching Licensure 6-12)

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131	3	
Statistics	NSCI 410		Fulfilled by Major Requirements
English Composition I	ENG 111	3	May also take ENG 231
English Composition II	ENG 112	3	May also take ENG 232
English Literature	#	3	Waived if ENG 231/232, add 1 Hr. to Electives
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Social Science or History	#	6	
Natural or Physical Science	BIOL 111/L		Fulfilled by Major Requirements
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**27**	

NATURAL SCIENCE EDUCATION MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Biology I / Lab	BIOL 111/L	4	
Principles of Biology II / Lab	BIOL 112/L	4	
Principles of Chemistry I / Lab	CHEM 113/L	4	
Principles of Chemistry II / Lab	CHEM 114/L	4	
Introductory Physics I / Lab	PHYS 150/L or 201/L	4	
Introductory Physics II / Lab	PHYS 251/L or 202/L	4	
Natural Science Major Courses (100+ Level In BIOL, CHEM, NSCI or PHYS)	###	4	May not take CHEM 101
Natural Science Major Courses (200+ Level In BIOL, CHEM, NSCI or PHYS)	###	8	
Natural Science Major Courses (300+ Level In BIOL, CHEM, NSCI or PHYS)	###	13	
Senior Seminar	NSCI 410	1	
TOTAL HOURS FOR MATH MAJOR		**50**	
LICENSURE REQUIREMENTS			
COURSE	**COURSE NUMBER**	**CREDITS**	**NOTES**
Teaching Science, 6-12	EDCI 434	3	
Introduction to Education	EDUC 211	3	
Professional Foundations I	EDUC 303	3	
Professional Foundations II	EDUC 304	3	
Survey of Exceptional Learners	EDUC 331	3	
Portfolio and Practicum - TVAAS	EDUC 332	1	
Practicum in Education	EDUC 402	3	
Classroom Management & Methods	EDUC 407	3	
Literacy across the Curriculum	EDUC 429	3	
Curriculum & Assessment In 6-12 Schools	EDUC 430	3	
Student Teaching - Elementary Level I	EDUC 431	6	
Student Teaching - Elementary Level II	EDUC 432	6	
Teaching Practicum III	EDUC 473	1	
Geography Survey	GEOG 280	3	
Educational Psychology	PSYC 315	3	
TOTAL PROFESSIONAL EDUCATION REQUIREMENTS		**47**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 124 **2.75 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN NURSING - RN TO BSN

NURS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU		0	Satisfied by NURS 300 or 12+ Hours of Transfer Credit
Mathematics	#	3	Choose From: MATH 105, 117, 129, 131 or 162
Statistics			Fulfilled by Major Requirements
English Composition I	ENG 111	3	May Also Take ENG 231
English Composition II	ENG 112	3	May Also Take ENG 232
English Literature	#	3	Waived if ENG 231/232, Add 1 Hr. to Electives
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	Choose From: PHIL 220, 322, or 325
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**31**	

RN TO BSN MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Dimensions of Professional Nursing	NURS 300	3	
Introduction to Professional Role Development	NURS 302	4	
Health Assessment for RNs	NURS 304	4	
Professional Role Development II	NURS 402	3	
Global Health Nursing	NURS 405	6	
Community Health Nursing Clinical	NURS 406	2	
Leadership	NURS 412	5	
Professional Practice & Leadership Clinical	NURS 413	2	
Evidence-Based Nursing	NURS 416	3	
Transfer NURS Courses or Nursing Block Credit		30	Students transferring from schools that are not regionally accredited will require the Nursing Block Experiential Learning Credit. This block credit will provide transfer of 30 lower division nursing credits.
TOTAL HOURS FOR MAJOR		**62**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		29	Free Electives vary based on Nursing Transfer Hours or Nursing Block Credit Option
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**29**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN PHYSICS

PHYS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to CBU	CBU 101	0	
Mathematics	MATH 131		Satisfied by Support Requirements
Statistics	MATH 308	3	
English Composition I	ENG 111	3	May Take ENG 231
English Composition II	ENG 112	3	May Take ENG 232
English Literature	#	3	Waived if ENG 231/232, add 1 hr to Free Elect
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	PHYS 150/L		Satisfied by Major Requirements
Moral Values	#	3	
Philosophy or Literature	#	3	
TOTAL HOURS FOR GER		**30**	

SCHOOL OF SCIENCE SUPPORT REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
General Chemistry I / Lab	CHEM 113/L	4	
General Chemistry II / Lab	CHEM 114/L	4	
Fundamentals of Computer Science / Lab	CS 172/L	4	
Engineering Instrumentation Lab	ME 301	2	
Electric Circuit Analysis I	ECE 221	3	
Calculus I	MATH 131	3	
Calculus II	MATH 132	3	
Differential Equations	MATH 231	3	
Calculus III	MATH 232	3	
Probability	MATH 309	3	
Math Electives (300+ Level)		6	
TOTAL HOURS FOR SUPPORT REQUIREMENTS		**38**	

PHYSICS MAJOR REQUIREMENTS: (2.0 GPA in Major Required)(Transfer Students Must Take at Least 14 Hours of the Required Courses Numbered Above 300 at CBU.)

COURSE	COURSE NUMBER	CREDITS	NOTES
Physics I / Lab	PHYS 150/L	4	
Physics II / Lab	PHYS 251/L	4	
Physics III / Lab	PHYS 252/L	4	
Electromagnetic Fields	PHYS 340	3	
Special Relativity	PHYS 347	2	
Solid State Physics	PHYS 353	3	
Advanced Mechanics I	PHYS 380	3	
Advanced Mechanics II	PHYS 381	1	
Optics / Lab	PHYS 415/L	4	
Thermal Physics	PHYS 430	3	
Quantum Mechanics I	PHYS 447	3	
Quantum Mechanics II	PHYS 448	3	
Advanced Physics Lab	PHYS 452	1	
Research I	PHYS 491	0	
Research II	PHYS 492	2	
Senior Comprehensives	PHYS 499	0	
TOTAL HOURS FOR MAJOR		**40**	

SCHOOL OF SCIENCE MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		14	Maximum 3 hours of PHYS
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**14**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 122 **2.0 CUMULATIVE GPA REQUIRED**

MINORS IN THE SCHOOL OF SCIENCES

At least 50% of required courses for a minor must be taken at CBU.

BIOLOGY: A minor in Biology requires a minimum of 23 hours in BIOL courses, including BIOL 111/L and BIOL 112/L plus 15 hours in BIOL courses numbered 200 or above including 7 hours in BIOL courses numbered 300 and above and earned at CBU. This minor is not available to Natural Science majors.

CHEMISTRY: A minor in Chemistry requires a minimum of 23 hours in CHEM courses excluding CHEM 101, 115, and 115L. At least 7 of the hours must be in CHEM courses numbered 300 or above and earned at CBU. This minor is not available to Natural Science majors.

COMPUTER SCIENCE: A minor in Computer Science requires the following courses CS 172, 172L, 234, 234L, 360, 471; MATH 141 or 405; and one course selected from CS 370, 440, 460-469.

MATHEMATICS: A minor in Mathematics requires 21 hours in MATH courses including MATH 131, 132, 231, 232, and three MATH courses numbered 300 or above, at least one 400 Level course, and cannot include both 308 and 309. At least 6 hours in MATH courses numbered 300 or above must be earned at CBU.

PHYSICS: A minor in Physics requires a minimum of 21 hours in PHYS courses including the following courses: PHYS 150, 150L, 251, 251L, 252, 252L, and at least 9 hours in PHYS courses numbered 300 or above. At least 5 hours in PHYS courses numbered 300 or above must be earned at CBU, and no more than 4 hours in PHYS courses numbered 300 or above may be earned via challenge exams. This minor is not available to Natural Science majors.

PUBLIC HEALTH (SCIENCE OPTION): A minor in Public Health (science option) requires 36 hours including BIOL 101, 102, 111/L, 112/L, CHEM 113/L, PHIL 322 or 325, SOC/ANTH 350 Global Health, and 12 hours selected from the following: BIOL 103/L, 107/L, 236, 321/L, 370, 412/L, 413/L, and 492 (a special topics course in public health with the permission of the biology department). Note that BIOL 321 and 370 require CHEM 211 as a prerequisite.

INTERDISCIPLINARY PROGRAMS

Some academic programs cross Departmental and School boundaries. They consist of courses drawn from various disciplines and are thus listed separately. Below please find a listing of such interdisciplinary approaches.

CYBERSECURITY AND FORENSICS
Schools of Business, Engineering and Sciences

FACULTY

DANIEL M. BRANDON, JR., *Professor*
BS, Case Western Reserve University; MS, PhD, University of Connecticut; PMP

PASCAL BEDROSSIAN, *Professor*
BS, Christian Brothers University; MS, PhD, Memphis State University

H. JOHN VENTURA, *Associate Professor*
BS, Christian Brothers College; M.E., University of Florida;
EdS, PhD, Nova Southeastern University; P.E.

ERIC B. WELCH, *Professor*
BS, MS, PhD, Mississippi State University

JENNIFER WESKE, *Assistant Professor*
BBA, Stephen F. Austin State University; MBA, The University of Memphis

ARTHUR A. YANUSHKA, *Professor*
BA, Fordham University; MS, State University of New York at Stony Brook;
PhD, University of Illinois

PART-TIME FACULTY

AMY WARE, *Adjunct Lecturer*
BA, University of Mississippi; MA, University of Memphis

COURSE REQUIREMENTS FOR A BA/BS IN INTERDISCIPLINARY STUDIES

This degree is only for students who have been admitted into the BA/BS Interdisciplinary Studies Program with an approved proposal by the VP of Academics and Student Life.

ADMISSIONS REQUIREMENTS:
To be admitted, a student must submit a written proposal that must contain the rationale for the degree sought and a proposed paradigm. The proposal must be approved by the student's ad hoc committee (which includes three faculty members: the advisor, a faculty member from the second field, and a third appropriate faculty member) and the Vice President for Academics and Student Life prior to the end of the student's fourth semester.

CURRICULUM REQUIREMENTS:
Students who wish to major in Interdisciplinary Studies will be required to meet all of the requirements for a minor in a field offered by CBU (other than Interdisciplinary Studies). The student's advisor and chair of her/his ad hoc faculty committee must be a faculty member in this minor department.

In addition to meeting all requirements for the above minor, the student must take 18 or more hours from at least one other major or minor field offered by CBU, 9 hours or more of which must be 300-level or above courses. A second faculty member of the student's faculty committee must come from this second field.

Overall, the student must have 30 or more hours of 300-level or above coursework, excluding the capstone project credit. All General Education requirements, GPA, and other University requirements must be met. The student must also participate in the research or capstone project of the minor field. An "interdisciplinary studies" or "independent study" capstone will not satisfy this requirement. The "major GPA" will include all courses taken in the two primary areas of study, along with a senior project, and therefore must be a 2.00 average or above.

GPA requirements – 2.0 cumulative; 2.0 for major (inclusive of minor, secondary area of study, capstone project). Students will make specific curricular choices with the direction of the advisor, including General Education courses, which can be found on page 29.

Total credits required for the degree..... 121

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN CYBER SECURITY & DIGITAL FORENSICS CYBR

GENERAL EDUCATION REQUIREMENTS: (# - Refer to page 30 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation To CBU	CBU 101	0	
Mathematics	MATH 131	3	
Statistics	#	3	
English Composition I	ENG 111	3	May Take ENG 231
English Composition II	ENG 112	3	May Take ENG 232
English Literature	#	3	Waived if ENG 231/232, add 1 hr to Free Elect
Religious Studies	#	6	
Social Science or History	#	6	
Natural or Physical Science	#	4	
Moral Values	#	3	
Aesthetics			Fulfilled by English Literature GER
TOTAL HOURS FOR GER		**34**	

CYBER SECURITY MAJOR REQUIREMENTS: (2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Computers in Problem Solving / Lab	CS 112/L	4	
Fundamentals of Computer Science / Lab	CS 172/L	4	
Data Structures / Lab	CS 234/L	4	
C Programming	CS 301	3	
Operating Systems	CS 370	3	May take ECE 370
Digital Design	ECE 250	3	
Computer Networks	ECE 450	3	
Intro to Computer Business Applications	MIS 153	3	
Introduction to MIS	MIS 231	3	
Systems Analysis & Design	MIS 351	3	
Applications & Web Development	MIS 470	3	
Data Base Design & Business Intelligence	MIS 471	3	May take CS 471
Cyber Security Internship	MIS 456	3	
Information Security & Lab	MIS 481/L	4	
Digital Forensics & Lab	MIS 482/L	4	
Security Compliance	MIS 483	3	
Calculus II	MATH 132	3	
Discrete Math	MATH 141	3	
TOTAL HOURS FOR MAJOR		**59**	

MINOR REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Minor Electives		21	At least 7 classes (21 credit hours) must be taken in a single area which MAY BE SATISFIED BY an official CBU minor, a second major, OR a group of 21 COHESIVE credit hours in a subject relevant to cyber security. THE 21 COHESIVE CREDIT HOURS MAY BE TRANSFERRED TO CBU. If a CBU minor or major contributes less than the 21 minor credit hours specified above, then other courses would need to be taken (or transferred in) to add up to a total of 21 hours.
TOTAL HOURS FOR MINOR		**21**	

MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		9	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**9**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 123

MINOR IN GLOBAL STUDIES

A minor in Global Studies requires 18 hours of course work with HUM/GS 200 being required and 15 hours to be chosen from a list of designated courses below. Please note the following requirements: 1) 6 elective hours must be at the 300 level or above; 2) elective courses must be taken from at least three different departments or programs; 3) no more than 2 courses can be 100 level courses. In addition to the 18 hours, students must demonstrate a second language capability equivalent to the 202 level (or take up to 12 hours of a foreign language) and take part in a University approved international experience. Designated elective courses include the following: ANTH 160; ANTH/SOC 387; ART 211, 212; BIOL 107, 107lab; CE 305, 317; ECE/ME/CE/CH E 314, 400; ECON 422; ENG 231, 232, and other specified English courses; FIN 437; GEOG 280, 310, 325, 340; any History course (only one American history will apply); MUSC 112; PHIL 317, 318, 324, 325; POLS 113, 115, 340, 370, 375; RS 220, 221, 270, 340; all foreign language courses 300 level and above; and special international topics from a variety of courses including special GS art and cultural offerings. (Note: the faculty of Political Science has oversight of the Minor in Global Studies).

MINOR IN SUSTAINABILITY STUDIES

The minor in Sustainability Studies is an interdisciplinary minor designed to introduce students to the breadth and application of academic approaches relevant to meeting the scientifically, ethically, and politically complex environmental, community, and social justice challenges of the Twenty-First Century. The Department of History & Political Science has oversight of the Sustainability Studies minor. This minor degree is intended to complement progress toward completion of a bachelor's degree in the student's major field of study by emphasizing sustainability themes in her or his major and related academic areas. In this respect, the minor provides substantial support for students who wish to incorporate sustainability issues and themes in their major program research. The minor in Sustainability Studies requires the following courses:

- HUM 210-Introduction to Sustainability;
- PHIL 324-Technology and Human Values or PHIL 325-Environmental Ethics;
- BIOL 107 and BIOL 107L Environmental Biology and lab or BIOL 412 and BIOL 412L Ecology and lab;
- 3 courses from the following list (two of which must be from outside one's major field of study):

ANTH 160, 350; BIOL 101, 102, 107, 250*, 370*, 412*; CE/CH E/ECE/ME 400*; CH E 410*; ECON 325, 347, 420*, 422*; GS/HUM 200; HIST 351*; 352*, 353*; HUM 295,395†; MGMT 320*; PHIL 324, 325; POLS 113; RS 330, 331, 375; PSYC/SOC 364*.

Course additions and substitutions, e.g., "Special Topics" courses for the minor require prior approval by the director of the Minor in Sustainability Studies.

* Has prerequisite(s) that might not be counted toward the minor;
† Requires approval of the director of the Minor in Sustainability Studies, and only one course in HUM 295,395 may count toward the minor

MINOR IN WOMEN'S AND GENDER STUDIES

The minor in Women's and Gender Studies is an interdisciplinary minor designed to introduce students to the perspectives and experience of women and the analysis of gender and sexualities in intersection with other important categories including race, ethnicity, religion, class, disability, and nationality. This minor degree is intended to complement progress toward completion of a bachelor's degree in the student's major field of study by incorporating contemporary theories of gender and sexuality and the complex relations between education, theory, and practice for social justice as approaches to the student's major and related academic fields. A minor in Women's Studies requires 18 credit hours. Courses may be selected from ENG 362; PSYC/SOC 270, 345, 353; RS 372; SOC/ANTH 351. Note: the Religion & Philosophy Department has oversight of the Minor in Women's and Gender Studies. Additional "Special Topics" courses will be designated as giving credit hours for this minor. Course substitutions for the minor require prior approval by the department's director of the minor in Women's and Gender Studies.

ACADEMIC COURSES

References to the timing of course offerings which follow apply only to day courses. Professional Studies and summer school course offerings are scheduled according to need. Christian Brothers University reserves the right to cancel classes at any time due to insufficient enrollment.

ACCOUNTING COURSES

Requirements for the major are found on Page 63.

ACCT 260. FINANCIAL ACCOUNTING
This course will provide the student with an understanding of how financial accounting information is used in business decision making and its importance as a field of study regardless of major. Basic transaction analysis, journal entries, and T-accounts are used to provide the structure for understanding the interplay between management decisions and the analysis of financial statements. Prerequisites: MATH 105 or higher. A grade of "C" or higher in this course is required to proceed to ACCT 264 or 270. *One semester; three credits*

ACCT 264 INTERMEDIATE FINANCIAL ACCOUNTING I
First of a series of three courses containing an in-depth study of Generally Accepted Accounting Principles. Topics covered include accounting standards and the conceptual framework underlying financial accounting, accounting information systems, the income statement, the balance sheet and the time value of money. Various pronouncements of the Financial Accounting Standards Board are covered. Prerequisite: ACCT 260. A grade of "C" or higher in this course is required to proceed to any upper level accounting course. Offered in the Spring semester. *One semester; three credits*

ACCT 270. MANAGERIAL ACCOUNTING (Formerly ACCT 360)
Managerial accounting introduces the student to methods of using accounting information within an organization to plan operations, control activities, and make decisions. Accounting methods covered include cost-volume profit analysis, profit planning, variance analysis and other techniques that aid in decision making and evaluation of business performance. Prerequisite: ACCT 260 with a grade of "C" or higher. *One semester; three credits*

ACCT 312. ACCOUNTING SYSTEMS (Formerly ACCT 410)
Principles underlying establishment of complete accounting systems; application to typical business organizations; emphasis on the functions of control and protection. Prerequisite: ACCT 264 with a grade of "C" or higher. A grade of "C" or higher in this course is required to proceed into ACCT 412. Offered in the Spring semester. *One semester; three credits.*

ACCT 319. COST ACCOUNTING
The course is designed to provide in-depth coverage of cost accounting concepts, objectives, and accumulation and reporting procedures. Particular attention is given to material, labor and overhead costs in job order and process cost accumulation systems. The importance of cost accounting as a management tool in planning, controlling, and analysis is emphasized throughout the course. Prerequisite: ACCT 270 with a grade of "C" or higher. Offered in the Fall semester. *One semester; three credits*

ACCT 330. FEDERAL INCOME TAXATION I (formerly ACCT 430)
This course introduces the student to the current Income Tax Code and the effect the Internal Revenue Service and the courts have had on the evolution of Federal tax law. Application of the Federal Income Tax to individuals, and the determination of their tax liability is explained. Basic tax research is introduced through the use of various tax services, court decisions, and regulations. This research is considered a prerequisite for success in tax practice. Principles and procedures of sound tax planning are introduced. Prerequisite: ACCT 260 with a grade of "C" or higher. Offered in the Fall semester. *One semester; three credits*

ACCT 331. FEDERAL INCOME TAXATION II (formerly ACCT 431)
This course is a follow-on course with more advanced tax areas such as gain and loss determination, net operating loss concepts, and other topics. The application of the Internal Revenue Code to partnerships and corporations and the development of their tax reporting are introduced. Tax research, as it applies to advanced tax topics, and further discussion of sound tax planning are continued. Prerequisite: ACCT 330. Offered in the Spring semester. *One semester; three credits*

ACCT 364. INTERMEDIATE FINANCIAL ACCOUNTING II
Second of a series of three courses containing an in-depth study of Generally Accepted Accounting Principles. Topics covered include cash and receivables, inventories, property plant and equipment, depreciation, intangible assets, current and long-term liabilities and stockholders' equity. Various pronouncements of the Financial Accounting Standards Board are covered. Prerequisite: ACCT 264 or 265 with a grade of "C" or higher. Offered in the Fall semester. *One semester; three credits*

ACCT 366. INTERMEDIATE FINANCIAL ACCOUNTING III
Third of a series of three courses containing an in-depth study of Generally Accepted Accounting Principles. Topics covered include earnings per share, investments, revenue recognition, accounting for income tax, pensions and leases, accounting changes and the cash flow statement. Various pronouncements of the Financial Accounting Standards Board are covered. Prerequisite: ACCT 364 or 365 with a "C" or higher. Offered in the Spring semester. *One semester; three credits*

ACCT 376. GOVERNMENTAL AND NON-PROFIT ACCOUNTING (formerly ACCT 475)
This course examines the procedures used by government units, particularly municipalities and not-for-profit entities. Emphasis in the course is on budgetary and fund accounts. Prerequisites: ACCT 264 with a grade of "C" or higher. Offered in the Spring semester. *One semester; three credits*

ACCT 380. FINANCIAL STATEMENT ANALYSIS (formerly ACCT 480)
This course is a review of financial statements for fairness and completeness in reporting. The focus is on the analysis of financial statements and related footnotes from the standpoint of the different users of financial reports. Prerequisite: ACCT 260 with a grade of "C" or higher. Offered in the Spring semester. *One semester; three credits*

ACCT 385. FRAUD EXAMINATION
This course gives a comprehensive view of the growing significance of fraud in today's business world. This course will examine the nature of fraud, the types of fraud, recent developments in fraud, and the victims of fraud. Students will learn to perform an analysis of fraud using specialized software. (Same as CJ 375) Prerequisite: Must be a junior or senior. *One semester; three credits*

ACCT 390. PROFESSIONAL ACCOUNTING ETHICS (formerly ACCT 490)
This course provides the student with an understanding of, and an appreciation for, the various ethics requirements of the accounting profession. Specific attention is given to the Code of Ethics of the AICPA, the IMA, and the FEI. Students will also understand the ethics requirements for certification by the State Boards of Accountancy. Prerequisites: ACCT 260 with a grade of "C" or higher. Offered in the Fall semester. *One semester; three credits*

ACCT 400. ACCOUNTING INTERNSHIP (Formerly BUS 400)
Under the supervision of a faculty member from the appropriate department, students in the School of Business, after receiving the approval of the faculty, are placed in the offices of cooperating firms to receive on-the-job training under the supervision of members of the firm. Credit is granted upon acceptance of periodic reports and a final summary report of work done verified by the authorized supervisor and the instructor. Prerequisite: ACCT 264 with a grade of "C" or higher. *Pass/Fail grading. One semester; three credits*

ACCT 412. AUDITING
This course is an introduction to the auditing profession. Particular attention is given to the Generally Accepted Auditing Standards, audit reports, ethical and legal responsibilities, evidence, audit risk and materiality, internal control, audit programs and the overall audit plan. The auditor's decision-making process is emphasized throughout the course. Prerequisite: ACCT 312 with a "C" or higher. Offered in the Fall semester. *One semester; three credits*

ACCT 460-464. SPECIAL TOPICS IN ACCOUNTING.
Each course is designed to permit intensive study into topics of special interest and timeliness in the area of Accounting. Offered as needed. *One semester; three credits*

ACCT 465. ADVANCED ACCOUNTING I
Advanced Accounting I is a continuation of Intermediate Accounting in that it further explores financial accounting topics with an emphasis on consolidated financial statements. Coverage also includes accounting for branch offices and partnerships. Prerequisite: ACCT 364 with a "C" or higher. Offered in the Fall semester. *One semester; three credits*

ACCT 485. FORENSIC ACCOUNTING
This course gives a comprehensive view of forensic accounting including both civil and criminal accounting fraud related activities. This course will explore false business valuations, employer fraud, information security fraud, and counter-terrorism. Prerequisite: ACCT 412. Offered in the Spring semester. *One semester; three credits.*

ACCT 491 INTERNATIONAL FINANCIAL REPORTING STANDARDS
Similarities and differences between GAAP and International Financial Reporting Standards (IFRS); international issues related to taxation and financial statement analysis. Prerequisite: ACCT 364 with a "C" or higher. Offered in the Spring semester. *One semester; three credits.*

ACCT 499. ACCOUNTING COMPREHENSIVE EXAMINATION
Seniors will be required to take a comprehensive examination in all areas of accounting before graduation. The examination date will be announced. A passing score is required for graduation. Prerequisite: Permission of Dean of the School of Business. Pass/Fail grading. *One semester, zero credits.*

■ AIR FORCE ROTC
Air Force ROTC courses are offered through The University of Memphis under the instruction of The University of Memphis faculty.

■ ALGEBRA COURSES
ALG 115. BASIC ALGEBRAIC EXPRESSIONS
This course provides the student a review of basic math skills. Topics include algebraic expressions, solving basic algebraic equations and inequalities, polynomial operations, factoring, rational expressions and exponents. The course does not supply any portion of the math credits required in any CBU degree program. Students may not receive credit for ALG 115 after completing any Math course numbered 100 or above. *Two semesters; one credit*

ALG 120. ALGEBRAIC EQUATIONS
This course is a continuation of ALG 115. Topics include linear equations, linear inequalities, systems of equations, radicals, rational and quadratic equations, graphing linear functions and inequalities. The course does not supply any portion of the mathematics credits required in any CBU degree program. Students may not receive credit for ALG 120 after completing any Math course numbered 100 or above. Prerequisite: ALG 110 or 115. *Two semesters; two credits*

■ ANTHROPOLOGY COURSES
ANTH 102. PRINCIPLES OF EPIDEMIOLOGY
Epidemiology is the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems. This class uses an interdisciplinary perspective that includes the fields of public health, epidemiology and anthropology. Lectures focus on socio-behavioral interactions that influence the causes and spread of disease with special attention to social disparities. (Same as BIOL 102.) Offered in even-numbered Spring semesters. *One semester; three credits*

ANTH 126. FORENSIC ANTHROPOLOGY
This course is the subspecialty of Physical Anthropology that involves excavation and identification of human remains for legal purposes. Students are exposed to the human skeleton and taught to examine bones for sex, age, ancestry, and stature differences. Interpretation of skeletal crime trauma is stressed. The most recent techniques and analyses in the forensic sciences, along with current and controversial trends in anthropology are discussed. Authentic case studies are used to illustrate the applied field of anthropology. This course is intended for applied psychology and science students. It assumes a basic familiarity with skeletal anatomy. (Same as NSCI 126.) Prerequisite: MATH 105 or higher. Corequisite: ANTH 126L. *One semester; three credits*

ANTH 126L. FORENSIC ANTHROPOLOGY LAB
Laboratory to accompany ANTH 126. Hands-on laboratory sessions will be used to teach basic techniques of skeletal analysis. Laboratory topics to include basic anatomy of the human skeleton, differences between animal and human remains, determination of the time interval since death, age, sex, ancestry, stature, the cause and manner of death, facial reconstruction, case report writing, etc. **Please note: Students will be expected to respectfully handle animal and human remains.** (Same as NSCI 126L.) Prerequisite: MATH 105 or higher. Corequisite: ANTH 126. *One semester; one credit*

ANTH 128. PHYSICAL ANTHROPOLOGY
This course is designed to introduce the student to the field of physical/biological anthropology, with an emphasis on human evolution. The larger themes investigated are the fundamentals of biological anthropology, major principles underlying our evolutionary history, and a review of the fossil evidence in an attempt to understand the development of the human species. (Same as NSCI 128.) Prerequisite: MATH 105 or higher. Corequisite: ANTH 128L. *One semester; three credits*

ANTH 128L. PHYSICAL ANTHROPOLOGY LAB
Laboratory to accompany ANTH 128. It includes working with hominid casts, and primate and modern human skeletal material. (Same as NSCI 128L.) Prerequisite: MATH 105 or higher. Corequisite: ANTH 128. *One semester; one credit*

ANTH 160. CULTURAL ANTHROPOLOGY (Formerly ANTH 150)
This course, which deals primarily with the concerns of cultural anthropology, focuses on the study of human diversity, and what defines humanity. It explores the beliefs, values, behaviors, technologies, and environments of a wide variety of cultures in an attempt to understand and appreciate variations within the human community in addition to evolution and modern biological variation. In attempting to understand the world's diversity, students have the opportunity to better understand themselves, their potentials, and their limitations. *One semester; three credits*

ANTH 190-199. SPECIAL TOPICS IN ANTHROPOLOGY
Courses in different areas of anthropology that are not offered on a regular basis. Prerequisite: MATH 105 or higher. Corequisite: Corresponding lab course. *One semester; three credits*

ANTH 190L-199L. SPECIAL TOPICS IN ANTHROPOLOGY LABORATORIES
Laboratories to accompany ANTH 190-199. Prerequisite: MATH 105 or higher. Corequisite: Corresponding ANTH 190-199 course. *One semester; one credit*

ANTH 279. INTRODUCTION TO ARCHEOLOGY
This class introduces students to archaeological approaches to understanding prehistoric cultures. Students study general anthropological concepts and specific archaeological methods and theories. Specific case studies are presented to illustrate several aspects of archaeological practice, and to show how archaeologists develop their understandings of cultural variation, change, and the rise of modern societies. (Same as HIST 279.) *One semester; three credits*

ANTH 280-287. SELECTED TOPICS IN ANTHROPOLOGY
Directed work on a special topic or project in anthropology. *One semester; one to three credits*

ANTH 290-299. HONORS SPECIAL TOPICS IN ANTHROPOLOGY
Special topics in Anthropology open to members of the Honors Program or by permission of the instructor and Honors Director. *One semester; one to four credits*

ANTH 301. MEDICAL ANTHROPOLOGY (Formerly ANTH 305)
Health, illness and treatment can be regarded very differently in various parts of the world and even within American society. This course will focus on the impact of beliefs and values on medicine. A range of definitions of health and illness, as well as the treatments which flow from these definitions, will be considered. Prerequisite: ANTH 160. *One semester; three credits*

ANTH 350. GLOBAL HEALTH
The course will introduce students to the main concepts of the public health field and the critical links between public health and social and economic development. Students will get an overview of the determinants of health, how health status is measured, and the influences of various factors including social, economic, and political issues on the health of individuals and of communities. It will also introduce students to key concerns regarding nutrition, reproductive health, infectious diseases, and chronic diseases. Material will include key concepts, be practical in orientation, and global in coverage but with an important focus on the developing world and on the health of the poor. *One semester; three credits*

ANTH 351. SOCIOLOGY OF THE FAMILY
Survey of changes in family systems over the years. Areas of study include courtship, love, mate selection, parenthood, and family problems. The course also examines cross-cultural comparisons and considers alternatives to traditional family forms. Emphasis is placed on the use of the empirical evidence to evaluate popular beliefs. (Same as SOC 351.) *One semester; three credits*

ANTH 380-387. SELECTED TOPICS IN ANTHROPOLOGY
Directed work on a special topic or project in anthropology. *One semester; one to three credits*

ANTH 390-396. HONORS SPECIAL TOPICS IN ANTHROPOLOGY
Special topics in Anthropology open to members of the Honors Program or by permission of the instructor and Honors Director. *One semester; one to four credits*

ANTH 450, 451. INDEPENDENT RESEARCH IN ANTHROPOLOGY
These courses are intended for advanced (junior status or higher) students who wish additional experience in research. In ANTH 450 the student will investigate in depth a specialized topic in anthropology. In ANTH 451 the student will further investigate the topic by engaging in empirical research that is then analyzed, interpreted, and presented in a manuscript. These courses are recommended for students who may intend to continue their education in a graduate program. Prerequisites: Permission of instructor and the Chair of Behavioral Sciences. *One semester; one to three credits*

■ ARMY ROTC COURSES

Army ROTC courses are offered through The University of Memphis under the instruction of The University of Memphis faculty.

■ ART COURSES

Requirements for the major are found on Page 56 and 57.

ART 101. ART APPRECIATION
The student will be exposed to different areas of the visual arts which will include the study of the visual elements and the principles of design. The course will also cover a brief survey of the highlights of art from the Paleolithic period to modern times. *One semester; three credits*

ART 102. 2-D DESIGN
Elements and principles of design will be the primary focus through the use of mixed media and collage techniques. How line, form, shape, and color influence composition will be the primary learning outcome of this course. *One semester; three credits*

ART 106. PHOTOSHOP ESSENTIALS
This course is an introduction to the user interface, tools, and features of Adobe Photoshop. Students begin working with the industry standard for creating raster/bitmap graphics. This incredibly deep program is used for graphic design, web design, image manipulation, photo restoration, digital illustration. lighting effects, and animation. By the end students will have progressed from a beginning to intermediate skill level able to command many of the powerful tools Photoshop has to offer. Payment of expendable materials fee is required. Basic computer skills are necessary for the best outcome for this course. *One semester; three credits.*

ART 107. ILLUSTRATOR ESSENTIALS
This course is an introduction to the user interface, tools, and features of Adobe Photoshop. Students get hands-on practice working with a sophisticated graphics application that has the capabilities to create complex designs. Students will explore digital drawing basics, combine text and graphics, and design and print packaging for mock products. Payment of expendable materials fee is required. Basic computer skills are necessary for the best outcome for this course. *One semester; three credits.*

ART 108. INDESIGN ESSENTIALS
This course is an introduction to the user interface, tools, and features of Adobe InDesign, a powerful but intuitive page layout application. Students work through basic toward advanced techniques ranging from: type controls; graphics file management, layers and document setup. Students will explore designing a range of documents from simple and attractive to complex and spectacular. Payment of expendable materials fee is required. Basic computer skills are necessary for the best outcome for this course. *One semester; three credits.*

ART 109. FLASH ESSENTIALS
This course is an introduction to the user interface, tools, and features of Adobe Flash. Students learn how to create basic Flash animations and movies using the timeline; discovering how the timeline in Flash can be used to create basic frame-by-frame animations and motion tweened animations. Confidence builds throughout the semester while novice animators learn to navigate the Flash interface, create new Flash files, set stage properties, import images into Flash, create and work with text, create and format drawing objects and add layers. Payment of expendable materials fee is required. Basic computer skills are necessary for the best outcome for this course. *One semester; three credits.*

ART 110. DREAMWEAVER ESSENTIALS
Dreamweaver has become one of the industry's leading Website design editing and management tool. This course is an introduction to the user interface, tools and features of Dreamweaver. Students learn how to use Dreamweaver as a tool to create a website; setting up a site in Dreamweaver, FTP with Dreamweaver, creating links, inserting text, and inserting images. In the beginning we are hard lined and technical but as the semester progresses we start discussing basic concepts of Web design and as confidence builds throughout the semester students start to apply the basics of Web design concepts. Basic computer skills are necessary for the best outcome for this course. *One semester; three credits*

ART 111. DRAWING I
The student will learn the basics of composition, visual elements, and principles of design. *One semester; three credits*

ART 200. OIL PAINTING I
The student will learn the basics of design along with techniques of oil painting, using paint from tubes as well as oilbars. *One semester; three credits*

ART 201. CONCEPTS AND CREATION IN THE VISUAL ARTS
The intended audience for the course Is art majors, minors, and students interested in an art related career. Art 201 is an introduction to the concepts

underpinning artistic creation. Through lectures and studio work students will explore relationships between artistic processes and everyday life. The objective of the course is to foster the development of student's appreciation and understanding of contemporary art through an examination of art and contemporary social, cultural, and political issues surrounding artistic practice. *One semester; three credits.*

ART 203. PAINTING WATER-BASED MEDIA
A study of painting methods in a variety of traditional and non-traditional water-based material and techniques. Students will begin to combine their understanding of drawing and design in the form of problem-solving exercises focusing on composition, value, color, and surface for both abstract and realistic work. *One semester; three credits*

ART 204. 3-D DESIGN
An introduction to three-dimensional design concepts through traditional and non-traditional methods. Emphasis will be placed on the elements and principles of design as applied to the sculptural form. *One semester; three credits*

ART 205. BEGINNING DIGITAL PHOTOGRAPHY
An introduction to the fundamentals of digital photography. The course emphasis is on understanding photography as a tool for visual expression. Payment of expendable materials fee is required. *One semester; three credits*

ART 208. CERAMICS I
This course will teach the fundamentals of ceramics through the techniques of coil and slab. *One semester; three credits.*

ART 210. INTRODUCTION TO ART THERAPY
This course will cover the creative arts approach to counseling. The theoretical basis for using art in counseling will be identified as well as evidence-based practice guidelines for assisting individuals, families, and groups across the lifespan. Biological, psychological, and social perspectives will be integrated into the student's knowledge of counseling methods. *One semester; three credits*

ART 211. WORLD ART HISTORY I
A survey of major visual art forms from prehistoric times to the Renaissance. *One semester; three credits*

ART 212. WORLD ART HISTORY II
A survey of major visual art forms from the Renaissance period to the present. *One semester, three credits*

ART 214. ART THERAPY PRACTICES
This course will expand upon the theoretical issues learned in ART 210 to create a deeper understanding of contemporary practices for art therapists. This course will focus on the latest teaching methods, supervision techniques, and educational developments for all types of creative therapies. *One semester, three credits*

ART 233. FIGURE DRAWING
A drawing class using live models as subjects. Drawing materials will include brush and ink, charcoal, pastel and various other media. *One semester; three credits*

ART 240-245 SPECIAL TOPICS IN ART
Content are variable with interest and instructor. *One semester; three credits*

ART 290-299. HONORS SPECIAL TOPICS.
Open to members of the Honors Program or by permission of instructor and Honors Director. *One semester; three credits*

ART 301. ADVANCED DESIGN: MIXED MEDIA
An emphasis on cultivating individual creativity through combining the elements of two-dimensional and three-dimensional design using collage techniques. At this level, students will have a wide knowledge base of a variety of materials and techniques in order to make creative choices, with the guidance of the instructor, when meeting the goals for project assignments. *One semester; three credits*

ART 302. CONTEMPORARY ART HISTORY
A survey of contemporary developments in art from 1945- present. This course emphasizes student discussion, critical thinking, and writing. *One semester; three credits*

ART 304. INTERNSHIP FOR VISUAL ARTS
Major related work experience through which students apply skills to professional activity. Prerequisites: Permission of arts faculty and good academic standing. One hour in class is required. *One semester; three credits.*

ART 305. INTERNSHIP FOR VISUAL ARTS
Graphic design major related work experience through which students apply skills to professional activity. Prerequisites: Permission of arts faculty and good academic standing. One hour in class is required. *One semester; three credits.*

ART 306-307. ART THERAPY WORKSHOP AND FIELD STUDY
This course provides experience in a community setting (disability centers, schools with special education programs, hospitals, institutions, or elder care facilities), using art therapy principles and instruments. Art materials used in therapy will be introduced during this course. Supervised workshops provide basic understanding of individual and group processes in Art Therapy. These workshops may take place in the classroom to simulate a clinical setting or as a community outreach component. Prerequisite: Art 210 or 214; transportation is required. *Three credits*

ART 308. OIL PAINTING II
An extension of the techniques learned in Basic Oil Painting (ART 200) with an emphasis on personal growth and creativity. *One semester; three credits*

ART 309. DRAWING II
A continuation of Drawing I and Figure Drawing with the introduction of advanced techniques. *One semester; three credits*

ART 310. INTRODUCTION TO PRINTMAKING
The student will be instructed in the basics of printmaking using the techniques of woodcut, linocutting, screen printing, and monoprinting. *One semester; three credits*

ART 311. PRINTMAKING II
Students will build on printmaking techniques learned in ART 310. An emphasis will be placed on personal growth through projects directed by the instructor. *One semester; three credits*

ART 312. PAINTING III
At this level the student will have mastered basic oil painting techniques and have the ability to apply a more creative approach to the work. *One semester; three credits*

ART 314. BEGINNING DIGITAL IMAGING
This course will cover the basic tools used in digital imaging software. A variety of different software may be offered, including Adobe InDesign, Illustrator, and Photoshop. Students will be introduced to developing a design language and vocabulary. Corequisite: ART 314L. *One semester, two credits*

ART 314L. BEGINNING DIGITAL IMAGING LAB
Introduction to methodological and research practices for designers. Corequisite: ART 314. *One semester, one credit*

ART 315. ADVANCED DIGITAL IMAGING
This course will be a build on information, vocabulary and visual language learned in ART 314. Prerequisites: ART 314/L. Corequisite: ART 315L. *One semester; two credits*

ART 315L. ADVANCED DIGITAL IMAGING LAB
Advanced research practices for designers. Prerequisite: ART 314/L. Corequisite: ART 315. *One semester: one credit*

ART 316. TYPOGRAPHY
An introduction to the history of typography for the graphic design students. This course emphasizes type identification, type faces and families, type compiling, letter and word spacing, copy-fitting, designing with type, and type as a communication tool. These topics will be introduced through lectures and practiced in project-based assignments. Corequisite: ART 316L. *One semester; three credits*

ART 316L. TYPOGRAPHY LAB
Lab to accompany ART 316. Corequisite: ART 316. *One semester; one credit*

ART 330. SCULPTURE II
Students will apply design principles learned in ART 204 to three dimensional projects using various materials. Pre-requisite: ART 204 or Permission of Department Chair. *One semester; three credits*

ART 331. INTRODUCTION TO HANDMADE PAPER
Using a variety of fibers students will learn the basics of papermaking. This course will also encourage the use of handmade paper in book arts and other art projects for sustainability purposes. *One semester; three credits.*

ART 334. INTRODUCTION TO BOOKMAKING
Using a variety of bookbinding techniques students will learn the basics of bookmaking as an art form. This course will encourage the use of recycled and handmade papers as an introduction to the use of sustainable materials as an art medium. *One semester; three credits*

ART 390-399. HONORS SPECIAL TOPICS IN ART
Special topics in art open to members of the Honors Program or by permission of the instructor and Honors Program Director. *One semester; three credits*

ART 400-405. SPECIAL TOPICS IN ART
Content and credit are variable with interest and instructor. Prerequisite: Approval of Department Chair. *One semester; one to three credits*

ART 409-411. DRAWING: EXPERIMENTAL
An advanced drawing course that allows students to experiment with techniques, materials and subject matter learned in previous courses. At this level the student will be expected to apply contemporary art historical references to their work along with creative choices when fulfilling assignments. *One semester; three credits*

ART 412-414. PAINTING: EXPERIMENTAL
An advanced painting course that builds on the techniques, materials and subjects learned in other painting and art history courses. Students will fulfill assignments through the painting medium of their choice. *One semester; three credits*

ART 415. GRAPHIC DESIGN I
Continuing development of design language, vocabulary, methodological and research practices for graphic designers. Multifaceted projects explore continuity of design in two-dimensional space, each one focusing on a specific set of relationships. Prerequisites: ART 314 and 315. Corequisite: ART 415L. *One semester; two credits*

ART 415L. GRAPHIC DESIGN I LAB
Required time in lab used to complete research and projects. Prerequisites: ART 314 and 315. Corequisite: ART 415. *One semester; one credit*

ART 418. GRAPHIC DESIGN II
Comprehensive problem solving with emphasis on design uniformity in more than one medium or format. Simulated client-based projects focus on typography, communication, legibility/readability, language sequence and information hierarchy. Course concludes with portfolio review for admission into Graphic Design III. Payment of expendable materials fee is required. Prerequisites: ART 314, 315, and 415. Corequisite: ART 418L. *One semester; two credits*

ART 418L. GRAPHIC DESIGN II LAB
Hours required to complete all research and projects using the computer lab. Prerequisites: ART 314, 315, and 415. Corequisite: ART 418. *One semester; one credit*

ART 419. GRAPHIC DESIGN III
This course merges prior knowledge and skills, and sets the stage for independent design projects. The course requires students to research and analyze all components of the design process. New, practical and conceptual skills will be discussed in order to develop meaningful, interactive user experiences. Payment of expendable materials fees is required. Prerequisites: ART 418/L. Corequisite: ART 419L *One semester; two credits*

ART 419L. GRAPHIC DESIGN III LAB
Required time in lab used to complete research and projects. Prerequisite: ART 418/L. Corequisite: ART 419. *One semester; one credit*

ART 420. GRAPHIC DESIGN IV
This course combines lectures with studio work to facilitate a goal directed environment. Students will learn to integrate theory and practical applications while sharpening conceptual, computer, and research skills. All projects are required to meet capable standards stressing the highest quality. Payment of expendable materials fee is required. Prerequisite: ART 419/L. Corequisite: ART 420L *One semester; two credits*

ART 420L. GRAPHIC DESIGN IV LAB
Required time in lab used to complete research and projects. Prerequisite: ART 419/L. Corequisite: ART 420. *One semester; one credit*

ART 470. ADVANCED STUDIO
Students will work on thesis paper and concept building related to their senior exhibition. Projects will be decided through careful advising from instructor. *One semester; three credits.*

ART 475. SENIOR SEMINAR
The student will be required to produce a large body of work which would be indicative of the level the student has achieved. The theme of the works will be decided by the student and instructor. The student will be required to have an exhibition of these works to be viewed by the public. Prerequisite: Approval of the instructor. *One semester; three credits*

ART 480-485. SPECIAL STUDIES IN ART
Content and credit are variable with interest and instructor. Prerequisite: Approval of Department Chair. *One semester; one to three credits*

■ BIOLOGY COURSES

Requirements for the degree are found on Page 92.

BIOL 101. PUBLIC HEALTH
This course provides students with an introduction to fundamental concepts and approaches underlying public health. Topics covered include evidence and prevention-based perspectives on health; the social context of health and health disparities; environment and health; health and our food system; the role of community in public health; effective public health interventions; ethical issues in public health; and future directions in public health. Special focus will be paid to the South, Memphis, and the topic of HIV/AIDS. Offered even-numbered Fall semesters. *One semester; three credits*

BIOL 102. PRINCIPLES OF EPIDEMIOLOGY
Epidemiology is the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems. This class uses an interdisciplinary perspective that includes the fields of public health, epidemiology and anthropology. Lectures focus on socio-behavioral interactions that influence the causes and spread of disease with special attention to social disparities. (Same as ANTH 102.) Offered in even-numbered Spring semesters. *One semester; three credits*

BIOL 103. BIOLOGY OF ADDICTION
In this course, we will cover the biological effects of alcohol and drugs on human organ systems, particularly the nervous, digestive, excretory and reproductive systems. We will discuss the psychological and sociological consequences of these effects. The use of drugs in both therapeutic and pathologic situations will be explored, and modalities of recovery will be discussed. Prerequisite: MATH 105 or higher. Credits not applicable to the BS in Biology and Biomedical Sciences biology elective requirement. Offered in the Spring semester. Corequisite: BIOL 103L. *One semester; three credits*

BIOL 103L. BIOLOGY OF ADDICTION LAB
In this course, we will examine the anatomy and physiology of organ systems affected by alcohol and other psychoactive drugs of abuse. We will use fruit flies as a model to determine the effects of alcohol on their physiology and reproductive success. We will conduct two experiments on human volunteers: effects of caffeine on the cardiovascular system and the effects of ethanol on balance, equilibrium, and judgment. With the laboratory component, this course fulfills University graduation requirements. Prerequisite: MATH 105 or higher. Corequisite: BIOL 103. Credit not applicable to the BS in Biology and Biomedical Sciences biology elective requirement. Offered in the Spring semester. *One semester; one credit*

BIOL 107. ENVIRONMENTAL BIOLOGY
An interdisciplinary approach to the study of the environment, the course provides the scientific basis for understanding how environmental systems work. Topics include discussion of the economic impact and consequences of the disruptions of natural systems, the importance of public policy, and how environmental issues are linked to our everyday life. Designed for non-majors. Prerequisite: MATH 105 or higher. Corequisite: BIOL 107L. Credits not applicable to the BS in Biology and Biomedical Sciences biology elective requirement. Offered in the Fall semester. *One semester; three credits*

BIOL 107L. ENVIRONMENTAL BIOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 107. Laboratory sessions will include several outdoor field trips and data collection on the Wolf River. Prerequisite: MATH 105 or higher. Corequisite: BIOL 107. Credits not applicable to the BS in Biology and Biomedical Sciences biology elective requirement. Offered in the Fall semester. *One semester; one credit*

BIOL 109. HUMAN BIOLOGY
A systematic study of the developmental structure and function of the human organism, including the anatomy and physiology of each organ system and common problems that may occur in each. Genetics, evolution, and ecology, as they apply to the human organism, are also studied. Designed for non-majors. Prerequisite: MATH 105 or higher. Corequisite: BIOL 109L. Credits not applicable to the BS in Biology and Biomedical Sciences biology elective requirement. Offered in the Spring semester. *One semester; three credits*

BIOL 109L. HUMAN BIOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 109. Prerequisite: MATH 105 or higher. Corequisite: BIOL 109. Credit not applicable to the BS in Biology and Biomedical Sciences biology elective requirement. Offered in the Spring semester. *One semester; one credit*

BIOL 111. PRINCIPLES OF BIOLOGY I
The first half of a comprehensive study of contemporary biology, this semester covers biochemistry, cytology, energy metabolism, photosynthesis, cell division, genetics, evolution, systematics and taxonomy of viruses and prokaryotes. This course includes three lectures and one discussion section per week. Prerequisite: minimum ACT math score of 20 or above or ALG 115; ACT composite of 22 or higher, or CHEM 101 with a grade of "C" or higher. Corequisite: BIOL 111L (CHEM 101 or CHEM 113/L strongly recommended). *One semester; three credits.*

BIOL 111L. PRINCIPLES OF BIOLOGY I LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 111. Prerequisites: minimum ACT math score of 20 or above or ALG 115; ACT composite of 22 or higher, or CHEM 101 with a grade of "C" or higher. Corequisite: BIOL 111L (CHEM 101 or CHEM 113/L strongly recommended). *One semester; one credit*

BIOL 112. PRINCIPLES OF BIOLOGY II
Continuation of BIOL 111, this course covers systematics and taxonomy of protists, fungi, plants and animals, anatomy and physiology of eukaryotic organisms, embryology and development, and ecology. This course includes three lectures and one discussion per week. Prerequisite: BIOL 111/L and CHEM 101 or higher with grades of "C" or higher. Corequisite: BIOL 112L (CHEM 113/L or higher strongly recommended). *One semester; three credits.*

BIOL 112L. PRINCIPLES OF BIOLOGY II LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 112. Prerequisite: BIOL 111/L and CHEM 101 or higher with grades of "C" or higher. Corequisite: BIOL 112 (CHEM 113/L or higher strongly recommended). *One semester; one credit*

BIOL 211. VERTEBRATE EMBRYOLOGY
A study of human embryology with emphasis on the fundamental development processes common to vertebrate embryos. Topics include gametogenesis, fertilization, and development of the embryo from zygote through the differentiation of the neural tube. The remainder of the course is devoted to the development of selected human organ systems including the nervous system, sense organs, and the cardiovascular, digestive, respiratory, and urogenital systems. Prerequisite: BIOL 112/L with grades of "C" or higher and CHEM 113/L or higher. Corequisite: BIOL 211L. Offered in the Fall semester. *One semester; three credits*

BIOL 211L. VERTEBRATE EMBRYOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 211. Histological, preserved, and selected living materials are studied to illustrate gametogenesis, fertilization, and development of the vertebrate embryo from zygote through the differentiation of organ systems in amphibian, avian, and mammalian embryos. Prerequisite: BIOL 112/L with grades of "C" or higher and CHEM 113/L or higher. Corequisite: BIOL 211. Offered in the Fall semester. *One semester; one credit*

BIOL 212. COMPARATIVE VERTEBRATE ANATOMY
A study of the structural and functional evolution of selected organ systems in representative vertebrates, the first part of the course surveys the phylogenetic relationships among the vertebrates. In the remainder of the course, structures and their organizations are interpreted in terms of their embryological development, phylogeny, and functional adaptations. Prerequisites: BIOL 112/L with grades of "C" or higher, and CHEM 113/L or higher. Corequisite: BIOL 212L. Offered in the Spring semester. *One semester; three credits.*

BIOL 212L. COMPARATIVE VERTEBRATE ANATOMY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 212. Dissection of preserved representative specimens including shark, amphibian, and cat is required. Prerequisite: BIOL 112/L with grades of "C" or higher, and CHEM 113/L or higher. Corequisite: BIOL 212. Offered in the Spring semester. *One semester; one credit*

BIOL 213. MEDICAL AND SCIENTIFIC TERMINOLOGY

This course examines the Latin and Greek origins of words used in the scientific and medical community. In addition to learning the basic meaning of these words, their prefixes, suffixes and combining forms will also be studied. Emphasis will be given to terms applicable to the systems, structure, function and diseases of the human body, also terms applying to veterinary science as well as zoological, botanical, chemical, and geological terms. Attention will be given to pronunciation, spelling and common abbreviations used in scientific writings. Practice with medical and veterinary records will be included. An understanding of etymology will give students in any area of specialization a better comprehension of the fundamental meaning of many English words. Prerequisite: BIOL 112/L and CHEM 113/L or higher. Offered as needed. *One semester; two credits*

BIOL 216. BOTANY
A comprehensive study of the principles of botany. Topics include a survey of the major groups of plants, algae, and fungi, their life cycles, anatomy, metabolism, biogeography, ecology and evolution. All scheduled field trips are mandatory. Prerequisites: BIOL 112/L and CHEM 113/L or higher. Corequisite: BIOL 216L. Offered in odd-numbered Fall semesters. *One semester; three credits*

BIOL 216L. BOTANY LABORATORY
A comprehensive field-based study of the principles of botany. There will be several mandatory field trips throughout the semester that involve travel to local sites so that students gain a better understanding of the local flora and how to gather and prepare specimens in the field. Prerequisites: BIOL 112/L and CHEM 113/L or higher. Corequisite: BIOL 216. Offered in odd-numbered Fall semesters. *One semester; one credit*

BIOL 217. HUMAN ANATOMY AND PHYSIOLOGY I
The first half of a study of the various levels of organization of the human body. The first semester covers cells, cell metabolism, tissues and the integumentary, skeletal, muscular, nervous, sensory, and endocrine systems. Prerequisites: BIOL 112/L with grades of "C" or higher, and CHEM 113/L or higher. Corequisite: BIOL 217L. Offered in the Fall semester. *One semester; three credits.*

BIOL 217L. HUMAN ANATOMY AND PHYSIOLOGY I LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 217. Dissection of preserved mammalian material is required. Prerequisites: BIOL 112/L with grades of "C" or higher, and CHEM 113/L or higher. Corequisite: BIOL 217. Offered in the Fall semester. *One semester; one credit*

BIOL 218. HUMAN ANATOMY AND PHYSIOLOGY II
A continuation of BIOL 217, this semester covers the cardiovascular, immune, digestive, respiratory, urinary and reproductive systems. Students will be responsible for a nominal fee to cover the required CPR course. Prerequisites: BIOL 217/L with grades of "C" or higher and CHEM 113/L or higher. Corequisite: BIOL 218L. Offered in the Spring semester. *One semester; three credits.*

BIOL 218L. HUMAN ANATOMY AND PHYSIOLOGY II LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 218. Dissection of a preserved mammalian specimen and selected mammalian organs is required. Prerequisites: BIOL 217/L with grades of "C" or higher and CHEM 113/L or higher. Corequisite: BIOL 218. Offered in the Spring semester. *One semester; one credit*

BIOL 236. NUTRITION
The basic principles of nutrition are studied with particular emphasis on their applications to human health and development. This course includes a study of the essential nutrients; current and past dietary trends, including ethnic considerations; relationship of RDAs and diets to health, disease, and causes of death; changes in individual nutrient requirements based on factors such as age, gender, heredity, environment, etc.; governmental legislation regarding food labels, processing additives, contaminants, preservatives, and dietary guidelines; and a personal assessment of one's own eating habits, requirements, and potential health problems. Outside reading materials related to current nutritional trends will be assigned. Prerequisites: BIOL 112/L and CHEM 114/L or higher. Offered in the Spring semester. *One semester; three credits*

BIOL 240. INTRODUCTION TO BIOINFORMATICS
The course considers introductory topics in bioinformatics. Topics include the structure of DNA, data searches, pairwise alignments, substitution patterns, protein structure prediction and modeling, proteomics and the use of web-based tools for topics in bioinformatics. (Same as CS 240). Prerequisite: BIOL 111/L or CS 172. Offered in odd-numbered Spring semesters. *One semester; three credits*

BIOL 250. ECOLOGICAL CENSUS TECHNIQUES
This is a field-intensive introduction to the techniques and statistical analyses used in population and community ecology. Experimental design and data collection will be stressed on major groups of organisms, including invertebrates, small mammals, and plants. This course requires mandatory overnight exercises tentatively to be taught at the Edward J. Meeman Biological Field Station, and several day trips to various locations throughout the mid-south. Prerequisite: BIOL 112/L with "C" or higher, CHEM 113/L with a grade of "C" or higher and permission of instructor. Offered in the Summer semester. *One semester; three credits.*

BIOL 290-299. SPECIAL TOPICS IN BIOLOGY
Selected topics of interest. Prerequisites: BIOL 112/L and CHEM 113/L or higher; permission of the Instructor. Corequisite: The laboratory course if offered. *One semester; one to four credits*

BIOL 290L-299L. SPECIAL TOPICS IN BIOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 290-299L. Prerequisites: BIOL 112/L and CHEM 113/L or higher; permission of the Instructor. Corequisite: The lecture course. *One semester; one credit*

BIOL 303. ALGAE, FUNGI AND LICHENS
This course will focus on the diversity and comparative study of the structure, function, reproduction, growth, development, ecology, evolution and natural history of algae, fungi and lichens. Economic importance and uses of the various organisms will also be covered. Prerequisites: BIOL 112/L and CHEM 113/L with grades of "C" or higher. Corequisite: BIOL 303L. Offered even-numbered Fall semesters. *One semester; three credits*

BIOL 303L. ALGAE, FUNGI AND LICHENS LABORATORY
Laboratory exercises will focus on field trip collection and identification of the various algae, fungi and lichen organisms. Taxonomic keys and various chemical tests and laboratory techniques will be used. Proper preserving and herbarium mounting techniques for the lichens will also be covered. Prerequisite: BIOL 112/L and CHEM 113/L with a grade of "C" or higher. Corequisite: BIOL 303. Offered even-numbered Fall semesters. *One semester; one credit*

BIOL 304. LIMNOLOGY
Limnology is the study of inland waters, lakes, ponds, rivers and streams. This course examines physical, chemical and biological variables that influence living organisms in these ecosystems. Both theoretical and applied aspects of limnology will be covered. Ecological theories will be examined and studies on aquatic ecosystems, which have been used to test these theories, will be discussed. The role of limnology in the management of water resources will be discussed throughout the course. Prerequisites: junior or senior standing, BIOL 112/L and CHEM 114/L. Corequisite: BIOL 304L. Offered in odd-numbered Spring semesters. *One semester; three credits.*

BIOL 304L. LIMNOLOGY LABORATORY
Laboratory course to illustrate principles covered in BIOL 304. Several labs will be field trips followed by analysis and discussion of the data collected. This provides the opportunity to ask questions in limnology, illustrate the variation in aquatic habitats, demonstrate the practical aspects of limnology (sampling methods, etc.) and use the methods of analyzing and writing up collected data. Participation in scheduled field trips is mandatory. Group III Biology Elective. Prerequisites: junior or senior standing, BIOL 112/L and CHEM 114/L. Corequisite: BIOL 304. Offered odd-numbered Spring semesters. *One semester; one credit.*

BIOL 311. GENETICS
A study of the structure and function of nucleic acids in viruses, prokaryotes, and eukaryotes along with basic concepts, principles and applications of classical, molecular and population genetics. Topics include recombinant technology, genetics and cancer, epigenetics, and the human genome. Prerequisites: BIOL 111/L and BIOL 112/L with grades of "C" or higher and CHEM 211/L. Corequisite: BIOL 311L. Offered in the Fall semester. *One semester; three credits*

BIOL 311L. GENETICS LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 311. Prerequisites: BIOL 111/L and BIOL 112/L with grades of "C" or higher and CHEM 211/L. Corequisite: BIOL 311. Offered in the Fall semester. *One semester; one credit*

BIOL 312. HUMAN PHYSIOLOGY
This course consists of the study of the biochemical and biophysical mechanism underlying human physiology and pathophysiology using a systems-level approach. Emphasis is placed on the integration of functions within both systems to maintain homeostasis. Attendance at a minimum of one off campus seminar is required. Prerequisite: BIOL 112/L with grades of "C" or higher, CHEM 114/L and one additional Biology course at the 200 level or above. Recommended: CHEM 211/L, 315 and PHYS 201. Corequisite: BIOL 312L. Offered in the Fall semester. *One semester; three credits*

BIOL 312L. HUMAN PHYSIOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 312. Prerequisite: BIOL 112/L with grades of "C" or higher, CHEM 114/L and one additional Biology course at the 200 level or above. Recommended: CHEM 211/L, 315 and PHYS 201. Corequisite: BIOL 312. Offered in the Fall semester. *One semester; one credit*

BIOL 321. MICROBIOLOGY
A study of microbial biochemistry, molecular biology, morphology, physiology, metabolism, growth and growth control, taxonomy, diversity, genetics, evolution, ecology, and immunology with emphasis on bacteria and viruses. Topics in medical, food and industrial microbiology, and public health. Prerequisites: BIOL 111/L and BIOL 112/L with grades of "C" or higher and CHEM 211/L, junior or senior standing. Corequisite: BIOL 321L. Offered in the Spring semester. *One semester; three credits*

BIOL 321L. MICROBIOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 321. Prerequisites: BIOL 111/L and BIOL 112/L with grades of "C" or higher and CHEM 211/L; junior or senior standing. Corequisite: BIOL 321. Offered in the Spring semester *One semester; one credit*

BIOL 335. INVERTEBRATE ZOOLOGY
Taxonomy, ecology, evolution, morphology, and physiology of invertebrate phyla. Prerequisites: BIOL 112/L and CHEM 113/L or higher, 7 additional credits in biology at the 200 level or higher, and junior or senior standing. Corequisite: BIOL 335L. Offered in even-numbered Spring semesters. *One semester; three credits*

BIOL 335L. INVERTEBRATE ZOOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles in BIOL 335. Students are required to participate in the Gulf Coast Field trip. Offered in even-numbered Spring semesters. Prerequisites: BIOL 112/L and CHEM 113/L or higher, 7 additional credits in biology at the 200 level or higher, and junior or senior standing. Prerequisite or corequisite: BIOL 335. Offered in even-numbered spring semesters. *One semester; one credit*

BIOL 340. EXPERIMENTAL DESIGN AND STATISTICAL ANALYSIS
This course will cover a wide range of topics in design and analysis of ecological experiments. Students will become familiar with statistical tests for different data sets and understand how to design experiments based on the questions they wish to ask. Students will understand and implement statistical procedures such as, but not limited to: t-test, paired t-test, one, two, and three-way analysis of variance, regression, correlation, and several

multivariate techniques. Prerequisites: BIOL 112/L, CHEM 114/L and MATH 117 or (MATH 107 & 110) or higher. *One semester; three credits*

BIOL 346. EVOLUTION
Investigation of the evidence, proponents, and theories of organic evolution with emphasis on modern contributions to the understanding of speciation. Topics covered in this course include macroevolution, phylogenetics and evolutionary history of major groups of organisms, genetic drift, evolution of genomes, variation, genetic theory of natural selection, and phenotypic evolution. Prerequisite: BIOL 112/L and CHEM 113/L or higher. Offered in odd-numbered Spring semesters. *One semester; three credits*

BIOL 350. RESEARCH METHODS
This course is designed for students who are actively involved in research projects that will not be considered for the completion of their senior internship or thesis (BIOL 461-465). Students may work on or off CBU campus on the research project. Students should participate in a minimum of 200 hours on the project, including data analysis and documentation. Students will be required to be familiar with several techniques within their particular area of research expertise. These techniques will be summarized within the documentation of their research projects within the methods section. Prerequisites: BIOL 112/L, CHEM 114/L, and permission of the instructor or Chair of the Department of Biology. Offered as needed. *One semester; three credits*

BIOL 362. BIOLOGY SEMINAR
Seminar series in which research scientists are invited to discuss their current research. Students will create a research poster describing a paper from the primary literature. Students will also submit a research proposal for summer research that will be conducted as a requirement for BIOL 464/465, Mentored Research. Prerequisites or corequisites: junior standing, a grade of "C" or higher in a minimum of two 200 – 400 level biology courses, a grade of "C" or higher in CHEM 211/L, a Science GPA of 2.0 or higher, or permission of the instructor or Chair of the Biology Department. Offered in the Spring semester. *One semester; one credit*

BIOL 367. PHARMACOLOGY
An introduction to the structure, mechanisms, pharmacokinetics, pharmacodynamics, therapeutic uses, and adverse reactions of prototypic agents from the major categories of drugs. Prerequisites: BIOL 112/L with grades of "C" or higher and CHEM 211/L; junior or senior standing. Recommended: BIOL 217/L, 218/L or BIOL 312/L. Offered in odd-numbered Spring semesters. *One semester; three credits*

BIOL 369. HERPETOLOGY
Herpetology is the study of amphibians and reptiles. In this course we will examine the major taxonomic groups of amphibia and reptilia in depth, focusing on local groups and surveying the more interesting exotic members of these taxa to gain an understanding of their diversity. Life history, anatomy, physiology, ecology, and conservation issues are among the topics that will be discussed. Prerequisites: BIOL 112/L and CHEM 113/L or higher, seven additional credits of biology at the 200 level or higher, and junior or senior standing. Corequisite: BIOL 369L. Offered in even-numbered Spring semesters. *One semester; three credits*

BIOL 369L. HERPETOLOGY LAB
The student will learn to visually identify (to species level) the amphibians and reptiles naturally found in Western Tennessee and the tri-state area. Additionally, the student will learn to identify amphibians by vocalization (frog calls). Initial identification will take place in the lab using preserved specimens and also digital images and sounds. Identification skills will continue to be developed in the field while on field trips to nearby sites. Field techniques for performing natural history surveys will be discussed, followed by implementation in the field. Prerequisites: BIOL 112/L and CHEM 113/L or higher, seven additional credits of biology at the 200 level or higher, and junior or senior standing. Corequisite: BIOL 369. Offered in even-numbered Spring semesters. *One semester; one credit*

BIOL 370. TOXICOLOGY
An introduction to the basic principles of toxicology including investigation of the sites and modes of action of toxic agents and the factors affecting their toxicity, this course will also examine sources, fate, and effects of environmental pollutants. Prerequisites: BIOL 112/L with grades of "C" or higher and CHEM 211/L; junior or senior standing. Offered in Spring semester of even-numbered years. *One semester; three credits*

BIOL 381. ANIMAL BEHAVIOR
The study of the mechanisms and evolution of animal behavior. Topics include methods for the observation and quantification of behavior, natural selection and evolution of behavior, behavior genetics, neural and physiological mechanisms of behavior, communication, aggression, sexual reproduction, mating systems, and interspecific behavioral interactions. Prerequisites: BIOL 112/L with grade of "C" or higher, CHEM 114/L or higher, seven additional credits of biology at the 200 level or higher, and junior or senior standing. Offered in even-numbered Spring semesters. Group III Biology elective. *One semester; three credits*

BIOL 390-398. SPECIAL TOPICS IN BIOLOGY
Selected topics of interest. Prerequisite: BIOL 112/L and CHEM 113/L or higher, and 4 credits in biology at the 200 level or higher; permission of the instructor. *One semester; one to four credits*

BIOL 390L-398L. SPECIAL TOPICS IN BIOLOGY LAB
Selected topics of interest. Prerequisite: BIOL 112/L, CHEM 113/L or higher, and 4 credits in biology at the 200 level or higher; permission of the instructor. Corequisite: the lecture course *One semester; one credit*

BIOL 412. ECOLOGY
Study of the principles of ecology. Topics to be investigated include population organization, demographics and regulation, ecosystem and community structure/function, abiotic factors, and cycling of energy. Prerequisites: BIOL 112/L, CHEM 113/L or higher, seven additional credits in biology at

the 200 level or higher, and junior or senior standing. Corequisite: BIOL 412L. Offered even-numbered Fall semesters. *One semester; three credits*

BIOL 412L. ECOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 412. The course includes data-gathering in both terrestrial and aquatic ecosystems and mandatory field trips to ecologically important sites. Students will also complete a semester-long project, with the intent to publish results. Prerequisites: BIOL 112/L, CHEM 113/L or higher, seven additional credits in biology at the 200 level or higher, and junior or senior standing. Prerequisite or corequisite: BIOL 412. Offered in even-numbered Fall semesters. *One semester; one credit*

BIOL 413. PARASITOLOGY
A study of the morphology, taxonomy, life cycle, distribution, pathology, and control of parasites of man and other animals. Prerequisites: BIOL 112/L, CHEM 113/L or higher, seven additional credits in biology at the 200 level or higher, and junior or senior standing. Corequisite: BIOL 413L. Offered in the Fall semester. *One semester; three credits*

BIOL 413L. PARASITOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 413. Students conduct surveys to study the distribution of parasites and conduct long-term studies on the pathology of parasitic infection. Students are required to participate in the Gulf Coast Field trip. Prerequisite: BIOL 112/L, CHEM 113/L or higher, seven additional credits in biology at the 200 level or higher, and junior or senior standing. Corequisite: BIOL 413. Offered in the Fall semester. *One semester; one credit*

BIOL 414. ANIMAL HISTOLOGY
A study of the microscopic and ultramicroscopic structure of vertebrate (primarily mammalian) tissues and organs, i.e., microscopic anatomy. Special emphasis is placed on the relationship of structure to function. Group I Biology elective. Prerequisites: BIOL 111/L and BIOL 112/L with grades of "C" or higher, CHEM 114/L or higher, seven additional credits in biology at the 200 level or higher, and junior or senior standing. Corequisite: BIOL 414L. Offered in odd-numbered Spring semesters. *One semester; three credits*

BIOL 414L. ANIMAL HISTOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 414. Prerequisites: BIOL 111/L and 112/L with grades of" "C" or higher, CHEM 114/L or higher, seven additional hours of biology at the 200 level or higher, and junior or senior standing. Corequisite: BIOL 414. Offered in odd-numbered Spring semesters. *One semester; one credit*

BIOL 415. IMMUNOLOGY
The study of antigens, antibodies, organs and cells involved in humoral and cell-mediated immunity. Immune problems such as allergy, autoimmunity and AIDS are also discussed. Prerequisites: BIOL 112/L and CHEM 211/L with a grade of "C" or higher. Recommended: BIOL 311. Corequisite: BIOL 415L. Offered in the Fall semester. *One semester; three credits*

BIOL 415L. IMMUNOLOGY LABORATORY
Laboratory experience to illustrate and explain the principles covered in BIOL 415. Prerequisites: BIOL 112/L and CHEM 211/L with a grade of "C" or higher. Prerequisite or corequisite: BIOL 415. Offered in the Fall semester. *One semester; one credit*

BIOL 421. CELL/MOLECULAR BIOLOGY
A study of eukaryotic cell structures and function. Special emphasis is placed on the role that biomolecules play in cell surface interactions that lead to intracellular signaling. The clinical and molecular nature of cancer is also discussed. Prerequisites: BIOL 112/L and CHEM 211/L with a grade of "C" or higher. Recommended: BIOL 311. Corequisite: BIOL 421L. Offered in the Spring semester. *One semester; three credits*

BIOL 421L. CELL/MOLECULAR BIOLOGY LABORATORY
Laboratory experiences will demonstrate the concepts covered in BIOL 421. Experiments will employ techniques such as PCR, bacterial transformation, amplification and restriction mapping of plasmid DNA, western blotting and affinity chromatography. Prerequisites: BIOL 112/L and CHEM 211/L with a grade of "C" or higher. Corequisite: BIOL 421. Offered in the Spring semester. *One semester; one credit*

BIOL 440. RESEARCH I
Research projects are conducted under the guidance of a practicing researcher, typically facilitated by Dr. James Moore. Research is performed in the summer preceding the senior year and usually requires 200 – 300 in-field hours. Students are required to attend lab discussions and meet regularly with Dr. Moore or their research mentor if off-site. Students are required to take the ETS Biology II exam (BIOL 499) that will be administered in exam week of the Fall semester. Prerequisites: BIOL 340, senior standing or permission of the instructor. Offered in the Fall semester. *One semester; two credits*

BIOL 441. RESEARCH II
This course is a continuation of BIOL 440 Research I. During this course the students will meet weekly to discuss their research results and analyze their data. Project results will be presented in a formal paper by the end of the Spring semester. Students will also present their results at the annual Tennessee Academy of Science meeting. Prerequisite or corequisite: BIOL 340, 440, and 499. *One semester; two credits.*

BIOL 451. NEUROSCIENCE
This course will investigate the field of neuroscience with emphasis on neuroanatomy of the mammalian brain. Also contained within this course will be the study of neurophysiology and neuropharmacology using both vertebrate and invertebrate central and peripheral nervous systems. Offered in the Spring semester. Prerequisites: Junior or senior standing or permission of the instructor, BIOL 218/L or 312/L and CHEM 211/L or higher. Recommended: CHEM 315. Corequisite: BIOL 451L. Offered in even-numbered Spring semesters. *One semester; three credits*

BIOL 451L. NEUROSCIENCE LABORATORY
This laboratory is designed to complement the Neuroscience lecture course. Neuroanatomy will be taught at both the gross and microscopic level.

Experiments and demonstrations will be used to study neurophysiology and neuropharmacology concepts. Prerequisites: Junior or senior standing or permission of the instructor, BIOL 218/L or 312/L and CHEM 211/L or higher. Recommended: CHEM 315. Corequisite: BIOL 451. Offered in even-numbered Spring semesters. *One semester; one credit*

BIOL 461. INDEPENDENT RESEARCH I
Senior students design and conduct an organized research project usually requiring 100-150 in-lab hours. Course emphases include experimental design, controls, analysis of results, use of professional literature, and the writing of a draft of a journal-quality paper. Prerequisites: BIOL 362 and senior standing. Offered in the Summer and Fall semesters *One semester; one credit*

BIOL 463. MENTORED RESEARCH, INTERNSHIP IN BIOLOGY/BIOMEDICAL SCIENCE I
Research projects are conducted under the guidance of a practicing research scientist or clinician. The student is not limited as to the location of the project. This position may be paid or unpaid, depending on each individual student's situation. Students are encouraged to apply early for competitive fellowships. The commitment is generally 200-300 hours on the project, usually during the summer between the junior and senior year. Students will attend group discussions at CBU during the summer or will correspond on-line with the course director. Prerequisites: BIOL 362, senior standing or permission of the Biology Department Chair. Offered in the Summer Semester. *One semester; one credit*

BIOL 464. MENTORED RESEARCH, INTERNSHIP IN BIOLOGY/BIOMEDICAL SCIENCE II
During this course the students will meet weekly to discuss the results of their research projects. In addition to discussion, individual sections of a journal-style article will be written, peer reviewed, and a formal paper will be completed by the end of the semester. Students will begin to prepare a presentation of their research as well. Prerequisite: CHEM 212/L, one other Chemistry course with lab at the 200 level or above, and BIOL 362; Corequisite: BIOL 499. Prerequisite or corequisite: CHEM 315/L. Offered in the Fall semester. *One semester; two credits*

BIOL 465. MENTORED RESEARCH, INTERNSHIP IN BIOLOGY/BIOMEDICAL SCIENCE III
This course is a continuation of BIOL 464. During this course the students will meet weekly to practice presenting their research project results. In addition to peer review of the presentations, students will present their results in a public forum as an oral paper and in a poster session on CBU campus. Prerequisites: BIOL 464 and 499. Offered in the Spring semester. *One semester; two credits*

BIOL 466. INDEPENDENT RESEARCH II
A continuation of BIOL 461, the student prepares to present results in three forms - a final paper, an oral presentation at a public forum, and a poster session on campus. Prerequisites: BIOL 461 and senior standing. *One semester; three credits*

BIOL 490-498. SPECIAL TOPICS IN BIOLOGY
Selected topics of interest. Prerequisite: BIOL 112/L and CHEM 113/L or higher, seven additional credits of biology at the 200 level or higher; permission of instructor. *One semester; one to four credits*

BIOL 490L-498L. SPECIAL TOPICS IN BIOLOGY LABORATORY
Laboratory to accompany BIOL 490-498. Prerequisites: BIOL 112/L and CHEM 113/L or higher, seven additional credits of biology at the 200 level or higher; permission of instructor. *One semester; one to four credits*

BIOL 499. SENIOR COMPREHENSIVE
First semester seniors are required to take a comprehensive exam on selected fields of biology (cell biology, molecular biology/genetics, organismal biology, population biology/evolution/ecology). The exam is two hours in length and is given in the Fall semester. August and December graduates (students off paradigm) must take the exam the Fall semester of the year prior to their graduation. Pass/Fail grading. *One semester; zero credit*

TENTATIVE SUMMER COURSES in affiliation with the Gulf Coast Research Laboratory (GCRL), Ocean Springs, MS:
Barrier Island Ecology, Coastal Ornithology, Marine Biology, Marine Mammals, Marine Ecology, Marine Conservation, Shark Biology, Oceanography. Marine Ichthyology, Marine Invertebrate Zoology, Marine Aquaculture, Marine Biology, Marine Microbiology. Oceans and Human Health, Marine Fungi, Marine Toxicology. *For additional information about the course offerings at the GCRL, see the Chair of the Biology Department.*

■ BUSINESS ADMINISTRATION COURSES

BUS 103. FUNDAMENTALS OF BUSINESS
This course covers the basic business concepts, disciplines, and practices. It surveys major types of business institutions, functional areas of business organizations, and business processes. It provides an orientation into the modern business world for both future business majors and also for other majors. NOTE: if taken by students with 24 hours or more, credit will not count for BS degree with a major in Accounting or Business Administration. Offered in the Fall semester. *One semester; three credits*

BUS 160-164. SPECIAL TOPICS IN BUSINESS ADMINISTRATION
Each course is designed to permit intensive study into topics of special interest and timeliness in one or more areas of business administration. Offered as needed. *One semester; one to three credits*

BUS 260-264. SPECIAL TOPICS IN BUSINESS ADMINISTRATION
Each course is designed to permit intensive study into topics of special interest and timeliness in one or more areas of business administration. Offered as needed. *One semester; one to three credits*

BUS 360-364. SPECIAL TOPICS IN BUSINESS ADMINISTRATION
Each course is designed to permit intensive study into topics of special interest and timeliness in one or more areas of business administration. Offered as needed. *One semester; one to three credits*

BUSINESS LAW COURSES

BLAW 301. BUSINESS LAW I

The origins and general survey of contract law along with the nature, formation, execution, and interpretation of contracts in the common law system. Emphasis is on instruction in legal principles that govern typical business situations and on the rules of law and procedure applied by the courts in the United States. *One semester; three credits*

BLAW 302. BUSINESS LAW II

Continuation of BLAW 301. In-depth study of the Uniform Commercial Code and its far reaching effects on modern business transactions; the laws of agency, partnerships and corporations, and the legal concept of property. *One semester; three credits*

BLAW 345. LEGAL ENVIRONMENT OF BUSINESS

The course deals with administrative law. Primary areas of concentration include anti-trust law, consumer protection, securities regulation, labor law, and environmental law. Offered as needed. *One semester; three credits*

CBU STUDIES COURSES

CBU 100. CBU CO-OP

Requires full-time placement at a company/organization that is directly related to the student's major. The enrollment status of the work portion of a co-op program is equivalent to 12 credit hours per semester. Prerequisite: Approval of the Department Chair. Pass/Fail Grading. Course does not count toward major. *One semester; zero credit*

CBU 101. ORIENTATION TO CBU

The purpose of the course is to bring about the best possible transition from high school to university life at Christian Brothers University, including expectations for academic success. Successful completion of this course is required for graduation from Christian Brothers University. Older students may apply for an exemption from this class after conferring with the Dean of Academic Services. Pass/Fail grading. *One semester; zero credit*

CBU 200. CAREER PLANNING

This course is designed to prepare students for successful career planning. Topics will focus on self-assessment, career exploration and decision-making, job and graduate school preparation, and professionalism. Career development theories will be discussed as a comprehensive approach to career development will be implemented through interactive lecture and experiential learning. *One semester; one credit.*

CBU 300, 301. PEER COUNSELOR LEADERSHIP DEVELOPMENT I/II

This is a special preparatory program for students selected as Peer Counselors for CBU. The program provides extensive training for the Peer Counselors in preparation for their role as group leaders in CBU 101. The training covers a wide range of topics presented to new students and identifies issues and solutions that may arise as new students adapt to university life at CBU. Prerequisite: Approval of instructor. *Two semesters; three credits each*

CHEMICAL ENGINEERING COURSES

Requirements for the degree are found on Pages 73 and 74.

CH E 101. CHEMICAL ENGINEERING PROJECT I

Introduction to chemical engineering careers. Technical team projects. Written and oral presentations, use of the library and other sources to retrieve technical data. Student AIChE chapter meetings, discussions with panels of practicing engineers from local industry, and chemical plant visits. Industrial safety, ethics, environmental responsibility, and other suitable topics. Offered in the Fall semester. *Two semesters; one credit each*

CH E 120. INTRODUCTION TO CHEMICAL ENGINEERING

Systems of measurement units, concepts of mass and energy balances, and basic approaches for simple unit operations. Graphical analysis of engineering problems using spreadsheets and other software. Simple statistics. Prerequisite: MATH 117 or (MATH 107 & 110) with a grade of "C" or higher. Offered in the Spring semester. *One semester; two credits*

CH E 201. CHEMICAL ENGINEERING PROJECT II

Continuation of Chemical Engineering Project I. CH E 201 students serve as mentors and leaders for first-year students in CH E 101. Offered in the Fall semester. *Two semesters; one credit each*

CH E 232. MATERIAL AND ENERGY BALANCES

Multi-component material and energy balances in chemical reactions and processes. Compressibility of real gases. Single and multi-phase material balances. Energy balances on reactive and non-reactive systems. Properties of ideal mixtures. Prerequisite: CH E 305. Offered in the Spring semester. *One semester; four credits*

CH E 305. ELEMENTARY THERMODYNAMICS (Formerly CH E 231)

Fundamental laws and concepts of the macroscopic approach to the thermodynamics of pure materials. Properties of pure materials from tables, charts and ideal-gas equation. Heat and work. First and second law analysis of open and closed systems. Introduction to heat engines and heat pumps. (Same as ME 305). Prerequisites: MATH 132 and (CHEM 113 or CHEM 115). Students must have completed or be enrolled in PHYS 150. Offered in the Fall semester. *One semester; three credits*

CH E 314. ENGINEERING ECONOMY

Fundamentals of engineering economy. Cost concepts. Time value of money and equivalence. Economic analysis of alternatives. Depreciation and after-tax analysis. Effects of inflation on economic analysis. Currency exchange rates. Effects of global economic issues on engineering decision making. Prerequisite: junior or senior standing. (Same as CE 314, ECE 314, ME 314) *One semester; three credits*

CH E 319. PRINCIPLES OF PACKAGING
Overview of the historical development of packaging, the system of packaging science, along with information about economic importance, social implications and packaging as a profession. Study of the functions of packaging and materials, container types, processes, technology and equipment employed to protect goods during handling, shipping and storage. Introduction of package development process, packaging testing and evaluation methods, standards, and equipment. Brief review of governmental regulations affecting packaging. (Same as ME 319 and PKG 319). Prerequisites: MATH 117 or (MATH 107 &110) and CHEM 113 or 115. Offered in the Fall semester. *One semester; three credits*

CH E 321. HEALTHCARE PACKAGING
Introduction to the basics of materials used for healthcare packaging including materials selection. The steps used for packaging design and development and use of suitable conversion process from raw materials to packages. The considerations used for aseptic packaging and added sterilization process, if needed. Storage and distribution of final products to customers with codes imprinted on products for quick identification of source details. Finally, the most important steps of scope, planning, preparation, and for receiving of FDA validation. (Same as PKG 321 and ME 321) Prerequisites: MATH 117 or (MATH 107 & 110) and CHEM 113 or 115. Offered in the Spring semester. *One semester; three credits*

CH E 323. FLUID MECHANICS
Principles of fluid mechanics and applications to chemical processes. Laminar and turbulent flow in conduits. Flow through packed and fluidized beds. Flow measurement. Pumps and compressors. Prerequisites: CH E 232 and MATH 231. Offered in the Fall semester. *One semester; three credits*

CH E 324. HEAT TRANSFER
Principles of heat transfer and applications to chemical processes. Design of heat exchangers and evaporators. Prerequisite: CH E 323. Offered in the Spring semester. *One semester; three credits*

CH E 325. JUNIOR LABORATORY I
Experimental study of fluid flow and flow measurement. Packed and fluidized bed hydraulics. Prerequisite: Student must have completed or be enrolled in CH E 323. Offered in the Fall semester. *One semester, one credit*

CH E 326. JUNIOR LABORATORY II
Experimental study of heat transfer. Heat exchangers. Unsteady state heat transfer. Temperature sensors. Prerequisite: Student must have completed or be enrolled in CH E 324. Offered in the Spring semester. *One semester; one credit*

CH E 327. CHEMICAL ENGINEERING THERMODYNAMICS
Thermodynamic analysis of multi-component, multiphase, and reacting systems. Calculation of properties for real materials. Application of First and Second Laws. Free-energy, activity, fugacity and activity coefficients. Phase equilibrium. Prerequisite: CH E 305 or ME 305. Offered in the Fall Semester. *One semester; three credits*

CH E 328. MATERIALS SCIENCE
Material classification, behavior, properties and selection. The internal structures of metals, ceramics, polymers and electronic materials are examined to develop understanding of their mechanical, physical, chemical, and electrical properties. Controlling properties and behavior of materials by manipulating internal structures. (Same as ME 428) Prerequisites: CHEM 113 or 115. Offered in the Fall semester. *One semester; three credits*

CH E 330. MASS TRANSFER & SEPARATIONS
Mass transfer and integration of heat, mass, and momentum transfer into analysis of process operations of gas absorption, distillation, adsorption, and liquid extraction. Prerequisites: CH E 323 and 327. Offered in the Spring semester. *One semester; three credits*

CH E 393. PACKAGING SPECIAL PROJECT
Individual projects related to packaging. Reports are presented in both oral and written form. Prerequisites: PKG 319 or CH E 319 and PKG 320 or CH E 320. *One semester; two credits*

CH E 400. THE COMPLEAT ENGINEER
This course deals with a wide array of issues facing the practicing engineer. Topics include: engineering ethics, regulatory issues; health, safety, and environmental factors; reliability, maintainability, produciblity, sustainability; and the context of engineering in the enterprise, in society, and as part of the global economy. (Same as ECE 400, CE 400, and ME 400) Prerequisite: Permission of the department and MATH 232. *One semester; three credits*

CH E 401-402. CHEMICAL ENGINEERING SENIOR PROJECT
Real world problems in chemical engineering and related fields. Senior project must be approved by the course instructor and the work supervisor when conducted outside of CBU. Credit for CH E 402 is granted upon final review of the report submitted by the student. Prerequisite: Senior standing in Chemical Engineering. *One semester each; two credits each*

CH E 410. AIR POLLUTION CONTROL
Causes and consequences of air pollution, regulatory concerns, and methods for controlling and mediating the consequences of air contaminants. Prerequisites: CHEM 113 or 115 and junior or senior standing or permission from the instructor. Offered in odd-numbered Spring semesters. (Same as CE 435). *One semester, three credits*

CH E 411. PRINCIPLES OF PACKAGING DEVELOPMENT
Review common packaging materials, packaging forms, and special packaging techniques for certain product commodities. Overview current practices and state of the art of packaging design from concept to prototype. Learn to use ArtiosCAD, and other computer drafting and modeling software create virtual package design. Utilize hand tools, Artios sample cutting table, thermal former machine to create prototype package. Prepare

packaging specifications and design documentation for procurement and manufacturing. Discuss impacts of packaging design on manufacturing/fabrication cost, packaging operations, end use, and environment. Make aware of packaging related laws and regulations, and be sensitive to copyright and intellectual property protection. (Same as PKG 411 and ME 411) Prerequisite: CH E/ME/PKG 319. Offered in the Spring semester. *One semester; three credits*

CH E 412. INDUSTRIAL AND PROCESS SAFETY
Basic principles of industrial safety. Hazards and risks of industrial processes (particularly those in the chemical process industries) and how these hazards can be controlled. Prerequisites: CHEM 113 or 115 and junior or senior standing or permission from the instructor. Offered in even-numbered Spring semesters. *One semester, three credits*

CH E 425. PROCESS DESIGN I
Application of principles and concepts of chemical engineering with safety and practical considerations to design equipment to meet a processing need. Emphasis is placed upon a particular unit or subsystem rather than a complete process which is the subject of CH E 426, Process Design II. Prerequisite: CH E 330. Student must have completed or be enrolled in CH E 443. Offered in the Fall semester. *One semester; three credits*

CH E 426. PROCESS DESIGN II
Application of principles of process and plant design to solve comprehensive industrial problems. Flow sheet development, equipment sizing and determination of operating parameters, troubleshooting, safety considerations, cost estimation and economic analysis. Computer simulation (Aspen Plus) of process plants. Prerequisite: CH E 425 and CH E 443. Offered in the Spring semester. *One semester; three credits*

CH E 437. MODELING AND CONTROL IN CHEMICAL ENGINEERING
Development of mathematical models for Chemical Engineering systems in terms of ordinary differential equations. Design of feedback control systems. Controller stability and tuning. Prerequisite: CH E 330. Offered in the Fall semester. *One semester, three credits*

CH E 441. SENIOR LABORATORY I
Experimental study of heat and mass transfer. Absorption, evaporation, distillation, etc. Written and oral reports required on results of experiments. Prerequisite: CH E 330. Offered in the Fall semester. *One semester; one credit*

CH E 442. SENIOR LABORATORY II
Experimental study of reaction kinetics and behavior of various reactors. Polymerization and characterization of polymers. Written reports are required on experimental results. Prerequisite: CH E 443. Offered in the Spring semester. *One semester; one credit*

CH E 443. REACTOR DESIGN
Chemical reaction kinetics of homogeneous and heterogeneous isothermal systems and homogeneous non-isothermal systems. Application of kinetics to analysis and design of batch and flow reactors and their combinations to achieve specified end results. Prerequisites: CH E 324 and 327. Offered in the Fall semester. *One semester; three credits*

CH E 444. POLYMERIC MATERIALS
Introduction to chemistry, physics, technology and uses of common high polymers currently being produced. Prerequisite: CH E 443. Offered in the Spring semester. *One semester; three credits*

CH E 446. BIOCHEMICAL ENGINEERING
Enzyme catalyzed reactions. Microbial growth modeling. Conceptual design of bioreactors and bioseparations. Prerequisites: CHEM 315 and CH E 443. Offered in the Spring semester. *One semester; three credits*

CH E 490-494. SPECIAL TOPICS
Elective courses of special or current interest. Taught by faculty with special or unique qualifications. Prerequisites are announced with course offerings. *One semester; one to four credits*

CH E 495-496. INTERNSHIP IN CHEMICAL ENGINEERING
Students majoring in chemical engineering may be placed in the engineering offices of contracted firms to receive job training under the supervision of qualified engineers. Tasks completed as part of the internship must be approved by an authorized work supervisor. Credit is granted upon faculty approval of periodic review reports and a final summary report describing the work performed. Minimum time 200 hours. Prerequisites: Junior standing and permission of the department. Pass/Fail grading. *One semester; one to three credits*

■ CHEMISTRY COURSES

Requirements for the degrees are found on Page 94.

CHEM 101. INTRODUCTION TO COLLEGE CHEMISTRY
This course is designed for students who are unprepared to begin the study of chemical principles. Emphasis is on elements and their symbols, names and formulas of compounds, valences, balancing equations, stoichiometry, and the algebra required for proficiency in chemistry. Prerequisite: Minimum ACT Math score of 20 or above or ALG 115. This course does not supply any portion of the science credits required in any CBU degree program. Offered in the Fall semester. *One semester; three credits*

CHEM 105. CHEMISTRY OF COOKING
This course takes an in-depth and hands-on approach to the chemical nature and transformations that occur during classic and modern cooking techniques. A study of basic chemical principles, the scientific method, experimental design, and method optimization will be employed to understand the effects of cooking processes on food. This course concludes with a study abroad trip (required) to Italy taking place immediately after Spring commencement. This trip of culinary adventures will include cooking instruction and tours. Corequisite: CHEM 105L. Offered in the Spring semester of even-numbered years. *One semester; three credits*

CHEM 105L. CHEMISTRY OF COOKING LABORATORY
This course is the laboratory analogue to CHEM 105 Chemistry of Cooking. Each meeting will demonstrate aspects discussed in the lecture. Topics will include the Maillard reaction, gas laws, and thermal properties of cookware. Corequisite: CHEM 105. Offered in the Spring semester of even-numbered years. *One semester; one credit*

CHEM 106. SPECIAL TOPICS
Introductory course in one of the fields of Chemistry. Prerequisites and corequisites as described in the syllabus for each Special Topics course. Corequisite: CHEM 106L *One semester; one to three credits each*

CHEM 106L. SPECIAL TOPICS LABORATORY
Introductory laboratory course to accompany CHEM 105 or CHEM 106. Prerequisites and corequisites as described in the syllabus for each Special Topics course. Corequisite: CHEM 106. *One semester; one credit each*

CHEM 113. PRINCIPLES OF CHEMISTRY I
This is the first-semester chemistry course for all students of science and chemical engineering. Topics include matter, measurements, atoms, molecules, ions, use of formulas and equations, thermochemistry, gases, electronic structure, the periodic table, covalent bonding, molecular structure, liquids and solids, and solutions. Prerequisite: Minimum ACT Math subscore of 25 or above AND minimum ACT composite score of 25 or above or CHEM 101 or 115 at Christian Brothers University or high school chemistry and satisfactory performance on departmental placement examination. Corequisite: CHEM 113L. *One semester; three credits*

CHEM 113L. PRINCIPLES OF CHEMISTRY I LABORATORY
This course is designed to illustrate and explain the principles covered in CHEM 113. Prerequisite: Minimum ACT Math subscore of 25 or above AND minimum ACT composite score of 25 or above or CHEM 101 or 115 at Christian Brothers University or high school chemistry and satisfactory performance on departmental placement examination or.. Corequisite: CHEM 113. *One semester; one credit*

CHEM 114. PRINCIPLES OF CHEMISTRY II
This is the second-semester chemistry course for students of science and chemical engineering. Topics include chemical equilibrium, precipitations, acids and bases, chemical thermodynamics and kinetics, oxidation and reduction, electrochemistry, and nuclear reactions. Prerequisites: CHEM 113/L, and MATH 117, (107 & 110), or 131. Corequisite: CHEM 114L. *One semester; three credit*

CHEM 114L. PRINCIPLES OF CHEMISTRY II LABORATORY
This course is designed to illustrate and explain the principles covered in CHEM 114. Prerequisites: CHEM 113/L, and MATH 117, (107 & 110), or 131. Corequisite: CHEM 114. Prerequisites: CHEM 113/L. *One semester; one credit*

CHEM 115. GENERAL CHEMISTRY
A one-semester survey course in chemistry. Topics include matter, formulas and equations, thermochemistry, gases, electronic structure of the atom, the periodic table, bonding, molecular structure, liquids and solids, chemical kinetics, equilibrium, and electrochemistry. Prerequisite: MATH 117, (107 & 110), 129, or 131, or ACT Math Subscore of 27 or higher. Corequisite: CHEM 115L. *One semester; three credits*

CHEM 115L. GENERAL CHEMISTRY LABORATORY
A one-semester laboratory course in chemistry designed to illustrate and explain the concepts covered in CHEM 115. Prerequisite: MATH 117, (107 & 110), 129, or 131, or ACT Math Subscore of 27 or higher. Corequisite: CHEM 115. *One semester; one credit*

CHEM 200. SPECIAL TOPICS
Internship or introductory course in one of the major fields of chemistry. Prerequisites as described in the syllabus for each Special Topics course. Corequisite: CHEM 200L. *One semester; one to three credits each*

CHEM 200L SPECIAL TOPICS LABORATORY
Internship or introductory course in one of the major fields of chemistry. Prerequisites as described in the syllabus for each Special Topics course. Corequisite: CHEM 200L. *One semester; one to three credits each*

CHEM 201. INTRODUCTION TO FORENSIC CHEMISTRY
This course in an introduction to the fundamentals of forensic chemistry. Topics include criminalistics, collection and physical evaluation of evidence, and fundamental chemical principles. Current trends in forensic chemistry addressing scientific, technological, and societal effects will be discussed. Prerequisites: CHEM 114 or 115. Corequisite: 201L. Offered in the Fall semester of odd-numbered years. *One semester; three credits*

CHEM 201L. INTRODUCTION TO FORENSIC CHEMISTRY LAB
This course is designed to introduce students to quantitative and qualitative analysis of physical crime scene evidence. Topics will include serology, trace evidence, explosives and fingerprinting. Prerequisites: CHEM 114 or 115. Corequisite: 201. Offered in the Fall semester of odd-numbered years. *One semester; one credit*

CHEM 211. ORGANIC CHEMISTRY I
This course uses both a mechanistic and functional-group approach to introduce organic concepts. Topics include bonding, functional groups, stereochemistry, acids and bases, and conformations. Mechanisms covered include electrophilic addition, SN_2, SN_1, E_1, E_2 and radical reactions. This course deals with compounds from the aliphatic series. Prerequisites: CHEM 113/L and CHEM 114/L with a minimum grade of "C" in each course. Corequisite: CHEM 211L. *One semester; three credits*

CHEM 211L. ORGANIC CHEMISTRY I LABORATORY

This course is designed to teach the student the techniques of organic chemistry as well as to carry out reactions discussed in class. Some of the techniques presented are distillation, recrystallization, and extraction. The experiments will teach the proper methods of carrying out reactions. Prerequisites: CHEM 113/L and CHEM 114/L with a minimum grade of "C" in each course. Corequisite: CHEM 211. *One semester; one credit*

CHEM 212. ORGANIC CHEMISTRY II
This is the second in a two-semester sequence which builds on CHEM 211. This course will use a mechanistic and functional-group approach to introduce organic concepts. Topics include NMR, IR, and UV spectroscopy, aromaticity, enolates, and polymers. Mechanisms include EAS, NAS, nucleophilic addition, and nucleophilic acyl substitution. This course deals with compounds from both the aliphatic and aromatic series. Prerequisites: CHEM 211/L. Corequisite: CHEM 212L. *One semester; three credits*

CHEM 212L. ORGANIC CHEMISTRY II LABORATORY
This class is a continuation of CHEM 211L. The lab will be a combination of spectroscopy, reactions and identification of unknowns. The experiments carried out in lab will correspond to ones discussed in class. The identities of the organic unknowns will be determined by chemical and spectroscopic means. The skills learned in the first semester are used extensively in this class. Prerequisites: CHEM 211/L. Corequisite: CHEM 212. *One semester; one credit*

CHEM 214. QUANTITATIVE ANALYSIS
A course which covers analytical principles and sources of error, principles of volumetric and gravimetric analysis, electrogravimetry, potentiometric titrations, and spectrophotometric analysis. Prerequisites: CHEM 114/L and MATH 131. Corequisite: CHEM 214L. Offered in the Fall semester. *One semester; two credits*

CHEM 214L. QUANTITATIVE ANALYSIS LABORATORY
Laboratory to accompany CHEM 214. Prerequisites: CHEM 114/L and MATH 131. Corequisite: CHEM 214. Offered in the Fall semester. *One semester; two credits*

CHEM 311. ORGANIC QUALITATIVE ANALYSIS
This course covers the identification of pure organic compounds and mixtures. The course includes use of spectroscopy and chromatography as well as classical techniques. Prerequisites: CHEM 212/L. One hour of lecture and six hours of laboratory work per week. Offered in the Spring semester of odd-numbered years. *One semester; three credits*

CHEM 315. BIOCHEMISTRY I (Introduction to Biochemistry)
This course is a detailed introduction to the chemistry of the major classes of biologically important molecules including amino acids, proteins, carbohydrates, lipids, and nucleic acids. A discussion of the role of water in biological systems, techniques for isolation and characterization of biomolecules, enzyme kinetics, regulation of enzyme activity, membrane structure and function, bioenergetics, general characteristics of metabolic pathways, glycolysis, gluconeogenesis, the Krebs cycle, and glycogen metabolism will be included. The course will conclude with an introduction to signal transduction pathways. Prerequisites: CHEM 212/L. Corequisite: CHEM 315L. Offered in the Fall semester. *One semester; three credits*

CHEM 315L BIOCHEMISTRY I LABORATORY
This course is designed to accompany Biochemistry I. It will provide an introduction to laboratory techniques used in the isolation and characterization of the major classes of biological molecules. Emphasis will be placed on techniques for protein purification and assay including chromatography, electrophoretic methods, centrifugation, spectroscopy, and enzyme kinetics. Prerequisites: CHEM 212 /L. Corequisite: CHEM 315. Offered in the Fall semester. *One semester; one credit*

CHEM 316. BIOCHEMISTRY II (Metabolic Regulation and Signal Transduction)
This course is a continuation of Biochemistry I, providing a comprehensive introduction to the study of metabolic pathways with emphasis on basic principles of regulation. The mechanism of hormone action and interrelationships between signal transduction and metabolic regulation will be discussed. An introduction to drug design and the mechanism of action of drugs in the human body will be included. The course will conclude with an introduction to molecular biology. Prerequisites: BIOL 112/L and CHEM 315/L. Offered in the Spring semester. *One semester; three credits*

CHEM 330. RESEARCH SEMINAR I (formerly CHEM 430)
A study of the chemical literature and ethical conduct in science. Students will be required to prepare a journal club presentation. Attendance of departmental seminars is also required. Prerequisites: CHEM 212/L. Offered in the Fall semester. *One semester; zero credit*

CHEM 331. RESEARCH SEMINAR II
Students will be required to attend departmental seminars and to submit summaries of these presentations. Students will select a research project and advisor. Prerequisite: CHEM 330. Offered in the spring semester. *One semester, zero credit*

CHEM 342 PHYSICAL BIOCHEMISTRY
Studies of the physical properties of biological molecules. Prerequisites: MATH 129 or 131, CHEM 315 and 315L, or permission of instructor. Offered in the Spring semester. *One semester, three credits*

CHEM 351. PHYSICAL CHEMISTRY I
Studies of the kinetic theory and properties of gases, the laws of thermodynamics, molecular energies, free energy and equilibrium, phase equilibria, ideal and real solutions, colligative properties, electrochemistry, rates and mechanisms of chemical reactions, catalysis, photochemistry, and collision theory. Prerequisites: CHEM 114/L, 211/L, MATH 231 and PHYS 251/L. Corequisite: CHEM 351L. Offered in the Fall semester. *One semester; three credits*

CHEM 351L. PHYSICAL CHEMISTRY I LABORATORY
Laboratory work corresponding to CHEM 351. Prerequisites: CHEM 114/L, 211/L, MATH 231 and PHYS 251/L. Corequisite: CHEM 351. Offered in the Fall semester. *One semester; one credit*

CHEM 352. PHYSICAL CHEMISTRY II
Studies of quantum mechanics and atomic structure, chemical bonding, spectroscopy and term symbols, molecular statistics, partition functions, diffraction and crystallography, intermolecular forces, liquids, surface chemistry, colloids, viscosity and diffusion, and macromolecules. Prerequisites: CHEM 212/L, 351/L, PHYS 252/L, and MATH 232. Corequisite: CHEM 352L. Offered in the Spring semester. *One semester; three credits*

CHEM 352L. PHYSICAL CHEMISTRY II LABORATORY
Laboratory work corresponding to CHEM 352. Prerequisites: CHEM 212, 351, 351L, PHYS 252/L and MATH 232. Corequisite: CHEM 352. Offered in the Spring semester. *One semester; one credit*

CHEM 410. ADVANCED BIOCHEMISTRY
A detailed discussion of selected topics in biochemistry including membrane transport, membrane and organelle chemistry, photosynthesis, nucleic acid chemistry, selected metabolic pathways from lipid and amino acid metabolism, and mechanisms of enzyme action. Drug design and the mechanism of action of selected drugs will also be discussed. Prerequisites: BIOL 112/L and CHEM 315/L. Offered in even-numbered Spring semesters. *One semester; three credits.*

CHEM 415. ANALYTICAL CHEMISTRY
This course is oriented toward the study and use of instruments in chemical analysis and research. Theory and its application to instrumental methods of analysis are covered, including basic electronics, spectrophotometry, electrochemical analysis, and chromatography. Three one-hour lectures per week. Prerequisites: MATH 131, CHEM 212/L and 214/L. Corequisite: CHEM 415L. Offered in the Spring semester of even-numbered years. *One semester; three credits*

CHEM 415L. ANALYTICAL CHEMISTRY LABORATORY
Experiments dealing with basic electronics, optical spectrophotometry, non-optical spectrometry, electrochemical analysis, and chromatography are performed. Prerequisites: MATH 131, CHEM 212/L and 214/L. Corequisite: CHEM 415. Offered in the Spring semester of even-numbered years. *One semester; one credit*

CHEM 420. ADVANCED FORENSIC CHEMISTRY
This course provides advanced treatment of topics introduced in CHEM 201. A discussion of modern techniques and instrumentation used in forensic analysis will be included. Prerequisites: CHEM 212/L and 214/L. Corequisite: CHEM 420L. Offered in the Spring semester of odd-numbered years. *One semester; three credits*

CHEM 420L. ADVANCED FORENSIC CHEMISTRY LABORATORY
This course is designed to illustrate the principles covered in CHEM 420. Prerequisites: CHEM 212/L and 214/L. Corequisite: CHEM 420. Offered in the Spring semester of odd-numbered years. *One semester; one credit*

CHEM 422. INORGANIC CHEMISTRY
This course is an in-depth study of the elements (metals and non-metals) and their compounds. Emphasis is on periodic relationships, theory of solutions, coordination compounds, and the kinetics of inorganic reactions in solution. Three one-hour lectures per week. Prerequisites: CHEM 212/L and 351/L. Corequisite: CHEM 422L. Offered in the Spring semester of odd-numbered years. *One semester; three credits*

CHEM 422L. INORGANIC CHEMISTRY LABORATORY
Advanced laboratory techniques are used in the synthesis, analysis, and purification of inorganic coordination compounds. Prerequisites: CHEM 212/L and 351/L. Corequisite: CHEM 422. Offered in the Spring semester of odd-numbered years. *One semester; one credit*

CHEM 428. RESEARCH SEMINAR III
Students will be required to attend departmental seminars and to submit summaries of these presentations. Students will begin writing their senior research paper. Prerequisite: CHEM 331. Offered in the Fall semester. *One semester; zero credit.*

CHEM 429. RESEARCH SEMINAR IV (Formerly CHEM 431)
Completion of research project. Oral presentation of research at a meeting of a learned society. Completion of a written research paper in a format suitable for publication in a refereed journal. In addition, each student will prepare a poster and present it at a poster session on campus. Students will be required to attend departmental seminars and to submit summaries of these presentations. Prerequisite: CHEM 428. Offered in the Spring semester. *One semester; two credits*

CHEM 432-437, 440-441. SPECIAL TOPICS
An advanced study in one of the following fields: Inorganic, Organic, Analytical, Polymer, Physical, or Biochemistry. Prerequisites and corequisites as described in the syllabus for each Special Topics course. *One semester; one to four credits each*

CHEM 439. ASTROPHYSICAL CHEMISTRY
This is an interdisciplinary capstone course for Science and Engineering majors. Astronomy is used as the framework upon which to hang many other topics; the student's previous knowledge of chemistry, physics, mathematics, and biology will be reviewed and expanded upon, along with history, philosophy, music, and religion. Topics include an overview of the Universe, the sky and the Earth, the history of astronomy, light and telescopes, origin and evolution of the Solar System, the nature and evolution of stars, including supernovae, neutron stars, pulsars, and black holes, the Milky Way and other galaxies, interstellar molecules, life in the Universe, quasars, and cosmology, including the Big Bang and the expanding Universe. Optional observing sessions included. Prerequisites: CHEM 114, PHYS 150 or 201, and MATH 129 or 131. Junior standing recommended. Offered in the Spring semester of even-numbered years. *One semester; three credits*

CHEM 490. INTERNSHIP IN CHEMISTRY

Students majoring in Chemistry or Biochemistry may be placed in an area company or research facility under approved supervision. Students submit progress reports and a final paper describing the experience. Prerequisites: Junior standing and permission of department chair. *One semester; one credit*

CHEM 498. SENIOR COMPREHENSIVE/BIOCHEMISTRY
Students must pass either an external examination in biochemistry chosen by the department (such as the GRE) or pass a comprehensive examination administered by the faculty of the department. A passing score is required for graduation. Offered in the spring semester. Offered pass/fail. *One semester, zero credit.*

CHEM 499. SENIOR COMPREHENSIVE/CHEMISTRY
Students must pass either an external examination covering all of the major fields of chemistry that is chosen by the department (such as the Major Field Assessment in Chemistry) or pass a comprehensive examination administered by the faculty of the department. A passing score is required for graduation. Offered in the spring semester. Pass/Fail grading. *One semester, zero credit.*

■ CHINESE COURSES

The following foreign language courses will be offered on the campus of Rhodes College under the instruction of Rhodes faculty. See Dean of the School of Arts concerning these courses.

CHIN 101. ELEMENTARY CHINESE I
This course introduces Chinese to students with no knowledge of the language. Equal emphasis will be given to acquiring the rudiments of spoken and written Chinese. Students will begin mastery of Chinese characters and vocabulary, and they will be introduced to some basic aspects of Chinese culture and society. Offered in the Fall semester. *One semester; four credits*

CHIN 102. ELEMENTARY CHINESE II
Students will continue study of the rudiments of spoken and written Chinese. Students will master approximately 700 characters and a vocabulary of a little more than 1,000 words. Students become acquainted with Chinese culture and society as a necessary part of their education in this language. Prerequisite: CHIN 101 or the equivalent. Offered in the Spring semester. *One semester; four credits*

CHIN 201. INTERMEDIATE CHINESE I
In addition to the same objectives for the first year, this course aims at improving students' aural-oral skills to achieve fluency and comprehension, further developing their proficiency in reading for understanding and enhancing their ability to write in Chinese and to translate from Chinese into English and vice versa. Prerequisite: CHIN 102 or the equivalent. Offered in the Fall semester. *One semester; four credits*

CHIN 202. INTERMEDIATE CHINESE II
Builds on the foundations of CHIN 201 and goes more in depth with fluency, comprehension, reading proficiency, writing, and translation. Prerequisite: CHIN 201. Offered in the Spring semester. *One semester; four credits*

CHIN 205. MODERN CHINESE LITERATURE IN ENGLISH TRANSLATION
An introductory course of modern Chinese literature (1918-1989) designed to acquaint students with major phases of modern Chinese literature and some masterpieces of representative writers in relation to political and social changes. The course provides opportunities to learn about modern Chinese culture, society, and politics through readings of chosen works and trains students to read thoughtfully and critically. No prior knowledge of Chinese language and culture is required. *One semester; four credits*

CHIN 206. INTRODUCTION TO EAST ASIAN CULTURES
This course introduces East Asian cultures through the classic works of China, Japan and Korea. In order to better grasp the culture legacies of East Asia, students will read various cultural texts such as fiction, poetry, drama, and prose in English translation. This course is designed to help students develop a more sophisticated understanding of and critical appreciation for East Asian cultures. No knowledge of East Asian languages or prior coursework on East Asian cultures is required. *One semester; 4 credits*

CHIN 210. CHINESE LITERARY HERITAGE
This course introduces one of the world's richest literary heritages: traditional Chinese literature. It conducts a general survey of Chinese literature from high antiquity up to modern times with the focus on some representative writers and their works. It consists of three major sections: poetry and prose, drama, and fiction. All readings are in English. No prior knowledge of Chinese language and culture is required. *One semester; four credits.*

CHIN 214. INTRODUCTION TO CHINESE CULTURE
This course introduces students to Chinese civilization and culture from the multiple perspectives of geography, history, philosophy, language, literature, religion, art, people, society, and general ways of life. Major concerns will include, but are not restricted to, forms of material and spiritual culture that have developed and changed through China's continuous traditions; individual and collective values that underlie social life, political organization, economics systems, family structure, human relationships, and individual behavior; and the rationales that have made Chinese culture what it is. *One semester; four credits.*

CHIN 215. GENDER AND SEXUALITY IN CHINESE LITERATURE AND FILM
This course offers a critical survey of women's images in Chinese literature and films. It seeks to examine the images of traditional Chinese women as well as how these images have changed throughout history. It also seeks to understand the social, cultural and institutional norms of women's behaviors in traditional Chinese society as well as how the fictional imagination conforms to, deviates from and subverts these normative gender behaviors. Offered in the Fall semester. *One semester; four credits.*

CHIN 220. CONTEMPORARY CHINESE CINEMA
An introductory course on contemporary Chinese cinema that combines film viewing with readings of film theory and criticism. The aim is to

provide a window for students to glimpse the complexity of contemporary Chinese culture. Students will view selected Chinese films produced in mainland China, Taiwan, and Hong Kong from the 1980's to the present and be required to read essays of critical studies which explore the interrelations of various issues in Chinese society. *One semester; four credits.*

CHIN 301. ADVANCED CHINESE I
This course lays greater emphasis on further developing students' proficiency in reading for understanding and enhancing their ability to write in Chinese and to translate from Chinese into English and vice versa. Prerequisite: CHIN 202 or the equivalent. Offered in the Fall semester. *One semester; four credits*

CHIN 302. ADVANCED CHINESE II
This course continues the groundwork of CHIN 301. At the end of the course students should be able to read Chinese materials in everyday life, to write compositions in Chinese characters for daily communication, and to translate non-technical materials from Chinese into English and vice versa with the help of dictionaries. Prerequisite: CHIN 301 or the equivalent. Offered in the Spring semester. *One semester; four credits*

CHIN 409. SPECIAL TOPICS
Intensive study of some aspect or theme of Chinese literature, culture or society in China. May be taken more than once for credit with new topics. Prerequisites: CHIN 302 or permission of instructor. *One semester; four credits.*

■ CIVIL & ENVIRONMENTAL ENGINEERING COURSES

Requirements for the degree are found on Page 75.

CE 110. INTRODUCTION TO CIVIL ENGINEERING
This course provides an introduction to the different concentrations within civil engineering: structural engineering, transportation engineering, geotechnical engineering, water resource engineering, and environmental engineering. This course promotes critical thinking and application of the engineering design process to solve civil engineering problems. Incorporates hands-on lab activities and spreadsheet computations. Offered in the Fall semester. *One semester; two credits*

CE 111. CIVIL ENGINEERING GRAPHICS
Emphasis on visual aspects of engineering communications, expression of ideas, developing spatial concepts as related to design. Graphical design is taught using orthographic projection, technical sketching, and 3-D modeling. CAD applications in Civil and Environmental Engineering. Introduction to steel and reinforced concrete construction. Introduction to topography, plot plans, legal descriptions and subdivision design. Offered in the Fall semester. *One semester; three credits*

CE 113. CIVIL ENGINEERING ANALYSIS
This course provides an introduction to mathematical concepts and numerical modeling frequently used by civil engineers. Students are given an introduction to geomatics, statics, and mechanics of materials. Incorporates hands-on lab activities and scientific programming. Offered in the Spring semester. Prerequisite: MATH 117, (107 & 110), or higher. *One semester; two credits*

CE 201. STATICS
Principles of statics; coplanar and non-coplanar force systems. Equilibrium of force systems, analysis of structures, friction, centroids, moment of inertia. Prerequisite: PHYS 150. *One semester, three credits*

CE 210. MECHANICS OF MATERIALS (formerly ME 312)
Axial load, shear and bending moment diagrams. Differential equations of beams. Study of stresses due to axial, bending, torsional loads, and combined loading. Mohr's circle of stress. Design techniques. Column design equations. (Same as ME 210). CE 113 or 201 with grades of "C" or higher and PHYS 150. *One semester; three credits*

CE 225. GEOMATICS (formerly CE 125)
Introduction to the art, science, and technologies used in the positions above, on, or beneath the earth's surface. Theory of measurements and errors. Measurement of line, direction and angles. Principles of leveling, traversing and topographic surveys. Horizontal and vertical route alignments. Computation of Areas and Volumes. Computer applications. Offered in the Fall semester. Prerequisite: CE 111 and 113. Corequisite: CE 225L. *One semester; three credits*

CE 225L. GEOMATICS LAB (formerly CE 125L)
Field work to support theory covered in CE 125. Roadway design, closed traverse and topographic mapping projects. Three laboratory hours each week. Report writing skills are required. Computer applications. Offered in the Fall semester. Prerequisite: CE 111 and 113. Corequisite: CE 225. *One semester; one credit.*

CE 212. STRUCTURAL ANALYSIS
Load paths and tributary area. Analysis of statically determinate beams, frames, and trusses. Deflection computation methods. Energy methods. Influence lines. Analysis of statically indeterminate beams, frames, and trusses using the force method, moment distribution, and approximate methods. Incorporates computer analysis of structures and hands-on lab activities. Prerequisites: CE 201 and 210. Offered in the Spring semester. *One semester; three credits*

CE 251. CONSTRUCTION MATERIALS
An introduction to construction management: planning and scheduling, engineering economics, and contracts. Aggregate testing. Concrete and asphalt mix design and material science. Timber material science and an introduction to structural timber design. Prerequisite: CE 202 or 210. Offered in the Spring semester. *One semester; three credits*

CE 251L. CONSTRUCTION MATERIALS LABORATORY
Field and lab work to support theory covered in CE 251. Laboratory Aggregate testing. Concrete and asphalt mix design. Timber material testing. Prerequisite: CE 202 or 210. Offered in the Spring semester. *One semester; one credit*

CE 299. HYDRAULICS
Study of hydrostatics and hydrodynamics includes pressure heads, pressure centers, buoyancy and flotation, stability of gravity dams, flow of fluids in pipes and open channels, nozzles, weirs, compound and branching pipe networks. Fundamentals of conveyance system design. Oral and written communication skills are required. Prerequisite: CE 210. Corequisite: CE 299L. Offered in the Spring semester. *One semester; three credits*

CE 299L. HYDRAULICS LABORATORY
Laboratory experimental work to support theory covered in CE 299. Prerequisite CE 210. Corequisite: CE 299. Offered in the Spring semester. *One semester; one credit*

CE 305. ENVIRONMENTAL SITE ASSESSMENT
Environmental assessment; environmental laws and regulations; planning and conducting; title search, site walk-through, water and soil sampling; laboratory and field testing of soil and groundwater; fundamentals of site remediation. Written and oral communication skills are required. Prerequisite: CE 299. Offered as needed. *One semester; three credits*

CE 310. DESIGN OF STEEL STRUCTURES
Design of structural steel elements. Design of tension members, columns, beams, base plates, and simple connections. Computer analysis and design. Prerequisite: CE 203 or 212. Offered in the Fall semester. *One semester; three credits*

CE 311. DESIGN OF REINFORCED CONCRETE STRUCTURES
Design of reinforced concrete elements such as beams, one-way slabs, short columns, strip and spread footings. Computer analysis and design. Prerequisite: CE 203 or 212. Offered in the Spring semester. *One semester; three credits*

CE 313. HYDROLOGY
The aspects of hydrology which are of concern to an engineer: water balance, probability and statistics in hydrologic design and analysis, basin modeling, hydrographs, stream flow routing, flood control, groundwater hydrology, and computer applications. Oral and written communication skills are required. Prerequisites: CE 299. Offered in the Fall semester. *One semester; three credits*

CE 314. ENGINEERING ECONOMY
Fundamentals of engineering economy. Cost concepts. Time value of money and equivalence. Economic analysis of alternatives. Depreciation and after-tax analysis. Effects of inflation on economic analysis. Currency exchange rates. Effects of global economic issues on engineering decision making. Prerequisite: junior or senior standing. (Same as CH E 314, ECE 314, and ME 314). *One semester; three credits*

CE 318. HIGHWAY ENGINEERING
Study of driver and vehicle characteristics as they relate to the geometric design of highways. Highway capacity and safety. Design of drainage structures. Highway materials and the structural design of flexible and rigid pavements. Students are required to develop plans for a design project assigned by the instructor. Discussion of transportation planning, land use/transportation relationships, economy, mass transit facilities and intermodal systems. Computer applications. Oral and written communication skills are required. Prerequisite: CE 125 or 225. Offered in the Spring semester. *One semester; three credits*

CE 319. TRAFFIC ENGINEERING
Travel time, delay, speed and volume studies. Capacity of freeways, expressways, urban streets, arterials and intersections. Pedestrian, parking and accident studies. Traffic markings, signs, signals both pretimed and actuated, and progression. Geometric design of urban arterials and intersections. Students are required to submit functional plans for design projects assigned by the instructor. Emphasis on intersection, interchange, and expressway design. Computer applications. Written communication skills are required. Offered as needed. Prerequisite: CE 125 or 225. *One semester; three credits.*

CE 322. SOIL MECHANICS
A study of the origin and composition of soils; character and properties; gradation and permeability; seepage phenomena and frost action. Introduction to mechanics of earth masses including consideration of stresses, strains, consolidation theory, rate of consolidation, total and differential settlements, and shearing resistance. Prerequisites: CE 210 and 299. Corequisite: CE 322L. Offered in the Fall semester. *One semester; three credits*

CE 322L. SOIL MECHANICS LABORATORY
Standard laboratory tests to determine soil properties. Written and oral communication skills are required. Prerequisites: CE 210 and 299. Corequisite: CE 322. Offered in the Fall semester. *One semester; one credit*

CE 329. ENVIRONMENTAL ENGINEERING I
Introduction to environmental engineering, environmental regulations, mass balance, energy balance, water chemistry, water quality, water supply, and drinking water treatment and processes. Oral and written communication skills are required. Prerequisites: CHEM 115/L, CE 299 and Junior Standing. Offered in the Spring semester. *One semester; two credits.*

CE 331. JUNIOR PROJECT
Interdisciplinary team design projects are initiated by the student (or suggested by the faculty) and approved by the faculty, investigated and developed throughout three semesters preceding the student's graduation. Students submit proposals for CE 331, 431 and 432. Students attend senior presentations and other professional lectures. Report writing and oral presentation. Prerequisite CE 203 or 212. To be taken three semesters

preceding the student's graduation. *One semester; one credit*

CE 340. DESIGN OF FOUNDATIONS
Sub-surface investigations and geotechnical reports; bearing capacity of soils, theory and design of shallow and deep foundations; settlement analysis; lateral earth pressure and cantilever retaining walls; slope stability analysis. Computer applications. Emphasis on design throughout. Written communication skills are required. Prerequisite: CE 322. Offered in the Spring semester. *One semester; three credits*

CE 345. PLANNING AND SCHEDULING
Various methods of scheduling will be presented including CPM, PPM, PERT, and LSM. Discussion of issues relating to activity duration, contractual considerations, time cost trade-off, schedule monitoring/updating and integration of schedule and cost. Computer applications. Offered as needed. *One semester; three credits*

CE 350. CONSTRUCTION ESTIMATING AND COST CONTROL
Methods of making quantity surveys, estimating construction cost, construction scheduling and methods of cost control. The study of labor relations as they affect construction cost, scheduling and job control. Offered as needed. *One semester; three credits*

CE 400. THE COMPLEAT ENGINEER
This course deals with a wide array of issues facing the practicing engineer. Topics include: engineering ethics; regulatory issues; health, safety, and environmental factors; reliability, maintainability, produciblity, sustainability; and the context of engineering in the enterprise, in society, and as part of the global economy. (Same as CH E 400, ECE 400, and ME 400) Prerequisites: Permission of the department and MATH 232. *One semester; three credits*

CE 401. ADVANCED ENVIRONMENTAL ENGINEERING ANALYSIS AND DESIGN
Advanced concepts in environmental engineering. Industrial waste treatment, toxic material disposal, physical, biological, and chemical treatment schemes. Oral and written communication skills are required. Prerequisite: CE 329. Offered as needed. *One semester; three credits*

CE 402. OPEN CHANNEL HYDRAULICS
Study of open channel fluid conveyance systems. Special emphasis on the design and analysis of natural and artificial channels. Characteristics of flow systems. Prerequisite: CE 299 or equivalent. Offered as needed. *One semester; three credits*

CE 404. SOLID AND HAZARDOUS WASTE MANAGEMENT
Introduction to solid and hazardous waste management, legislation and social impact. Engineering design, planning and analysis associated with waste sources, handling, storage, collection, transport, and disposal of solid and hazardous wastes. Written communication skills are required. Offered as needed. Prerequisite: CE 329. *One semester; three credits*

CE 409. SPECIAL TOPICS IN STRUCTURAL ENGINEERING
Topics vary depending on senior projects. Prerequisites: CE 310 or 311. *One semester; three credits*

CE 410. INTRODUCTION TO BRIDGE ENGINEERING
Design, rehabilitation, and maintenance of modern highway bridges. AASHTO LRFD specifications. Offered as needed. *One semester; three credits*

CE 413 INTRODUCTION TO WIND AND EARTHQUAKE ENGINEERING
Analysis and design of buildings under wind and earthquake. Retrofit and repair. Offered as needed. Prerequisite: CE 212. *One semester; three credits*

CE 418. ADVANCED DESIGN OF FOUNDATIONS
Counterfort retaining walls; construction of earth dams; seepage; sheet piles; foundations on swelling soils; soil improvement. Oral and written communication skills are required. Offered as needed. Prerequisite: CE 340. *One semester; three credits*

CE 421. DESIGN OF PAVEMENTS
Factors affecting design of pavements: loads, climate, and environment; stresses in flexible and rigid pavements; properties of pavement components; materials characterization; soil stabilization; theory and design of flexible and rigid pavements for highways and airports; pavement evaluation and rehabilitation. Oral and written communication skills are required. Prerequisites: CE 251 and 322. Offered as needed. *One semester; three credits*

CE 425. HEAVY CONSTRUCTION EQUIPMENT AND METHODS
Study of the equipment, methods and materials used in "horizontal" construction. Methods of estimating the production and costs of heavy construction equipment will be presented. Offered as needed. *One semester; three credits*

CE 428. CONSTRUCTION MANAGEMENT
Study of the principles and professional management practices applied to construction projects to ensure the successful execution of capital projects for owners. Students will learn how to plan, schedule, estimate costs and select the proper equipment and materials to complete a construction project to specifications on time and within budget. Prerequisite: Junior or senior standing. Offered as needed. *One semester; three credits*

CE 429. ENVIRONMENTAL ENGINEERING II
Study of environmental health, environmental biology, wastewater generation, wastewater characteristics, wastewater treatment and processes, air pollution, and hazardous waste treatment. Oral and written communication skills are required. Prerequisite: CE 329. Offered in the Fall semester. *One semester; two credits.*

CE 431. SENIOR DESIGN PROJECT I
Interdisciplinary team design projects are initiated by students (or suggested by the faculty) and approved by the faculty. Investigated and developed

throughout the senior year by the students. Reports are presented in both oral and written form. Practitioner involvement is required in each project. Professional registration, responsibility, and ethics. Also includes considerations of safety, reliability, aesthetics, social and environmental impact. Taken in sequence during the last two semesters before graduation. Practitioner involvement is required in each project. Review of Civil Engineering courses for the Fundamentals of Engineering examination. These courses address various management, business, public policy, leadership, and professional issues. Prerequisite: CE 331. Taken in sequence during the last two semesters before graduation. *One semester; two credits*

CE 432. SENIOR DESIGN PROJECT II
A continuation of CE 431. Prerequisite: CE 431. *One semester; two credits*

CE 435. AIR POLLUTION CONTROL
Causes and consequences of air pollution, regulatory concerns, and methods for controlling and mediating the consequences of air contaminants. Prerequisites: CHEM 113 or 115 and junior or senior standing or permission from the instructor. Offered in the Spring semester. (Same as CH E 410). *One semester, three credits*

CE 442. ADVANCED DESIGN OF REINFORCED CONCRETE STRUCTURES
Advanced topics in reinforced concrete design such as: strip and spread footings, mat foundations, slabs on grade, retaining walls, deep foundation systems, slender columns, and two-way slabs. Computer analysis and design. Offered as needed. Prerequisites: CE 311 and 340. *One semester; three credits*

CE 444. ADVANCED STRUCTURAL ENGINEERING
Advanced topics in structural analysis and design such as: load analysis from design codes, design of steel beam-columns, indeterminate analysis methods (slope-deflection and moment distribution for beams and frames), introduction to finite element analysis (springs, bars, trusses, beams, and frames), introduction to earthquake engineering. Computer analysis and design. Offered as needed. Prerequisite: CE 310. *One semester; three credits*

CE 445. ADVANCED GEOTECHNICAL ENGINEERING
Advanced topics in geotechnical analysis and design such as: advanced topics in settlement analysis (elastic, primary and secondary consolidation, Schmertmann Method, Casagrande Method), advanced topics in shear strength evaluation (pole method, stress paths, laboratory testing), advanced topics in slope stability (log-spiral, various methods of slices), introduction to geotechnical earthquake engineering (earthquake magnitude, earthquake motion, liquefaction). Computer analysis and design. Offered as needed. Prerequisite: CE 322/L. *One semester; three credits*

CE 489. FUNDAMENTALS OF CIVIL ENGINEERING EXAM
All civil engineering students must enroll in this course as well as register, take and pass either the FE exam or mock FE exam before they can earn their B.S. in Civil Engineering from CBU. Pass/Fail grading. *One semester; Zero credit*

CE 490-494. SPECIAL TOPICS
Elective courses of special or current interest. Taught by faculty with special or unique qualifications. Taken by Juniors and Seniors. Prerequisites: Announced with course offerings; junior or senior standing. *One semester; one to four credits*

CE 495. INTERNSHIP IN CIVIL AND/OR ENVIRONMENTAL ENGINEERING (Formerly CE 499)
Students majoring in civil/environmental engineering may be placed in the engineering offices of contracted firms to receive job training under the supervision of qualified engineers. Tasks completed as part of the internship must be approved by an authorized work supervisor. Credit is granted upon faculty approval of periodic review reports, a final report, and a final oral presentation to the faculty. Minimum time 200 hours. Prerequisites: Junior or senior standing and permission of department. *One semester; three credits*

CE 496-498. TOPICS IN CIVIL ENGINEERING
Directed work on a special problem. Problems of an inter-disciplinary nature are encouraged. A written report is required. A contract outlining the scope of the project is required prior to the initiation of work. Prerequisites: Senior standing and a duly executed contract. *One semester; one, two, and three credits respectively*

■ COMPUTER SCIENCE COURSES

The requirements for the degree are found on Page 95 and 96. Requirements for the dual degree in Computer Science and Mathematics are found on Page 97. Requirements for the dual degree in Computer Science and Electrical Engineering are found on Page 78.

CS 112 COMPUTERS IN PROBLEM SOLVING
The course is an introduction to problem solving and programming. It emphasizes problem decomposition, control structures, basic data structures, implementation of algorithms and an introduction to object oriented programming. It uses the Python programming language for programming exercises and projects. Prerequisite: Math 103 or a minimum Math ACT of 23. Corequisite: CS 112L. Offered in the Fall semester. *One semester; three credits*

CS 112L. COMPUTERS IN PROBLEM SOLVING LAB
Lab to accompany CS 112. Corequisite CS 112. *One semester; one credit*

CS 172. FUNDAMENTALS OF COMPUTER SCIENCE
This course concerns topics in algorithms and program development using object-oriented programming concepts. Topics include methods, arrays, classes, objects, encapsulation, inheritance, composition, abstraction and graphical user interfaces. It uses an object-oriented language for programming exercises and projects. Prerequisites: CS 112 or ECE 112. Corequisite: CS 172L. *One semester; three credits*

CS 172L. FUNDAMENTALS OF COMPUTER SCIENCE LAB

Lab to accompany CS 172. Prerequisites: CS 112 or ECE 112. Corequisite: CS 172. *One semester; one credit*

CS 234. DATA STRUCTURES
The course teaches the student important data structures, such as lists, stacks, queues, trees and tables. The student designs and implements correct readable and efficient software systems with interacting components. Prerequisite: CS 172. Corequisite: CS 234L. Offered in the Fall semester. *One semester; three credits*

CS 234L. DATA STRUCTURES LAB
Lab to accompany CS 234. Prerequisite: CS 172. Corequisite: CS 234. *One semester; one credit*

CS 240. INTRODUCTION TO BIOINFORMATICS (Same as BIOL 240)
The course considers introductory topics in bioinformatics. Topics include the structure of DNA, data searches, pairwise alignments, substitution patterns, protein structure prediction and modeling, proteomics and the use of web-based tools for topics in bioinformatics. (Same as BIOL 240). Prerequisite: CS 172 or BIOL 111 and 111L. Offered in odd-numbered Spring semesters. *One semester; three credits*

CS 301. C PROGRAMMING
The course discusses problem solving and the design of algorithms and their implementation in the C programming language. It considers the fundamentals of procedural programming with applications in business, engineering and science. Topics include variables, expressions and statements, console input/output, modularization and functions, arrays, pointers and strings, data structures, and file input/output. Its laboratories require designing and implementing applications. Prerequisite: CS 234. *One semester; three credits*

CS 360. OBJECT ORIENTED DESIGN
The course uses object oriented analysis and design techniques and tools to develop and implement solutions to problems in business, engineering and science. Prerequisite: CS 234. Offered in the Spring semester *One semester; three credits*

CS 370. OPERATING SYSTEMS
This course presents the topics that govern the behavior of operating systems. Topics include processor scheduling, memory management, input, output, file storage allocation, protection and security. (Same as ECE 370). Prerequisite: CS 234. Same as ECE 370. Offered in the Spring semester. *One semester; three credits*.

CS 400. INTERNSHIP IN COMPUTER SCIENCE
Computer science majors receive on-the-job training in the offices of cooperating firms. To receive credit, the student must submit periodic reports and a detailed final report of the work done. The authorized supervisor at the firm must verify these reports. Prerequisites: Junior standing and approval of the Computer Science faculty. Pass/Fail grading. *One semester; one to three credits*

CS 440. ALGORITHMS
The course studies standard methods and examples in the design and analysis of algorithms. Topics include some basic paradigms in algorithm design and analysis of the efficiency and optimality of representative algorithms selected from some of graph, pattern matching, numerical, randomized and approximation algorithms. Offered in the Spring semester as needed. Prerequisites: CS 234 and MATH 141. *One semester; three credits*

CS 460-469. TOPICS IN COMPUTER SCIENCE
Courses are designed each semester to meet the current needs of the students and to express the particular interests of the instructor. Prerequisite: CS 360 or ECE 360. Offered in the Spring semester of odd-numbered years. *One semester; one to three credits*

CS 471. DATABASE DESIGN
The course stresses the design of databases and their implementation using a relational database management system. Topics include entity-relationship and relational data models and database design. Abstract query languages (relational algebra) and SQL (language for creating, querying, and modifying relational and object-relational databases). Views, integrity, constraints, triggers, transactions and security. Data warehouses, data mining, temporal databases, XML. Prerequisite: Junior or Senior standing. Offered in the Fall semester. (Same as ECE 471). *One semester; three credits*

CS 481. COMPUTER SCIENCE PROJECT I
The course requires that the student design, develop and implement a major project that solves a real problem in either business or engineering in the field of computer science. The project requires the presentation of oral and written reports. Prerequisite: senior standing. Offered in the Fall semester. *One semester; one credit*

CS 482. COMPUTER SCIENCE PROJECT II
The course is a continuation of CS 481. The student completes the project begun in CS 481 and must pass a departmental assessment test. The student may have to take an external assessment examination approved by the department. Prerequisite or corequisite: CS 481. Offered in the Spring semester. *One semester; three credits*

■ CRIMINAL JUSTICE COURSES

CJ 150. PUBLIC ADMINISTRATION
A history and overview of the field of Public Administration as a profession and an academic discipline. It is designed to give the student a solid and in-depth understanding of past, present, and future problems of administrators in managing government organizations in the political environment. Interrelationships between chief executives, legislators, the judiciary, interest groups, and bureaucracies are considered. *One semester; three credits*

CJ 200. CRIMINAL JUSTICE
An analysis of the structure, functions, and decision process of social agencies that deal with the management and control of crime and criminal

offenders. Includes study of the nature, causes, and role of criminal behavior in society. *One semester; three credits*

CJ 205. CRIMINOLOGY
This course will offer an introduction to theoretical explanations for the causes of crime. We will take a psychosocial approach to understanding crime causation and prediction through the use of data and specific theories. *One semester; three credits*

CJ 210. CRIMINAL LAW
Criminal Law is an examination of some of the substantive aspects of criminal law, including principles of criminal liability, specific analysis of elements of crimes, and substantive defenses to crimes. Throughout the course, there is an ongoing examination of Constitutional safeguards that control the substantive and procedural aspects in the criminal justice system. Course instruction consists of lecture, use of hypothetical case studies and reading and analysis of selected laws and court decisions. *One semester; three credits*

CJ 215. CORRECTIONS
This course will offer a comprehensive look at the components that make up the corrections system in the United States. The history and future of the corrections system will be analyzed through an examination of the political and social climate in our country. *One semester; three credits*

CJ 220. POLICING
This course is an in-depth study of law enforcement in the United States, the largest and most visible part of the criminal justice system. Students will focus on the differences and functions of federal, state, local, county and private policing in this country. *One semester; three credits*

CJ 225. JUVENILE JUSTICE
The focus of this course is to examine the juvenile delinquency phenomenon through the historical context of delinquency, the changing legal environment (including major court decisions which have transformed the juvenile system), exploring the theories of the causes of juvenile delinquency, and discussion of juvenile delinquency prevention and control programs. *One semester; three credits*

CJ 245. CHILD SEXUAL ABUSE
This class will acquaint the student with the various players involved in the crime of child sexual abuse, dispel many of the popular myths associated with this crime and introduce the physical and behavioral indicators of abuse. The most recent research on forensic interviewing and repressed memory will be reviewed. Guest speakers will include prosecutors and police investigators with the Child Protection Investigation Team. *One semester; three credits*

CJ 250. SERIAL KILLERS
This class will present a brief history of the more famous serial killers in both the United States and abroad and the increasing phenomenon of serial killings will be discussed. Students will be introduced to the science of profiling and other techniques used in the investigation of serial killings and psychological profiles of two contemporary serial killers will be compared. *One semester; three credits*

CJ 280-287. SELECTED TOPICS IN CRIMINAL JUSTICE
Directed work on a special topic or project in criminal justice. *One semester; one to three credits*

CJ 290-299. HONORS SPECIAL TOPICS.
Special topics in criminal justice open to members of the Honors Program or by permission of instructor and Honors Director. *One semester; one to four credits*

CJ 315. CROSS-CULTURAL CRIMINAL JUSTICE
Crime, justice, and retribution vary tremendously around the globe. Some cultures have meetings with parties rather than courts, and, in some, suspects merely vanish never to be seen again. This course will look at varieties of concepts of crime, wrongdoing, punishment (or lack of), and systems for dealing with these in other parts of the world, and compare some of these systems to the criminal justice system and its ideology in the United States. *One semester; three credits*

CJ 362. SOCIOLOGY OF ADDICTION
A social scientific approach to the nature, role, and effects of chemical and psychological addiction in society. Explores a variety of addiction issues as they relate to the social institutions of family, education, politics, and medicine. Prerequisite: SOC 101 with a grade of "C" or higher. (Same as SOC 362.) *One semester; three credits*

CJ 365. DEVIANT BEHAVIOR
An exploration of theoretical perspectives on deviance, problems in defining deviance and specific categories of deviance. Deviant behaviors discussed may include but are not limited to prostitution, gambling, transgenderedness, pornography, mental illness, sexualities, and physical disability. (Same as SOC 365). Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; three credits*

CJ 370. APPLICATIONS OF MEMORY
An examination of the application of memory in such diverse areas as courtroom testimony (e.g., factors influencing witnesses, hypnosis, repressed memory, false memory), memory for everyday events, memory aids, and advertising. The relevant theories and research in each area are examined. (Same as PSYC 370.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

CJ 375. FRAUD EXAMINATION
This course gives a comprehensive view of the growing significance of fraud in today's business world. This course will examine the nature of fraud, the types of fraud, recent developments in fraud, and the victims of fraud. Students will learn to perform an analysis of fraud using specialized software. (Same as ACCT 385.) *One semester; three credits*

CJ 380-387. SELECTED TOPICS IN CRIMINAL JUSTICE

Directed work on a special topic or project in criminal justice. *One semester; one to three credits*

CJ 390-399. HONORS SPECIAL TOPICS IN CRIMINAL JUSTICE
Special topics in criminal justice open to members of the Honors Program or by permission of the instructor and Honors Director. *One semester; three credits*

CJ 455. CORRECTIONAL COUNSELING
This course is designed to present some of the counseling and treatment techniques that are available to assist correctional workers toward assisting the offender to establish a satisfying lifestyle that conforms to the regulations as well as protecting the community from harmful activity by offenders placed under the correctional workers' supervision. (Same as PSYC 455.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

CJ 480-487. ADVANCED TOPICS IN CRIMINAL JUSTICE
Directed work on a special topic or project in criminal justice. *One semester; one to three credits*

■ ECONOMICS COURSES

ECON 214. PRINCIPLES OF MICROECONOMICS
Attention is focused on the micro concept of economic analysis, and primary attention given to the theory of the firm and partial equilibrium problems arising within any enterprise economy. Attention is also given to government regulation of business, the theory of income distribution as it pertains to the determination of wages, rents and profits, and international trade. *One semester; three credits*

ECON 215. PRINCIPLES OF MACROECONOMICS
This course focuses attention on the aggregate or macroeconomic relationships and gives attention to the central problems of economic organization, the functioning of the price system, the economic role of government, the determination of national income, employment, the rate of inflation, and fiscal and monetary policy. Further, the student is introduced to the interactions between aggregate markets such as the product market, the factor/labor market, and the money market. Prerequisite: ECON 214. *One semester; three credits*

ECON 303. MONEY AND BANKING
A general survey of credit and credit instruments, activities and policies of financial institutions such as commercial and savings banks, the Federal Reserve System, and investment banks. Study of the place of money in modern economic life, including its relation to prices, employment, and business activity. Prerequisites: ECON 214 and 215. *One semester; three credits.*

ECON 323. THE ECONOMICS OF HEALTH AND HEALTHCARE
The course uses the tools of economic thinking and economic analysis to examine the current state of health and healthcare in the United States. Economic concepts to be discussed include scarcity, rationing, the roles of the free market and government, sensitivity to price, determinants of the demand for, and the supply of, healthcare, and production possibilities. These and other tools will be used to examine such topics as changing demographics, alternative production and delivery systems, health insurance, regulation of the health sector, and the legal environment. Prerequisite: ECON 214 or consent of instructor. Offered as needed. *One semester; three credits*

ECON 325. ENVIRONMENTAL ECONOMICS
This course will examine the emerging field of environmental economics - that is, the connections between economics and the environment. Topics will include the sources of environmental problems, the concept of natural capital, sustainable development, and how to balance environmental policy, economic growth and the constraints of a market based economic system. Offered as needed. *One semester; three credits*

ECON 343. INTERMEDIATE MACROECONOMICS
The theory of national income and employment, analysis of aggregate demand, the general degree of utilization of productive resources and the general level of prices as well as related questions of policy. Prerequisites: ECON 214 and 215. Offered as needed. *One semester; three credits*

ECON 344. INTERMEDIATE MICROECONOMICS
A study of basic economic theory as it pertains to the individual economic units of a society, a study of the tools which are used in analyzing these units. Price determination, market analysis, and resource allocation are stressed. Prerequisites: ECON 214 and 215. Offered as needed. *One semester; three credits*

ECON 346. CURRENT ECONOMIC TOPICS
Analysis and discussion of current issues from an economic perspective. Possible subject areas include the environment, health care, comparative economic systems, welfare, growth and development, crime, religion and economics, and other current topics. The course may examine several current issues or may focus on just one or two. Offered as needed. *One semester; three credits*

ECON 347. SUSTAINABILITY, CULTURE, AND ECONOMICS
This course will examine the relationship between these three topics by choosing one area of the world, such as Asia, Europe, and Latin America, and selecting specific countries in one of these areas for a micro and macro comparison. This course will include optional travel to one of these areas during fall, winter, spring or summer break. Offered as needed. *One semester; three credits*

ECON 400. ECONOMICS INTERNSHIP
Under the supervision of a faculty member from the appropriate department, students in the School of Business, after receiving the approval of the faculty, are placed in the offices of cooperating firms to receive on-the-job training under the supervision of members of the firm. Credit is granted upon acceptance of periodic reports and a final summary report of work done verified by the authorized supervisor and the instructor. Offered in the Fall and Spring. Pass/Fail grading. *One semester; three credits*

ECON 420. MANAGERIAL ECONOMICS

This course focuses on the application of economics theory to the problems and decisions faced by business managers in a market-oriented economy. The economic aspects of business departments such as marketing, finance, accounting, and law are explored and integrated into the applicable economic theories and models. Thus, in a very general sense, this course attempts to provide the student with a method of looking at the world of microeconomics through the eyes of an economist and from the perspective of a business person. Prerequisites: ECON 214 and 215. *One semester; three credits*

ECON 422. INTERNATIONAL TRADE AND ECONOMICS
This course is designed to provide the student with a basic understanding of the principles of international trade, marketing, and finance. Specific topics which will be introduced include but are not limited to: tariffs, subsidies, import restrictions, foreign exchange, methods, agencies, and middlemen and business practices which influence trade relations. In addition, students will study the basics of the field of International Business including national differences in political economy and culture, global trade and investments, foreign direct investments, regional economic integration, foreign exchange markets, and strategic alliances. Prerequisites: ECON 214 and 215. Offered in the Fall semester. *One semester; three credits*

ECON 450. ECONOMICS POLICY
Application of economic theory and methodology to the study of decision making in both the political arena and various government agencies. This will include the study of politics using the economic ways of thinking, various theories of justice and approaches to public policy, analysis of representative/democratic government, study of decision making inside bureaucracies, and development of the process of public policy formulation and implementation. Among the policy areas covered will be an analysis of policy programs in the areas of education, welfare, and health care. Prerequisites: ECON 214. Offered as needed. *One semester; three credits*

ECON 460-466. SPECIAL TOPICS IN ECONOMICS
The reading and discussion of significant economic literature. The course is designed to improve the student's approach to modern economic problem solving and to stimulate economic thinking and the analysis of modern business problems. Prerequisites: ECON 214 and 215. Offered as needed. *One semester: three credits*

■ EDUCATION COURSES

EDUC 200. INTRODUCTION TO UNDERGRADUATE TEACHER EDUCATION
This zero credit course will introduce undergraduate students to the complexities involved in graduate studies including proper APA style, department expectations, licensure requirements, among other topics. This course must be taken in the junior year. *One semester; zero credits.*

EDUC 211. INTRODUCTION TO EDUCATION
Introduction to the profession of teaching and development of a personal philosophy of teaching and learning; examination of American education and contemporary schools. Orients prospective teachers to licensure requirements and the Teacher Education Program. Field experience is a required part of the course. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 303. PROFESSIONAL FOUNDATIONS I
Students acquire background in the professional foundations of education, emphasizing perspectives on the profession of teaching, the teacher as a leader, the history of schooling, philosophies of curriculum, social and cultural influences on schools and classrooms, the diversity of student populations, and the politics, economics, and law of education. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits.*

EDUC 304. PROFESSIONAL FOUNDATIONS II
Students acquire background and skill in curriculum design and instructional strategies and methods, instructional planning and guidance, analysis of patterns of classroom dynamics, classroom assessment, and classroom inquiry in conjunction with perspectives on school reform, teacher leadership, and lifelong professional development. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits.*

EDUC 331. SURVEY OF EXCEPTIONAL LEARNERS
This course surveys and assesses the physical, psychological, social, and learning characteristics and needs of atypical learners with emphasis on skills and techniques for identifying and teaching such learners in a heterogeneous classroom. Requires interviews with and observations of practitioners in special education and a practicum experience of at least ten hours. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 332. PORTFOLIO AND PRACTICUM - TVAAS
This one hour course will explore virtual teaching scenarios, assessments, and reflections of best practices as outlined by the state department of education. Must be taken any semester prior to the final semester; recommended for a semester when not taking EDUC 350 or EDUC 420. Prerequisite: Must be TEP admitted - see Department of Education. There Is a $100.00 LiveText fee and a $300.00 EdTPA fee attached to this course. *One credit.*

EDUC 350. PORTFOLIO AND PRACTICUM I
Required for elementary licensure. Candidates recently admitted to the Teacher Education Program complete 30 clock-hours of school-based experience and assessments, including initial development of technology driven portfolio. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; one credit.*

EDUC 402. PRACTICUM IN EDUCATION
Required for students choosing middle or secondary teaching majors linked with the MAT route to middle or secondary licensure. Also required for students in K-6 Liberal Studies, Pre-licensure program, Pre-K - 3 Early Childhood program, and Special Education Modified K-12 program. Weekly one-hour seminar, readings, and 30 hours of field experience. *One semester; three credits*

EDUC 405. CURRICULUM AND METHODS IN LANGUAGE ARTS, Pre-K-5
Students examine the theory and practice of transforming the methods of inquiry and the knowledge base of the language arts into language curriculum, emphasizing content and performance standards, planning for instruction, teaching methods and materials, including the integration of technology into the elementary school language arts curriculum. Specialized instruction in teaching grades K-3 to read is an integral part of this course. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 406. CURRICULUM AND METHODS IN LANGUAGE ARTS, 6-8
Required for elementary licensure. Theory and practice in reading and instruction and in the knowledge and skills of language literacy, emphasizing content and performance standards in the language arts, planning for instruction, teaching methods, and materials, including the integration of technology into the 4-8 language arts curriculum. Field experience is a required part of this course/ Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 407. CLASSROOM MANAGEMENT AND METHODS
Students develop and practice competence in various classroom management methods, including unit and lesson planning, interpersonal and group communication skills, and principles of effective classroom organization. Course topics include analyzing, comparing, evaluating, and applying various theories and methods of classroom motivation, management, and discipline. Ten hours of field experience required. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 411. CURRICULUM AND METHODS IN SCIENCE, Pre-K-8
Required for elementary licensure. Theory and practice in transforming the methods of inquiry and the knowledge base of the sciences into the elementary science curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and materials, including the integration of technology into the elementary science curriculum. Field experience is a required part of this course. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 412. CURRICULUM AND METHODS IN SOCIAL STUDIES, Pre-K-8
Required for elementary licensure. Theory and practice in transforming the methods of inquiry and the knowledge base of the social sciences into the elementary social studies curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and materials, including the integration of technology into the elementary social studies curriculum. Field experience is a required part of this course. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 420. PORTFOLIO AND PRACTICUM II
Required for elementary licensure. Candidates at a mid-point in the Teacher Education Program complete 30 clock-hours of school-based experience and assessments, including further development of technology-driven portfolio, appropriate Praxis II tests, and application for student teaching experience. Prerequisite: Must be TEP admitted - see Department of Education. Must take the semester prior to student teaching. *One semester; one credit*

EDUC 422. CURRICULUM AND METHODS IN MATHEMATICS, Pre-K-8
Required for elementary licensure. Theory and practice in transforming the methods of reasoning and the knowledge base of mathematics into the elementary math curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and materials, including the integration of technology into the elementary math curriculum. Field experience is a required part of this course. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 424. CREATIVE EXPRESSION IN ELEMENTARY SCHOOLS, Pre-K-5
Required for elementary licensure. Integration of concepts of music, visual art, drama, and dance into the elementary classroom. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; one credit*

EDUC 427. MIDDLE SCHOOL STRATEGIES
Students review the elements of high performing middle schools and the characteristics of the young adolescent. Specific components include interdisciplinary teaming, flexible block-of-time scheduling, quality and authentic work designed to address needs of the adolescent, alternative assessment, teacher-based guidance, exploratory experiences, classroom/team management, and current middle school issues. Emphasis is given to the developing and changing roles and relationships of middle school teacher leaders. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credits*

EDUC 428. YOUNG ADULT LITERATURE
A study of literature written for preadolescent children and adolescents designed for those who will teach middle school and high school English and language arts. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUC 429. LITERACY ACROSS THE CURRICULUM
Students planning to teach in the middle and secondary school setting learn about the importance of teaching reading within the content areas and about using reading and writing strategies to strengthen student literacy and learning. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credit*

EDUC 430. CURRICULUM AND ASSESSMENT IN SECONDARY SCHOOLS, 6-12
Students planning to teach in the secondary school setting engage in curriculum design and development in their content areas and plan assessment strategies that encourage higher dimensions of learning and understanding in high school students. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credits*.

EDUC 431. STUDENT TEACHING—ELEMENTARY LEVEL I
Directed student teaching in the early childhood grades is under the supervision of a selected cooperating teacher and a selected University supervisor. There is a $150.00 fee attached to this course. Prerequisites: Permission of the department chair and admission to Teacher Education Program. Corequisites: EDUC 432 and 474. No other courses may be taken concurrently except corequisites. Pass/Fail grading. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; six credits*.

EDUC 432. STUDENT TEACHING—ELEMENTARY LEVEL II
Directed student teaching in the middle grades is under the supervision of a selected cooperating teacher and a selected University supervisor. There is a $150.00 fee attached to this course. Prerequisites: Permission of the department chair and admission to Teacher Education Program. Corequisites: EDUC 431 and 474. No other courses may be taken concurrently except corequisites. Pass/Fail grading. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; six credits*.

EDUC 473. TEACHING PRACTICUM III
Culminating semester long experience of supervised teaching for students in the Early Childhood Pre-K - 3 and Special Education Modified K-12 degree program. During Teaching Practicum III, students are expected to improve their instructional methods and classroom management, to become more reflective and analytical about their own professional practice, and to utilize clinical methods, assessment strategies, and classroom inquiry techniques to investigate their impact on student learning. Students continue to compile their portfolio and are required to take EDUC 474, Professional Seminar and Portfolio III, with EDUC 473. There is a $150.00 fee attached to this course. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; four credits*

EDUC 474. PROFESSIONAL SEMINAR AND PORTFOLIO III
Seminar accompanies EDUC 473 and supports students in their experience of supervised teaching in the Early Childhood Pre-K - 3 and Special Education Modified (K-12) programs. During the seminar, students complete the final components of required assessments for their licensure program, including their portfolio. Prerequisite: Must be TEP admitted - see Department of Education. Corequisites: EDUC 431 and 432. *One semester; one credit*

EDUC 490-498. PROBLEMS IN EDUCATION
Directed work in a special topic in education approved by the department up to 3 credit hours. Prerequisite: Approval of Director of Teacher Education. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; one to three credits*

■ EDUCATION - CURRICULUM AND INSTRUCTION

EDCI 418. DIFFERENTIATED INSTRUCTION MIDDLE/SECONDARY SCHOOLS
Students identify, analyze, compare, and justify varied approaches to creating viable learning environments that successfully serve the needs of diverse learner populations. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; two credits*

EDCI 433. TEACHING MATHEMATICS, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary mathematics. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credits*

EDCI 434. TEACHING SCIENCE, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary science. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credits*

EDCI 435. TEACHING ENGLISH/LANGUAGE ARTS, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary English. Prerequisite: EDUC 429 and student must be TEP admitted. See Department of Education. *One semester; three credits*

EDCI 436. TEACHING HISTORY/SOCIAL STUDIES, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary history. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credits*

EDCI 437. TEACHING FOREIGN LANGUAGE, K-12
Required curriculum and instructional methods course for all students completing a licensure program in a foreign language. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credits*

EDCI 438. TEACHING ART K-12
Required curriculum and instructional methods course for all students completing a licensure program in visual arts. Prerequisite: Must be TEP admitted. See Department of Education. *One semester; three credits*

■ EDUCATION - EARLY CHILDHOOD

ECDV 430. CHARACTERISTICS OF EARLY CHILDHOOD EDUCATION
This course explores the nature and development of children Pre-K-third grade. Students explore models and theories of early childhood development and research based approaches to design developmentally appropriate strategies for early childhood students. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

ECDV 431. METHODS OF TEACHING EARLY CHILDHOOD EDUCATION
Students examine theory and practice of methods and inquiry as they pertain to the early childhood classroom. Emphasis is placed on transforming

these practices into the early childhood curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and the integration of technology across the curriculum. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EDUCATION - SPECIAL

EXCE 431. INCLUSION AND THE GENERAL EDUCATION SETTING
Candidates in this course will develop practical knowledge on how to create successful inclusion environments for students with disabilities. While this course provides a broad perspective of inclusive practices, there will be a particular focus on Science and Social Studies as related to projects and activities. Candidates will gain knowledge on how to plan and implement inclusive strategies, as well as adapt the general content to meet the needs of special learners. This course includes a 5-hour observation requirement to be completed in a co-teaching setting. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EXCE 433. DIRECT INSTRUCTION FOR EXCEPTIONAL LEARNERS
Candidates will acquire background and understanding of reading, math, and writing challenges in elementary students who have mild or moderate disabilities. This course will help candidates acquire a set of skills that will enable them to determine what core academic concepts are necessary for each student. Candidates will also learn effective instructional methods for teaching these basic skills. Candidates will gain their knowledge through course readings, application assignments, observations/field experiences, lectures, demonstrations, and group discussions. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EXCE 434. MODELS OF INSTRUCTION FOR EXCEPTIONAL LEARNERS PRE-K-8
Candidates will acquire background and understanding of instructional strategies related to teaching students with mild or moderate disabilities in the upper grades. Students will use generalizations about classroom practice to develop key principles for use of the instructional strategies. Emphasis will be placed on the integrations of research findings and theories of instructional models that apply to teaching Pre-K-8 students who need to be involved in higher level thinking. This course will prepare candidates to plan and implement appropriate lessons, assessments, activities, assignments, teaching strategies, and develop collaborative relationships that actively engage students in their own learning, thus creating lifelong learners. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EXCE 435. MODELS OF INSTRUCTION FOR EXCEPTIONAL LEARNERS 6-12
Candidates will acquire background and understanding of instructional strategies related to teaching students with mild or moderate disabilities in the upper grades. Students will use generalizations about classroom practice to develop key principles for use of the instructional strategies. Emphasis will be placed on the integrations of research findings and theories of instructional models that apply to teaching middle and high school students who need to be involved in higher level thinking. This course will prepare candidates to plan and implement appropriate lessons, assessments, activities, assignments, teaching strategies, and develop collaborative relationships that actively engage students in their own learning, thus creating lifelong learners. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EXCE 438. USING APPLIED BEHAVIOR ANALYSIS TO CREATE SUCCESSFUL LEARNING ENVIRONMENTS
Candidates will learn the principles of behavior analysis and how to apply them to managing classroom behavior in the following ways: selecting and writing behavioral goals and objectives, collecting data on the seven dimensions of behavior, applying procedures for reducing maladaptive behavior and increasing appropriate behavior, teaching useful target skills, and understanding the functions of behavior in order to complete a functional behavior assessment and behavior intervention plan. Candidates will also learn positive behavior support strategies as they relate to class-wide and school-wide behavior intervention programs. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

EXCE 440. ASSESSMENT OF EXCEPTIONAL LEARNERS
Candidates will become familiar with formal and informal assessment strategies used in the identification and service of students. This course provides in-depth information on standardized testing and hands-on learning related to criterion-referenced assessments by teachers, psychologists, therapists, and medical professionals. In addition, the field experience component will include administering an informal criterion-referenced test. Prerequisite: EDUC 331 and must be TEP admitted - see Department of Education. *One semester; three credits*

EXCE 451. FAMILY CONSULTATION AND SUPPORT
Candidates will acquire the knowledge to engage, support, and collaborate with the families of students with disabilities.
Candidates will gain an understanding of the impact of identification and diagnosis on families, transitioning students between various school settings, transitioning between post school and adulthood, and collaboration with community to aid in post school opportunities. Candidates will also acquire knowledge in the diversity of students, backgrounds, and the law of education. Prerequisite: Must be TEP admitted - see Department of Education. *One semester; three credits*

ELECTRICAL & COMPUTER ENGINEERING COURSES

Requirements for the degree are found on Pages 76 and 77. Requirements for a dual degree in Electrical Engineering and Computer Science are found on Page 78.

ECE 101. INTRODUCTION TO ENGINEERING PROBLEM SOLVING
Students are provided an overview of engineering and computer science disciplines and careers. Students are introduced to C++, EXCEL, and AutoCad and the application of software to engineering and computer science problems. Students are introduced to a hardware interface by programming the BeagleBone Black microcontroller. Recommended corequisite: MATH 105, 117, (107 and 110), 129, or 131 or permission of the instructor. Offered in the Fall semester. *One semester; three credits*

ECE 112 COMPUTERS IN ENGINEERING PROBLEM SOLVING (Formerly ECE 172)
This course is an Introduction to computers and programming in engineering problem solving. It emphasizes object-oriented programming and the use of modern tools and techniques for software engineering practices. It uses an object-oriented language for programming exercises and projects. Topics include classes, objects, methods, encapsulation, inheritance, abstraction, flow control, basic data structures, sorting and searching algorithms, and file I/O. Prerequisite: ECE 101 with a grade of "C" or higher. Corequisite: ECE 112L. Offered in the Spring semester. *One semester, three credits.*

ECE 112L COMPUTERS IN ENGINEERING PROBLEM SOLVING LAB (Formerly 172L)
Lab to accompany ECE 112 and required by electrical engineering majors in the computer track. Prerequisite: ECE 101 with a grade of "C" or higher. Corequisite: ECE 112. *One semester, one credit.*

ECE 130. INTRODUCTION TO PROGRAMMING USING 3D GRAPHICS
This course is an introduction to object oriented programming using graphics in the creation of 3D movies, games and interactive applications. It studies: Algorithmic thinking and expression (how to read and write in a formal language); Abstraction (how to communicate complex ideas simply, and decompose problems logically); Appreciating elegance (why some solutions are inherently better than others); Object development (classes, objects, methods, parameters, and inheritance); Interactive programs (events and event handling); Core programming concepts (functions, if/else, loops, recursion, lists, arrays, variables). Online course. Offered as needed. *One semester, three credits*

ECE 134. INTRODUCTION TO COMPUTATIONAL THINKING AND PROGRAMMING
This course is an introduction to object oriented programming and computational thinking. Topics include methods, arrays, classes, objects, encapsulation, inheritance, composition, abstraction and graphical user interfaces. It uses the Python language for programming exercises and projects. Online Course. Offered as needed. *One semester; three credits*

ECE 135. COMPUTATIONAL THINKING AND OBJECT ORIENTED PROGRAMMING USING 3D GRAPHICS AND JAVA
This course is the continuation of ECE130, Introduction to Programming Using 3D graphics, and studies the fundamental concepts and ideas of object oriented programming and computational thinking. Topics include methods, arrays, classes, objects, encapsulation, inheritance, composition, abstraction and graphical user interfaces. It uses the Java language for programming exercises and projects. Prerequisite: ECE130. Online Course. Offered as needed. *One semester; three credits*

ECE 150. INTRODUCTION TO MULTIMEDIA DSP
This course is a hands-on Introduction to Digital Signal Processing applied to Multimedia signals: video, images, music and voice. Topics include compression, enhancement and restoration of multimedia signals. Spectrum representation, Sampling and Aliasing, FIR and IIR filters, the Z-Transform, Spectrum analysis. It studies the application of DSP in areas such as biotechnology, medical imaging, economic forecasting, telecommunications, scientific imaging, materials science, weather forecasting, seismic data processing, analysis and control of industrial process, aerospace and defense, remote sensing, computer-generated animation, etc. Recommended corequisite: MATH 105, 117, (107 and 110), 129, or 131 or permission of the instructor. Offered in the Fall semester. *One semester, three credits*

ECE 221. ELECTRIC CIRCUIT ANALYSIS I
Fundamental electrical concepts: charge, voltage, current, power, resistance, capacitance and inductance. Techniques of circuit analysis; Kirchhoff's Laws; nodal and mesh analysis; source transformations. Thevenin's and Norton's theorems; linearity and superposition. Transient analysis; source free R-L, R-C, and R-L-C networks; unit step forcing function; natural and forced responses. Sinusoidal steady-state analysis; the complex forcing function; phasors-complex impedance; complex power; effective values and balanced three-phase systems. Prerequisite: MATH 132. *One semester; three credits*

ECE 222. ELECTRIC CIRCUIT ANALYSIS II
Complex frequency; damped sinusoidal forcing function, Z(s) and Y(s). Frequency response; series and parallel resonance. Magnetically coupled circuits; mutual inductance, linear and ideal transformers. Two-port networks; admittance, impedance and hybrid parameters. Fourier analysis; trigonometric and complex forms; complete response to periodic forcing functions. Fourier transforms; unit impulse function; convolution and circuit response in the time and frequency domain; system transfer functions. Laplace transform techniques; initial and final value theorems and transfer functions. Prerequisite: ECE 221 with a grade of "C" or higher and MATH 231. Offered in the Fall and Spring. *One semester; three credits*

ECE 250. DIGITAL DESIGN
Binary number system and Boolean Algebra. Minimization of logic functions. Implementation of logic circuits. Design of combinational circuits. Sequential devices. Design of synchronous sequential circuits. Introduction to counters, registers, and Register Transfer Language. Design of advanced arithmetic circuits. Memory devices. Processor design and microprogramming. Written reports are required for each of three design projects. Prerequisites: ECE 101 or CS 112 or ME 112 with a grade of "C" or higher. Offered in the Spring semester. *One semester; three credits*

ECE 251. MICROCONTROLLER ARCHITECTURE AND PROGRAMMING
Embedded systems, microcontroller technology, assembly language and C programming, input/output interfacing, data acquisition hardware, interrupts, and timing. Design projects will require writing C programs and interfacing to hardware using the BeagleBone Black microcontroller. Prerequisite: ECE 250 and 221 or permission of the instructor. Corequisite: ECE 251L. Offered in the Spring semester. *One semester; three credits*

ECE 251L. MICROCONTROLLER ARCHITECTURE AND PROGRAMMING LABORATORY
Microprocessor interfacing and programming lab to accompany ECE 251. Prerequisite: ECE 101 and 250. Corequisite ECE 251. *One semester; one credit*

ECE 309. AN INTRODUCTION TO VIDEO GAME DESIGN
Students are introduced to theory behind video game design. The second part of the course will introduce theories of the serious game initiative, which covers education games and interactive simulations. A final project will be the creations of a video game. Prerequisite: ECE 101 with a grade of "C" or higher or permission of the instructor. *One semester; three credits*

ECE 310. DEVELOPING VIDEO GAMES USING A STATE MACHINE I
Students learn the technical and organizational skills needed to develop video games using Unity3D. Unity 3D is a cross-platform game engine that provides encompassing environments to develop feature-rich video games and publish them to desktop, mobile, console and web platforms.

Control of the game engine will be taught with a visual state machine editor and runtime library that allows students to develop video games without programming experience. This will allow students to focus almost entirely on building and testing ideas as quickly as possible without needing to learn a scripting language. Prerequisite: ECE 101 with a grade of "C" or higher. *One semester; three credits*

ECE 314. ENGINEERING ECONOMY
Fundamentals of engineering economy. Cost concepts. Time value of money and equivalence. Economic analysis of alternatives. Depreciation and after-tax analysis. Effects of inflation on economic analysis. Currency exchange rates. Effects of global economic issues on engineering decision making. Prerequisite: junior or senior standing. (Same as CH E 314, CE 314 and ME 314) *One semester; three credits*

ECE 322. LINEAR CONTROL SYSTEMS
Analysis and design of linear control systems. Transfer function, block diagrams and state-variable representation. Feedback concepts and stability analysis in both the frequency and time domain. Design by Root locus, Bode plots, and state variable methods. Emphasis on use of computational software for complex cases. (Same as ME 322 Control Systems Engineering) Prerequisites: MATH 231, ECE 221 and ME 202. Offered in the Spring semester. *One semester; three credits*

ECE 331. ELECTRONICS I
Properties of semiconductors. PN-junction diodes: theory, models, and circuit applications. Operation and characteristics of bipolar junction and field effect transistors. Analysis and design of transistor bias circuits. Low frequency transistor models. Analysis and design of single stage amplifiers. Introduction to the operational amplifier and some of its applications. Introduction to frequency response of amplifiers. Introduction to oscillation. Prerequisites: ECE 222 with a grade of "C" or higher and MATH 132. Corequisite: ECE 331L. Offered in the Fall semester. *One semester; three credits*

ECE 331L. JUNIOR LABORATORY I (Formerly ECE 341)
Experiments paralleling topics from ECE 222 and ECE 331. Most experiments will relate to topics from electronics and stress designing with discrete electronic devices. Introduction to integrated circuits through circuit applications. Students will be required to maintain a lab journal. Prerequisites: ECE 222 with a grade of "C" or higher and MATH 132. Corequisite: ECE 331. Offered in the Fall semester. *One semester; one credit*

ECE 332. ELECTRONICS II
Analysis and design of single and multi-stage transistor circuits. Applications of the operational amplifiers and other integrated circuits. Introduction to feedback amplifiers, digital electronics, and small analog-digital systems. Introduction to power devices and circuits. Prerequisites: ECE 331/L. Corequisite: ECE 332L. Offered in the Spring semester. *One semester; three credits*

ECE 332L. JUNIOR LABORATORY II (Formerly ECE 342)
Design projects paralleling ECE 322 and ECE 332. Some experiments may be assigned by the instructor, but some projects will be proposed by the students and submitted to the instructor for approval prior to the initiation of the work. An engineering notebook is kept by each student. Prerequisite: ECE 331/L. Corequisite: ECE 332. Offered in the Spring semester. *One semester; one credit*

ECE 335. SYSTEMS, SIGNALS AND NOISE
Signal models, systems analysis, random variables and random processes. Analog communication systems, baseband analog signal transmission, and continuous wave modulation techniques for analog transmission. Digital transmission for analog signals, sampling, quantizing, encoding of analog signals for transmission over digital systems. Analysis and design of digital communications systems, information theory, discrete pulse and carrier wave modulation schemes. Prerequisites: ECE 222 and MATH 309 or the successful passing of an ECE departmental exam with applicable mathematical content contained in Math 309. Offered in the Spring semester. *One semester; three credits*

ECE 350. COMPUTER SYSTEMS DESIGN AND ARCHITECTURE
Computer hardware and software organization, processor programming models, data representation, assembly language programming, design of memory systems, input and output device interfacing, programming, multiprocessing, and introduction to computer communication. Programming projects using C, Linux, and the BeagleBone Black microcontroller will be required. Prerequisite ECE 251 or permission of instructor. Offered in the Fall semester. *One semester; three credits.*

ECE 370. OPERATING SYSTEMS
Structure and functions of operating systems; processes and process scheduling, synchronization and mutual exclusion, memory management; auxiliary storage management, resource allocation and deadlock. Programming projects using C, Linux, and the BeagleBone Black microcontroller will be required. (Same as CS 370). Prerequisite ECE 251 or CS 234 or permission of instructor. Offered in the Spring semester. *One semester; three credits*

ECE 400. THE COMPLEAT ENGINEER
This course deals with a wide array of issues facing the practicing engineer. Topics include: engineering ethics; regulatory issues; health, safety, and environmental factors; reliability, maintainability, producibility, sustainability; and the context of engineering in the enterprise, in society, and as part of the global economy (Same as CH E 400, CE 400 and ME 400). Prerequisite: Permission of the department and MATH 232. *One semester; three credits*

ECE 401. ELECTROMECHANICAL ENERGY CONVERSION
Linear and nonlinear magnetic circuits of transformers. Basic principles of electromechanical energy conversion, electromechanical devices and feedback control systems. Derivation and analysis of mathematical models. Rotating AC and DC machinery and their use to control systems. Direct energy conversion systems. Prerequisite: ECE 222. Corequisite: ECE 401L. Offered in the Spring semester. *One semester; three credits*

ECE 401L. ENERGY CONVERSION LABORATORY (Formerly ECE 403)
Laboratory experiments paralleling ECE 401. Single phase transformers. Induction and synchronous machines. Use of variable frequency sources for speed control of induction motors, voltage and speed control circuits of DC machines. Structured, written laboratory reports. Prerequisite: ECE

222 Corequisite: ECE 401. Offered in the Spring semester. *One semester; one credit*

ECE 406. ELECTROMAGNETIC FIELD THEORY
Field and vector operations. Electrostatic and magnetostatic fields. Time varying fields and electrodynamics. Plane waves. Transmission lines, transient and steady state. Prerequisites: ECE 221, MATH 232 and PHYS 251. Offered in the Fall semester. *One semester; three credits*

ECE 409. ELECTRICAL AND COMPUTER ENGINEERING PROJECT I
Design, development and implementation of student selected projects. Projects are sponsored by local and national industry. Includes complete engineering and testing as well as economic analysis. Written reports are required with the final product in engineering report form. A required oral presentation of the project to industry sponsors, faculty and students. Prerequisites: ECE 332, senior standing, and approval of department advisor. Offered in the Fall semester. Pass/Fail grading. *One semester; zero credit*

ECE 410. ELECTRICAL AND COMPUTER ENGINEERING PROJECT II
This is the major design experience for ECE students in which they demonstrate knowledge and skills acquired in earlier course work, technical and non-technical. They must also incorporate relevant engineering standards and realistic constraints in their work. Students select, design, develop and implement solutions to selected projects. Projects are suggested and sponsored by local and national industry, government, and institutions. Written reports are required with the final report in engineering report form. A final oral presentation to sponsors, faculty and friends is required. Prerequisites: ECE 409. senior standing and approval of department advisor. Offered in the Spring semester. *One semester; three credits*

ECE 411. ELECTRICAL AND COMPUTER ENGINEERING PROJECT I (Formerly ECE 409)
Design, development and implementation of student selected projects. Projects are sponsored by local and national industry. Includes complete engineering and testing as well as economic analysis. Written reports are required with the final product in engineering report form. A required oral presentation of the project to industry sponsors, faculty and students. Prerequisites: ECE 332, Senior Standing, and approval of Department advisor. Offered in the Fall semester. Pass/Fail grading. *One semester; two credits*

ECE 412. ELECTRICAL AND COMPUTER ENGINEERING PROJECT II (Formerly ECE 410)
This is the major design experience for ECE students in which they demonstrate knowledge and skills acquired in earlier course work, technical and non-technical. They must also incorporate relevant engineering standards and realistic constraints in their work. Students select, design, develop and implement solutions to selected projects. Projects are suggested and sponsored by local and national industry, government, and institutions. Written reports are required with the final report in engineering report form. A final oral presentation to sponsors, faculty and friends is required. Prerequisites: ECE 411, senior standing and approval of department advisor. Offered in the Spring semester. *One semester; one credit*

ECE 450. COMPUTER NETWORKS
The course emphasizes the relationship between computer systems and network services. HTTP, SMTP, DNS, NNTP and other networking services are introduced and explained. The Unix operating system implementation of these services is studied. Network based programming projects are assigned to verify understanding of protocols and operating system issues. Security and privacy issues in a networked environment are addressed. Prerequisite: CS 234, ECE 251 or permission of instructor. Offered in the Spring semester. *One semester; three credits*

ECE 451. ADVANCED C++ PROGRAMMING
This course extends the object-oriented concepts developed in ECE. The course will cover topics that address namespaces, templates, exceptions, run time type indentification, and the standard library including containers, iterators, and algorithms. Programming projects using C++, Linux, and the BeagleBone Black microcontroller will be required. Prerequisites: ECE 112, 172 or CS 172 and senior standing or permission of the instructor. *One semester; three credits*

ECE 452. DEVELOPING VIDEO GAMES USING A GAME ENGINE AND C# I
Students learn the technical and organizational skills needed to develop video games using Unity3D. Unity 3D is a cross-platform game engine that provides encompassing environments to develop feature-rich video games and publish them to desktop, mobile, console and web platforms. Students will learn to navigate a game engine environment, create/add graphical content to game, control games behavior through scripting, and other skills need to create 2D and 3D games. In additional to covering technical aspects, this course will also cover the organizational aspects of game development. Prerequisites: ECE 310 and ECE 112/L or CS 172/L or CS 112/L. *One semester; three credits*

ECE 459. EDUCATIONAL ASSESSMENT IN UNITY
Students learn the principles behind assessment development using Evidence Centered Design in the context of video games. Students will learn to develop tasks in Unity to assess a variety of competencies. Prerequisite: ECE 310 or 452. *One semester; three credits*

ECE 460. LEGAL ISSUES IN VIDEO GAME DESIGN
Students learn legal principles and procedures related to game development, publication, and sales, including intellectual property law (patent, trademarks, trade-secrets and copyrights) and contractual law (Common and UCC). Prerequisites: Junior or Senior Standing. *One semester; three credits*

ECE 470. DATA COMMUNICATIONS
Elements of data communication and the ISO reference model. Network structure, architectures and protocol hierarchies. Algorithms and heuristics for design of computer network topology. Physical basis for data communication. Synchronous and asynchronous data communication, interface standards, data channels and modulation schemes. Data link protocols. Point-to-point, satellite, packet radio, and local area networks. Written reports are required for each of the three design projects. Prerequisite: ECE 335 or ECE 350. Offered in the Fall semester. *One semester; three credits*

ECE 471. DESIGN OF DATABASE SYSTEMS
The course stresses the design of databases and their implementation using a relational database management system. Topics include entity-relationship and relational data models and database design. Abstract query languages (relational algebra) and SQL (language for creating, querying, and modifying relational and object-relational databases). Views, integrity, constraints, triggers, transactions and security. Data warehouses, data

mining, temporal databases, XML. (Same as CS 471). Prerequisite: junior or senior standing. Offered in the Fall semester. *One semester; three credits*

ECE 477. DIGITAL SIGNAL PROCESSING
Discrete time signals and systems. The discrete time Fourier transform. The z-transform. The inverse z-transform. The discrete Fourier series. The discrete Fourier transform. Circular convolution. Representation of linear digital networks. Network structures for IIR systems. Network structures for FIR systems. Design of IIR digital filters. Digital Butterworth filters. Design of DIR filters. Computation of the discrete Fourier transform. The FFT. Written reports are required for each of the three design projects. Prerequisite: ECE 350. Offered in the Spring semester. *One semester; three credits*

ECE 478. DIGITAL CONTROL SYSTEMS
Real-time control of dynamic systems using digital computers, Z-transform methods, discrete equivalents to continuous systems, sampled data systems, root locus and frequency response methods, state-space design techniques, sample rate selection, and problems with discretization and numerical round-off, introduction to central topics in robotics. Projects using C, Linux, and the BeagleBone Black microcontroller will be required. Prerequisites: ECE 251 and 322. Offered in the Spring semester. *One semester; three credits*

ECE 480 - 489. SPECIAL TOPICS
Elective courses of special or current interest. Usually taught by visiting faculty with special or unique qualifications. Normally taken by Seniors. Prerequisites are announced with course offerings. *One semester; three credits*

ECE 490 - 494. SEMINAR
Special series of lectures on selected topics. Course credit assigned may range from zero to two. *One semester; zero to two credits*

ECE 495 - 496. INTERNSHIPS IN ELECTRICAL AND COMPUTER ENGINEERING
Students majoring in electrical engineering may be placed in the engineering offices of contracted firms to receive job training under the supervision of qualified engineers. Tasks completed as part of the internship must be approved by an authorized work supervisor. Credit is granted upon faculty approval of periodic review reports and a final summary report describing the work performed. Minimum time 200 hours. Prerequisites: Junior standing and permission of the department. *Pass/Fail grading. One semester; three credits*

ECE 497- 499. TOPICS IN ELECTRICAL AND COMPUTER ENGINEERING I, II, III
Directed work on a special problem. Problems of an interdisciplinary nature are encouraged. A written report is required. A contract outlining the scope of the project is required prior to the initiation of work. Prerequisite: Senior standing and a duly executed contract. ECE 497 and 498 are Pass/Fail grading. *One semester each; one, two, and three credits respectively.*

■ ENGLISH COURSES

Requirements for the degree are found on Pages 45 and 46.

ENG 100. DEVELOPMENTAL COMPOSITION
Intensive work on basic grammar, punctuation, sentence structure, paragraph development, and reading skills. Designed to prepare students for ENG 111. Offered in the Fall semester. Pass/Fail Grading. *One semester; three credits*

ENG 101. DEVELOPMENTAL COMPOSITION INTERNATIONAL
Intensive work on basic grammar, punctuation, sentence structure, paragraph development, and reading skills. Designed to prepare international/ESL students for ENG 111. Offered in the Fall semester. Pass/Fail Grading. *One semester; three credits*

ENG 111. ENGLISH COMPOSITION I
An introduction to academic writing and critical reading. Writing sequences with practical application of specific strategies for invention, drafting, frequent revision, peer review, and editing. Special sections which focus on a specific topic may be designated. Offered in the Fall and Spring.Honors Program students typically take ENG 231 and 232 instead of ENG 111 and 112 and a literature course. Prerequisites: ENG 100 or 101 or ACT English score of 20. *One semester; three credits*

ENG 112. ENGLISH COMPOSITION II
An introduction to argumentative strategies, research skills, and other applied writing. Students will write several short pieces and a research paper. Special sections which focus on a specific topic may be designated. Prerequisite: ENG 111. Offered in the Fall and Spring. Honors Program students typically take ENG 231 and 232 instead of ENG 111 and 112 and a literature course. *One semester; three credits*

ENG 211. INTRODUCTION TO LITERATURE I
A study of the literary forms of the novel and the short story, including literature that represents a range of racial, ethnic, and cultural perspectives. This course will include an emphasis on writing skills cultivated in ENG 111 and 112. Prerequisites: ENG 112. *One semester; three credits*

ENG 212. INTRODUCTION TO LITERATURE II
A study of the literary forms of drama and poetry, including literature that represents a range of racial, ethnic, and cultural perspectives. This course will include an emphasis on writing skills cultivated in ENG 111 and 112. Prerequisites: ENG 112. *One semester; three credits*

ENG 221. SURVEY OF BRITISH LITERATURE I
A survey of the representative prose, poetry, and drama writers of Great Britain from the beginnings through the 18th Century. Fulfills ENG 211 requirements. Prerequisites: ENG 112 or permission of Department Chair. Offered in the Fall semester. *One semester; three credits*

ENG 222. SURVEY OF BRITISH LITERATURE II
A survey of the representative prose, poetry, and drama writers of Great Britain since 19th-century Romantic Period. Fulfills ENG 212 requirement.

Prerequisites: ENG 112 or permission of Department Chair. Offered in the Spring semester. *One semester; three credits*

ENG 231. HONORS SURVEY OF WORLD LITERATURE I
A survey of significant prose and poetry writers of world literature from ancient times through 1600. This course will include an emphasis on writing skills. ENG 231 by itself can be substituted for ENG 111. ENG 231 and 232 together can be substituted for ENG 111 and 112, and one of the following: ENG 211, 212, 221, or 222. Prerequisite: Membership in the Honors Program. Offered in the Fall semester. *One semester; four credits*

ENG 232. HONORS SURVEY OF WORLD LITERATURE II
A survey of significant prose and poetry writers of world literature from 1600 through the present. This course will include an emphasis on writing skills. ENG 232 by itself can be substituted for ENG 112. ENG 231 and 232 together can be substituted for ENG 111 and 112, and one of the following: ENG 211, 212, 221, or 222. Prerequisite: ENG 111 or 231 and membership in the Honors Program. Offered in the Spring semester. *One semester; four credits*

ENG 240-249. SPECIAL TOPICS
Topics vary with the instructor. Prerequisite: ENG 111 & 112 or ENG 231 & 232. *One semester; one to three credits*

ENG 290-299. HONORS SPECIAL TOPICS IN ENGLISH
Special topics in English open to members of the Honors Program or by permission of the instructor and Honors Director. *One semester; three credits*

ENG 300. COMMUNICATION THEORY
Forming a foundation for further thought and exploration, this course introduces students to the major theories and approaches to studying communication in a variety of contexts. Prerequisite: ENG 112. *One semester; three credits*

ENG 301. INTERCULTURAL COMMUNICATION
This course explores the role culture plays in communication in our current society. Embedded in this exploration will be students' identification of their own cultural role in society today. Prerequisites: ENG 112. *One semester; three credits*

ENG 302. ECC JUNIOR SEMINAR
Students will study communication and rhetorical theory and prepare for their capstone Internship project. Prerequisites: ENG 112, 300, 303, and 371. *One semester; one credit*

ENG 303. DIGITAL RHETORIC
The goal of this course is to provide students with a theoretical and practical understanding of how rhetoric works in online environments. The course will provide a thorough understanding of media, genre, digital literacy, and the basics of design. Prerequisite: ENG 112. *One semester; three credits*

ENG 315. HISTORY OF THE THEATRE
An in-depth study of the theatre including samples of dramatic literature from ancient Greece to the present. (Same as THEA 315). Prerequisite: ENG 112. *One semester; three credits*

ENG 331. AMERICAN LITERATURE TO 1865
A study of the representative prose and poetry writers of American literature set against the political, religious, and philosophical backgrounds from contact through the U.S. Civil War. Prerequisite: ENG 112. *One semester; three credits*

ENG 332. AMERICAN LITERATURE FROM 1865
A study of representative prose and poetry writers of American literature set against the social, political, and philosophical backgrounds since Reconstruction. Prerequisite: ENG 112. *One semester; three credits*

ENG 339. EIGHTEENTH-CENTURY BRITISH NOVEL
Extensive reading in novels by representative eighteenth-century British novelists such as Defoe, Richardson, Fielding, Smollett, and Sterne. Prerequisite: ENG 112. *One semester; three credits*

ENG 340. NINETEENTH-CENTURY BRITISH NOVEL
Extensive reading in novels by representative nineteenth-century British novelists such as Austen, the Brontes, Dickens, Eliot, and Hardy. Prerequisite: ENG 112. *One semester; three credits*

ENG 341. NINETEENTH-CENTURY AMERICAN NOVEL
Extensive reading in representative nineteenth-century American novels, set against the social, political, and literary backgrounds of their times. Prerequisite: ENG 112. *One semester; three credits*

ENG 342. AMERICAN ROMANTICISM
A study of the representative influences, characteristics, and figures of the American Romantic Movement from 1830 to 1860. Prerequisite: ENG 112. *One semester; three credits*

ENG 343. LITERATURE OF THE AMERICAN SOUTH
A survey of Southern American literature, including its background and themes, with emphasis on twentieth-century writers such as Faulkner, Welty, and Warren. Prerequisite: ENG 112. *One semester; three credits*

ENG 351. MODERN NOVEL
An examination of modern modes of fiction through representative novelists and the stylistic concepts that shape their expression. Prerequisite:

ENG 112. *One semester; three credits*

ENG 352. MODERN POETRY
A study of theory and representative poets in the United States, Great Britain, and Ireland from 1900 to the 1960s. Prerequisite: ENG 112. *One semester; three credits*

ENG 354. MODERN DRAMA
An examination of modern American drama from 1880-1960, beginning with a survey of late nineteenth-century European works followed by an intensive study of major playwrights and movements of the twentieth century. Prerequisite: ENG 112. *One semester; three credits*

ENG 361. AFRICAN-AMERICAN LITERATURE
A study of poetry and prose by representative African-American writers, reflecting the development of African-American literature in the United States. Prerequisite: ENG 112. *One semester; three credits*

ENG 362. WOMEN IN LITERATURE
An examination of literature by women in light of feminist literary theory. Prerequisite: ENG 112. *One semester; three credits*

ENG 371. BUSINESS COMMUNICATIONS
An examination of logical and psychological patterns of business communication and adaptation to varying audiences. A study of forms of written and oral communication in the business worlds from correspondence for both routine and problems situations to proposals and both short and long reports, all in context of relevant technologies. Prerequisite: ENG 112. *One semester; three credits*

ENG 373. ADVANCED COMPOSITION
A study of rhetorical theory and rhetorical models accompanied by advanced practice in composition. Prerequisite: ENG 112. *One semester; three credits*

ENG 374. DRAMATIC WRITING WORKSHOP
A study of the major forms of drama and an introduction to the stylistics and rhetorical aspects of those forms through study and practice. The class will culminate in a workshop of the students' own work. Prerequisite: ENG 112. *One semester; three credits*

ENG 375. SCIENTIFIC AND TECHNICAL WRITING
An examination of the principles of effective communication in industry, business, and government with emphasis on practical writing skills for technical articles, reports, proposals, and documentation. Heavy emphasis on the computer as the technical writer's workspace. Prerequisite: ENG 112. *One semester; three credits*

ENG 376. CREATIVE WRITING WORKSHOP
A study of the major forms of poetry and fiction, specifically the short story, and an introduction to the stylistic and rhetorical aspects of those forms through study and practice. This class includes workshop of the students' original work. Prerequisite: ENG 112. *One semester; three credits*

ENG 378. LITERARY NONFICTION WORKSHOP
A study of the major forms of creative nonfiction and an introduction to the stylistics and rhetorical aspects of those forms through study and practice. The class will culminate in a workshop of the students' own work. Prerequisite: ENG 112. *One semester; three credits*

ENG 379. SCREENWRITING WORKSHOP
A study of the screen writing tradition in which students begin with the basics of visual storytelling, and then examine the two fundamental elements of drama – structure and character. The class will culminate in a workshop of the students' own work. Prerequisite: ENG 112. *One semester; three credits*

ENG 380-389. SPECIAL TOPICS
Topics vary with the instructor. Prerequisite: ENG 112 and one 200 level English course (211, 212, 221, 222, 231, 232). *One semester; one to three credits*

ENG 390-399. HONORS ENGLISH SPECIAL TOPICS
Special topics in English open to members of the Honors Program or by Permission of the instructor and Honors Director. *One semester; one to four credits*

ENG 401. POETRY WORKSHOP
A study of the poetic tradition in which students work to find their own poetic voice through the application of various poetic techniques. Students will also workshop their own writing and actively critique the work of their peers. Prerequisite: ENG 112. *One semester; three credits*

ENG 432. MEDIEVAL LITERATURE
A study of representative works, European as well as British, from the Medieval Period. Prerequisite: ENG 112. *One semester; three credits*

ENG 440. CHAUCER
A study of Chaucer's major works with emphasis on *The Canterbury Tales* and *Troilus and Criseyde.* Prerequisite: ENG 112. *One semester; three credits*

ENG 441. SHAKESPEARE
An extensive and intensive study of both the comedies and tragedies. Prerequisite: ENG 112. *One semester; three credits*

ENG 442. RENAISSANCE LITERATURE
A study of the major poets and prose writers of the English Renaissance Period including Spenser, Marlowe, and others. Prerequisite: ENG 112. *One semester; three credits*

ENG 443. MILTON

A study of Milton's poetry with emphasis on *Paradise Lost.* Prerequisite: ENG 112. *One semester; three credits*

ENG 444. RESTORATION AND THE EIGHTEENTH CENTURY
Dryden, Pope, Swift, and Johnson together with minor writers in poetry, prose, and drama. Prerequisite: ENG 112. *One semester; three credits*

ENG 445. ROMANTIC PROSE AND POETRY
Wordsworth, Coleridge, Byron, Shelley, Keats-their practice and theory-as well as the Romantic essayists. Prerequisite: ENG 112. *One semester; three credits*

ENG 446. VICTORIAN PROSE AND POETRY
Tennyson, Arnold, Browning, Hopkins, Carlyle, Newman, Ruskin-their lyrics and essays. Prerequisite: ENG 112. *One semester; three credits*

ENG 447. SEVENTEENTH-CENTURY LITERATURE: POETRY AND DRAMA IN AN AGE OF TRANSFORMATION
A study of diverse poets and genres of the seventeenth-century, including a small selection of dramas, in relation to the cultural and historical transformations to which they speak. Authors will include canonical poets/dramatists such as John Donne, George Herbert, Ben Jonson, Aemelia Lanyer, Andrew Marvell, and John Milton, as well as a selection of work by more marginal figures. Prerequisite: ENG 112. *One semester; three credits*

ENG 450. CONTEMPORARY LITERATURE
A study of American, British, and World Anglophone fiction, poetry, and drama of the past twenty-five years. Prerequisite: ENG 112. *One semester; three credits*

ENG 451. FICTION WORKSHOP
A study of the prose tradition in which students work to find their own voice through the application of various narrative techniques. Focusing on the short story, students will workshop their own writing and actively critique the work of their peers. Prerequisite: ENG 112. *One semester; three credits*

ENG 460-469. SPECIAL TOPICS
Topics of special interest including Comic Drama, Literary Non-Fiction, Tragic Drama, Detective Fiction, Publishing History of the United States, Baseball in American Literature, etc. Topics vary with instructor. Prerequisite: ENG 112 and one 200 level English course (211, 212, 215, 221, 222, 231, or 232). *One semester; one to three credits each*

ENG 478. JUNIOR SEMINAR FOR CREATIVE WRITING MAJORS
A practical study of the application of creative writing in the academic and publishing world, including graduate schools, fellowships, colonies, conferences, and employment. Students will produce a directed collection of writing in their track as well as participate in a public presentation. Prerequisite: ENG 112 and junior standing. *One semester; three credits*

ENG 479. JUNIOR SEMINAR FOR ENGLISH MAJORS
This course should be taken in the Spring semester of the junior year. Students will examine contemporary critical approaches to literature and will engage in preliminary work on their senior seminar thesis. Offered in the Spring semester. *One semester; one credit*

ENG 480. SENIOR SEMINAR FOR ENGLISH MAJORS
This course should be taken during the Fall semester of the senior year. In the course students will examine methods and approaches to literary research and will produce a major project, ranging from a traditional academic paper to digital or public humanities projects. Offered in the Fall semester. Prerequisite: ENG 112. *One semester; three credits*

ENG 481. SENIOR SEMINAR FOR CREATIVE WRITING MAJORS
A study of the methods and approaches to each student's specific field of creative writing. Students will produce a portfolio of original works or one longer piece that will reflect their studies in creative writing. Students will also have a public reading of select works. Prerequisite: ENG 112 and senior standing. *One semester; three credits*

ENG 485. HONORS RHETORIC AND POWER
An exploration into how language reflects and interacts with society from a number of different angles, including (as they apply to language) definition, framing stereotypes, language taboos, powerful and powerless language. Prerequisite: ENG 112 and membership in the Honors Program or permission from the instructor. *One semester; one to three credits*

ENG 486. CASTINGS INTERNSHIP
Experience in editing CBU's literary magazine. For editor(s) only. Students may enroll in this course more than one time. *One semester; three credits*

ENG 487. HONORS JOURNAL INTERNSHIP
Experience in soliciting submissions for and editing the Honors Journal. Prerequisite: Honors Program membership and Approval by the Honors Program Director. Students may enroll in this course more than one time. Pass/Fail grading. *One to two semesters; one to three credits*

ENG 488. WRITING CENTER PRACTICUM
A practical introduction to the problems and management of a writing center and to the skills of one-to-one intervention in the student's writing process. Enrollment limited to Writing and Communications Corner. Students may enroll in this course more than one time. Pass/Fail grading. *One semester; one credit*

ENG 489. ENGLISH FOR CORPORATE COMMUNICATIONS CAPSTONE INTERNSHIP
Major-related work experience through which students apply English subject matter skills to professional activity. Prerequisite: Junior standing and Permission of the English faculty. One hour per week in class required. Prerequisite: ENG 300. *One semester; three credits*

ENG 490-497. RESEARCH TOPICS IN ENGLISH

Original writing projects or independent study and research in literature pursued under the guidance of a member of the English faculty. Syllabus and credit hours contracted by the student with the English Department. *One semester each; one to three credits each*

ENG 498. INTERNSHIP IN ENGLISH
Major-related work experience through which students apply English subject matter skills to professional activity and use internship experience to reflect and analyze concepts important to field of study. Prerequisite: Junior standing and Permission of the English faculty. *One semester; three credits*

ENG 499. CREATIVE WRITING INTERNSHIP
Major-related work experience through which students apply English subject matter skills to professional activity. Prerequisite: Junior standing and Permission of the English faculty. Offered in the Spring Semester. One hour per week in class required. *One semester; three credits*.

■ ENGINEERING COURSES

ENGR 100. EXPLORING ENGINEERING
Exploration of the Engineering profession, Engineering disciplines, and careers. Basic engineering calculations, unit conversions, etc. *One semester; two to three credits.*

ENGR 101. PRINCIPLES OF ENGINEERING
Statics; structures; material properties and testing. *One semester; three credits*

ENGR 102. INTRODUCTION TO AEROSPACE ENGINEERING
Evolution and physics of flight; flight planning, navigation and physiology; materials and structures; orbital mechanics; space travel; aerospace careers. *One semester; three credits*

ENGR 103. INTRODUCTION TO BIOTECHNICAL ENGINEERING
Biotechnical engineering history and industry; forensics; environmental, agricultural, and biomedical engineering. *One semester; three credits*

ENGR 104. INTRODUCTION TO CIVIL ENGINEERING & ARCHITECTURE
Structures, services and utilities; residential and commercial building design; cost and efficiency analysis; careers in civil engineering and architecture. *One semester; three credits*

ENGR 105. INTRODUCTION TO COMPUTER INTEGRATED MANUFACTURING
Principles, history, and cost of manufacturing; control systems; manufacturing processes; product development; automation; CIM. *One semester; three credits*

ENGR 106. INTRODUCTION TO COMPUTER SCIENCE AND SOFTWARE ENGINEERING
Algorithm, graphics, and graphical user interfaces; large-scale data collection and analysis; visualization; security and cryptography; intelligent systems; Scratch, App Inventor, and Python software. *One semester; three credits*

ENGR 107. INTRODUCTION TO DIGITAL ELECTRONICS
Analog and digital electronics; combinational logic, NAND and NOR logic; sequential logic, latches and flip-flops, asynchronous and synchronous counters, state-machine design; microcontrollers. *One semester; three credits*

ENGR 108. ENGINEERING DESIGN & DEVELOPMENT
Project management; problem justification; designing a solution; prototyping and testing; evaluation; presentation of the design process. *One semester; three credits*

ENGR 200-210. ENGINEERING CO-OP
Requires placement at an appropriate engineering or engineering related firm. Documentation of engineering work performed is required for course completion. Prerequisite: Approval of the Department Chair. Pass/Fail grading. *One semester each; three credits each*

ENGR 400. THE COMPLEAT ENGINEERING MANAGER
This course deals with a wide array of issues facing the engineering manager. Topics include: engineering ethics; regulatory issues; health, safety, and environmental factors; reliability, maintainability, producibility, sustainability; and the context of engineering In the enterprise, in society, and as part of the global economy. Prerequisite: MATH 131. *One semester; three credits*

ENGR 421. VIDEO GAME DESIGN PROJECT I
Design, development and implementation of student selected projects. This course includes complete engineering and testing as well as economic analysis on a video game. Written reports are required with the final product in engineering report form. A required oral presentation of the project to industry sponsors, faculty and students. Prerequisites: ECE 310 and Chair of the ECE Department or BSEM advisor. Offered in the Fall semester. *One semester; two credits*

ENGR 422. VIDEO GAME DESIGN PROJECT II
This is the major design experience for ECE students in which they demonstrate knowledge and skills acquired in earlier course work, technical and non-technical. They must also incorporate relevant engineering standards and realistic constraints in their work. Students select, design, develop and implement solutions to selected video game projects. Projects are suggested and sponsored by local and national industry, government, and institutions. Written reports are required with the final report in engineering report form. A final oral presentation to sponsors, faculty and friends is required. ECE students will take ECE 412. Prerequisites: ECE 421. Offered in the Spring semester. *One semester; one credit hour.*

ENGR 431. SUSTAINABILITY PROJECT I
Sustainability-related project initiated by students (or suggested by the faculty) and approved by the Sustainability Concentration Coordinator.

Oral presentation and written report. *One semester; one credit*

ENGR 432. SUSTAINABILITY PROJECT II
Continuation of project from ENGR 431. Oral presentation and written report. Prerequisite: ENGR 431. *One semester; two credits*

ENGR 441. MANAGEMENT OF INFORMATION SYSTEMS
Basic principles of Management Information Systems. Topics in current networking and communication technologies and their impacts on performance and productivity in an organization. Software and hardware components of a network and database technology. *One semester; three credits*

ENGR 442. DATA BASE AND BIG DATA MANAGEMENT
Survey of current database approaches and systems. Topics include DBMS types; architecture; introduction to SQL; query optimization. DB management project required. *One semester; three credits*

ENGR 443. INTRODUCTION TO DATA SCIENCE
Practical tools used to analyze and interpret data. A review of probability, statistics and software programming. Data pre-processing techniques, supervised learning techniques in classification and regression, unsupervised learning techniques in clustering and visualization techniques. *One semester; three credits*

ENGR 444. SOFTWARE PROGRAMMING FOR ENGINEERS
The course introduces concepts of python programming for engineering and IT applications. Topics include variables, conditionals and loops, functions, files and input/output, and object oriented techniques. *One semester; three credits*

ENGR 463. MUSIC IN VIDEO GAME DESIGN
Students learn the role of music and sound design in interactive media (i.e. video games). The course is open to Novice and Intermediate Players of musical instruments with an emphasis on Folk and Classical Guitar. *One semester; three credits.*

ENGR 480 - 489. SPECIAL TOPICS
Elective courses of special or current interest. Usually taught by visiting faculty with special or unique qualifications. Normally taken by Seniors. Prerequisites are announced with course offerings. *One semester; one, two, or three credits*

ENGR 489. FE REVIEW
Review sessions for FE exam. Pass/Fail grading. *Zero credit*

ENGR 490 - 494. SEMINAR
Special series of lectures on selected topics. Course credit assigned may range from zero to two. *One semester; zero to two credits*

ENGR 495 - 496. INTERNSHIP
Students may be placed in engineering related offices of contracted firms to receive job training under the supervision of qualified engineers. Tasks completed as part of the internship must be approved by an authorized work supervisor. Credit is granted upon faculty approval of periodic review reports and a final summary report describing the work performed. Minimum time 200 hours. Prerequisites: Juniors standing and permission of program coordinator. Pass/Fail grading. *One semester; three credits*

■ FINANCE COURSES

Requirements for the concentration are found on Page 65. Requirements for the minor are found on page 67.

FIN 327. FINANCIAL MANAGEMENT I
An introduction to the basic concepts, principles and analysis techniques of finance as applied to business organizations. The basis for virtually all financial analysis methodology lies in discounted cash flow analysis which is covered in this course. DCF techniques are then applied to areas of basic corporate decision-making involving the acquisition or replacement of physical assets and the decision to pursue capital projects. Finance 327 is a quantitative, problem solving course. Prerequisites: ACCT 260, ECON 214, MIS 153, MATH 105, (107 and 110, 117, 129, or 131) and STAT 221. *One semester; three credits*

FIN 340. INVESTMENTS
Covers the principles governing the selection of investment media, topics in modern portfolio theory, and techniques of analysis and evaluation as applied to various investment alternatives. The functioning of security markets and how financial assets are traded as well as valuation techniques for bonds, equity instruments, options and futures are covered. Emphasis is on gaining a more in-depth understanding of financial investment alternatives, their valuation and analysis. Prerequisite: FIN 327. Offered in the Spring semester. *One semester; three credits*

FIN 346. PERSONAL FINANCE
The course is designed to acquaint the student with basic principles necessary to efficiently manage personal financial affairs. Special attention is given to the areas of budgeting, insurance, consumer credit, housing cost problems, and investment opportunities. This course cannot be used to fulfill any of the Finance requirements in the School of Business. Offered as needed. *One semester; three credits*

FIN 350. CAPITAL MARKETS AND INSTITUTIONS
Survey of financial markets and institutions and their individual characteristics; sources of supply of and demand for funds in each market, the complex interrelations among markets and the role of each in the process of capital formation and allocation. Prerequisites: FIN 327. Offered in the Spring semester. *One semester; three credits*

FIN 400. FINANCE INTERNSHIP
Under the supervision of a faculty member from the appropriate department, students in the School of Business, after receiving the approval of

the faculty, are placed in the offices of cooperating firms to receive on-the-job training under the supervision of members of the firm. Credit is granted upon acceptance of periodic reports and a final summary report of work done verified by the authorized supervisor and the instructor. *Pass/Fail grading. One semester; three credits*

FIN 410. DERIVATIVE SECURITIES
Structure, operation, and mechanics of trading in markets for futures, swaps, options, synthetic options, and futures on options; transfer of risk and stabilization of prices through futures trading; buying/selling strategies; valuation of futures contracts and options. Applications of derivatives to hedging and speculating strategies. Prerequisite: FIN 340. Offered in the Fall Semester. *One semester; three credits*

FIN 411. COMMERCIAL BANKING
Study of bank management and bank regulation; examination of conditions that lead to bank regulation and conditions that caused deregulation; exploration of current theories of profitable bank operations. Prerequisites: FIN 327 and 340. Offered as needed. *One semester; three credits*

FIN 412. RISK MANAGEMENT
Addresses problems faced by risk managers encompassing traditional aspects of risk management and insurance including insurance, reinsurance, hedging and capital markets as tools to manage or mitigate risk. Prerequisite: FIN 411. Offered as needed. *One semester; three credits*

FIN 427. FINANCIAL MANAGEMENT II
Extends the knowledge of financial management and provides insights into the complexity of the decisions faced by practicing financial managers. Various topics are covered in the course with major emphasis on capital budgeting. Other topics covered include working capital management, international mergers and acquisitions, financial engineering, optimal capital structure, and enterprise value. Prerequisite: FIN 327. *One semester; three credits*

FIN 430-436. SPECIAL TOPICS IN FINANCE
Readings and discussions of recent significant finance and investment literature. Possible subject areas include leveraged buyouts, mergers and acquisitions, junk bonds, speculative markets, fixed-income investments, foreign markets and exchanges, and hedging. Prerequisites: FIN 327. Offered as needed. *One semester; three credits*

FIN 437. INTERNATIONAL FINANCIAL MANAGEMENT
The international aspects of financial management. Topics include currency markets and exchange rate determination, transfer of funds, banking services, international financial institutions, parity conditions, foreign exchange exposure and management, and valuation of international projects. Prerequisite: FIN 327. Offered in the Spring semester. *One semester; three credits*

FIN 440. PORTFOLIO MANAGEMENT
The analysis and valuation of securities and the selection, timing, diversification, and other aspects of supervising the management of investment portfolios. Students analyze the composition of, make buy/sell recommendations for, and evaluate the performance of a portfolio during the semester. Prerequisites: FIN 327. Offered in the Fall semester. *One semester; three credits*

FIN 455. PRACTICUM AND PROJECT IN FINANCE
This course is designed to explore and put to practical use the entire body of knowledge gained in previous FIN courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific problems in the financial services professions. Prerequisite: Permission of the Instructor. *One semester; three credits*

■ FOREIGN LANGUAGE COURSE REQUIREMENTS (for courses taught at CBU)

When a student has passed two or more years of the *same* foreign language with at least a "C" average in high school, she/he may choose one of the following options:

1. Enroll in the same foreign language studied in high school at the 201 level (recommended option) or at the 101 or 102 level (permitted options).
2. Enroll at the elementary level (101) of a foreign language not studied in high school (Note that a 101 course must be followed by the corresponding 102 course in order to acquire elementary competency in a language.)

A minimum of thirty minutes per week in the language laboratory is required for all 100 and 200 level courses.

Upper-division language courses may be taken concurrently with intermediate courses with prior approval of the instructor.

Upper-division language courses may be offered as tutorial courses with the availability and the consent of the instructor and the approval of the Chair of the Department of Literature & Languages.

■ FOREIGN LANGUAGE COURSES

FORL 101. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

FORL 102. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

FORL 201. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

FORL 202. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

FORL 301. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

FORL 302. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

FORL 401. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

FORL 402. SPECIAL TOPICS IN FOREIGN LANGUAGES
The study of a language other than French, German or Spanish. *One semester; one to four credits*

■ FRENCH COURSES

FREN 101. ELEMENTARY FRENCH I
Fundamentals of grammar and pronunciation, elementary conversation. Second semester includes reading and translation of texts of graded difficulty. Not open for credit to native speakers of French with formal education delivered in French beyond age 10. Offered in the Fall semester. *One semester; three credits*

FREN 102. ELEMENTARY FRENCH II
Fundamentals of grammar and pronunciation, elementary conversation. Second semester includes reading and translation of texts of graded difficulty. Not open for credit to native speakers of French with formal education delivered in French beyond age 10. Offered in the Spring semester. Prerequisite: FREN 101. *One semester; three credits*

FREN 201. INTERMEDIATE FRENCH I
A review of French grammar with composition and conversation. Second semester includes the reading of French short stories selected from French literature, designed to increase the student's vocabulary and to contribute to his mastery of idiomatic constructions. Prerequisites: FREN 102. Not open for credit to native speakers of French with formal education delivered in French beyond age 10. Offered in the Fall semester. *One semester; three credits*

FREN 202. INTERMEDIATE FRENCH II
A review of French grammar with composition and conversation. Second semester includes the reading of French short stories selected from French literature, designed to increase the student's vocabulary and to contribute to his mastery of idiomatic constructions. Prerequisites: FREN 201. Not open for credit to native speakers of French with formal education delivered in French beyond age 10. Offered in the Spring semester. *One semester; three credits*

FREN 280-289. SPECIAL TOPICS IN FRENCH
Topics of special interest related to French literature, language and culture. Prerequisites: FREN 102 or permission from the Department Chair. *One semester; three credits.*

FREN 301. COMPOSITION AND CONVERSATION I
Continued study of French grammar and composition. Drill on idioms and difficult constructions with reading in French civilization. Prerequisites: FREN 202 or the equivalent. Not open for credit to native speakers of French with formal education delivered in French beyond age 10. Offered in the Fall semester. *One semester; three credits*

FREN 302. COMPOSITION AND CONVERSATION II
Continued study of French grammar and composition. Drill on idioms and difficult constructions with reading in French civilization. Prerequisites: FREN 202 or the equivalent. Not open for credit to native speakers of French with formal education delivered in French beyond age 10. Offered in the Spring semester. *One semester; three credits*

FREN 311. SURVEY OF FRENCH LITERATURE I
A survey of the chief French authors and their works from the beginnings through the Golden Age. Readings, lectures, discussions. Prerequisite: Two years of college French or the equivalent. Offered in the Fall semester. *One semester; three credits*

FREN 312. SURVEY OF FRENCH LITERATURE II
A survey of the chief periods and movements in French literature from the 18th to the 20th century. Reading in French of selections from the masterpieces of the principal authors of these centuries. Prerequisite: Two years of college French or equivalent. *One semester; three credits*

FREN 313. FRENCH CIVILIZATION I
An overview of the chief historical, political, and artistic periods in French civilization from the Middle Ages through the 18th century. Readings, lectures, discussions, films, and presentations. Prerequisite: Two years of college French or equivalent. Offered in the Fall semester. *One semester; three credits*

FREN 314. FRENCH CIVILIZATION II
Continued study of the principal historical, political, and artistic periods in French civilization, with an emphasis on the 19th and 20th centuries. Readings, lectures, discussions, films, and presentations. Prerequisite: Two years of college French or equivalent. Offered in the Spring semester. *One semester; three credits*

FREN 315. BUSINESS FRENCH I

An introduction to business and technology in the French-speaking world from a personal, everyday life perspective. Study includes banking, telecommunications, computers, and the Internet. Prerequisite: Two years of college French or the equivalent. Offered in the Fall semester. *One semester; three credits*

FREN 316. BUSINESS FRENCH II
Continued study of business and technology in the French-speaking world. Units include interviewing, resume writing, business correspondence, and corporate organization. Prerequisite: Two years of college French or the equivalent. Offered in the Spring semester. *One semester; three credits*

FREN 380-389. SPECIAL TOPICS IN FRENCH.
Topics of special interest related to French literature, language, or culture. Prerequisites: French 302 and 312 and permission of instructor. *One semester; one to three credits*

FREN 400-410. RESEARCH TOPICS IN FRENCH
Original writing projects or independent study and research in literature, pursued under the guidance of a member of the French faculty. Syllabus and credit hours contracted by the student with the French professor. *One semester each; one to three credits each*

FREN 480-489. SPECIAL TOPICS IN FRENCH.
Topics of special interest related to advanced study of French literature, language, or culture. Prerequisites: French 302 and 312 and permission of instructor. *One semester, one to three credits*

■ GEOGRAPHY COURSES

GEOG 280. GEOGRAPHY SURVEY
The study of the general nature of the earth, focusing on topography and climate of land areas, ways of living of the world's peoples, and relationships of people, their resources and environment. *One semester; three credits*.

GEOG 310. PHYSICAL GEOGRAPHY
An introduction to environmental and earth science, particularly weather and climate. Study of atmospheric phenomena, global climate systems and patterns; emphasis on the development of map and globe skills. *One semester; three credits*

GEOG 325. REGIONAL GEOGRAPHY
Spatial analysis of economic, cultural, and physical characteristics of selected areas of the world. Comparisons of developing and industrialized nations involving population distribution, spatial patterns of economic activity, and human-environmental relationships. *One semester; three credits*

GEOG 340. HUMAN GEOGRAPHY
Study of cultural, political, and economic aspects of major ethnographic areas and selected cultures of the world. *One semester; three credits*

■ GERMAN COURSES

The following foreign language courses will be offered on the campus of Rhodes College under the instruction of Rhodes faculty. See Dean of the School of Arts concerning these courses.

GRM 101. ELEMENTARY GERMAN I
Fundamentals of grammar and pronunciation, elementary conversation. Second semester includes reading and translation of texts of graded difficulty. Not open for credit to native speakers of German with formal education delivered in German beyond age 10. Offered in the Fall semester. *One semester; three credits*

GRM 102. ELEMENTARY GERMAN II
Fundamentals of grammar and pronunciation, elementary conversation. Second semester includes reading and translation of texts of graded difficulty. Not open for credit to native speakers of German with formal education delivered in German beyond age 10. Offered in the Spring semester. Prerequisite: GERM 101. *One semester; three credits*

GRM 201. INTERMEDIATE GERMAN I
A review of German grammar with composition and conversation. Second semester includes the reading of German short stories selected from German literature, designed to increase the student's vocabulary and to contribute to his mastery of idiomatic constructions. Prerequisites: GERM 102. Not open for credit to native speakers of German with formal education delivered in German beyond age 10. Offered in the Fall semester. *One semester; three credits*

GRM 202. INTERMEDIATE GERMAN II
A review of German grammar with composition and conversation. Second semester includes the reading of German short stories selected from German literature, designed to increase the student's vocabulary and to contribute to his mastery of idiomatic constructions. Prerequisites: GERM 201. Not open for credit to native speakers of German with formal education delivered in German beyond age 10. Offered in the Spring semester. *One semester; three credits*

GRM 210. READINGS (INTERMEDIATE LEVEL)
Readings designed to meet individual interests and needs. Prerequisites: Permission of instructor. *One semester; four credits.*

GRM 220. TOPICS IN GERMAN LITERATURE, CULTURE AND SOCIETY
A survey of the cultural and intellectual history of the German speaking peoples, beginning in 1750. The historical periods covered will be presented within the framework of specific topics, such as revolution or national identity. Readings from a variety of areas (literature, philosophy, politics, etc.); films, lectures, reports, and discussions. *One semester; four credits*

GRM 221. TOPICS IN GERMAN LITERATURE, CULTURE AND SOCIETY
A continued discussion on the topics covered in GERM 220, progressing to 1900. The historical periods covered will be presented within the framework of specific topics, such as revolution or national identity. Readings from a variety of areas (literature, philosophy, politics, etc.); films, lectures, reports, and discussions. Prerequisite: GERM 220. *One semester; four credits*

GRM 240. GERMAN CINEMA
This course, examining important German films since the days of the Weimar Republic, places special emphasis on the historical and social background of each film as well as the aesthetic qualities of the works. It thereby seeks to contribute to a better understanding of recent German history and of films as an artistic medium. Filmmakers to be studied include Friedrich Murnau, Fritz Lang, Leni Riefenstahl, Volker Schlondorff, Helma Sanders-Brahms, Wim Wenders, Rainer Werner Fassbinder, and Wolfgang Becker. All films are subtitled; the course is taught in English. German 340 is reserved for majors and minors, who will do substantial portions of the work for the course in German. *One semester; four credits.*

GRM 242. THE HOLOCAUST IN TEXT, IMAGE, AND MEMORY
Examination of such topics as the origins and expressions of Anti-Semitism in central Europe, the political events and structures of the Holocaust, the reality of ghettos and concentration camps, the impact of technological modernization on the Final Solution, and resistance to the Nazis. Materials will include non-fictional texts, literature, art, and music. All materials and discussions in English. German 342 is reserved for majors and minors, who will do substantial portions of the work for the course in German. *One semester; four credits.*

GRM 244. GERMAN FAIRY TALES
Emphasis on the Grimms' tales: theoretical approaches to the tales from the late 19th and early 20th centuries as well as later adaptations. All materials and discussions in English. German 344 is reserved for majors and minors, who will do substantial portions of the work for the course in German. *One semester; four credits.*

GRM 246. MARX, NIETZSCHE, FREUD
This course introduces students to the works of Marx, Nietzsche, and Freud. Discussions will center on materialism and its significance for concepts of history and progress, and on the status of the self in society. Discussions of contemporary cultural theory and of popular culture will test the continued relevance of these thinkers. All materials and discussions in English. German 346 is reserved for majors and minors, who will do substantial portions of the work for the course in German. *One semester; four credits.*

GRM 248. SPECIAL TOPICS IN GERMAN LITERATURE
Emphasis on a specific author, group of authors, or theme. Course topics may vary, and students may repeat the course with a different topic. All materials and discussions in English. German 348 is reserved for majors and minor, who will do substantial portions of the work for the course in German. *One semester; four credits.*

GRM 301. COMPOSITION AND CONVERSATION
Advanced training in written and oral German expression. Prerequisites: German 202, or permission of instructor. Offered in the Fall semester. *One semester; four credits.*

GRM 302. ADVANCED READING COMPREHENSION
Emphasis on the development of reading skills through a variety of text types. Prerequisites: German 202, 301 or permission of instructor. Offered in the Spring semester. *One semester; four credits.*

GRM 305. GERMAN IN GERMANY
An intensive study of advanced German in Germany. Prerequisite: Permission of CBU Department Chair. Offered in the Summer semester. *One semester; four credits.*

GRM 310. READINGS (ADVANCED LEVEL)
Readings designed to meet individual interests and needs. May be taken more than once for credit with new topics. Prerequisites: Permission of instructor. *One semester; one to four credits.*

GRM 311. SUPPLEMENTAL READINGS
This readings course is reserved for majors and minors enrolled in German 320 or 321. It is designed to give students opportunities to read, write, and speak in German in conjunction with the coursework in English. May be repeated once. Prerequisites: Concurrent enrollment in 320 or 321. *One semester; one credit.*

GRM 320. TOPICS IN GERMAN LITERATURE, CULTURE AND SOCIETY
Reserved for German majors and minors. A survey of the cultural and intellectual history of the German speaking peoples, beginning in 1750. The historical periods covered will be presented within the framework of specific topics, such as revolution or national identity. Readings from a variety of areas (literature, philosophy, politics, etc.); films, lectures, reports, and discussions. Prerequisite: GERM 301 or permission of instructor. Must take one credit of 311 concurrently. *One semester; four credits.*

GRM 321. TOPICS IN GERMAN LITERATURE, CULTURE AND SOCIETY
Reserved for German majors and minors. A continued discussion on the topics covered in GERM 320, progressing to 1900. The historical periods covered will be presented within the framework of specific topics, such as revolution or national identity. Readings from a variety of areas (literature, philosophy, politics, etc.); films, lectures, reports, and discussions. Prerequisite: GERM 302 or permission of instructor. Must take one credit of 311 concurrently. *One semester; four credits*

GRM 340. GERMAN CINEMA

Reserved for majors and minors, who will do substantial portions of the work for the course in German. This course, examining important German films since the days of the Weimar Republic, places special emphasis on the historical and social background of each film as well as the aesthetic qualities of the works. It thereby seeks to contribute to a better understanding of recent German history and of films as an artistic medium. Filmmakers to be studied include Friedrich Murnau, Fritz Lang, Leni Riefenstahl, Volker Schlondorff, Helma Sanders-Brahms, Wim Wenders, Rainer Werner Fassbinder, and Wolfgang Becker. All films are subtitled; the course is taught in English. *One semester; four credits.*

GRM 342. THE HOLOCAUST IN TEXT, IMAGE, AND MEMORY
Reserved for majors and minors, who will do substantial portions of the work for the course in German. Examination of such topics as the origins and expressions of Anti-Semitism in central Europe, the political events and structures of the Holocaust, the reality of ghettos and concentration camps, the impact of technological modernization on the Final Solution, and resistance to the Nazis. Materials will include non-fictional texts, literature, art, and music. All materials and discussions in English. *One semester; four credits*

GRM 344. GERMAN FAIRY TALES
Reserved for majors and minors, who will do substantial portions of the work for the course in German. Emphasis on the Grimms' tales: theoretical approaches to the tales from the late 19th and early 20th centuries as well as later adaptations. All materials and discussions in English. *One semester; four credits*

GRM 346. MARX, NIETZSCHE, FREUD
Reserved for majors and minors, who will do substantial portions of the work for the course in German. This course introduces students to the works of Marx, Nietzsche, and Freud. Discussions will center on materialism and its significance for concepts of history and progress, and on the status of the self in society. Discussions of contemporary cultural theory and of popular culture will test the continued relevance of these thinkers. All materials and discussions in English. *One semester; four credits*

GRM 348. SPECIAL TOPICS IN GERMAN LITERATURE
Reserved for majors and minor, who will do substantial portions of the work for the course in German. Emphasis on a specific author, group of authors, or theme. Course topics may vary, and students may repeat the course with a different topic. All materials and discussions in English. *One semester; four credits*

GRM 409. SPECIAL TOPICS
Intensive study of some aspect or theme of German literature, culture or society in German. May be taken more than once for credit with new topics. Prerequisites: German 301, 302 or 305 and permission of CBU Department Chair. *One semester; four credits.*

GRM 486. SENIOR SEMINAR
Independent study designed to give students the opportunity to apply their knowledge of the discipline in a full-length research paper. Prerequisite: Permission of CBU Department Chair. Offered in the Spring semester. *One semester; two credits.*

■ GLOBAL STUDIES COURSES

GS 200. FOUNDATIONS OF GLOBAL STUDIES
In this course we will explore the diverse and often conflicting meanings associated with the concept of globalization. We will examine world geography with respect to major regions and consider political, economic, and cultural systems with an eye to what it means in the 21st century to be or become a "global citizen." The course will be interdisciplinary and will offer the students the opportunity to examine ways to "globalize" their horizons, their major disciplines, and their career paths. (Same as HUM 200). *One semester; three credits*

GS 300-301. SPECIAL TOPICS IN GLOBAL STUDIES
Special topics courses of interest which include some study abroad. Offered as needed. *One semester; one to three credits*

■ GREEK COURSES

The following foreign language courses will be offered on the campus of Rhodes College under the instruction of Rhodes faculty. See Dean of the School of Arts concerning these courses.

GREK 101. ELEMENTARY GREEK I
Introduces students to the fundamentals of the ancient Greek language. Although the primary goal of the elementary sequence of courses through Greek 201 is to prepare students to use ancient Greek documents in a wide variety of academic contexts, students will begin development of all four language skills: reading, writing, listening, and speaking. *One semester; four credits*

GREK 102. ELEMENTARY GREEK II
Continued introduction to the ancient Greek language. Although the primary goal of the elementary sequence of courses through Greek 201 is to prepare students to use ancient Greek documents in a wide variety of academic contexts, students will continue develop of all four language skills: reading, writing, listening, and speaking. Prerequisite: GREK 101. *One semester; four credits*

GREK 201. INTERMEDIATE GREEK I
This course concludes the elementary language sequence and prepares students for more advanced work in the language. During this course students will make the transition from graded selections in the elementary texts to authentic ancient texts primarily from the fifth and fourth centuries BCE. In addition to developing their ability to comprehend and interpret ancient texts, students will continue to work on their aural-oral proficiency. Prerequisite: Greek 102 or the equivalent. Offered in the Fall semester. *One semester; four credits*

GREK 203. KOINE GREEK II
This course introduces students to koine Greek, the "common" dialect of the post-classical period from ca. 323 BCE to AD 300 and concentrates

on the narrative and epistolary texts of the New Testament. Instructors may choose to read in addition some selections from the Greek translation of the Hebrew Scriptures (Septuagint), the Apocrypha and Pseudepigrapha, Philo, and Josephus. Its primary aims are to help students improve not only their ability to read ancient Greek texts in the original but also to critically examine them, building upon the skills acquired in the Search and Life programs. Prerequisite: GREK 201. *One semester; four credits*

GREK 265. TOPICS IN GREEK LITERATURE

In this course advanced students of ancient Greek will read and analyze texts from major works of literature. It will feature materials organized thematically, generically, by period, or by author. Texts in this course will generally represent significant documents for the study of the cultural and literary history of the Greek society and may also be the subjects of study in other courses offered at Rhodes both by GRS and other disciplines. The course will help students develop greater reading fluency and expand their understanding of interpretative approaches. The course will generally be taught as a four-credit course. Students in special circumstances may take the course for one, two, or three credits with the permission of the instructor. The course may be repeated for credit if the topic differs. Prerequisite: Greek 201 or the equivalent. Offered in the Fall semester. *One semester; one to four credits*

GREK 291. HOMERIC POETRY

This course, making extensive use of resources available via the internet, focuses on the earliest literary documents in the Greek language, the poems attributed to Homer. Readings will come primarily from the Iliad and Odyssey, but students should expect to do some work with the Hymns and the Hesiodic corpus as well. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the Archaic Period of Greek history as well as the issues of composition and transmission. Students will also become familiar with current interpretative approaches to the material. Prerequisite: GREK 265 or equivalent. Some familiarity with Greek history is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 292. GREEK LYRIC POETRY

This course, making extensive use of resources available via the internet, focuses on the evolution of major types of Greek poetry, including elegy, monodic lyric, and choral lyric. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context of the Archaic Period. Students will also become familiar with current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history and Homeric poetry is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 293. GREEK COMEDY

This course, making extensive use of resources available via the internet, focuses on the work of the Athenian comic playwrights. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the 5th and 4th centuries BCE. Students will also become familiar with the current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history, Homeric poetry, the work of the lyric poets, and the literature of the 5th century is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 294. LITERATURE OF THE 4TH CENTURY BCE

This course, making extensive use of resources available via the internet, focuses on the work of the Athenian historians, orators, and philosophers who were active in the 4th century BCE. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoiksis (www.sunoikisis.org), and weekly tutorials with faculty members at their home institutions. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the 4th century BCE. Students will also become familiar with the current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history, Homeric poetry, the work of the lyric poets, and the literature of the 5th century is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 295. HELLENISTIC LITERATURE

This course, making extensive use of resources available via the internet, focuses on the evolution of Greek literature during the Hellenistic period, which begins with the conquest of Alexander the Great and the founding of the Museum at Alexandria by Ptolemy I Soter. Students will read and study the works of the major authors of the period: Callimachus, Theocritus, and Apollonius of Rhodes as well as epigrams from other writers including Meleager, Philodemus, and Posidippus. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context of the Hellenistic Period. Students will also become familiar with current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history, Homeric poetry, the work of the lyric poets, and the literature of the 5th century is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 391. HOMERIC POETRY

Reserved for more advanced students of Greek. This course, making extensive use of resources available via the internet, focuses on the earliest literary documents in the Greek language, the poems attributed to Homer. Readings will come primarily from the Iliad and Odyssey, but students should expect to do some work with the Hymns and the Hesiodic corpus as well. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty

members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the Archaic Period of Greek history as well as the issues of composition and transmission. Students will also become familiar with current interpretative approaches to the material. Prerequisite: GREK 265 or equivalent. Some familiarity with Greek history is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 392. GREEK LYRIC POETRY
Reserved for more advanced students of Greek. This course, making extensive use of resources available via the internet, focuses on the evolution of major types of Greek poetry, including elegy, monodic lyric, and choral lyric. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context of the Archaic Period. Students will also become familiar with current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history and Homeric poetry is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 393. GREEK COMEDY
Reserved for more advanced students of Greek. This course, making extensive use of resources available via the internet, focuses on the work of the Athenian comic playwrights. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the 5th and 4th centuries BCE. Students will also become familiar with the current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history, Homeric poetry, the work of the lyric poets, and the literature of the 5th century is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 394. LITERATURE OF THE 4TH CENTURY BCE
Reserved for more advanced students of Greek. This course, making extensive use of resources available via the internet, focuses on the work of the Athenian historians, orators, and philosophers who were active in the 4th century BCE. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoiksis (www.sunoikisis.org), and weekly tutorials with faculty members at their home institutions. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the 4th century BCE. Students will also become familiar with the current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history, Homeric poetry, the work of the lyric poets, and the literature of the 5th century is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

GREK 395. HELLENISTIC LITERATURE
Reserved for more advanced students of Greek. This course, making extensive use of resources available via the internet, focuses on the evolution of Greek literature during the Hellenistic period, which begins with the conquest of Alexander the Great and the founding of the Museum at Alexandria by Ptolemy I Soter. Students will read and study the works of the major authors of the period: Callimachus, Theocritus, and Apollonius of Rhodes as well as epigrams from other writers including Meleager, Philodemus, and Posidippus. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context of the Hellenistic Period. Students will also become familiar with current interpretative approaches to the material. Prerequisite: Greek 265 or equivalent. Some familiarity with Greek history, Homeric poetry, the work of the lyric poets, and the literature of the 5th century is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

■ HISTORY COURSES

Requirements for the degree are found on Page 48 and 49.

HIST 107. WORLD HISTORY TO 1500
This course is an introduction to origins and development of the major world societies through 1500. Major topics include the changing status of women, the origins and spread of world religions, the nature and results of cross-cultural encounters, different approaches to understanding the human relationship to the natural world, and the various factors behind the decline and collapse of civilizations. *One semester; three credits*

HIST 108. WORLD HISTORY SINCE 1500
This course is an introduction to the histories of major world societies since 1500. Major topics include the changing status of women, the origins and effects of imperialism, the origins and spread of nationalism, the Industrial Revolution, the World Wars, decolonization, the Cold War, and globalization. *One semester; three credits*

HIST 151. AMERICAN SOCIETY TO 1877
A political, social, and economic survey of the Age of Discovery; Colonial America; the Revolutionary, Confederation, and Constitutional periods; the Ante-Bellum, Civil War, and Reconstruction eras. *One semester; three credits*

HIST 152. AMERICAN SOCIETY SINCE 1877
A political, social, and economic survey of the post-Civil War and Reconstruction eras; Industrializationand Reform in the U.S., including the Populist and Progressive Eras; World War I; the Great Depression and the New Deal; World War II and the Cold War; JFK's New Frontier, LBJ's Great Society; Vietnam, Watergate, and recent developments in politics, society, and economics. *One semester; three credits*

HIST 200-210. TOPICS IN HISTORY
Topics vary with instructor. History majors and minors are permitted a maximum of 3 credit hours in this 200 level topics area to count as a substitute for 300/400 level course credit towards their degree. Prerequisite: Sophomore standing. *One semester; three credits*

HIST 279. INTRODUCTION TO ARCHEOLOGY
This class introduces students to archaeological approaches to understanding prehistoric cultures. Students study general anthropological concepts and specific archaeological methods and theories. Specific case studies are presented to illustrate several aspects of archaeological practice, and to show how archaeologists develop their understandings of cultural variation, change, and the rise of modern societies. (Same as ANTH 279). *One semester; three credits.*

UPPER DIVISION COURSES ARE OPEN TO STUDENTS WHO HAVE MET SPECIFIC COURSE PREREQUISITES.

HIST 301. ANCIENT CIVILIZATION
A study of the origins of civilizations in the Near East and the Mediterranean area: Mesopotamia, Egypt, Israel, Persia, Greece, Rome. Prerequisite: HIST 107 or permission of the instructor. *One semester; three credits*

HIST 304. ENGLAND 1760-1950
This course is a survey of British history from the reign of George III to the establishment of a social welfare state under Clement Atlee. Major topics include the American Revolution, Irish relations, the Napoleonic Wars, Industrial Revolution, Imperialism, and the World Wars. Prerequisite: HIST 108 or permission of instructor. *One semester; three credits.*

HIST 305. THE MIDDLE AGES
A political, economic, social, and intellectual history of medieval western civilization. Among other things, the course will cover topics such as the transition from Roman to Medieval civilization, monasticism, feudal society, the religious and intellectual revival of the High Middle Ages, the Papal Monarchy and the Crusades, the Black Death and the transition from Medieval to early modern European civilization. Prerequisite: HIST 107 or permission of the instructor. *One semester; three credits*

HIST 306. SOCIAL HISTORY OF BRITISH ROCK
This course will use readings, lectures, movies, and discussions to examine the connections between British society and the innovative rock music it spawned from the 1950s to the 1990s. Students will discuss the historical context surrounding the creation of music by bands such as The Beatles, The Rolling Stones, The Clash, The Smiths, Joy Division, Oasis, Blur, and Radiohead. Prerequisite: HIST 108, 152, or permission of instructor. *One semester; three credits.*

HIST 313. BRITISH INDIA
The history of British India from the founding of the East India Company in 1600 to partition and the transfer of power in 1947. The main focus will be on the encounter between the British and the Indians, but we will also explore the process of British conquest, the development of colonial policy and imperial ideology, the various forms of Indian reaction and resistance, and the origins and growth of the independence movement. Prerequisite HIST 108 or permission of the instructor. *One semester; three credits*

HIST 315. MODERN EAST ASIA
This course examines the history of China and Japan since 1800. Particular attention is given to the reaction to Western Imperialism and each country's development into a modern nation. Prerequisite: HIST 108 or permission of the instructor. *One semester; three credits*

HIST 324. SCIENTIFIC REVOLUTION
This course is an examination of the origins, development, and effects of the scientific revolution in Europe from 1450 to 1750. The course focuses on the social and cultural forces that shaped the scientific revolution as well as the revolution's broad impact beyond the world of science. The lives and accomplishments of famous scientists, such as Galileo and Newton, will also be covered. Prerequisite: HIST 108 or permission of the instructor. *One semester; three credits*

HIST 330. ADVANCED POLITICS ON FILM
A concentrated critical analysis of the political aspects of film, the politics of film production, and the interpretation of film. This course shall focus on a particular political or social issue, topic, or film genre. (Same as POLS 330) Prerequisite: any Political Science or History course or permission of the instructor Recommended but not required: POLS 230. *One semester; three credits.*

HIST 336. AFRICA AND THE WEST SINCE 1450
This course explores the interaction between Africa and the West from 1450 to the present. Major topics will be Africa's role in the Atlantic World, the effects of the Atlantic Slave Trade on Africa, European colonization, decolonization, and post-colonial struggles. Prerequisite: HIST 108 or permission of the instructor. *One semester; three credits*

HIST 339. EUROPE AND THE GREAT WAR
This course details the history of World War One with a focus on the war's causes and its cultural and social impact within Europe. It will also examine the course of the fighting and major military and political personalities. Prerequisite: HIST 108 or permission of the instructor. *One semester; three credits*

HIST 340. WEIMAR REPUBLIC AND NAZI GERMANY
This course covers the history of Germany from 1919 to 1945. It will examine the collapse of the Weimar Republic and the rise of Nazi power. It will also cover the life of Adolf Hitler, the Holocaust, and Nazi ideology, policy, and war aims. Prerequisite: Any Political Science or History course or permission of the instructor. *One semester; three credits*

HIST 341. REVOLUTIONARY CHANGE IN MODERN EUROPE
This course explores the history of modern Europe through a comparative study of the French and Russian Revolutions. Prerequisite: HIST 108

or permission of the instructor *One semester; three credits*

HIST 342. COLONIAL AMERICA
A study of the political, economic, cultural, and military developments in the thirteen British North American colonies from settlement to 1763. Some discussion of Spanish, French, and Indian cultures will also be included. Prerequisite: HIST 151 or permission of the instructor. *One semester; three credits*

HIST 343. THE AMERICAN REVOLUTION AND EARLY NATIONAL PERIOD
A study of the origins, causes, and results of the American Revolution; the Confederation Period; the Constitutional Convention; the early years of the new nation; emphasis on the emergence of political parties and the Jefferson Presidency. Prerequisite: HIST 151 or permission of the instructor. *One semester; three credits*

HIST 345. THE ANTEBELLUM SOUTH
The study of social, cultural, economic, and political developments in the antebellum South. Prerequisite: HIST 151 or permission of the instructor. *One semester; three credits*

HIST 346. THE CIVIL WAR AND RECONSTRUCTION
An examination of the causes of the Civil War; a comparison of the Union and the Confederacy; military phases of the War; emphasis on Lincoln and Davis; aftermath of the Civil War and the role of the Radical Republicans. Prerequisite: HIST 151 or permission of the instructor. *One semester; three credits*

HIST 347. EMERGENCE OF MODERN AMERICA
A political, economic, social, and diplomatic history of America from the end of Reconstruction to the Great Depression. Prerequisite: HIST 152 or permission of the instructor. *One semester; three credits*

HIST 348. MODERN AMERICA
A political, economic, social, and diplomatic history of America from the Great Depression to the present. Prerequisite: HIST 152 or permission of the instructor. *One semester; three credits*

HIST 349. THE SOUTH SINCE RECONSTRUCTION
A survey of the political, economic, social, and cultural history of the former Confederate and slave states since 1877. Prerequisite: HIST 152 or permission of the instructor. *One semester; three credits*

HIST 350. HONORS AFRICAN-AMERICAN HISTORY
Social, cultural, economic, and political role of African-Americans in the United States from 1619 to the present. Prerequisite: HIST 151, 152, Membership in Honors Program or permission of the instructor. *One semester; three credits*

HIST 351. HISTORY OF THE AMERICAN WEST
This course covers the history of the trans-Mississippi West during the nineteenth century, examining the region's geography, as well as, describing its impact on American history until the symbolic "closing of the frontier" in the 1890s and beyond. As an examination of this distinctive part of American history and culture, this course will also focus on the mythology of the West and the creation of some of America's most lasting and important imagery, especially in movies, music, and literature. Prerequisite: HIST 151, 152, or permission of the instructor. *One semester; three credits*

HIST 352. ENVIRONMENTAL HISTORY OF AMERICA, 1491-PRESENT
Examines the changing and varied American environmental ideas and practices from the colonial era to the present, with particular attention to the influence of race, class, gender, and region on people's visions of and behaviors toward nature. It also emphasizes the key role government officials, industrial capitalism, and cities and suburbs have played in determining the use of natural resources and lands. Prerequisite: HIST 151 or 152; or HUM 210; or permission of instructor. *One semester; three credits*

HIST 353. CITIES AND SUBURBS: ECOLOGY AND COMMUNITY IN U.S. HISTORY
Examines the broad range of urban and suburban environments which different groups of Americans have called home, and the ways in which these locales have endured and changed from 1800 to the present. The course balances the study of cultural ideas, social practices, and institutional and political structures while emphasizing the influence of broad historical forces such as industrialization and immigration. Prerequisite: HIST 151, 152 or permission of instructor. *One semester; three credits*

HIST 354. MANHOOD AND WOMANHOOD IN MODERN AMERICA
Explores the cultural construction and contestation of gender and sexuality norms from the 1820s to the present. This course will articulate the connections between the lives of different socio-economic groups of men and women, while giving particular attention to gendered power dynamics in politics, war, work, leisure, family, and religion. Prerequisite: HIST 151, 152 or permission of instructor. *One semester; three credits*

HIST 355. CHILDHOOD AND YOUTH IN AMERICAN HISTORY
Examines how gender, race, class, and urban and rural living have structured different childhood experiences and conflicting cultural norms from the colonial era to the present. This course emphasizes how education, work, play, parenting, voluntary organizations, reform efforts, and independent youth cultures have reflected both changes and continuities in ideas about children's role in the family and society. Prerequisite: HIST 151, 152 or permission of instructor. *One semester; three credits*

HIST 375. UNITED STATES FOREIGN POLICY
This course will examine the history and practice of U.S. foreign policy. It will examine current issues in U.S. foreign policy, the organization and function of institutions, how decisions are made, and the politics of foreign policy making. (Same as POLS 375). Prerequisite: any political science or history course or permission of the instructor. Recommended but not required, one of the following: HIST 152 or POLS 112 or 113. *One*

semester; three credits

HIST 376. MEXICO, CENTRAL AMERICA, AND THE CARIBBEAN
A political, military, and cultural history of three important regions of Latin America. This course will examine the course and impact of European conquest, the role of colonial institutions, and independence movements. The greatest attention will be paid to twentieth-century events and trends, in order to analyze their influence on contemporary societies in these areas. Prerequisite: HIST 108 or permission of the instructor. *One semester; three credits*

HIST 377. REVOLUTIONARY LATIN AMERICA
This course will examine the role of revolutions throughout nineteenth and twentieth century Latin America. The focus of the course will be on political and military events, as well as the theory behind revolutionary activity. Careful attention will be paid to revolutions in Mexico, Guatemala, Cuba, Nicaragua, and El Salvador. Prerequisite: HIST 108 or permission of the instructor. *One semester; three credits*

HIST 380. HONORS POLITICAL HISTORY OF THE SPACE AGE
The political history of space exploration and utilization. Legal, scientific, and military aspects of space. The space programs of current and emerging space-faring countries. Commercial use of space and private sector spaceflight programs. The cultural and social impacts of space exploration. The prospects and implications of space colonization and the search for extraterrestrial intelligence. Prerequisite: Any Political Science or History course, or permission of instructor. (Same as POLS 380). *One semester; three credits*

HIST 385-389. SPECIAL TOPICS IN NON-U.S. HISTORY
Topics vary with instructor. Prerequisite: permission of the instructor. *One semester; three credits*

HIST 390-399. HONORS SPECIAL TOPICS
Special topics in history open to members of the Honors Program or by permission of instructor and Honors Director. *One semester; one to four credits*

HIST 401-402. INTERNSHIP
Content varies with specific internship program. Prerequisites: permission of History Internship Director and junior standing. *One semester each; one to three credits*

HIST 490-497. TOPICS IN HISTORY
Topics vary with instructor. Prerequisite: permission of instructor. *One semester; three credits*

HIST 498. TOPICAL HISTORY RESEARCH SEMINAR
Topics vary with instructor but will focus on research methods and the completion of a major research project. Each course will be based on a common topic, with students developing their own research project related to the common course topic. As part of the writing and research process students will deliver 20 minute presentations of their research. All history majors are required to pass this course or HIST 499 with a minimum grade of a C. Prerequisites: 6 hours of 300/400 level history credit and senior standing, or junior standing with permission of the instructor. *One semester; three credits*

HIST 499. US HISTORY RESEARCH SEMINAR
US topics vary with instructor but will focus on research methods and the completion of a major research project. Each course will be based on a common theme or time period, with students developing their own research project related to the common course theme or period. As part of the writing and research process students will deliver 20 minute presentations of their research. All history majors are required to pass this course or HIST 498 with a minimum grade of a C. Prerequisites: 6 hours of 300/400 level history credit and senior standing, or junior standing with permission of the instructor. *One semester; three credits*

■ HOSPITALITY AND TOURISM MANAGEMENT COURSES (offered through Study Abroad Program)

HTM 415. INTRODUCTION TO TOURISM
In this course students are introduced to the basic dimensions of tourism on the basis of concrete practical examples, especially the various levels of tourism, the various perspectives from which it can be viewed, as well as the basic steps in creation of touristic products. Additional topics are the connection between supply and demand within the context of different parameters, such as regional culture; legal and political frameworks; economic and financial systems, the current financial climate, and climate change, energy concerns and environmental protection. Finally management approaches in keeping with these issues will be discussed, which will then be built upon in later stages of the students' studies. *One semester; four credits*

HTM 420. APPLIED PROJECT IN TOURISM
Students will work independently in teams of 4-5 members to organize and complete a specific project. The topics will be interdisciplinary so as to interconnect the study program's subject areas and promote interdisciplinary know-how. The teams will be supported by an interdisciplinary faculty tandem. This didactic method is designed to maximize interdisciplinary interactions and support. Students will draw from the theoretical background they have received in previous courses in order to apply their knowledge of tourism and management. Project topics will vary from year to year. *One semester; four credits*

HTM 430. FOUNDATION IN HOSPITALITY MANAGEMENT
Hospitality management is a key area in tourism, around which most other touristic products are clustered. For this reason a basic knowledge of the field is crucial to any tourism program. In this course the basic elements of hospitality management will be explained, including personnel management, strategic and operative elements, legal frameworks and quality control measures. *One semester; three credits*

HTM 440. EVENT MANAGEMENT
In this course the psychological, organizational and social foundations necessary for staging events will be covered. New trends in the event sector

will be explained on the basis of these foundations. Basic technical knowledge needed to stage events will be discussed, such as 1) legal and business parameters; 2) the main technical and organizational considerations in mounting events; 3) entrepreneurial approaches to planning events, including budgeting of supplies, personnel, time and costs on the basis of concrete examples; 4) important risks connected with the mounting of events, such as accidents, as well as strategies to minimize these risks through the use of checklists and other means. *One semester; one credit*

HTM 450 - 451. SPECIAL TOPICS
Special topics in the Hotel, Restaurant, Tourism curricula. *One semester; one to three credits*

HTM 455. PRACTICUM
This course is designed to explore and put to practical use the entire body of knowledge gained in previous HTM courses. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific problems in hospitality and tourism management. Prerequisite: Permission of the Instructor. Offered in the Fall and Spring semesters. *One semester; three credits*

■ HUMANITIES COURSES

HUM 150. PERSPECTIVES ON PUBLIC LIFE
This course will examine what it has meant throughout history and in different cultures to be a member of a society. Students will learn about and critically analyze the role of the individual in civil society from depictions in history, literature, religion, philosophy, and the fine arts. A key aim of the course is to provide students with essential insight into the opportunities and justification for lives of community involvement. *One semester; three credits*

HUM 200. FOUNDATIONS OF GLOBAL STUDIES
In this course we will explore the diverse and often conflicting meanings associated with the concept of globalization. We will examine world geography with respect to major regions and consider political, economic, and cultural systems with an eye to what it means in the 21st century to be or become a "global citizen." The course will be interdisciplinary and will offer the students the opportunity for students to examine ways to "globalize" their horizons, their major disciplines, and their career paths. (Same as GS 200) *One semester; three credits*

HUM 210. INTRODUCTION TO SUSTAINABILITY
This class will use common texts, discussions, collaborative activity, and field trips to explore the meanings of environmental and community sustainability from multiple cultural and academic perspectives. Guest speakers from local community organizations and businesses as well as CBU professors from different departments will engage students with what sustainability means in their professional and civic activity. Students will collaborate as a class or work in groups to design a project that achieves sustainability-related outcomes. *One semester; three credits.*

HUM 254. CHRISTIANITY AND PEACE (Formerly HUM 354)
An analysis of historical Christian attitudes toward war and peace. Theological and moral arguments for the pacifist and just war traditions will be analyzed, along with their application to forms of state sanctioned violence such as war and capital punishment and the new challenges to these traditions such as military intervention and terrorism. (Same as RS 254). *One semester; three credits*

HUM 295, 395. COMMUNITY SERVICE
A structured opportunity for students to select and participate in a community service project in the Memphis area. Includes regular meetings with the faculty advisor, group meetings for reflection and discussion. Normally involves a minimum of 60 hours of service. *One semester; three credits*

HUM 306. COMPUTERS AND SOCIETY
An examination of the social implications of computer technology and of the special social and ethical issues raised by the growing use of computers in all aspects of human life, including business and finance, science, education, government, etc. Among topics considered will be privacy and security, quality of work life, the potentials and problems of computer modeling, information systems and artificial intelligence, and the responsibilities of computer professionals and others for the use of computers. *One semester; three credits*

HUM 498. HONORS CAPSTONE
As a required capstone experience, each Honors student will participate in the Honors Capstone in the Senior year. Using an interdisciplinary approach and drawing upon a special topic or theme that can vary from year to year, students will critically reflect upon their academic major and previous Honors courses in the context of broader moral visions and public commitments. Prerequisite: Senior standing. *One semester; three credits*

■ LATIN COURSES

The following foreign language courses will be offered on the campus of Rhodes College under the instruction of Rhodes faculty. See Dean of the School of Arts concerning these courses.

LATN 101. ELEMENTARY LATIN I
An introduction to the fundamentals of the Latin language. Although the primary goal of the elementary sequence of courses through Latin 201 is to prepare students to use Latin documents in a wide variety of academic contexts, students will develop all four language skills: reading, writing, listening, and speaking. Offered in the Fall semester. *One semester; four credits*

LATN 102. ELEMENTARY LATIN II
A continued introduction to the Latin language. Although the primary goal of the elementary sequence of courses through Latin 201 is to prepare students to use Latin documents in a wide variety of academic contexts, students will develop all four language skills: reading, writing, listening, and speaking. Offered in the Spring semester. Prerequisite: LATN 101. *One semesters; four credits*

LATN 201. INTERMEDIATE LATIN I

This course concludes the elementary language sequence and prepares students for more advanced work in the language. During this course, students will begin making the transition from graded selections in the elementary texts to authentic ancient texts from a variety of Latin authors and genres from antiquity to the modern period. In addition to developing their ability to comprehend and interpret ancient texts, students will continue to work on their aural-oral proficiency. Prerequisite: Latin 102 or the equivalent. Offered in the Fall semester. *One semester; four credits*

LATN 202. LATIN RHETORIC II

In keeping with the pedagogy of the ancient schools of rhetoric, this course will provide an analytic and comprehensive review of the structures of the language. Students will work toward fluency in reading, composition, and conversation. Prerequisite: Latin 201 or the equivalent. Offered in the Spring semester. *One semester; four credits*

LATN 232. LATIN IN ROME

An intensive reading course examining works of Latin literature pertinent to the study of the topography of Rome. Selections will come from Roman historians, poets, orators, and inscriptions. Class meetings will take place in the city of Rome. Students will visit and analyze sites described in the primary literature; inscriptions review in situ where possible, and study the textual tradition through available manuscripts. Prerequisite: Latin 201 or the equivalent. Offered in the Summer semester. *One semester; four credits*

LATN 265. TOPICS IN LATIN LITERATURE

In this course advanced students of Latin will read and analyze texts from major works of literature. It will feature materials organized thematically, generically, by period, or by author. Texts in this course will generally represent significant documents for the study of the cultural and literary history of Roman society and may also be the subjects of study in other courses offered at Rhodes both by GRS and other disciplines. The course will help students develop greater reading fluency and expand their understanding of interpretative approaches. The course will generally be taught as a four-credit course. Students in special circumstances may take the course for one, two, or three credits with the permission of the instructor. The course may be repeated for credit if the topic differs. Prerequisite: Latin 201 or the equivalent. *One semester; one to four credits*

LATN 291. LATIN LITERATURE FROM THE EARLY REPUBLIC

This course, making extensive use of resources available via the internet, focuses on the earliest literary documents in the Latin language. Readings will come primarily from the comedies of Plautus and Terence, but students should expect to study other examples of archaic Latin such as the fragments of Ennius' Annales. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the early Republic. Students will also become familiar with current interpretative approaches to the material. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

LATN 292. LATIN LITERATURE FROM THE LATE REPUBLIC

This course, making extensive use of resources available via the internet, focuses on the literature of Rome during the Late Republic. Readings will come primarily from the work of Cicero, Catullus, Caesar, and Sallust. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the Late Republic. Students will also become familiar with the current interpretative approaches to the material. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

LATN 293. LITERATURE OF THE NEROIAN PERIOD

This inter-institutional collaborative course, making extensive use of resources available via the internet, explores the literature of the early Roman Empire, with a particular emphasis on the works of authors who were active during the period of Nero's reign. These authors include Seneca, Lucan, and Petronius. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the early Principate. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

LATN 294. ROMAN LITERATURE, 70-180 CE

This course, making extensive use of resources available via the internet, explores the society of the Roman Empire through the works of authors who were active during the period beginning with the reign of Vespasian and extending to the death of M. Aurelius. These authors include Martial, Statius, Tacitus, Pliny the Younger, Juvenal, and Apuleius. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will require extensive reading in more than one genre of Latin literature and a rigorous study of the cultural and historical context of Rome in the late first and second centuries CE. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

LATN 295. LATIN LITERATURE FROM LATE ANTIQUITY AND THE MIDDLE AGES

This course examines the literature produced during and after the dissolution of the Roman empire, beginning approximately with the reforms of Diocletian and Constantine and concluding with the renaissance of secular education in the twelfth century. Texts will include selections from the work of Jerome, Augustine, Prudentius, Alcuin of York, Einhard, Hrotsvitha of Gandersheim, Abelard, Heloise, Hildegard of Bingen, and Walter of Chatillon. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions

that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will require extensive reading in more than one genre of Latin literature and a rigorous study of the cultural and historical context of Rome and the Latin-speaking world after 180 CE. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

LATN 391. LATIN LITERATURE FROM THE EARLY REPUBLIC
Reserved for more advanced students of Latin. This course, making extensive use of resources available via the internet, focuses on the earliest literary documents in the Latin language. Readings will come primarily from the comedies of Plautus and Terence, but students should expect to study other examples of archaic Latin such as the fragments of Ennius' Annales. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the early Republic. Students will also become familiar with current interpretative approaches to the material. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. **One semester; four credits**

LATN 392. LATIN LITERATURE FROM THE LATE REPUBLIC
Reserved for more advanced students of Latin. This course, making extensive use of resources available via the internet, focuses on the literature of Rome during the Late Republic. Readings will come primarily from the work of Cicero, Catullus, Caesar, and Sallust. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the Late Republic. Students will also become familiar with the current interpretative approaches to the material. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. **One semester; four credits**

LATN 393. LITERATURE OF THE NEROIAN PERIOD
Reserved for more advanced students of Latin. This inter-institutional collaborative course, making extensive use of resources available via the internet, explores the literature of the early Roman Empire, with a particular emphasis on the works of authors who were active during the period of Nero's reign. These authors include Seneca, Lucan, and Petronius. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will include a rigorous study of the cultural and historical context during the early Principate. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. **One semester; four credits**

LATN 394. ROMAN LITERATURE, 70-180 CE
Reserved for more advanced students of Latin. This course, making extensive use of resources available via the internet, explores the society of the Roman Empire through the works of authors who were active during the period beginning with the reign of Vespasian and extending to the death of M. Aurelius. These authors include Martial, Statius, Tacitus, Pliny the Younger, Juvenal, and Apuleius. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will require extensive reading in more than one genre of Latin literature and a rigorous study of the cultural and historical context of Rome in the late first and second centuries CE. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. **One semester; four credits**

LATN 395. LATIN LITERATURE FROM LATE ANTIQUITY AND THE MIDDLE AGES
Reserved for more advanced students of Latin. This course examines the literature produced during and after the dissolution of the Roman empire, beginning approximately with the reforms of Diocletian and Constantine and concluding with the renaissance of secular education in the twelfth century. Texts will include selections from the work of Jerome, Augustine, Prudentius, Alcuin of York, Einhard, Hrotsvitha of Gandersheim, Abelard, Heloise, Hildegard of Bingen, and Walter of Chatillon. Students will participate in a weekly webcast lecture, an online discussion moderated by faculty members from institutions that participate in Sunoikisis (www.sunoikisis.org), and weekly tutorials with faculty members at Rhodes. This course is specifically designed for advanced students and will require extensive reading in more than one genre of Latin literature and a rigorous study of the cultural and historical context of Rome and the Latin-speaking world after 180 CE. Prerequisite: Latin 265 or equivalent. Some familiarity with Roman history and the literature of the Augustan period is strongly advised. Permission of the instructor is required. Offered in the Fall semester. *One semester; four credits*

■ MANAGEMENT COURSES

Requirements for the concentration are found on page 65. Requirements for the minor are found on page 67.

MGMT 227. FOUNDATIONS OF MANAGEMENT
An introductory management class examining organizations and the role of managers. The course is organized around the four functions of management: planning, organizing, leading and controlling. Broader themes such as ethics and organizational culture are also discussed. *One semester; three credits*

MGMT 250. LEADERSHIP AND DIVERSITY
The intensive, year-long program is designed to develop leadership and interpersonal skills with the goal of informing positive social attitudes regarding the desirability and value of diversity in the community and the importance of community action. Topics include: leadership, civic responsibility, trust, problem-solving, critical thinking, communication, conflict resolution and human relations. Prerequisite: Admission to the Bridge Builders

Junior Leadership Conference. Students will register for the course in the Spring semester. *Three credits*

MGMT 251. LEADERSHIP AND SERVICE
The intensive, year-long program will provide students with an opportunity to design and implement a major service project at a local high school. Students will provide leadership for the project by: conducting a needs assessment; identifying a specific need to address in their project; design, staff and implement the project; evaluate the effectiveness of the project; and, present their results to the community. Prerequisite: Admission to the Bridge Builders Senior Leadership Conference. Students will register for the course in the Spring semester. *Three credits*

MGMT 290. HONORS LEADERSHIP
Using a multidisciplinary approach to leadership, this class will include both theoretical and practical material from fields such as management, psychology, literature, history and religion. Students will develop their own philosophy of leadership and prepare themselves for leadership roles based on a thorough understanding of case studies and theoretical models. Prerequisite: membership in the Honors Program or permission of Honors Program Director and instructor. Offered as needed. *One semester; three credits*

MGMT 291-299. HONORS SPECIAL TOPICS
Special topics in management open to members of the Honors Program or by permission of Honors Program Director and instructor. *One semester; one to four credits*

MGMT 300. INTERNATIONAL BUSINESS & CULTURAL EXPERIENCE
This course introduces students to the business, political, economic, and cultural environments of a selected country. Experiential study, classroom lectures, and activities including site visits, guest lectures, and cultural experiences are integrated to develop a comprehensive understanding of the country selected. The course content includes a visit to the country selected for study. Open to all students. Students must have a valid passport. Course may be repeated for different countries. Offered as needed. *One semester; three credits*

MGMT 320. INTERNATIONAL BUSINESS
An introduction to the field of international business and the implications of international trade and globalization upon American business. Topics include the comparison of political economies and cultures, global trade and investment strategies, foreign investment, regional economic integration, foreign exchange markets, strategic alliances and global marketing. Prerequisite: ECON 214 and 215 or ECE/CH E/CE/ME 314. *One semester; three credits*

MGMT 352. ORGANIZATIONAL BEHAVIOR AND MANAGEMENT
The psychology of organizations and their effect on individuals and groups. Topics include motivation theory, power and authority, communication, teamwork, leadership, job design and organizational structures. Other issues include globalization, cultural diversity, ethics and technology and coaching, developing, motivating, and taking corrective action with employees in the day-to-day experiences of management. Offered in the Spring semester. *One semester; three credits*

MGMT 400. MANAGEMENT INTERNSHIP
Under the supervision of a faculty member from the appropriate department, students in the School of Business, after receiving the approval of the faculty, are placed in the offices of cooperating firms to receive on-the-job training under the supervision of members of the firm. Credit is granted upon acceptance of periodic reports and a final summary report of work done verified by the authorized supervisor and the instructor. *Pass/Fail grading. One semester; three credits*

MGMT 412. HUMAN RESOURCES MANAGEMENT
Personnel administration principles and philosophy, from the perspective of employer and employee. Major topics include recruiting, hiring, training, promotion, health and welfare, and employee safety. In addition, the legal environment surrounding human resource issues will be studied. Prerequisite: MGMT 227 or 352. Offered in the Fall semester. *One semester; three credits*

MGMT 418. OPERATIONS AND SUPPLY CHAIN MANAGEMENT (Formerly MKTG 418)
This course is designed to introduce the students to the operation function of the organization with an emphasis on the supply chain processes. Operation and Supply Chain managers are challenged to improve organizational productivity by reducing costs, creating flexible processes, and improving product and service quality. Emphasis will be placed on analyzing process strategies, performance and quality, inventory control and lean systems, supply chain development, location, and transportation analysis. The course will integrate quantitative modeling with business problem solving by using the tools of forecasting, decision making, linear programming, inventory models, waiting line analysis, and project management models. Prerequisites: MKTG 311, MGMT 227 or 352, and STAT 222. *One semester; three credit hours*

MGMT 428. MANAGEMENT QUANTITATIVE METHODS (Formerly MGMT 339)
This course is designed to strengthen the student's knowledge of and ability to use management science models. In-depth study of modeling such as linear and goal programming, queuing models, simulation, and more advanced decision making models will be the focus. Prerequisite: MGMT 418 or MKTG 418. Offered in the Spring semester. *One semester; three credit hours*

MGMT 430. ETHICAL DECISION MAKING IN BUSINESS
This course is an applied course in business and managerial ethics. Various ethical theories will be applied to contemporary business situations. In addition, the course will focus on raising the awareness of the student to ethical issues, principles and arguments by examining the social and corporate environment in which they will be living and working. Prerequisite: PHIL 220 or equivalent, MGMT 227 or 352, MKTG 311 and FIN 327. *One semester; three credits*

MGMT 450. ORGANIZATION STAFFING AND DEVELOPMENT
Addresses the organizational staffing cycle from job analysis through recruitment, selection, employee development, career planning, retirement and downsizing. Legal issues pertaining to staffing are covered as well as the training process, including learning theory and technology as applied

to training. Prerequisite: MGMT 412. Offered as needed. *One semester; three credits*

MGMT 451. ORGANIZATIONAL REWARD SYSTEMS
Analyzes the components of reward systems, including base pay, incentive pay, and employee benefits. Development of pay plans, performance appraisal systems, various types of individual, group and organization-wide incentive programs, and outlines the various types of employee benefits. Prerequisite: MGMT 412. Offered as needed. *One semester three credits*

MGMT 452. EMPLOYEE AND LABOR RELATIONS/EMPLOYMENT AND LABOR LAW
Evolution of and current practices related to effective workplace relations between employer and employee in both union and non-union environments. The establishment and maintenance of a safe, healthy, diverse and secure workplace. Legal issues related to Human Resources, including EEO, FLSA, ADA, ERISA, and federal and state labor laws are explored. Prerequisite: MGMT 412. Offered as needed. *One semester three credits*

MGMT 453. SEMINAR IN GLOBAL BUSINESS
This course requires an international trip which provides students an opportunity to explore firsthand the international dimensions of business, to identify and pursue strategic issues in international business and trade, and to gain an awareness of how the cultural, economic, political, and legal environments influence business practices. Students study and conduct research on the country and prepare a report detailing business and cultural practices, political and economic environments. Other business and cultural research/analysis will be based on the emphasis of the course. Students bear the costs of airfare, lodging and meals. Prerequisite: ECON 214 and 215. Offered as needed. *One semester; three credits*

MGMT 455. PRACTICUM AND PROJECT IN MANAGEMENT
This course is designed to explore and put to practical use the entire body of knowledge gained in previous MGMT courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific management problems. Prerequisite: Permission of the instructor. *One semester; three credits*

MGMT 460-466. SPECIAL TOPICS IN MANAGEMENT
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Management. Prerequisite: MGMT 352. Offered as needed *One semester; three credits*

MGMT 490. SEMINAR IN LEADERSHIP
Readings, critical evaluation and analysis of selected topics in current management literature, research and practice. Individual and group analyses and presentations of assigned topics. Major research project to be presented to faculty and senior students. Prerequisites: MGMT 352, MKTG 311 and FIN 327. Offered in the Spring semester. *One semester; three credits*

MGMT 498. BUSINESS POLICY/STRATEGIC PLANNING
This course will consist of a series of lectures and practice exercises in research methods and case analysis. The study of corporate and business level policy and strategy making is developed using a top-management perspective. A research report along with case analysis papers will be prepared by each member of the class. In-class case assignments will be used for discussion and evaluation. Prerequisites: FIN 327, MGMT 227 or 352 and MKTG 311. *One semester; three credits*

■ MANAGEMENT INFORMATION SYSTEMS COURSES

Requirements for the concentration are found on page 66. Requirements for the minor are found on page 67.

MIS 153. INTRODUCTION TO COMPUTER BUSINESS APPLICATIONS (Formerly ITM 153)
This course is intended to provide to students a working knowledge of modern computation and business information processing via the common tools of word processing, presentation, spreadsheet, and data base management. Information coverage will include text, numerical, graphical, and functional representations via common business applications such as break-even analysis, present value determination, depreciation schedules, loan amortization tables, etc. *One semester; three credits*

MIS 231. INTRODUCTION TO MIS (Formerly ITM 231)
The purpose of this course is to introduce the fundamentals of Management Information Systems. This course discusses components of information systems (hardware, software, databases, and data communication technologies) and uses examples and cases to demonstrate important uses of information systems in organizations. Topics include transaction processing, e-commerce, supply chain systems, customer relationship management systems, marketing information systems, decision support systems, knowledge management systems, and ethics and security issues. Prerequisite: MIS 153 and MATH 105. *One semester; three credits*

MIS 271- 279. MIS SEMINARS
Through contractual arrangements with companies, government agencies, and/or organizations, the School of Business will offer courses on selected MIS topics. Students may take up to nine seminars as long as titles and content are clearly distinctive. Credit awarded may be used as free electives hours only. Enrollment is limited and requires permission of the Director of the associated program or Dean of the School of Business. Offered as needed. *One semester; one to three credits*

MIS 351. SYSTEMS ANALYSIS AND DESIGN (Formerly ITM 351)
This course presents methods for analyzing and designing business IT systems. The course emphasizes the Systems Development Life Cycle (SDLC) methodology. Classical and object oriented methods and tools are applied to business analysis and problem solving situations with adjustments as required to today's business environment. Included are requirements analysis and use case analysis, process models, data models, consistency of process and data models, justification and costing techniques, conversion and implementation procedures. A case study is employed to provide a practical "hands-on" approach. Prerequisite: MIS 231 or permission of instructor. Offered in the Fall semester. *One semester; three credits*

MIS 400-401. MIS INTERNSHIP
Under the supervision of a faculty member, students work on a real world project ("on-the-job-training") either for a company, for CBU, or for a charity organization. Special CBU approval forms must be completed. A student may take two internships, but only one per organization. Prerequisite: MIS 231 and 351. Offered as needed. *One semester; three credits*

MIS 455. INFORMATION SYSTEMS PRACTICUM AND PROJECT MANAGEMENT (Formerly ITM 455)
This course is designed to explore and put to practical use the entire body of knowledge gained in previous MIS courses. Topics will principally focus upon the managerial aspects of effective information technology deployment. Project Management concepts will be covered, including use of project management tools. A comprehensive project will test student's ability to apply technology and business skills to develop a workable, manageable, and effective information systems solution. Prerequisite: MIS 231, 351, 470 and 471 or permission of instructor. Offered as needed. *One semester; three credits*

MIS 456. CYBER SECURITY INTERNSHIP
This course is designed to explore and put to practical use the entire body of knowledge gained in the Cyber Security Program. A comprehensive project performed for an organization will assess the student's ability to apply classroom concepts and skills to a key cyber security issue. Project Management concepts and reporting will also be included. Prerequisite: MIS 481/L, 482/L and 483. *One semester; three credits*

MIS 460-466 SPECIAL TOPICS IN MIS
Course designed to permit intensive study into topics of special interest and timeliness in the area of Management Information Systems Management. Prerequisites depend upon topics and approval of instructor. Offered as needed. *One semester; three credits*

MIS 470. APPLICATION AND WEB DEVELOPMENT (Formerly ITM 470)
This course familiarizes students with the modern web based application development and programming environment. It also teaches students the basics of key Internet technologies (HTML, JavaScript, Dynamic HTML, CSS, ASP, PHP, AJAX, and XML), and trains students into the application and usage of key Internet tools. Upon completion of this course, students will be able to create and maintain modern advanced dynamic Websites. Prerequisites: MIS 153 and 231, or permission of instructor. Offered as needed. *One semester; three credits*

MIS 471. DATA BASE DESIGN AND BUSINESS INTELLIGENCE (Formerly ITM 471)
The course presents database design and management and emphasizes the relational model and Structured Query Language. Topics include database models, query languages, query optimization, database implementation, distributed processing, data mining, and business intelligence. Prerequisite: MIS 153 and 231, or permission of the instructor. Offered as needed. *One semester; three credits*

MIS 481. INFORMATION SECURITY
This course provides an overview of security challenges and strategies of countermeasure in the information systems environment. Topics include definition of terms, concepts, elements, and goals incorporating industry standards and practices with a focus on availability, vulnerability, integrity and confidentiality aspects of information systems. This course includes access control to information systems and applications encompassing authentication and accounting for end-users and system administrators. The course also addresses the broad topic of risk management, how risk, threats, and vulnerabilities impact information systems, how to assess and manage risk based on defining an acceptable level of risk for information systems, and business continuity planning and disaster recovery. Prerequisite: MIS 231 (or equivalent). Corequisite: MIS 481L. Offered as needed. *One semester; three credits*

MIS 481L. INFORMATION SECURITY LAB
This lab accompanies MIS 481 and provides hand on exercises to compliment the concepts covered in MIS 481. Prerequisite: MIS 231 (or equivalent). Corequisite: MIS 481. Offered as needed. *One semester; one credit*

MIS 482. DIGITAL FORENSICS
This course covers information system forensics investigation and response. Areas of study include concepts and procedures for investigating computer and cyber-crime and methods for collecting, analyzing, recovering and preserving forensic evidence. Using modern digital forensic tools and preparing forensic reports is also covered. Prerequisite: MIS 481. Corequisite: 482L. Offered as needed. *One semester; three credits*

MIS 482L. DIGITAL FORENSICS LAB
This lab accompanies MIS 482 and provides hand on exercises to compliment the concepts covered in MIS 482. Prerequisite: MIS 481. Corequisite: MIS 482. Offered as needed. *One semester; one credit*

MIS 483. SECURITY COMPLIANCE AND AUDITING
This course offers an overview of the American legal system, privacy laws and issues, and the legal and accounting processes involved in implementing and maintaining business IT systems. It includes the principles, the approaches and the methodology in auditing information systems to ensure the processes and the procedures are in compliance with pertinent laws and regulatory provisions especially in the context of information systems security. Prerequisite: MIS 481. Offered as needed. *One semester; three credits*

■ MARKETING COURSES

Requirements for the concentration are found on page 66. Requirements for the minor are found on page 67.

MKTG 311. PRINCIPLES OF MARKETING
Addresses the marketing-management functions directed toward organizational customers and prospects who buy goods and services necessary for the operation of their own businesses. Concepts of purchasing strategy, material management, and organizational buying behavior are integrated into electronic developments, strategic alliances and partnerships, and just in time. Prerequisite: Junior standing and ECON 214. *One semester; three credits*

MKTG 324. MARKETING RESEARCH AND INTELLIGENCE
The study of techniques and principles for systematically monitoring environments-collecting, recording, analyzing, and interpreting data that can aid decision makers who are involved with marketing of goods, services, or ideas. The application of intelligence and research findings in the development of marketing strategy is emphasized. The class employs research cases and projects to enhance students' practical research and intelligence skills. Prerequisite: MKTG 311 and STAT 222. Offered in the Spring semester. *One semester; three credits*

MKTG 334. MARKET AND CONSUMER BEHAVIOR
This investigation into consumer behavior brings together relevant research and applications from the behavioral sciences and other fields of marketing. The course will evaluate the decision process that individuals use as they obtain and use goods and services. The course will investigate the factors employed to identify and measure market segments. Emphasis is placed on an analysis of consumer behavior as a basis for marketing strategy. Prerequisite: MKTG 311. Offered in the Fall semester. *One semester; three credits*

MKTG 338. SELLING AND SALES MANAGEMENT
This course will provide a detailed investigation of that portion of the Marketing Mix pertaining to promotion with specific emphasis on Personal Selling. While some discussion will be given to sales techniques, the major emphasis will be concerned with the management of the outside sales force and the activities of that sales force. Prerequisite: MKTG 311. Offered as needed. *One semester; three credits*

MKTG 348. BUSINESS TO BUSINESS MARKETING
Addresses the marketing functions directed toward organizational customers and prospects who buy goods and services necessary for the operation of their own businesses. Concepts of purchasing strategy, material management and organizational buying behavior are integrated into electronic developments, strategic alliances and partnerships, and JIT. Prerequisite: MKTG 311. Offered as needed. *One semester; three credits*

MKTG 400. MARKETING INTERNSHIP
Under the supervision of a faculty member from the appropriate department, students in the School of Business, after receiving the approval of the faculty, are placed in the offices of cooperating firms to receive on-the-job training under the supervision of members of the firm. Credit is granted upon acceptance of periodic reports and a final summary report of work done verified by the authorized supervisor and the instructor. *Pass/Fail grading. One semester; three credits*

MKTG 401. INTRODUCTION TO REAL ESTATE
Basic terminology, principles and issues; market analysis, real estate law, instruments, legal descriptions, appraisal, investment, finance, brokerage, property management. Offered as needed. *One semester; three credits*

MKTG 411. MARKETING POLICY AND STRATEGY
This course is designed to introduce students to the activities that are necessary for the organization to provide the products and/or services necessary to meet the company's goals. The operations and supply chain managers are challenged to improve productivity while reducing costs, creating flexible processes that will meet the ever changing customer needs, and improving product and service quality. Emphasis will be placed on process strategies and analysis, quality and performance, inventory controls and lean systems, supply chain development and integration, location, and transportation analysis. The tools used will include forecasting, decision making, linear programming, inventory models, waiting line analysis, and project management models. Offered in the Spring semester. Prerequisite: MKTG 311 and 324. *One semester; three credits*

MKTG 433. PROMOTIONAL STRATEGY
This course is designed to provide the student with the communication processes used in marketing. The course builds on the base of an understanding of consumer behavior by treating the fields of advertising, sales promotion, personal selling, reseller stimulation, and other communications skills as part of the overall promotional mix. The course develops fundamental considerations as a background to a focus on managerial issues and problems. The various communication methods are treated as variables to communicate the want satisfying attributes of products and services. Prerequisite: MKTG 311. Offered in the Fall semester. *One semester; three credits*

MKTG 438. INTERNATIONAL MARKETING.
This course provides the framework for marketing on a global basis. Topics include: globalization and implications for marketing managers; international market entry decisions; partnering and alliances; pricing, product policy, and branding in the global market; standardization versus adaptation decisions in international marketing; and marketing research applications in global marketing. Prerequisite: MKTG 311 and MGMT 320. Offered in the Fall semester. *One semester; three credit hours*

MKTG 440. ENTREPRENEURSHIP
This course provides a foundation for an understanding of the variables and functions in the start-up of new business ventures. More and more businesses are being started, and the opportunities are there for such actions. The development of strategic plans and feasibility studies are essential for successful introduction of new businesses. It includes the study of theory, while developing a practical knowledge of the marketing management system and key concepts for new ventures. This course is designed to enable new enterprises a stronger opportunity to achieve a higher quality of success. Prerequisites: MGMT 227 or 352 and MKTG 311. Offered as needed. *One semester; three credits*

MKTG 455. PRACTICUM AND PROJECT IN MARKETING
This course is designed to explore and put to practical use the entire body of knowledge gained in previous Marketing courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific marketing problems. Prerequisite: Permission of the instructor. *One semester; three credits*

MKTG 460-466. SPECIAL TOPICS IN MARKETING
Courses are designed to permit intensive study into topics of special interest and timeliness in the area of marketing. Prerequisite: MKTG 311. Offered as needed. *One semester; three credits*

■ MATHEMATICS COURSES

Requirements for the degree are found on Pages 100-103.
Note: Most Mathematics courses require the use of a graphing calculator.

MATH 103. FUNDAMENTALS OF ALGEBRA
The course is designed to give the student fundamental quantitative and algebraic skills needed in other mathematics and science courses. Topics include: equations and inequalities, absolute value, linear systems, exponents, factoring, rational expressions, rational exponents, quadratic equations, and functions. The course does not supply any portion of the mathematics credits required in any CBU degree program. Students may not receive credit for MATH 103 after completing any mathematics course numbered above 103. Prerequisite: Minimum Math ACT of 20 or one year of high school algebra and passing a placement exam. *One semester; three credits*

MATH 105. FINITE MATH
This course contains introductory topics in mathematics for students in arts and business. Topics include lines, linear systems, matrices, linear programming, functions, polynomial, exponential and logarithmic models, and financial math. Prerequisites: Minimum Math ACT of 23 or MATH 103, ALG 120, or passing a placement exam. See Math Center Web page. *One semester; three credits*

MATH 106. APPLIED MATH WITH AN INTRODUCTION TO CALCULUS
This course contains introductory topics in mathematics for students in arts and business. Topics include: the derivative and its interpretations, the definite integral and its interpretations, applications of the derivative and antiderivatives. A student can receive credit for only one of MATH 106, 129, or 131. Prerequisite: MATH 105, (107 & 110), or 117. Offered in the Fall and Spring. *One semester; three credits*

MATH 107. FUNCTIONS
The course covers the basic concepts of college algebra, polynomial, rational, exponential and logarithmic functions as well as their graphs. The course emphasizes a comprehensive understanding of the language and uses of functions. Through the study of functions and their inverses, the course stresses algebraic skills and problem solving. Prerequisite: Minimum Math ACT of 23, ALG 120, MATH 103, or equivalent. Corequisite: MATH 110. *Two credits*

MATH 110. TRIGONOMETRY
The goals of the course are to teach the student basic concepts of trigonometry and trigonometric functions and its applications. Topics include: Review of functions and their inverses, right triangle trigonometry; trigonometric functions and their inverses; trigonometric identities; Law of Sines and Cosines. The course requires a graphing calculator and stresses problem solving. A grade of "C" or higher in this course is required to proceed to Math 131. A student can receive credits for only one of Math 110 or Math 117 or Math 129. Corequisite: Math 107 or equivalent. *Two credits*

MATH 117. PRECALCULUS
The goals of the course are to teach the student the basic concepts of college algebra, linear equations, quadratic equations, word problems, functions, graphs, exponential and logarithmic functions, trigonometry and trigonometric functions. The course stresses problem solving by the student with the use of a graphing calculator. A student can receive credit for only one of MATH 110, 117 or 129. A grade of "C" or higher in this course is required to proceed to MATH 131. Prerequisite: Minimum Math ACT of 26 or equivalent, MATH 103, 107 or ALG 120 with a grade of "C" or higher. *One semester; three credits*

MATH 121. STATISTICS INTRODUCTION
This is an independent study statistics module that includes percentages, measures of central tendency, dispersion, graphic representation of data, and estimation of parameters. Successful completion fulfills the statistics outcome of the General Education Requirements. Pass/Fail grading. *One semester; zero credits*

MATH 129. FUNCTIONS AND ENGINEERING CALCULUS I
The goals of this course are to teach the student basic concepts of college algebra and trigonometry and important concepts of calculus and its applications. Topics include: linear and quadratic equations; algebraic, exponential, and logarithmic functions and their graphs; right triangle trigonometry; trigonometric functions; the derivative and its interpretations; the definite integral and its interpretations; the Fundamental Theorem of Calculus; rules of differentiation and integration; and applications of derivatives and integrals. The course requires a graphing calculator and stresses problem solving. A student can receive credit for only one of MATH 110, 117 or 129 and for only one of MATH 129 or MATH 131. Six lectures and two recitation periods per week. Prerequisite: Minimum Math ACT of 25, MATH 103, 107 or equivalent. Offered in the Fall semester. *One semester; six credits*

MATH 131. CALCULUS I
The goals of the course are to teach the student important concepts of calculus and its applications. Topics include algebraic and transcendental functions, the derivative and its interpretations, the definite integral and its interpretations, the Fundamental Theorem of Calculus, rules of differentiation, applications of the derivative and antiderivatives. Three lectures and one laboratory period per week. A student can receive credit for only one of MATH 129 or 131. Prerequisite: Minimum Math ACT of 27, MATH 117, or (107 & 110) with a grade of "C" or higher. This prerequisite is waived for a student who passes a departmental placement test. A grade of "C" or higher in this course is required to proceed to MATH 132. Offered in the Fall and Spring. *One semester; three credits*

MATH 132. CALCULUS II
The goals of the course are to teach the student additional important concepts of calculus begun in MATH 131. Topics include techniques of integration, applications of integration, differential equations and modeling, approximations using Taylor and Fourier polynomials and series. Prerequisite: MATH 129 or 131 with a grade of "C" or higher. *One semester; three credits*

MATH 141. INTRODUCTION TO DISCRETE MATHEMATICS
This course considers a variety of discrete mathematical themes and subjects. These themes include problem solving, abstraction, representation, mathematical reasoning and proof, recursion, induction, modeling and synthesis. Topics include logic, graphs, sets, algorithms and combinatorics. Prerequisite: MATH 105, 106, 117, (107&110), 129, or 131. Offered in odd-numbered Spring semesters. *One semester; three credits*

MATH 151. NUMERICAL CONCEPTS FOR ELEMENTARY TEACHERS
This course includes concepts essential to mathematics for elementary school teaching candidates. Topics include: set theory, numbers and numeration, number theory, rational numbers, and problem solving. This course does not meet the CBU General Education Math requirement. Prerequisite: ALG 120 or equivalent. Offered in even-numbered Fall semesters. *One semester; three credits*

MATH 152. MATH TOPICS FOR ELEMENTARY TEACHERS
This course includes concepts essential to mathematics for elementary school teaching candidates. Topics include: informal geometry, measurement, problem solving, descriptive statistics, and elementary probability. This course does not meet the CBU General Education Math requirement: Prerequisite: ALG 120 or equivalent. Offered in odd-numbered Fall semesters. *One semester; three credits*

MATH 162. HEALTH SCIENCE APPLICATIONS OF ALGEBRA AND STATISTICS
The course uses models appropriate to the health sciences to motivate the study of algebra and statistics. Topics are chosen from algebraic expressions, symbol manipulation, linear and quadratic equations, descriptive statistics, exploratory data analysis, the normal distribution, functions, graphs, and linear, polynomial, rational, exponential, and logarithmic models. The course stresses interpretation of the mathematical model in its diverse applications. Prerequisite: MATH 103 or equivalent and admission to RN to BSN program. *One semester; three credits*

MATH 201. APPLIED STATISTICS
The course concerns the use of statistical methodology in planning, presentation, analysis and interpretation of scientific experiments and field observations. Topics are chosen from elements of probability and statistical inference, including estimates of parameters, confidence intervals, tests of hypotheses for quantitative and qualitative observations, correlation, nonparametric methods. Its goal is to allow science majors to analyze real data in a correct statistical manner. Offered in the Spring semester. Prerequisite: MATH 106, 129 or 131. *One semester; three credits*

MATH 231. DIFFERENTIAL EQUATIONS
This course is an introduction to the concepts and methods of ordinary differential equations. Topics include: first-order equations, elementary numerical methods, qualitative analysis, second-order homogeneous linear equations, the methods of undetermined coefficients and variation of parameters for nonhomogeneous equations, Laplace transforms, and models in science and engineering. Prerequisite: MATH 132. *One semester; three credits*

MATH 232. CALCULUS III
Algebra of vectors in a plane and in space; the calculus of vectors; vector functions; basic concepts of multivariable calculus; partial derivatives; multiple integrals. Prerequisite: MATH 231. *One semester; three credits*

MATH 301. GEOMETRY AND HISTORY OF MATHEMATICS
The course contains topics in geometry and the history of mathematics. Topics include Euclidean and non-Euclidean geometry, mathematical structures and the historical development of mathematical concepts. Prerequisite: MATH 132. Offered in odd-numbered Spring semesters. *One semester; three credits*

MATH 308. STATISTICS
The course considers statistical methods with applications in engineering and science. Topics include an introduction to probability, descriptive statistics, sampling methods, design of statistical experiments, concepts of hypothesis testing and confidence intervals, correlation, linear regression and analysis of variance. Prerequisite: MATH 232. *One semester; three credits*

MATH 309. PROBABILITY
The course considers fundamental topics in probability with applications in engineering and science. Topics are selected from: basic concepts in probability, random variables, expectation, variance, covariance, moment generating functions, common distributions such as binomial, hypergeometric, Poisson, geometric, uniform, normal, exponential, chi-square, T and F distributions, probability models, central limit theorem and functions of a random variable, bivariate, marginal, and conditional distributions. Offered in the Fall semester. Prerequisite: MATH 232. *One semester; three credits*

MATH 329. APPLIED NUMERICAL ANALYSIS
The course teaches the student the basic techniques of modeling and numerical computation with emphasis on applications and the use of numerical software. Topics will be chosen from the following: modeling of physical systems with algebraic, differential and integral techniques; algorithms for approximation; fitting functions to data; algorithms for the solution of linear systems and for finding eigenvalues and eigenvectors; algorithms for the solution of differential and integral equations; Fourier transforms. Offered in the Fall semester. Prerequisite: MATH 232. *One semester; three credits*

MATH 401. LINEAR ALGEBRA
This course contains an introduction to the basic concepts of linear algebra; namely Gaussian elimination, the theory of simultaneous linear equations, determinants, vector spaces, eigenvalues, eigenvectors and linear transformations. The course includes applications of linear algebra to selected topics from engineering, biology, and business. Prerequisite: MATH 232. Offered in odd-numbered Fall semesters. *One semester; three credits*

MATH 402. ABSTRACT ALGEBRA
The course contains an introduction to some basic concepts of abstract algebra, namely groups, rings, and fields and includes applications. Prerequisite: MATH 232. Offered in the Spring semester of even-numbered years. *One semester; three credits*

MATH 405. DISCRETE MATHEMATICS
This course is an introduction to graph theory and combinatorics. The topics will be chosen from the following: the basic properties of graphs and digraphs, graphs as models, Eulerian and Hamiltonian circuits, graph coloring, trees, network algorithms, generating functions, and recurrence relations. Prerequisite: MATH 231. Offered in the Spring semester. *One semester; three credits*

MATH 413. COMPLEX ANALYSIS (Formerly MATH 403)
This course concerns itself with the rudiments and techniques of complex analysis. Topics that are covered include: complex sequences, the derivative of a complex function, the Cauchy-Riemann equations, integration in the complex plane and the Cauchy-Goursat theorem, Cauchy's integral formula, Morera's theorem, Taylor and Laurent series, residue theory, and the evaluation of definite integrals. Prerequisite: MATH 232. Offered in the Fall semester of even-numbered years. *One semester; three credits*

MATH 414. REAL ANALYSIS (Formerly MATH 302)
The course develops the theory of calculus. It stresses the proofs of the theorems for functions of one variable. Topics include sequences, series, functions, limits, continuity, differentiation and integration. Prerequisite: MATH 232. Offered in the Spring semester of odd-numbered years. *One semester; three credits*

MATH 470-479. TOPICS IN MATHEMATICS
This course is designed to meet the current needs of the students and to express the particular interests of the instructor. Prerequisites: Junior standing, MATH 232 and permission of instructor. *One semester; one to three credits*

MATH 481-482. SENIOR SEMINAR I AND II
The student conducts an independent investigation in some field of mathematics. The course requires both written and oral reports. In addition, the student must pass a comprehensive assessment test in mathematics. Prerequisites: Junior or Senior standing and approval of the department head. Offered in sequence in the Fall and Spring semesters. *One semester each; one and two credits respectively.*

■ MECHANICAL ENGINEERING COURSES

Requirements for the degree are found on Page 79.

ME 112. SCIENTIFIC PROGRAMMING
This course covers fundamental programming techniques used to solve engineering problems that require repetitive or iterative calculations. Emphasis is placed on writing structured, portable, efficient, and understandable MATLAB and Excel programs. Prerequisite: MATH 131. *One semester; three credits*

ME 121. SOLIDS MODELING
Emphasis on visual aspects of engineering communications, expression of ideas, developing spatial concepts as related to design. Design is taught using 3-D modeling and parametric design. CAD applications. *One semester; three credits*

ME 201. MANUFACTURING PROCESSES
Production of common engineering materials. Heat treatment theory and processes. Study of machining, casting, metal forming, fabrication of plastics, ceramics, composites, welding, inspection, material testing, automation. Plant tours. Reports. Demonstrations. Three lectures and one three-hour lab each week. Offered in the Spring semester. Prerequisite: ME 121. *One semester; three credits*

ME 202. DYNAMICS
Kinematics and kinetics of particles and rigid bodies in two dimensions. Force-mass-acceleration, work-energy, and impulse-momentum methods will be covered. Prerequisites: CE 201 with a grade of "C" or higher. *One semester; three credits*

ME 210. MECHANICS OF MATERIALS (formerly ME 312)
Axial load, shear, and bending moment diagrams. Differential equations of beams. Study of stresses due to axial, bending, torsional loads, and combined loading. Mohr's circle of stress. Design techniques, Column design equations. (Same as CE 210). Prerequisite: CE 113 or 201 with grades of "C" or higher and PHYS 150. *One semester; three credits*

ME 301. ENGINEERING INSTRUMENTATION LABORATORY
A laboratory course designed to instruct the student in the theory and use of various engineering instruments and transducers. Emphasis is placed on appropriate error analysis in the reduction, analysis, and reporting of data. Technical report preparation is emphasized. Two lecture periods and one laboratory period of three hours. Prerequisite: PHYS 251. *One semester; two credits*

ME 302. ENERGY SYSTEMS LABORATORY
Experimental study of basic fluid flow and heat transfer phenomena, flow-measurements, impulse turbine, centrifugal pump, fluid circuit systems, electrical analogies, basic heat conduction experiments, free and forced convention, thermal radiation, temperature measurements, subsonic wind tunnel model studies, lift and drag measurements. Technical report preparation and presentation is emphasized. One laboratory period of three hours and lecture. Prerequisites: ME 301 and 313. . Students must have completed or be enrolled in ME 306. Offered in the Spring semester. *One semester; two credits*

ME 305. ENGINEERING THERMODYNAMICS I
Fundamental laws and concepts of the macroscopic approach to the thermodynamics of pure materials. Properties of pure materials from tables, charts and ideal-gas equation. Heat and work. First and second law analysis of open and closed systems. Introduction to heat engines and heat pumps. (Same as CH E 305) Prerequisite: MATH 132 and (CHEM 113 or 115). Students must have completed or be enrolled in PHYS 150. *One semester; three credits*

ME 306. HEAT TRANSFER
An introductory treatment of conduction, convection, and radiation heat transfer. Analysis of steady and unsteady heat conduction in simple geometries, boundary layer analysis and empirical correlations for convection, and basic theory of radiation heat transfer. Prerequisite: ME 313. *One semester; three credits*

ME 313. FLUID MECHANICS
Mechanical and thermodynamic properties of fluids. Theory of fluid statics. Conservation laws in integral and differential form. Dimensional analysis and dimensionless groups. Dynamics of frictionless incompressible flow. Modified Bernoulli equation. Flow of viscous fluids. Pipe flow theory. Empirical formulas and charts. Introduction to boundary layer theory, turbulent flow, and one-dimensional steady compressible flow. Prerequisites: ME 202 and 305 (or CH E 305) with a grade of "C" or higher, and MATH 232. Offered in the Fall semester. *One semester; three credits*

ME 314. ENGINEERING ECONOMY
Fundamentals of engineering economy. Cost concepts. Time value of money and equivalence. Economic analysis of alternatives. Depreciation and after-tax analysis. Effects of inflation on economic analysis. Currency exchange rates. Effects of global economic issues on engineering decision making. (Same as CH E 314, ECE 314 and CE 314). Prerequisite: junior or senior standing. *One semester; three credits*

ME 316. ENGINEERING THERMODYNAMICS II
Concepts of reversibility, irreversibility, and availability. Power and refrigeration systems. First Law analysis of gas-vapor mixtures. Introduction to psychrometry. Thermochemical reactions including combustion processes, fuel properties, and equilibrium composition. Prerequisites: ME 305 or CH E 305 with a grade of "C" or higher and CHEM 114 or 115. Offered in the Fall semester. *One semester; three credits*

ME 317. KINEMATICS
A study of relative motion and geometry of machine parts and mechanisms without reference to force or mass. Graphical and analytical solutions for the displacement, velocity, and acceleration of planar mechanisms. General case of acceleration including Coriolis component. Computer programming and numerical techniques applied to velocity and acceleration analysis of cycles. Prerequisite: ME 202 with a grade of "C" or higher. *One semester; three credits*

ME 318. DYNAMICS OF MACHINES
The dynamic analysis of machine parts by use of the principles of linear and angular momentum and the work-energy relationships. Graphical and analytical methods. Analysis and balancing of shaking forces in machines, flywheel analysis, basic gear analysis, gyroscopic forces in machines. Three lectures each week. Prerequisite: ME 317. *One semester; three credits*

ME 319. PRINCIPLES OF PACKAGING
Overview of the historical development of packaging, the system of packaging science, along with information about economic importance, social implications and packaging as a profession. Study of the functions of packaging and materials, container types, processes, technology and equipment employed to protect goods during handling, shipping and storage. Introduction of package development process, packaging testing and evaluation methods, standards, and equipment. Brief review of governmental regulations affecting packaging. (Same as CH E 319 and PKG 319). Prerequisites: MATH 117 or (MATH 107 and 110) and CHEM 113 or 115. *One semester; three credits*

ME 321. HEALTHCARE PACKAGING
Introduction to the basics of materials used for healthcare packaging including materials selection. The steps used for packaging design and development and use of suitable conversion process from raw materials to packages. The considerations used for aseptic packaging and added sterilization process, if needed. Storage and distribution of final products to customers with codes imprinted on products for quick identification of source details. Finally, the most important steps of scope, planning, preparation, and for receiving of FDA validation. (Same as CH E and PKG 321) Prerequisites: MATH 117 or (MATH 107 & 110) and CHEM 113 or 115. Offered in the Spring semester. *One semester; three credits*

ME 322. CONTROL SYSTEMS ENGINEERING (Formerly ME 422)
Analysis and design of linear control systems. Transfer functions, block diagrams, and state-variable representation. Feedback concepts and stability analysis in both the frequency and time domain. Design by Root locus, Bode plots, and State variable methods. Emphasis on use of computational software for complex cases. (Same as ECE 322) Prerequisites: MATH 231, ME 202 and ECE 221. Offered in the Spring semester. *One semester; three credits*

ME 400. THE COMPLEAT ENGINEER
This course deals with a wide array of issues facing the practicing engineer. Topics include: engineering ethics; regulatory issues; health, safety, and environmental factors; reliability, maintainability, produciblity, sustainability; and the context of engineering in the enterprise, in society, and as part of the global economy. (Same as CH E 400, ECE 400, and CE 400). Prerequisite: Permission of the department and MATH 232. *One semester; three credits*

ME 401. MECHANICAL SYSTEMS LABORATORY
Laboratory experiments are performed in stress analysis and experimental mechanics on a project team basis. Emphasis is placed on experimental technique, data analysis and report preparation and presentation. Each student also prepares a state of the art report on a topic selected by the department faculty. Prerequisite: ME 301. Students must have completed or enrolled in ME 420. Offered in the Fall semester. *One semester; two credits*

ME 407-408. MECHANICAL ENGINEERING PROJECT
Industry sponsored projects are initiated early in the first semester of the student's senior year and are completed and formally presented in a report (written and oral) to the sponsor, faculty and students in the following semester. Prerequisite: Permission of the department, ME 407 prerequisite for ME 408. Taken in sequence in the Fall and Spring semesters. *Two semesters; six credits*

ME 411. PRINCIPLES OF PACKAGING DEVELOPMENT
Review common packaging materials, packaging forms, and special packaging techniques for certain product commodities. Overview current practices and state of the art of packaging design from concept to prototype. Learn to use ArtiosCAD, and other computer drafting and modeling software create virtual packaging design. Prepare packaging specifications and design documentation for procurement and manufacturing. Discuss impacts of packaging design on manufacturing/fabrication cost, packaging operations, end use, and environment. Make aware of packaging related laws and regulations, and be sensitive to copyright and intellectual property protection. (Same as CH E and PKG 411) Prerequisite: PKG/CH E/ME 319. Offered in the Spring Semester. *One semester; three credits.*

ME 413. AERODYNAMICS
This course will introduce the basic equations of fluid motion and apply them to topics in aerodynamics. This includes the boundary layer, potential flow, compressible flow, and computational fluid mechanics. Prerequisite: ME 313. *One semester; three credits.*

ME 416. THERMAL ENVIRONMENTAL ENGINEERING
Refrigeration, vapor compression and absorption. Psychrometrics, basic air-conditioning processes, physiological effects, heat load calculations. Air conditioning system design will be emphasized. Three lectures each week. Prerequisites: ME 306 and 316. *One semester; three credits*

ME 419. MECHANICAL VIBRATIONS
Fundamentals of vibration theory applied to mechanical systems. Un-damped and damped, single and multiple degree of freedom, vibrating systems. Steady state analysis of free and forced vibrations; critical speeds and balancing, vibration isolation, instrumentation. Three lectures each week. Prerequisites: ME 202 and MATH 231. *One semester; three credits*

ME 420. MACHINE DESIGN
An integrated treatment of the design of mechanical systems combining static and dynamic load analysis, stress analysis, material selection, and failure analysis. Includes many advanced topics in stress analysis. Three lectures each week. Prerequisites: ME or CE 210 with a grade of "C" or higher and ME 318. Offered in the Fall semester. *One semester; three credits*

ME 421. THERMAL SYSTEMS ANALYSIS AND DESIGN
An integrated treatment of the analysis and design of thermal systems. Primarily concerned with industrial thermal processes, cycles and associated equipment. Prerequisite: ME 306. Offered in the Fall semester. *One semester; three credits*

ME 428. MATERIALS SCIENCE
Material classification, behavior, properties and selection. The internal structures of metals, ceramics, polymers and electronic materials are examined to develop understanding of their mechanical, physical, chemical, electrical properties. Develop some insight to controlling of properties and behavior of materials by manipulating internal structures. (Same as CH E 328) Prerequisites: CHEM 113 or 115 and junior or senior standing. *One semester; three credits*

ME 429. SELECTION OF MATERIALS
Importance of materials selection as part of the design process will be discussed. Fundamental relationships that govern the properties of materials will be examined and used to optimize the selection of engineering materials. Materials covered will include metals, plastics, ceramics, and composites. Prerequisite: ME or CE 210 with a grade of "C" or higher. *One semester; three credits*

ME 432. PRINCIPLES OF GAS DYNAMICS
Concepts of compressible flow. Steady streamtube flow. Supersonic flow and shock waves. Prandtl-Meyer flow. Supersonic nozzle and diffuser flow. Fanno and Rayleigh flow. Unsteady one-dimensional flow. Prerequisite: ME 313. *One semester; three credits*

ME 435. INTERMEDIATE MANUFACTURING
Introduction to advanced parametric computer-aided design and manufacturing (CADM) techniques. Students learn to design parts and assemblies using tools that enable parametric design. A design project is carried through from "blank screen" to production of computer numerical control (CNC) code and fabrication. Also provided is an introduction to structural and thermal analysis tools that are integrated with the CADM program. An oral report on advanced manufacturing technology is required. Occasional field trips to local manufacturing facilities. Prerequisites: ME 201 and junior or senior standing. *One semester; three credits*

ME 442. INTERNAL COMBUSTION ENGINES
Principles of spark ignition and compression engines. Both two and four-stroke engines are considered. Fuel combustion, cooling, and turbocharging effects. Experimental methods of determining engine performance. Guest lecturers and plant tours. Prerequisites: ME 306 and 316. *One semester; three credits*

ME 495. INTERNSHIP IN MECHANICAL ENGINEERING
Students majoring in mechanical engineering may be placed in the engineering offices of contracted firms to receive job training under the supervision of qualified engineers. Tasks completed as part of the internship must be approved by an authorized work supervisor. Credit is granted upon faculty approval of periodic review reports and a final summary report describing the work performed. Minimum time 200 hours. Prerequisites: junior standing and permission of the department. *Pass/Fail grading. One semester; three credits*

ME 496-498. SPECIAL TOPICS IN MECHANICAL ENGINEERING
Lectures, readings, discussions and research on special areas and advancements in mechanical engineering. Problems or projects of an interdisciplinary nature are encouraged. A written report may be required. Prerequisites: junior or senior standing and approval of department. *One semester; one to three credits*

MUSIC COURSES

MUSC 111. MUSIC APPRECIATION
An introduction to perceptive music listening through study of melody, harmony, rhythm, texture, etc. Extensive listening to characteristic selections and major forms from different periods of music. *One semester; three credits*

NATURAL SCIENCE COURSES

Requirements for the degree are found on pages 104 and 105.

NSCI 111. INTRODUCTION TO ASTRONOMY
The course introduces non-science students to astronomy. It includes naked-eye astronomy and a brief history of astronomy, the present-day tools of the astronomer, the solar system, the sun and stars, and finally the galaxy, the universe, and extraterrestrial life. Three lectures per week. Prerequisite: MATH 105 or higher. Corequisite: NSCI 111L. Offered in the Fall semester. *One semester; three credits*

NSCI 111L. INTRODUCTION TO ASTRONOMY LAB
Laboratory to accompany NSCI 111. Prerequisite: MATH 105 or higher. Corequisite: NSCI 111. Offered in the Fall semester. *One semester; one credit*

NSCI 115. SURVEY OF SCIENCE: HISTORY AND EXPERIMENTS
This course is intended mainly for liberal arts and business students. It will combine readings and experiments using selections from the classical writings from the Greeks to the 20th century. Authors who will be read in part include Hippocrates, Copernicus, Newton, and Darwin. Prerequisite: MATH 105 or higher. Corequisite: NSCI 115L. Offered in the Spring semester. *One semester; three credits*

NSCI 115L. SURVEY OF SCIENCE: HISTORY AND EXPERIMENTS LAB
Laboratory to accompany NSCI 115. Prerequisite: MATH 105 or higher. Corequisite: NSCI 115. Offered in the Spring semester. *One semester; one credit*

NSCI 122. THE NATURE OF LIGHT
An introduction to the field of optics for non-science majors. The question for the course is "What is light?" Different theories that model light as rays, waves, and photons are discussed to explain phenomena ranging from the formation of rainbows and mirages to the operation of lenses, lasers, holograms, and optical fibers. Prerequisite: MATH 105 or higher. Corequisite: NSCI 122L. *One semester; three credits*

NSCI 122L. THE NATURE OF LIGHT LAB
Laboratory to accompany NSCI 122. Prerequisite: MATH 105 or higher. Corequisite: NSCI 122. *One semester; one credit*

NSCI 126. FORENSIC ANTHROPOLOGY
This course is the subspecialty of Physical Anthropology that involves excavation and identification of human remains for legal purposes. Students are exposed to the human skeleton and taught to examine bones for sex, age, ancestry, and stature differences. Interpretation of skeletal crime trauma is stressed. The most recent techniques and analyses in the forensic sciences, along with current and controversial trends in anthropology are discussed. Authentic case studies are used to illustrate the applied field of anthropology. This course is intended for applied psychology and science students. It assumes a basic familiarity with skeletal anatomy. (Same as ANTH 126.) Prerequisite: MATH 105 or higher. Corequisite: NSCI 126L (Same as ANTH 126). *One semester; three credits*

NSCI 126L. FORENSIC ANTHROPOLOGY LAB
Laboratory to accompany NSCI 126. Prerequisite: MATH 105 or higher. Corequisite: NSCI 126 (Same as ANTH 126L) *One semester; one credit*

NSCI 128. PHYSICAL ANTHROPOLOGY
This course is designed to introduce the student to the field of physical/biological anthropology, with an emphasis on human evolution. The larger themes investigated are the fundamentals of biological anthropology, major principles underlying our evolutionary history, and a review of the fossil evidence in an attempt to understand the development of the human species. (Same as ANTH 128). Prerequisite: MATH 105 or higher. Corequisite: NSCI 128L. *One semester; three credits*

NSCI 128L. PHYSICAL ANTHROPOLOGY LAB
Laboratory to accompany NSCI 128. (Same as ANTH 128L). Prerequisite: MATH 105 or higher. Corequisite: NSCI 128. *One semester; three credits*

NSCI 190-199. SPECIAL TOPICS IN NATURAL SCIENCE
Courses in different areas of the natural sciences that are not offered on a regular basis. These include courses taught by visiting faculty members with special or unique qualifications or new courses taught by existing faculty members. Prerequisite: MATH 105 or higher. Corequisite: corresponding lab course. *One semester; three credits*

NSCI 190L-199L. SPECIAL TOPICS IN NATURAL SCIENCE LABORATORIES
Laboratories to accompany NSCI 190-199. Prerequisite: MATH 105 or higher. Corequisite: corresponding NSCI 190-199 course. *One semester; one credit*

NSCI 390-399 ADVANCED SPECIAL TOPICS
Advanced courses in different areas of the natural sciences that are not offered on a regular basis. These include courses taught by visiting faculty members with special qualifications or new courses taught by existing faculty members. Prerequisites: MATH 105 or higher and BIOL 112 Corequisite: NSCI 390L-399L. *One semester; three credits*

NSCI 390L-399L ADVANCED SPECIAL TOPICS LABORATORY
Laboratories to accompany NSCI 390-399 courses. Prerequisites: MATH 105 or higher and BIOL 112 Corequisite NSCI 390-399. *One semester; one credit.*

NSCI 410. SENIOR SEMINAR
Students will read current primary literature and will present those papers to the class each week and lead discussion. Successful completion fulfills the statistics outcome of the General Education Requirements. Required of Natural Science majors. Prerequisite: Junior standing. *One semester; one credit*

NSCI 412. SENIOR RESEARCH
Students conduct research under the mentorship of an established scientist. The students will actively participate in the design, implementation and presentation of the research project. Prerequisite: NSCI 410 and permission of the instructor. *One semester; two credits*

■ NAVY ROTC COURSES

Navy ROTC courses are offered through The University of Memphis under the instruction of The University of Memphis faculty.

■ NURSING COURSES

Requirements for the degree are found on page 106.

NURS 300. DIMENSIONS OF PROFESSIONAL NURSING
This is the first course in the RN to BSN program and is designed to introduce the student to professional nursing practice. An introductory discussion of the focus of the CBU Nursing program includes AACN Baccalaureate Essentials, historical development for professional nursing, Quality and Safety Education for Nurses (QSEN), American Nurses Association (ANA) Code of Ethics, Mindfulness, Benner Novice to Expert Theory, and APA style of writing. Students will assess and develop their nursing informatics competencies. Roles and responsibilities of a RN to BSN student at CBU are also included. Prerequisite: Admission to CBU RN to BSN Program. *One semester; three credits.*

NURS 302. INTRODUCTION TO PROFESSIONAL ROLE DEVELOPMENT
This course emphasizes the theoretical basis for nursing theory, professional development and socialization, scope of safe practice, the application of APA format in written assignments, and effective communication. An integration of transcultural awareness will be made through patterns of knowing in critical thinking, creativity, empathy, and personal expression. Students will have an opportunity to explore the complexities of healthcare and interdisciplinary team concepts while providing optimal care with specific application to the professional role of nursing. *One semester; four credits*

NURS 304. HEALTH ASSESSMENT FOR RNS
This course uses didactic and electronic clinical experiences to develop skill levels of the Registered Nurse to conduct a comprehensive health assessment with adults in various settings. The course emphasizes the integration of observations, systematic data collection, and effective communication in performing patient-centered health assessments that include risk assessment and risk reduction.
Practicum: Students will have the opportunity to use interview, observation, inspection, auscultation, palpation, and percussion in assessing clients across the life span in simulated and actual environments. Prerequisite: Admission to CBU RN to BSN program or permission of the Director. *One semester; four credits (3 hours of lecture and one 4 hour lab per week)*

NURS 307-310. SPECIAL TOPICS
This course is designed to offer directed work on a special topic or project in nursing with approval of the director. Prerequisites: permission of the Director. *One semester; one to four credits*

NURS 402. PROFESSIONAL ROLE DEVELOPMENT II
This course explores current issues and trends that impact the professional nursing role. The focus will be on global, legal and ethical principles that guide health care policies with specific application to nursing while developing a mindset that facilitates positive change and incorporates evidence based clinical practices into current health care strategies. Students will have an opportunity to explore current health care delivery systems with particular emphasis on high-risk groups and the underserved community. Prerequisites: NURS 300, 302 and 304. *One semester; three credits*

NURS 405. GLOBAL HEALTH NURSING
This course emphasizes the concept of the global community. The concept of the global community will be discussed in preparation for the student to meet the needs of client and client-centered systems through applications of Health Promotion-Disease Prevention embedded in the community/public health nursing setting. The course will explore the needs of the clients across the life span, discuss communicable disease, and explore methods to create healthy communities. Issues of health disparity and access to care will be explored. The student will demonstrate synthesis of course topics in the clinical setting. Prerequisites: NURS 300, 302, and 305. *One semester; six credits*

NURS 406. COMMUNITY HEALTH NURSING CLINICAL
This clinical course includes application of the concepts of the global community and client-centered care in multiple settings through service-based care delivery to underserved vulnerable populations locally, regionally and/or internationally. This may include participation in public health, occupational health, school health and/or a variety of service learning settings. Prerequisites: NURS 300, 302, and 304. Pass/Fail grading. *One semester; Two credits.*

NURS 412. LEADERSHIP
This course emphasizes the principles of leadership and management to meet the needs of clients and client-centered systems/facilities for the delivery of cost-effective health care. An overview of leadership and management theories will enhance the student's knowledge of the legal and ethical implications of the professional nursing role including conflict management, group process, delegation, staffing, budgeting, quality improvement, effective communication, informatics, change processes, healthcare policy, organizational structure and other issues. Leadership and management concepts and skills are stressed to enhance student career development. Prerequisite: NURS 402, 405 and 406. *One semester, five credits*

NURS 413. PROFESSIONAL PRACTICE AND LEADERSHIP CLINICAL
This clinical course includes application of the concepts and principles of nursing leadership and client-centered care in multiple settings through

service-based care delivery to underserved vulnerable populations locally, regionally and/or internationally. This course includes synthesis and application of didactic leadership and management theory, including demonstrating an understanding of current issues as they apply to the interdisciplinary practice of professional nursing in the 21st century. Prerequisites: NURS 402, 405 and 406. Pass/Fail grading. *One semester; two credits*

NURS 416. EVIDENCE-BASED NURSING
This course emphasizes the significance of integrating current evidence-based practice with clinical expertise, family and patient preferences and the delivery of optimal care. It introduces research methodology principles, analysis of research designs, ethical conduct in research, and research dissemination. Synthesis is monitored through a literature review and written assignments. Prerequisites: NURS 402, 405 and 406. *One semester; three credits*

NURS 417-420. SPECIAL TOPICS IN NURSING
This course is designed to permit intensive study into topics of special interest and timeliness in the area of nursing with approval of the director. Prerequisites: Permission of Director. *One semester; one to four credits*

■ PACKAGING COURSES

Requirements for the concentration are found on page 84. Requirements for the minor are found on page 86.

PKG 101. INTRODUCTION TO PACKAGING
Introduction to various areas of packaging industry. Offered in the Fall semester. *One semester; one credit*

PKG 202. PACKAGING LABORATORY
Packaged-product test specifications from various organizations including ISTA, ASTM and TAPPI. Pre-shipment tests; drop, vibration and compression. Temperature/humidity and altitude chambers. Corrugated cardboard tests; Mullen and ECT tests; Box design and prototyping. *One semester; two credits*

PKG 296-298. SPECIAL TOPICS IN PACKAGING
Elective courses of special or current interest in packaging. *One semester; one to four credits*

PKG 319. PRINCIPLES OF PACKAGING
Overview of the historical development of packaging, the system of packaging science, along with information about economic importance, social implications and packaging as a profession. Study of the functions of packaging and materials, container types, processes, technology and equipment employed to protect goods during handling, shipping and storage. Introduction of package development process, packaging testing and evaluation methods, standards, and equipment. Brief review of governmental regulations affecting packaging. (Same as CH E 319 and ME 319) Prerequisites: MATH 117 or (MATH 107 & 110) and CHEM 113 or 115. Offered in the Spring semester. *One semester; three credits*

PKG 321. HEALTHCARE PACKAGING
Introduction to the basics of materials used for healthcare packaging including materials selection. The steps used for packaging design and development and use of suitable conversion process from raw materials to packages. The considerations used for aseptic packaging and added sterilization process, if needed. Storage and distribution of final products to customers with codes imprinted on products for quick identification of source details. Finally, the most important steps of scope, planning, preparation, and for receiving of FDA validation. Same as CH E and ME 321) Prerequisites: MATH 117 or (MATH 107 & 110) and CHEM 113 or 115. Offered in the Spring semester. *One semester; three credits*

PKG 411. PRINCIPLES OF PACKAGING DEVELOPMENT
Review common packaging materials, packaging forms, and special packaging techniques for certain product commodities. Overview current practices and state of the art of packaging design from concept to prototype. Learn to use ArtiosCAD, and other computer drafting and modeling software create virtual package design. Utilize hand tools, Artios sample cutting table, thermal former machine to create prototype package. Prepare packaging specifications and design documentation for procurement and manufacturing. Discuss impacts of packaging design on manufacturing/fabrication cost, packaging operations, end use, and environment. Make aware of packaging related laws and regulations, and be sensitive to copyright and intellectual property protection. (Same as CH E and ME 411.) Prerequisite: CH E/ME/PKG 319. Offered in the Spring semester. *One semester; three credits*

PKG 489. PROFESSIONAL CERTIFICATION
All BSEM Packaging Concentration students must pass one of the following certifications: ISTA CPLP Technician or IoPP CPIT. *One semester; zero credit*

PKG 490. PACKAGING PROJECT
Individual project related to packaging. Reports are presented in both oral and written form. Prerequisite: Permission of the Department Chair. *One semester; two credits*

PKG 495. PACKAGING INTERNSHIP
Students are placed in packaging related facilities under the supervision of qualified packaging professionals. Tasks completed as part of the internship must be approved by an authorized work supervisor. Credit is granted upon faculty approval of periodic review reports and a final summary report describing the work performed. Minimum time 200 hours. Prerequisites: Junior or senior standing and permission of the department. *One semester; three credits*

PKG 496-498 ADVANCED TOPICS IN PACKAGING
Elective courses of special or current interest in packaging. Prerequisite: Junior or Senior standing and permission of department chair. *One semester; one to four credits*

PHILOSOPHY COURSES

Requirements for the Religion & Philosophy degree are found on Pages 53 and 54.

PHIL 201. INTRODUCTION TO LOGIC
A study of valid and fallacious reasoning, deductive and inductive. Formal logical structures such as the syllogism will be examined, as well as the logic of ordinary discourse and the avoidance of "informal" fallacies. (Satisfies the "Statistics" general education requirement). *One semester; three credits*

PHIL 219. SOCIAL AND POLITICAL PHILOSOPHY
A philosophical investigation into basic questions of politics and society and the moral foundations of human social existence. Topics may include human rights, equality, distributive justice, authority, punishment and coercion, and the nature of the good or just society. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 220. CONTEMPORARY MORAL ISSUES
A philosophical examination of a number of significant and controversial contemporary moral problems. Topics will vary but may include abortion, capital punishment, sexual morality, animal rights, environmental ethics, freedom of speech, discrimination, and affirmative action. The treatment of these topics will develop in the context of the tradition of philosophical ethics. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 223. BUSINESS ETHICS (formerly PHIL 323)
An analysis of business ethics, the responsibilities of business firms to employees, owners, consumers, and society. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 224. THEORIES OF HUMAN NATURE
An examination of several major theories of human nature with special emphasis on the ethical implications of these theories. A consideration of such questions as whether humans are by nature either good or evil, individual or social, free or determined in their actions, and whether they have some natural purpose or end. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 234. HONORS THEORIES OF HUMAN NATURE
An intensive study of classical, modern, and postmodern theories of human nature through the reading of original texts. There will be an emphasis on the philosophical concepts and the ethical implications of the theories. Prerequisite: Membership in Honors Program. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 280-289. HONORS SPECIAL TOPICS IN PHILOSOPHY
Special topics in philosophy open to members of the Honors Program or by permission of the instructor. *One semester; one to four credits*

PHIL 317. ANCIENT PHILOSOPHY
An in-depth treatment of selected philosophers from the ancient and medieval periods including Plato and Aristotle. Prerequisites: sophomore standing or higher. *One semester; three credits*

PHIL 318. MODERN PHILOSOPHY
An in-depth treatment of selected philosophers from the 17th to the 19th centuries, beginning with Descartes. Does not presuppose PHIL 317. Prerequisites: sophomore standing or higher. *One semester; three credits*

PHIL 320. CONTEMPORARY PHILOSOPHY
An introduction to the major currents of 20th Century philosophical thought in America and Europe. The focus will be on the question of the meaning of subjective existence. Answers to this question will be examined from the perspectives of analytic philosophy, pragmatism, existentialism, and contemporary continental thought. Prerequisites: sophomore standing or higher. *One semester; three credits*

PHIL 322. MEDICAL ETHICS
A review and evaluation of various theories of moral philosophy and an investigation into some of the current moral issues in the fields of biology and medicine. Prerequisite: sophomore standing or higher. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 324. TECHNOLOGY AND HUMAN VALUES
A philosophical examination of social and ethical issues relating to technology. Topics include: ethical responsibilities of engineers; the ethics of risk assessment and cost-benefit analysis, environmental sustainability and technology; technology and human nature; technology and globalization; and the impact of modern technology on human values. Prerequisite: sophomore standing or higher. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 325. ENVIRONMENTAL ETHICS
A study of ethical and social issues concerning the relation of humans to the natural environment. Topics include the history of environmental ethics, the application of various ethical theories and concepts to environmental concerns, sustainability and ethical responsibilities to future generations, and the relevance of scientific, technological, economic, legal, and socio-political considerations in the analysis of current issues in environmental ethics. Prerequisite: sophomore standing or higher. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 335. PHILOSOPHY OF RELIGION
An examination of philosophical issues relating to religion, the concept of God, arguments for and against God's existence, the nature of religious experience, knowledge, faith, the problem of evil and free will. (Same as RS 335). Prerequisite: any RS 200 course or higher. *One semester; three credits*

PHIL 340. ETHICAL THEORY
An examination of various philosophical theories, including those of Aristotle, Kant, and Mill, concerning moral values. Questions discussed include the following: whether morality is best defined in terms of rights, duties, consequences, authenticity of commitment, or models of virtue, and whether morality can be judged by some absolute standard or is always relative (and if so, to what?). Prerequisites: sophomore standing or higher. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 350. PHILOSOPHY OF THE ARTS
A study of various philosophical responses to questions concerning art. Topics include the nature of art, the relation between different arts, the nature of artistic creation, and the problem of evaluating works of art. Examples from literature, music, and the visual arts. Prerequisite: Sophomore standing or higher. *One semester; three credits*

PHIL 380-389. HONORS SPECIAL TOPICS IN PHILOSOPHY
Special topics in philosophy open to members of the Honors Program or by permission of the instructor. *One semester; one to four credits*

PHIL 391-396. SPECIAL TOPICS IN ETHICS
Selected philosophical topics in the area of meta-ethics, normative ethics, or applied ethics; content variable with instructor. Prerequisite: Sophomore standing or higher. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

PHIL 491-496. SPECIAL TOPICS IN PHILOSOPHY
Selected philosophical topics; content variable with instructor. Prerequisite: Sophomore standing or higher. *One semester; one to three credits*

PHIL 497. JUNIOR SEMINAR
This seminar, for Religion & Philosophy majors in their junior year, introduces students to philosophical, theological, and scriptural research methods to prepare students for satisfactory completion of their Senior Projects (PHIL/RS 498). During this semester long seminar, each student will develop a research program for his or her senior project, with the semester culminating in a presentation of each student's project proposal and outline. Offered in the Spring semester. *One semester; one credit*

PHIL 498. SENIOR PROJECT
The Senior Project is a capstone independent study requirement for senior Religion & Philosophy majors. Under the supervision of a senior project faculty advisor, each student will assemble a committee of three departmental faculty members to evaluate a research paper related to the student's previous studies in religion and/or philosophy. The final project will also be presented to the faculty of the Religion & Philosophy Department. Prerequisite: PHIL 497 or RS 497. *One semester; two credits*

■ PHYSICAL EDUCATION COURSE

PE 201. RHYTHMIC ACTIVITIES AND GAMES
Activities and games designed for teaching of elementary students. Offered in the Fall and Spring semester. *One semester; one credit*

■ PHYSICIAN ASSISTANT COURSES

PHAS 400. INTRODUCTORY CLERKSHIP I
This six-hour course is an opportunity for the discerning student to obtain valuable first-hand experience by witnessing the activities of a practicing Physician Assistant or other medical professional in a clinical setting. The experience will allow the student to develop greater insight into the role and practice of a Physician Assistant. Students will have set assignments that will be evaluated for the development of critical thinking skills required for education and practice. Students wishing to take this course must apply and be approved by the faculty of the Department of Physician Assistant Studies. This is a mandatory course for students following the MSPAS Pathway for CBU Natural Science Majors. *One semester; six credits*

PHAS 401. INTRODUCTORY CLERKSHIP II
This is a continuation of PAS 400. Students who have satisfactorily completed PAS 400 will be assigned to shadow a practicing PA to develop greater insight into the role and practice of a Physician Assistant. The will continue to have set assignments that would be presented to the Course Instructor and evaluated for evidence of critical thinking skills necessary to successfully complete PA education. Upon successful completion students will be awarded 6 semester hours credit. Students wishing to take this course must apply and be approved by the faculty of the Department of Physician Assistant Studies. This is a mandatory course for students following the MSPAS Pathway for CBU Natural Science Majors. *One semester; six credits*

PHAS 402. INTRODUCTION TO THE HEALTH PROFESSIONS
Health care in the United States is provided by a variety of professional and paraprofessional entities. This course will introduce the student to many of the entities that constitute the healthcare workforce. Students will appreciate the complexity of the health care system and the inter-relationship of the roles in providing care to patients across the life span and in a variety of socioeconomic environments. This course will build upon the exposure the student has experienced in PAS 400. *One semester; two credits*

PHAS 403. MEDICAL TERMINOLOGY
This course will introduce the student to the "language of medicine". Students will gain an appreciation for the prefix, root and suffix of terminology and the application in the medical arts. This course will also focus on the spelling and common abbreviations used in medical settings. This course has similar content to that of BIOL 213 and will not be offered if available. *One semester; one credit*

PHYSICS COURSES

Requirements for the degree are found on Page 107.

PHYS 150. PHYSICS I
A beginning course in physics covering the topics of kinematics, dynamics, gravitation, work, energy, momentum, rotational kinematics and dynamics. Prerequisite: MATH 129 or 131. Corequisite: PHYS 150L. *One semester; three credits*

PHYS 150L. PHYSICS I LABORATORY
Laboratory to accompany PHYS 150. Prerequisite: MATH 129 or 131. Corequisite: PHYS 150. *One semester; one credit*

PHYS 201. INTRODUCTORY PHYSICS I
A general physics course covering the topics of mechanics, heat, and sound. Designed primarily for biology majors. Prerequisite: High school algebra and trigonometry or MATH 117 or (107 & 110). Corequisite: PHYS 201L. A student can receive credit for only one of PHYS 150 and PHYS 201. *One semester; three credits*

PHYS 201L. INTRODUCTORY PHYSICS I LABORATORY
Laboratory to accompany PHYS 201. Prerequisite: High school algebra and trigonometry or MATH 117 or (MATH 107 and 110). Corequisite: PHYS 201. *One semester; one credit*

PHYS 202. INTRODUCTORY PHYSICS II
A continuation of PHYS 201 covering the topics of electricity and magnetism, light, and modern physics. Prerequisite: PHYS 150 or PHYS 201. Corequisite: PHYS 202L. *One semester; three credits*

PHYS 202L. INTRODUCTORY PHYSICS II LABORATORY
Laboratory to accompany PHYS 202. Prerequisite: PHYS 150 or PHYS 201. Corequisite: PHYS 202. *One semester; one credit*

PHYS 251. PHYSICS II
A second course in physics covering electric forces, electric fields, voltage, capacitance, current, resistance, magnetic forces, magnetic fields, induction, oscillations, and waves. Prerequisite PHYS 150. Corequisite: PHYS 251L. *One semester; three credits*

PHYS 251L. PHYSICS II LABORATORY
Laboratory to accompany PHYS 251. Prerequisite: PHYS 150. Corequisite: PHYS 251. *One semester; one credit*

PHYS 252. PHYSICS III
A third course in physics covering geometrical optics, interference, diffraction, quantum theory, waves and particles, atomic physics, special relativity, radioactivity, and nuclear physics. Prerequisite: PHYS 251. *One semester; three credits*

PHYS 252L. PHYSICS III LABORATORY
Laboratory to accompany PHYS 252. Prerequisite: PHYS 251. Prerequisite or corequisite: PHYS 252. Offered once per year. *One semester; one credit*

PHYS 340. ELECTROMAGNETIC FIELDS
An advanced course in classical electric and magnetic fields that expands upon the topics introduced in Physics II. Electrostatics, magnetostatics, Laplace's equation, the methods of images, and electric and magnetic fields in matter will be covered. Electrodynamics including electromotive force, Faraday's law, and Maxwell's equations will finish out the course. Intended for Physics and Engineering Physics majors and minors. Prerequisites: PHYS 251 and MATH 232. *One semester; three credits.*

PHYS 347. SPECIAL RELATIVITY
A study of the theory of special relativity including the experimental background of special relativity, relativistic kinematics including the doppler effect, and relativistic dynamics including the equation $E=mc^2$. Prerequisite: PHYS 252. *One semester; two credits*

PHYS 353. SOLID STATE PHYSICS
An introductory study of the physics of solids including crystal lattice vibrations and waves, the free electron model, electron energy bands, semiconductor electrical properties, junctions, and optical properties. Prerequisites: PHYS 252 and MATH 232. Offered in every other even-numbered Fall semester. *One semester; three credits*

PHYS 380. ADVANCED MECHANICS I
Primarily an advanced study of the kinetics and dynamics of single particles; Newton's laws; concepts of momentum, work, energy; and conservation principles. Prerequisites: PHYS 251 and MATH 232. *One semester; three credits*

PHYS 381. ADVANCED MECHANICS II
A continuation of the study of mechanics including accelerated reference frames, Lagrangian and Hamiltonian mechanics, and generalized coordinates. Prerequisite: PHYS 380. *One semester; one credit*

PHYS 400. INTERNSHIP IN PHYSICS
Students majoring in physics, engineering physics, or natural science receive on-the-job training in the offices or laboratories of cooperating firms. To receive credit, the student must submit periodic reports and a detailed final report of the work done. The authorized supervisor of the firm must verify these reports. Prerequisites: junior standing and approval of the Physics faculty. *Pass/Fail grading. One semester; one to three credits*

PHYS 415. OPTICS
A study of electromagnetic radiation, with emphasis on the visible portion of the spectrum. Topics include optical detectors, superposition of waves, interference, far-field and near-field diffraction, polarization, waveguides and optical fibers, and laser theory. Prerequisites: PHYS 252 and

MATH 232. *One semester; three credits*

PHYS 415L. OPTICS LABORATORY
Laboratory to accompany PHYS 415. Prerequisites: PHYS 252 and MATH 232. Corequisite: PHYS 415. *One semester; one credit*

PHYS 430. THERMAL PHYSICS
The first part of the course focuses on a classical treatment of thermodynamics from the perspective of physics. The second part of the course examines thermodynamics from the modern statistical mechanic's viewpoint. Topics include the fundamental laws of thermodynamics, entropy, ideal gasses, the Boltzmann distribution, the partition function and applications to real systems. Prerequisites: PHYS 252 and MATH 232. *One semester; three credits*

PHYS 447. QUANTUM MECHANICS I
A detailed introduction to quantum mechanics including thermal radiation, deBroglie's postulate, Schrodinger's equation, one-electron atoms, spin and transition rates. Prerequisites: PHYS 252 and MATH 232. *One semester; three credits*

PHYS 448. QUANTUM MECHANICS II
A continuation of the study of quantum mechanics including statistical mechanics, time-independent and time-dependent perturbation theory, and scattering. Prerequisite: PHYS 447. *One semester; three credits*

PHYS 452. ADVANCED PHYSICS LABORATORY
A laboratory course in advanced selected experiments. A written report on each experiment is required. Prerequisite: PHYS 252L. *One semester; one credit*

PHYS 491. RESEARCH I
An independent investigation in some field of physics. A choice of topic for research is made, and a written description of the proposed research including bibliographical references is required. Prerequisite: Departmental approval or Senior standing. *One semester; zero credit*

PHYS 492. RESEARCH II
The research proposed in PHYS 491 is carried out. A formal written report plus an oral presentation to the class and the departmental faculty is required. Prerequisite: PHYS 491. *One semester; two credits*

PHYS 495-498. SPECIAL TOPICS IN PHYSICS
Directed work on a special topic in physics approved by the department. *One semester; one to three credits*

PHYS 499. SENIOR COMPREHENSIVES
Second semester seniors are required to take a comprehensive examination on selected fields of physics as prepared and administered by the department faculty. A passing score is required for graduation. *One semester; zero credit*

■ POLITICAL SCIENCE COURSES

POLS 112. AMERICAN GOVERNMENT
This course is a survey of the American political system. Topics include the Constitution, federalism, interaction between the three branches of the federal government (legislative, executive, and judicial), political actors outside government (interest groups, media, political parties), state and local government, political culture, civil liberties, civil rights, and public policy. *One semester; three credits*

POLS 113. WORLD POLITICS
This course examines how politics unfold at the global level. Special attention will be paid to global actors and institutions: nations-states, international organizations, non-governmental organizations, and multi-national corporations. Topics include: conflict and cooperation, terrorism, the world economy, the environment, international law, and the interplay of culture, ideology, technology, and geography. *One semester; three credits*

POLS 115. NATIONS AND STATES (Comparative Politics) (Formerly POLS 210)
Comparing nation-states from different regions of the world through an examination of their politics, governments, economic systems, and cultures. The course will include discussion of democratic and non-democratic regimes, and different constitutional models. It shall also explore the role of culture, history, ideology, religion, and geography in shaping political systems. *One semester; three credits*

POLS 200-205. SPECIAL TOPICS IN POLITICAL SCIENCE
Topics vary with instructor. No prerequisite. *One semester; one to three credits*

POLS 215. INTRODUCTION TO THE LAW
This course is intended to introduce the student to the American legal system and to various practice areas of the law. Topics discussed include: how (and why) the American legal system is organized, including how the legislative process and executive branch are involved in this system; the focus on the role of ethics, procedure, and jurisdiction in the law; and an introduction to the primary substantive areas of the law that first year law students encounter, including torts, family, estate, property, contracts, business, and criminal law. (Same as PREL 215). *One semester; three credits*

POLS 220. SCIENCE FICTION AND POLITICS
The examination of political and social themes in works of science fiction and fantasy. The focus of the course will be the critical reading of texts, both written works and film. Issues discussed include: identity, the Self and the Other, conflict and war, the organization of society, utopia/anti-utopia, and the relationship between technology and culture. *One semester; three credits*

POLS 230. SURVEY OF POLITICS ON FILM
A survey of film as a vehicle for the communication of ideas and as an art form. The critical analysis of film as a political text. The way in which

political and social issues are depicted in film. Other issues discussed include prejudice and stereotyping in film, propaganda, and film censorship. *One semester; three credits.*

UPPER DIVISION COURSES ARE OPEN TO STUDENTS WHO HAVE SOPHOMORE STANDING AND MEET SPECIFIC COURSE PREREQUISITES, IF ANY.

POLS 310. U.S. CONSTITUTIONAL LAW
An examination of the structure of U.S. government and the limits on governmental power through detailed analysis of the U.S. Constitution and Supreme Court decisions interpreting it. The course will also examine the appropriate scope of judicial review in a democratic society. (Same as PREL 310). Prerequisite: POLS 112 or HIST 151 or permission of the department head. *One semester; three credits*

POLS 330. ADVANCED POLITICS ON FILM
A concentrated critical analysis of the political aspects of film, the politics of film production, and the interpretation of film. This course shall focus on a particular political or social issue, topic, or film genre. (Same as HIST 330) Prerequisite: any Political Science or History course or permission of the instructor Recommended but not required: POLS 230. *One semester; three credits.*

POLS 340. WEIMAR REPUBLIC AND NAZI GERMANY
This course covers the history of Germany from 1919 to 1945. It will examine the collapse of the Weimar Republic and the rise of Nazi power. It will also cover the life of Adolf Hitler, the Holocaust, and Nazi ideology, policy, and war aims. (Same as HIST 340). Prerequisite: any Political Science or History course or permission of the instructor. *One semester, three credits*

POLS 356. THE HOLOCAUST: POLITICAL AND RELIGIOUS DIMENSIONS
The Holocaust remains one of the most shocking and disturbing episodes in human history and, as a consequence, people of many backgrounds and beliefs have struggled with the profound political, religious, moral, and psychological questions it raises. This course examines the Holocaust as an event in human political history, and as a challenge for ethical and theological reflection. (Same as RS 356) Prerequisite: any RS 200 level course and HIST 107, 108, 151, 152, POLS 112, 113 or 115. *One semester; three credits*

POLS 370. INTERNATIONAL LAW
The history, formation and application of international law. Issues discussed include the sources of international law, the law of treaties, and rules regarding diplomacy, human rights, war/peace, war crimes, nationality, territory, and the global commons. Course readings shall include both secondary sources and legal texts. Prerequisites: Any political science or history course, or GS/HUM 200 or permission of the instructor. Recommended, but not required: POLS 113. *One semester; three credits*

POLS 375. UNITED STATES FOREIGN POLICY
This course will examine the history and practice of U.S. foreign policy. It will examine current issues in U.S. foreign policy, the organization and function of institutions, how decisions are made, and the politics of foreign policy making. (Same as HIST 375). Prerequisite: any political science or history course or Permission of the instructor. Recommended, but not required, one of the following: HIST 152, POLS 112 or 113. *One semester; three credits.*

POLS 380. HONORS POLITICAL HISTORY OF THE SPACE AGE
The political history of space exploration and utilization. Legal, scientific, and military aspects of space. The space programs of current and emerging space-faring countries. Commercial use of space and private sector spaceflight programs. The cultural and social impacts of space exploration. The prospects and implications of space colonization and the search for extraterrestrial intelligence. Prerequisite: Any Political Science or History course, or permission of instructor. (Same as HIST 380). *One semester; three credits.*

POLS 390-399. HONORS SPECIAL TOPICS
Special topics in political science open to members of the Honors Program or by permission of the instructor and Honors Director. Topics vary with instructor. *One semester; three credits*

POLS 470-479. TOPICS IN POLITICAL SCIENCE
Topics vary with instructor. Prerequisite: Any political science or history course, or permission of instructor. *One semester each; one to three credits each*

POLS 490-499. INTERNSHIPS
Content varies with specific internship program. Internship credit may be counted towards the POLS minor. History majors can use a maximum of 3 hours of internship credit towards the hours needed for the history degree. Prerequisite: Permission of Political Science Internship Director. *One semester each; one to three credits*.

■ PRE-LAW COURSES

PREL 215 INTRODUCTION TO THE LAW
This course is intended to introduce the student to the American legal system and to various practice areas of the law. Topics discussed include: how (and why) the American legal system is organized, including how the legislative process and executive branch are involved in this system; the focus on the role of ethics, procedure, and jurisdiction in the law; and an introduction to the primary substantive areas of the law that first year law students encounter, including torts, family, estate, property, contracts, business, and criminal law. (Same as POLS 215). No prerequisite. *One semester; three credits.*

PREL 216. PRE-LAW PRACTICUM
The Pre-Law Practicum will prepare students for the challenges of law students. The emphasis will be on personal statement preparation, LSAT preparation, and the application process. No prerequisite. *One semester; one credit*

PREL 310. U.S. CONSTITUTIONAL LAW
An examination of the structure of U.S. government and the limits on governmental power through detailed analysis of the U.S. Constitution and Supreme Court decisions interpreting it. The course will also examine the appropriate scope of judicial review in a democratic society. (Same as POLS 310.) Prerequisite: POLS 112 or HIST 151 or permission of the department head. *One semester; three credits*

■ PSYCHOLOGY COURSES

Requirements for the degree are found on Page 52.

PSYC 105. GENERAL PSYCHOLOGY
An introduction to the discipline of psychology as a science of behavior. Areas of study include biological aspects of psychology, learning, perception, personality, abnormal behavior, psychological research, social and developmental psychology. Psychology and Applied Psychology majors must complete the course with a grade of "C" or higher. *One semester; three credits*

PSYC 110. PSYCHOLOGY COLLOQUIUM
This course will focus on how to make the most of a psychology degree. Topics will include: marketable skills developed as a psychology major, careers available with a bachelor's degree, careers available with a graduate degree, preparing for/applying to graduate school, practicum/internship in psychology, and options within the major. Students will meet once a week. Each session will be led by a Behavioral Sciences faculty member. Offered in the Spring semester. *One semester; one credit*

PSYC 218. HUMAN DEVELOPMENT
An examination of developmental trends, principles, and processes through the lifespan. This course investigates human development at all stages and ages with attention to biological, social, and cognitive development. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 219. PERSONALITY
A survey of major personality theories and perspectives in terms of conceptions, applications, and research. Emphasis is placed on current theories and research in personality. Approaches to personality assessment and research methods in personality are considered throughout the course. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 223. FOUNDATIONS OF FORENSIC PSYCHOLOGY
An examination of the field of forensic psychology including professional training, forensic work settings, and the application of psychological knowledge to forensic issues like risk assessment, custody evaluations, assessment of sanity, competency, eyewitness testimony, jury decision making, police stress, and criminal profiling. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 225. BIOLOGICAL PSYCHOLOGY
Views the study of human and animal behavior within the context of biological principles. The course will include a review of functional neuroanatomy and principles of neural communication. Other areas covered include brain-behavior relationships, sensory processes, and biological bases for emotional behavior, sexual behavior, and psychological disorders. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 226. PSYCHOLOGY IN THE CINEMA
In this course we look at understanding movies as a psychological process through the use of film technique. We study the influential role of movies in society. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 227. SPORT PSYCHOLOGY
Examines psychological theories and research related to sport and exercise behavior. The course is designed to introduce students to the field of sport and exercise psychology and to provide an overview of basic research and practical implementations in this applied specialization of psychology. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 228. PSYCHOLOGY OF MEDIA
This course investigates the media construction of reality by examining media representations of different social constructs. Students examine how reality is created from a cognitive psychological and social-cognitive approach and from different media theories. (Same as SOC 228.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 229. HONORS PSYCHOLOGY OF MEDIA
This course investigates the media construction of reality by examining media representations of different social constructs. Students examine how reality is created from a cognitive psychological and social-cognitive approach and from different media theories. (Same as SOC 229.) Prerequisite: Membership in the Honors Program or special permission of the instructor and Honors Director. *One semester; three credits*

PSYC 235. FUNDAMENTALS OF APA WRITING STYLE AND ETHICS
Students will learn to write an APA-style research paper. They will write an APA-style research proposal with the potential of completing the research in the Correlational or Experimental Methods course. Students will also learn other research reporting methods including PowerPoint and poster presentations. Students will complete certification in APA ethics. Open to other students by instructor permission only. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 240. ANIMAL COGNITION
A study of the mental processes of animals with a comparative emphasis on human-animal cognitive processes viewed within an evolutionary context. Topics include language learning and communication, concept formation, problem solving, intelligence, emotion, and construction of artifacts. Similarities in animal-human developmental processes will be examined as well as current research on animal cognition. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 241. CONSUMER PSYCHOLOGY
This course analyzes consumer behavior from a psychological perspective. Topics include the impact of motivation, information processing, memory, personality, attitudes, and lifestyles on consumer decision processes and purchases. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 270. DYNAMICS OF GENDER
This class will critically examine how norms, beliefs, ideologies, language, culture and institutions influence gender behavior, traditional conceptions of masculinity and femininity, and socialization for masculine and feminine roles. (Same as SOC 270) Prerequisite: PSYC 105 with a grade of "C" or higher or SOC 101 with a grade of "C" or higher. *One semester; three credits*

PSYC 275. GRADUATE SCHOOL & PROFESSIONAL CAREERS IN PSYCHOLOGY
A survey of various professional careers in psychology and a thorough examination of the graduate school application and admissions process. Careers examined may include but are not limited to clinical/counseling, forensic, consumer, sports, educational, industrial/ organizational, and academics. This course is intended primarily for those students who plan to pursue a graduate education in psychology. Prerequisite: PSYC 105 with a grade of "C" or higher and sophomore standing. *One semester; three credits*

PSYC 280-287. SELECTED TOPICS IN PSYCHOLOGY
Directed work on a special topic or project in psychology. *One semester; one to three credits*

PSYC 290-299. HONORS SPECIAL TOPICS
Special topics in psychology open to members of the Honors Program or by permission of instructor and Honors Director. *One semester; one to four credits*

PSYC 303. POST TRAUMATIC STRESS DISORDER
The attack on the World Trade Center, Hurricane Katrina, the wars in Iraq and Afghanistan, the BP oil spill, trapped Chilean miners, earthquakes in Haiti, floods in Pakistan, tsunamis in Indonesia, murder and displacement in Darfur, massacre in Tiananmen Square. Survivors of these events experienced extreme trauma. Sometimes the consequences of these traumatic experiences cause the person to have trouble dealing with life for months or years. We call this extreme reaction post-traumatic stress disorder (PTSD). Knowledge of PTSD may help an individual become more resilient after experiencing extreme stress. The goal of this course is to familiarize the student with the disorder in order to understand the consequences of severe trauma. Understanding PTSD is necessary not just for mental health providers, but also for the individual who may experience, or knows someone who experiences, severe trauma, and the citizen concerned about the well-being of war veterans. In this course we will examine PTSD in depth; anxiety disorders; history and prevalence of PTSD; specific traumas (combat, sexual assault, crime, natural and man-made disasters, terrorism, etc.); symptoms, biology, consequences, impact and treatment of PTSD. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 305. PROBLEM SOLVING AND DECISION MAKING (Formerly PSYC 289)
The objective of this course is to improve people's ability to solve problems and make decisions using psychological material discussed in class. Students will learn to improve their practical problem solving skills by learning to recognize and overcome conceptual blocks to problem solving. Topics to be covered include creativity, methods of problem solving, memory aids, decision-making tools, avoiding biases of judgment, etc. Students will be given assignments revolving around practical problems and decisions (e.g., how to improve time management). Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester, three credits*

PSYC 306. HUMAN FACTORS (Formerly PSYC 301 Engineering Psychology)
Human factors, also called engineering psychology, ergonomics or usability engineering, deals with the importance of designing for human use. Equipment that is not ergonomically sound will be operated a little more slowly and be a little more prone to error. Our goal in this class is to provide a solid foundation in the principles of human performance and a broad overview of the field of human factors. This class provides the student with an understanding of the variables that influence human performance and the ways in which the human factors expert draws on this knowledge. The analysis of human performance requires frequent contact with real-world situations in which people actually perform. This course provides an integrated approach to the study of human factors, embedding the principles of human factors within a foundation based on contemporary views of human performance. Product design will be discussed in terms of usability and consumer behavior/preferences. Topics include the following: perception, cognition, and environment. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 310. DEATH AND DYING
A course considering relevant topics relating to death and the dying process from a multi-disciplinary perspective. Course content includes the meaning of death, the dying process in historical context and in contemporary culture, bereavement, grief, and mourning, approaches to terminal care, death and childhood, violent death, suicide, death industries, the right to die, and surviving death. (Same as SOC 310) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 315. EDUCATIONAL PSYCHOLOGY
This course focuses on the application of psychology to the school setting. It is intended to assist students in mastering an organized sampling of scientific knowledge about human development, learning, motivation, individual differences, and evaluation. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 317. PSYCHOPATHOLOGY (Formerly PSYC 230)
A survey of various types of mental disorders including their causes, symptoms, diagnosis, and treatment. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 318. HONORS PSYCHOPATHOLOGY
A survey of various types of mental disorders including their causes, symptoms, diagnosis, and treatment. Prerequisite: Membership in the Honors Program or by permission of the instructor and Honors Director. *One semester; three credits*

PSYC 320. HONORS SEMINAR DEATH AND DYING
This seminar focuses on critically examining and understanding death, the dying process, grief, the ethics of life/death, and a variety of related issues. It integrates a number of multidisciplinary perspectives and resources, emphasizes the exercise of critical thinking and implements the philosophy of writing as an integral means of learning. Prerequisite: Membership in the Honors Program or by permission of the instructor and Honors Director. (Same as SOC 320.) *One semester; three credits*

PSYC 325. TOPICS IN AGING
This course focuses on the following issues in aging: the impact of aging on the individual, the family, and society; the quality of later life; societal attitudes toward old age; problems and potentials of aging; retirement; living environments in later life; societal policies, programs and services for older Americans. The diversity in the aging process due to differences in gender, race, and social class is emphasized. (Same as SOC 325.) Prerequisite: PSYC 105 with a grade of "C" or higher or SOC 101 with a grade of "C" or higher. *One semester; three credits*

PSYC 340. FUNDAMENTALS OF COUNSELING
This course presents counseling in a broad manner covering its history, theories, processes, issues, specialties, and trends. In addition, this course concentrates on the importance of the personhood of counselors and of the multicultural, ethical, and legal environments in which counselors operate. Prerequisites: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 343. APPLIED CRISIS INTERVENTION STRATEGIES
This course presents the fundamental concepts, theories, strategies, and skills needed to understand and conduct effective crisis intervention. By studying case illustrations, it focuses on applying intervention strategies to several of the currently most prevalent types of crisis in the human experience. In addition, this course considers the importance of the personhood of the worker and crises that may occur in the human service workplace. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 345. HUMAN SEXUALITY
A survey study of topics in human sexuality. Topics included are basic reproductive anatomy, hormonal influences on behaviors, attraction, relationships, sexual variations, birth control, and sexually transmitted diseases. Self-assessment surveys on sexual attitudes are discussed in class. (Same as SOC 345) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 350. INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY (Formerly PSYC 352)
This course examines the contributions of psychology to effective human resources development and management. The course content is designed for Psychology and Business majors and focuses on the practical applications of psychology in the business world. Topics include the psychology of organizations, motivation and supervision, employee selection and development, legal considerations, evaluation, and organizational development. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 351. ADOLESCENT PSYCHOLOGY
This course is an exploration of theory and research relevant to the physical, psychological, and social transitions associated with early, middle, and late adolescence. Developmental issues examined include the formulation of identity establishing autonomy, moral development, social interaction, and the transformations associated with puberty, as well as the identification and understanding of problems and psychopathology in adolescence. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 353. SOCIAL PSYCHOLOGY
A study of the social-psychological aspects of human interactions. Areas of study include: affiliation, social perception, attribution processes, interpersonal attraction, aggression, attitude formation, attitude change, conformity, compliance, cooperation, competition, group structure, and group dynamics. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 354. CORRELATIONAL RESEARCH METHODS AND STATISTICS
An introduction to the fundamentals of research methods and statistical analysis in the Behavioral Sciences. Students will learn and apply basics of research methodology and basic statistical techniques with an emphasis on correlational methods. Students will conduct a correlational research project which will be presented to other students and faculty. Prerequisites: PSYC 235 and (ALG 110 & 120) or (ALG 108 & 118) or ALG 115 or higher. Required for all Psychology and Applied Psychology majors. Open to other students by instructor permission only. *One semester; three credits*

PSYC 355. EXPERIMENTAL RESEARCH METHODS AND STATISTICS
An introduction to basic experimental research design and related statistical analyses. Students will be required to design and conduct an experimental research project which will be presented to other students and faculty. Prerequisite: PSYC 354 with a grade of "C" or higher. Required for all Psychology majors. Open to other students by instructor permission only. *One semester; three credits*

PSYC 357. INTERVIEWING, ASSESSMENT, AND TEST INTERPRETATION
This course teaches the skills of interviewing and assessment. You will learn appropriate interviewing techniques, data collection, and diagnostic procedures. Prerequisite: PSYC 354. *One semester; three credits*

PSYC 364. STEREOTYPING AND PREJUDICE
This course will analyze and discuss issues related to stereotyping and prejudice, including psychological theory and empirical research on the topic. We will examine the origins, functions, and consequences of stereotyping and prejudice as well as measurement strategies. We will examine issues surrounding the persons both engaging in and targeted by stereotyping and prejudice and discuss historical and contemporary social and political

issues relevant to the course. (Same as SOC 364.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 370. APPLICATIONS OF MEMORY
An examination of the application of memory in such diverse areas as courtroom testimony (e.g., factors influencing witnesses, hypnosis, repressed memory, false memory), memory for everyday events, memory aids, and advertising. The relevant theories and research in each area are examined. (Same as CJ 370.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 371. SENSATION AND PERCEPTION
In this course, we will explore the processes of sensation and perception, through which information in the environment is converted into a form that our brains can process and which ultimately allow us to make sense of our world (sometimes). This exploration will include theories and research on the visual, auditory, somatosensory, gustatory, and olfactory modalities, including how they interact and how certain processes are common across multiple senses. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 372. PSYCHOPHYSIOLOGY
Psychophysiology is the study of the body to infer psychological states and processes. Things like heart rate, muscle activity, electrodermal activity (sweat), and even brain activity can tell us a great deal about people's thoughts and feelings—including many cases when they are not even aware of them. Methods covered in this course are used in such fields as forensics, marketing, medicine, audiology and speech language pathology, sport psychology, neuroscience, and many others. The basic skills learned in this course will generalize to many different applications. A substantial part of the course will be devoted to completion of an original research project. Prerequisite: PSYC 105 and 225 with grades of "C" or higher. *One semester; three credits*

PSYC 380-387. SELECTED TOPICS IN PSYCHOLOGY
Directed work on a special topic or project in psychology. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; one to three credits*

PSYC 390-399. HONORS SPECIAL TOPICS IN PSYCHOLOGY
Special topics in psychology open to members of the Honors Program or by permission of the Instructor and Honors Director. *One semester; three credits.*

PSYC 416. PSYCHOLOGY OF LEARNING
An in-depth examination of concepts, theoretical issues, and research findings involving the psychology of learning. Areas of study include classical and instrumental conditioning, principles of reinforcement and punishment, and other factors affecting learning. This course has a service-learning component. Prerequisite: PSYC 105 with a "C" or higher. *One semester; three credits*

PSYC 420. PSYCHOLOGY OF LEADERSHIP
This course focuses on psychological components of leadership behavior and its importance to various situations in the workplace. Students will explore the potential impact of leaders and their influence on individuals and groups. Particular attention is given to research and application of the essential competencies of effective leadership such as managing conflict, facilitating communication, rewards and motivation and leading groups and teams. The course content is designed for both Psychology and Business majors interested in working in a human resource field. Prerequisites: PSYC 105 and PSYC 350 with a "C" or higher. *One semester; three credits*

PSYC 435. PERSONNEL PSYCHOLOGY
This course examines the application of psychological research, employment law, and ethical principles to human resource problems in organizations. It focuses on applications designed to make employees, and organizations more effective and creating organizations that are satisfying places to work. Particular attention is given to hiring practices including recruitment, screening, selection, retention as well as performance evaluation and training. The course content is designed for both Psychology and Business majors interested in working in a human resource field. Prerequisites: PSYC 105 and PSYC 350 with a "C" or higher. *One semester; three credits*

PSYC 440. COGNITIVE PSYCHOLOGY
This course is designed to investigate the nature of the thinking mind. Cognitive psychology involves understanding how we gain information of the world, how it is transformed into knowledge, stored in memory, and accessed when needed. Topics include attention, memory, problem solving, creativity, and language. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 450-451. INDEPENDENT RESEARCH IN PSYCHOLOGY
These courses are a two semester sequence intended for advanced (junior status or higher) students who wish additional experience in research design and statistical analysis. In PSYC 450 the student will investigate in depth a specialized topic in psychology resulting in a proposal that will include a literature review, hypotheses and proposed research design. In PSYC 451 the student will further investigate the topic by engaging in empirical research that is then analyzed, interpreted, and presented in a manuscript. These courses are recommended for students intending to continue their education in a graduate program. Prerequisites: PSYC 354 and 355 and permission from the Chair of Behavioral Sciences. *Two semesters; two credits each*

PSYC 453. PSYCHOLOGY OF PERSUASION
This course examines the scientific and social psychological processes that underlie persuasion, Attitude formation and measurement as well as resistance to persuasion will also be examined. Persuasion as it applies to political campaigns, propaganda, and advertising and consumer behavior will be addressed, along with other relevant topics. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits.*

PSYC 455. CORRECTIONAL COUNSELING
This course is designed to present some of the counseling and treatment techniques that are available to assist correctional workers toward assisting the offender to establish a satisfying lifestyle that conforms to the regulations as well as protecting the community from harmful activity by offenders placed under the correctional workers' supervision (Same as CJ 455.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

PSYC 460. PRACTICUM IN PSYCHOLOGY
The practicum offered for majors with senior status includes several options. The first is a formal internship consisting of 100 hours of professional in-field experience. It is a well-structured program in which students will be required to meet a number of objectives related to their goals, their developing competence, and their interests in psychology and related fields. A 2.5 GPA is required to pursue this option. The second option involves a research assistantship in which seniors will assist practicing graduate-level and professional-level researchers in conducting their projects. Sound performance in the statistics and research courses is a prerequisite for this option. A third option involves the opportunity to be a learning facilitator mentored by a full-time faculty member. In this capacity, the student provides support services to a faculty member in a specific course. These services include preparation of presentation materials, development of study guides, the convening and leading of study groups, peer editing, and the compilation of course-related research. This option may be particularly valuable to students seeking careers in academic fields. The guidelines and requirements for this option have been developed and are made available to interested students upon request. A final option is an individually-designed project suited to the needs, interests, and academic strengths of the student. The project will be conducted under the direction of a full-time faculty member. Guidelines for the formal proposals are available. Plans for any of these options should be developed and approved by the Practicum Director the semester before the course is taken. Permission of the Practicum Director is required. Prerequisite: PSYC 105 with a grade of "C" or higher and senior standing. *One semester; three credits*

PSYC 470. COGNITIVE NEUROSCIENCE SEMINAR
In this course we will discuss the methods of cognitive neuroscience and neuroimaging, including PET, fMRI, EEG, ERPs, MEG, optical imaging, and lesion methods (including TMS), with an emphasis on human research and applications. We will critically evaluate research articles in which these methods are used to examine such topics as attention, memory, language, and motor control. Each student will propose an original research project. Prerequisite: PSYC 105 and 225 with grades of "C" or higher. *One semester; three credits*

PSYC 480-487. ADVANCED TOPICS IN PSYCHOLOGY
Directed work on a special topic or project in psychology. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; one to three credit*s

PSYC 490. SENIOR CAPSTONE
Readings, evaluation and analysis of selected topics in the discipline. May require a comprehensive individual empirical research project or other final project to be presented to and approved by departmental faculty. Prerequisite: PSYC 105 with a grade of "C" or higher and senior standing. *One semester; three credits*

PSYC 497. PSYCHOLOGY COMPREHENSIVES
Seniors will be required to take a comprehensive examination on selected areas of psychology. Students are required to have completed or be currently enrolled in their final psychology courses before taking the exam. This course commences through email and requires monitored email access, so students are responsible for contacting the instructor at the beginning of the semester to confirm enrollment and schedule the exam. Prerequisite: PSYC 105 with a grade of "C" or higher, PSYC 219, 317, 353, 354 and 440. *Pass/Fail grading. One semester; zero credit*

PSYC 499. ADVANCED INTERNSHIP
This course is intended for students who have completed the requirements for PSYC 460 at an exemplary level and either (a) wish to pursue further opportunities or directed field research at their original field placement or (b) wish to pursue an additional field placement consistent with the goals of the internship program and the developing interests of the students. Permission of the Practicum Director is required. Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

■ RELIGIOUS STUDIES COURSES

Requirements for the Religion & Philosophy degree are found on Pages 53 and 54.
Students are required to take one course at the 200 level before taking courses at the 300 level or above.

RS 200. UNDERSTANDING RELIGION
An introduction to religion through a comparative study of all aspects of religious experience in Christianity and other religious traditions. This course will address existential and theological questions through a study of scriptures, sacred reality, symbol, ritual, and ethics. *One semester; three credits*

RS 217. OLD TESTAMENT (HEBREW SCRIPTURES)
Using the Old Testament as a text and a guide, the course explores the origins and early history of the Jewish people to the Maccabean revolt and encompasses concepts such as Covenant, Prophecy, Messiah. *One semester; three credits*

RS 218. NEW TESTAMENT
A discussion of the Christian scriptures from literary, historical, and theological points of view concentrating on the life and teachings of Christ and the spread of Christianity after His death and resurrection. *One semester; three credits*

RS 220. HISTORY OF CHRISTIAN THOUGHT: THROUGH THE REFORMATION
This course examines the development of Christian history, practice, and theology from the time of the early churches through the Middle Ages and the Reformations. Special attention is paid to how Christian thought and practice develop through controversy and interpretation of the biblical tradition, as well as to the expression and experience of historical Christianity in art, architecture, music, and religious practices. *One semester; three credits*

RS 221. HISTORY OF CHRISTIAN THOUGHT: SINCE THE REFORMATION
This course examines major themes, questions, and issues in Christian theology after the Reformation to the early part of the 21st century. Special attention will be given to the significance of Christian theology and Christian faith for the lives of women and men in the contemporary world. *One semester; three credits*

RS 230. CHRISTIAN ETHICS
A critical investigation of the theological convictions grounding Christian understandings of doing what is right and being a good human person. This will include approaches to ethics from within both Catholic and Protestant Christianity, along with analysis of selected moral issues. *One semester; three credits*

RS 240. THE RELIGIOUS DIMENSION OF WORK (Formerly RS 315)
A study of the relationships between work and religion in western society. Career, studied from several perspectives, will be viewed ultimately as a vocation-a call from God. *One semester; three credits*

RS 245. HONORS RELIGION AND SCIENCE
This interdisciplinary course focuses on the way religion and science jointly contribute to our knowledge. It is based on the premise that no one source of knowledge, theological or otherwise, can alone provide a complete description of reality. Readings and guest lecturers from other disciplines will cover a wide-ranging dialogue dealing with issues in astronomy, physics, biology, and ecology. A spectrum of possibilities for the relation between religion and science will be considered, including the options of conflict, independence, dialogue, and interaction. Prerequisite: Membership in the Honors Program or permission of the instructor. *One semester; three credits*

RS 254. CHRISTIANITY AND PEACE
An analysis of historical Christian attitudes toward war and peace. Theological and moral arguments for the pacifist and just war traditions will be analyzed, along with their application to forms of state sanctioned violence such as war and capital punishment and the new challenges to these traditions such as military intervention and terrorism. (Same as HUM 254) *One semester; three credits*

RS 260. PERSON, WORLD, AND GOD
This course will focus phenomenologically on ways to recognize God's presence in our everyday lives. How does one person's religious experience compare/contrast with another's? Personality types, prayer forms, biblical references, and theological studies will be examined in tandem with lived experiences. *One semester; three credits*

RS 270. WORLD RELIGIONS (Formerly RS 350)
A survey of the great eastern and western religious traditions. The course covers the history, beliefs, practices, symbols, and sacred scriptures of select religions, including indigenous religions, Hinduism, Buddhism, Judaism, Christianity, Islam, and new religious movements. The course will include visits to religious sites in Memphis. *One semester; three credits*

RS 271. SOCIOLOGY OF RELIGION (Formerly RS 371)
The study of the beliefs, practices, and organizational forms of religion using the tools and methods of sociology. Topics covered may include the relation of beliefs to social conditions, the role of religion in cultural formation and public life, religious pluralism and conflict, the nature of religious cults and sects, the influence of religion on racial, gender, and sexuality issues, and the effect modernity has on religious belief and practice. (Same as SOC 271). Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; three credits*

RS 280. CATHOLICISM
An examination of the teachings, structures, and cultural influence of Roman Catholicism with emphasis on the Catholic understanding of Jesus Christ, the nature of the Church, the Sacraments, and the human person. *One semester; three credits*

RS 285. THE CHURCH IN THE WORLD
A study of the theology and organization of various major Christian churches in terms of their relation with the world and each other. Different models of being church will be analyzed, including approaches to authority, worship, and religious pluralism. *One semester; three credits*

RS 290-294. SELECTED TOPICS IN RELIGION
Selected topics of special interest at an introductory level. Topics vary with instructor. *One semester; three credits*

RS 295-299. HONORS SPECIAL TOPICS IN RELIGION
Selected topics of special interest in Religious Studies open to members of the Honors Program or by permission of the instructor. *One semester; three credits*

RS 300. JESUS CHRIST
An investigation into the historical features of Jesus' ministry and message and His importance in the world today. The course will examine Christian doctrine about Jesus and probe the reasons for His appeal through the centuries. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 320. RELIGION IN AMERICA
An examination of the cultural, legal, and historical factors that have helped shape the various religious communities of the United States. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 324. CHRISTIAN SPIRITUALITY
An examination of key figures and themes in Christian spirituality in terms of their different approaches to living the Christian life. Analysis will be made of each approach to spirituality in relation to Christian beliefs and values, the manner in which the spirituality is expressed in the daily practice of Christian life and the time period in which the spirituality developed. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 326. SOCIAL AND POLITICAL THEOLOGIES
A critical examination of contemporary social and political theologies, such as liberation theology, black theology, feminist theology and womanist theology. Special attention will be given to the importance of social context in developing such theologies and their ways of drawing from and critiquing traditional Christian theological views. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 330. JUSTICE AND SOCIETY
A study of issues relating to justice and human rights in contemporary social life (economic, political, cultural), focusing on the contributions of developing social justice teachings of the churches. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 331. THE SPIRITUALITY AND ETHICS OF EATING
This course examines the role of food and eating in the sacred texts and rituals of Judaism and Christianity in order to explore the thesis that food is not primarily a commodity but a relationship linking people to one another, to God, to the land, plants, and animals. Students additionally examine the contemporary environmental, ethical, and spiritual dimensions of food and the way these are reflected in our eating practices. Students are required to complete a service project for this course. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 335. PHILOSOPHY OF RELIGION
An examination of philosophical issues relating to religion, the concept of God, arguments for and against God's existence, the nature of religious experience, knowledge, faith, the problem of evil and free will. (Same as PHIL 335). Prerequisite: any RS 200 course or higher. *One semester; three credits*

RS 340. AFRICAN AMERICAN THEOLOGY
This course examines the unique contributions of African Americans to Christian theology. Discussion of African religions, slave spirituals and narratives, and the ongoing marginalization of African Americans due to structural racism will serve as an introduction. The focus of the course will be on contemporary developments beginning in the late 1960s, which will be explored through close reading of works of Black Liberation Theology. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 345. GOD, EVIL AND SUFFERING
A consideration of the question of religious faith in the face of evil and seemingly senseless pain and suffering, as well as some of the more carefully-reasoned responses proffered within the history of Christian thought, both traditional and modern. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 355. JUDAISM
Introduction to the history, religion, literature, and practices of rabbinic Judaism. This course will examine how the cultures of the diaspora, as well as being Christianity's constant "other," led to the institutions and rituals of modern Jewish experience. The course will also examine issues such as Jewish identity after the Holocaust, and the modern state of Israel. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 356. THE HOLOCAUST: POLITICAL AND RELIGIOUS DIMENSIONS
The Holocaust remains one of the most shocking and disturbing episodes in human history and, as a consequence, people of many backgrounds and beliefs have struggled with the profound political, religious, moral, and psychological questions it raises. This course examines the Holocaust as an event in human political history, and as a challenge for ethical and theological reflection. (Same as POLS 356) Prerequisite: any RS 200 level course and HIST 107, 108, 151, 152, POLS 112, 133 or 115. *One semester; three credits*

RS 360. ISLAM
An analysis of the Islamic faith, its history, major beliefs, contribution to civilization around the world, and relationship with Judaism and Christianity. Course topics include the five pillars of Islam. Jihad, male/female, relations, worship and celebrations, community life, and contemporary global and geopolitical issues in relation to Islam. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 372. WOMEN AND CHRISTIANITY
A historical and theological survey of the role of women in Christianity. Beginning from Christian origins, this course examines representations of women as apostles, prophets, martyrs, nuns and beguines, mystics, mothers, and wives. Special attention will be paid to theological discussions of the position of women, as well as contemporary reevaluations. Prerequisite: any RS 200 level course and junior standing. *One semester; three credits*

RS 375. THE PROPHETS
The movement that began with the 8th century BCE prophets of Israel marked a clear departure from the social and religious world view prevalent in the ancient Near East. This course will examine the background and literature of the prophetic movement with its agenda for social, religious, and political reforms. It will stress how prophets such as Amos, Jeremiah, and Isaiah were able to have a lasting impact on Western thought and religion through their views of Israel's relationship with neighboring nations, God, and future humanity. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 377. APOCALYPTIC IMAGINATION
A critical examination of apocalyptic texts and traditions in the ancient and modern worlds, with special attention to the book of Revelation. The course also explores modern appropriations of apocalyptic literature in theology, art, and film, and will give attention to more recent movements with apocalyptic overtones. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 380. PAUL: HIS LIFE AND HIS LETTERS
An historical and theological examination of the Apostle Paul and the Pauline letters, especially as they reflect the concerns of developing Christianity, including such issues as apocalypticism and the relation of Christian communities to the Jewish faith and the Roman Empire. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 385. THE GOSPELS
A study of the four Gospels using contemporary techniques of biblical interpretation with particular emphasis on the developing Jewish tradition in the early Christian Community. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 390-394. SPECIAL TOPICS IN RELIGIOUS STUDIES
Selected topics of special interest at an advanced level. Topics vary with instructor. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 395-399. HONORS SPECIAL TOPICS IN RELIGIOUS STUDIES
Special topics in religious studies open to members of the Honors Program or by permission of the instructor. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 400. CATHOLIC THOUGHT AND CULTURE THROUGH THE AGES
An interdisciplinary exploration of the wisdom of the Catholic tradition expressed through works of intellect and imagination, from the beginning of the Church up to contemporary times. Classics in literature, art, theology, philosophy, music, the sciences, and/or architecture are discussed. Emphasis is placed on recognizing the integrity of the grounding Catholic vision and on tracing the unified development and expansion of that vision over time. (Note: meets with MACS 600). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS. 402. CONTEMPORARY RELIGIOUS THOUGHT
A serious study of one or more selected theologians and religious thinkers from the twentieth century. Prerequisite: any RS 200 level course. *One semester; three credits*

RS 405. HONORS CONTEMPORARY RELIGIOUS THOUGHT
This course is designed to study 20th century theologians and their theologies concerning scripture, tradition, and human experience. Prerequisite: any RS 200 level course and membership in the Honors Program. *One semester; three credits*

RS 410. CATHOLIC BIBLICAL STUDIES
What is a Catholic approach to the study of the Bible? The course will begin with the Church's teaching on biblical interpretation as contained in such documents as Divino Afflante Spiritu, Dei Verbum, and "The Interpretation of the Bible in the Church." Selected texts from the Old and New Testaments will then be studied using the Catholic Church's approach to biblical interpretation in contrast to fundamentalism. (Note: meets with MACS 610). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 420. CATHOLIC SPIRITUALITY
An exploration of the relationship between religious experience and theological reflection as seen in the works of outstanding spiritual writers of the Catholic tradition, including St. Benedict, St. Francis and St. Clare, St. John Baptist de La Salle. This will include attention to prayer, forms of spirituality, and asceticism. (Note: meets with MACS 620). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 430. GOD AND THE HUMAN PERSON
An investigation of the Catholic doctrine of the human person in relation to God, including topics such as creation and fall, sin and grace, justification and sanctification, and eschatological fulfillment. (Note: meets with MACS 630). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 440. CHRISTOLOGY
Understanding the person, presence and mission of Christ in Scripture, doctrine, and dogma, and in contemporary theology. (Note: meets with MACS 640). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 450. THEOLOGY OF SACRAMENTS AND WORSHIP
An examination of the historical development of sacramental life in the Church and theological reflection on the sacraments. This will include contemporary approaches to the theology of sacraments, especially in relation to Christology and ecclesiology. (Note: meets with MACS 650). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 460. MORAL THEOLOGY
A study of the foundations of the Christian moral life, including freedom and moral agency, moral norms and moral reasoning, the place of scripture, tradition, and authority in the moral life, virtues and development of moral character. (Note: meets with MACS 660). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 470. CATHOLIC SOCIAL ETHICS
Critical analysis of the Biblical and theological foundations for Catholic social teaching and the teachings of the Catholic Church on matters such as war and peace; the rights and duties of states and citizens; the rights, duties, and obligations of members of a family; the rights, duties, and obligations of parents with respect to their children. (Note: meets with MACS 670). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 480. CATHOLICISM AND OTHER FAITH TRADITIONS
Drawing upon the teachings of Vatican II and other ecclesial documents, this course will explore the relationship between Catholicism and other faith traditions, both Christian and non-Christian. (Note: meets with MACS 680). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 485. INTERNSHIP
Combines work in a professional field with academic consideration of the relationship of that work to Religious Studies. Prerequisite: Permission of the Religious Studies Internship Director. *One semester; one to three credits*

RS 490. ECCLESIOLOGY AND MINISTRY
A consideration of the nature and structure of the Catholic Church, including its apostolic origins, the Church as communion and sacrament, magisterium and authority, the relation of the local and universal Church, evangelization, ministry and mission. Students will reflect upon their ministry plans/work in relation to the Church's mission. (Note: meets with MACS 690). Prerequisite: any RS 300 level course and permission of the chair of Religion & Philosophy. *One semester; three credits*

RS 491-496. SPECIAL TOPICS IN RELIGION
Selected topics of interest to individual students or small groups. Prerequisite: Approval of instructor. *One semester; one to three credits*

RS 497. JUNIOR SEMINAR
This seminar, for Religion & Philosophy majors in their junior year, introduces students to philosophical, theological, and scriptural research methods to prepare students for satisfactory completion of their Senior Projects (PHIL/RS 498). During this semester long seminar, each student will develop a research program for their senior project, with the semester culminating in a presentation of each student's project proposal and outline. Offered in the Spring semester. *One semester; one credit*

RS 498. SENIOR PROJECT
The senior project is a capstone independent study requirement for senior Religion & Philosophy majors. Under the supervision of a senior project faculty advisor, each student will assemble a committee of three departmental faculty members to evaluate a research paper related to the student's previous studies in religion and/or philosophy. The final project will also be presented to the faculty of the Religion & Philosophy Department. Prerequisite: either PHIL 497 or RS 497. *One semester; two credits*

■ RUSSIAN COURSES

The following foreign language courses will be offered on the campus of Rhodes College under the instruction of Rhodes faculty. See Dean of the School of Arts concerning these courses.

RUSS 101. ELEMENTARY RUSSIAN I
Elementary grammar, reading, and conversation, supplemented by materials on Russian culture. *One semester; four credits*

RUSS 102. ELEMENTARY RUSSION II
Continued study of elementary grammar, reading, and conversation, supplemented by materials on Russian culture. Prerequisite: RUSS 101. *One semester; four credits*

RUSS 201. INTERMEDIATE RUSSIAN I
Intermediate grammar and continued training in conversation and composition, supplemented by assignments in the Language Center. Reading of Russian texts of graded difficulty. Prerequisite: RUSS 102 or the equivalent. Offered in Fall semester. *One semester; four credits*

RUSS 202. INTERMEDIATE RUSSIAN II
A more in-depth focus on intermediate grammar, conversation and composition, supplemented by assignments in the Language Center. Continued reading of Russian texts of graded difficulty. Prerequisite: RUSS 201 or the equivalent. Offered in Spring semester. *One semester; four credits*

RUSS 205. THE RUSSIAN MIND
Study and analysis of the major intellectual currents of modern Russian history through literature, religious philosophy, and film. The study of these works is intended to identify some important attributes of the Russian national identity. Literary works will include those by Blok, Akhmatova, Soloukhin, Rasputin, and Petrushevskaya. Works of religious philosophy are by Soloviev, Florensky, Berdiaev, and Bulgakov. Films will include Dersu Uzala, The Barber of Siberia, and The Russian Ark. *One semester; 4 credits*

RUSS 209. RUSSIAN IN RUSSIA
A 3-4 week guided encounter with the language and culture aimed at solidifying vocabulary and grammar previously acquired. A significant cultural component is part of the course. Takes place in May-June. Offered in the Summer semester. *One semester; four credits*

RUSS 301. ADVANCED RUSSIAN I
Advanced grammar, with greater emphasis on the refinement of conversation and composition skills. Discussion of topics related to contemporary life in Russia. Prerequisite: RUSS 202 or equivalent. Offered in the Fall semester. *One semester; four credits*

RUSS 302. ADVANCED RUSSIAN II
Continued focus on advanced grammar, and the refinement of conversation and composition skills. More in-depth discussion of topics related to contemporary life in Russia. Prerequisite: RUSS 301 or equivalent. Offered in the Spring semester. *One semester; four credits*

RUSS 306. PHONETICS
Practice in Russian sounds, especially those that tend to be problematic for a non-native speaker. Emphasis on specific phonetic phenomena, such as palatalization and assimilation of consonants, and reduction of unstressed vowels. Examination of word stress, sentence-level stress, and intonation patterns. Corequisite: Course should be taken as early as possible in the study of Russian, but must be taken as a co-requisite with Russian 301. Offered in the Fall semester. *One semester; one credit*

RUSS 309. RUSSIAN IN RUSSIA
Reserved for more advanced students of Russian. A 3-4 week guided encounter with the language and culture aimed at solidifying vocabulary and grammar previously acquired. A significant cultural component is part of the course. Takes place in May-June. Offered in the Summer semester. *One semester; four credits*

SOCIOLOGY COURSES

SOC 101. INTRODUCTION TO SOCIOLOGY
An introduction to the sociological perspective. Sociology seeks to explain the origin and functioning of social behavior as it appears in such areas as the family, religion, economic structures, political structures, schools, deviant behavior, cultural norms, and other areas of human social interaction. As part of the process, students will be introduced to basic sociological terms, concepts, and theories. *One semester; three credits*

SOC 202. CONTEMPORARY SOCIAL PROBLEMS
The course focuses on a "systems approach" to social reality and provides students with the opportunity to comprehend, analyze, and evaluate social conditions, problems, and alternative solutions. Seeks to explore the critical assumptions that inform clashing views on controversial social issues. Students develop and practice skills of social policy analysis. Prerequisite: SOC 101 with a grade of "C" or higher and junior standing. *One semester; three credits*

SOC 228. PSYCHOLOGY OF MEDIA
This course investigates the media construction of reality by examining media representations of different social constructs. Students examine how reality is created from a cognitive psychological and social-cognitive approach and from different media theories. (Same as PSYC 228.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

SOC 229. HONORS PSYCHOLOGY OF MEDIA
This course investigates the media construction of reality by examining media representations of different social constructs. Students examine how reality is created from a cognitive psychological and social-cognitive approach and from different media theories. (Same as PSYC 229.) Prerequisite: Membership in the Honors Program or special permission of the instructor and Honors Director. *One semester; three credits*

SOC 270. DYNAMICS OF GENDER
This class will critically examine how norms, beliefs, ideologies, language, culture and institutions influence gender behavior, traditional conceptions of masculinity and femininity, and socialization for masculine and feminine roles. (Same as PSYC 270.) Prerequisite: PSYC 105 with a grade of "C" or higher or SOC 101 with a grade of "C" or higher. *One semester; three credits*

SOC 271. SOCIOLOGY OF RELIGION (formerly SOC 371)
The study of the beliefs, practices, and organizational forms of religion using the tools and methods of sociology. Topics covered may include the relation of beliefs to social conditions, the role of religion in cultural formation and public life, religious pluralism and conflict, the nature of religious cults and sects, the influence of religion on racial, gender, and sexuality issues, and the affect modernity has on religious belief and practice. (Same as RS 271.) Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; three credits*

SOC 280-287. SELECTED TOPICS IN SOCIOLOGY
Directed research on a special topic or project in sociology. Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; one to three credits*

SOC 290-299. HONORS SPECIAL TOPICS
Special topics in behavioral sciences open to members of the Honors Program or by permission of the instructor and Honors Director. *One semester; one to four credits*

SOC 310. DEATH AND DYING
A course considering relevant topics relating to death and the dying process from a multi-disciplinary perspective. Course content includes the meaning of death, the dying process in historical context and in contemporary culture, bereavement, grief, and mourning, approaches to terminal care, death and childhood, violent death, suicide, death industries, the right to die, and surviving death. (Same as PSYC 310.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

SOC 320. HONORS SEMINAR: DEATH AND DYING
This seminar focuses on critically examining and understanding death, the dying process, grief, the ethics of life/death, and a variety of related issues. It integrates a number of multidisciplinary perspectives and resources, emphasizes the exercise of critical thinking and implements the philosophy of writing as an integral means of learning. Prerequisite: Membership in the Honors Program or special permission of the instructor. (Same as PSYC 320.) Prerequisite: Membership in Honors Program or special permission of instructor and Honors Director. *One semester; three credits*

SOC 325. TOPICS IN AGING
This course focuses on the following issues in aging: the impact of aging on the individual, the family, and society; the quality of later life; societal attitudes toward old age; problems and potentials of aging; retirement; living environments in later life; societal policies, programs and services for older Americans. The diversity in the aging process due to differences in gender, race, and social class is emphasized. (Same as PSYC 325.) Prerequisite: PSYC 105 with a "C" or higher or SOC 101 with a grade of "C" or higher. *One semester; three credits*

SOC 345. HUMAN SEXUALITY
A survey study of topics in human sexuality. Topics included are basic reproductive anatomy, hormonal influences on behaviors, attraction, relationships, sexual variations, birth control, and sexually transmitted diseases. Self-assessment surveys on sexual attitudes are discussed in class. (Same as PSYC 345.) Prerequisite: PSYC 105 with a grade of "C" or higher or SOC 101 with a grade of "C" or higher. *One semester; three credits*

SOC 351. SOCIOLOGY OF THE FAMILY
A survey of changes in family systems over the years. Areas of study include courtship, love, mate selection, parenthood, and family problems. The course also examines cross-cultural comparisons and considers alternatives to traditional family forms. Emphasis is placed on the use of the empirical evidence to evaluate popular beliefs. (Same as ANTH 351.) *One semester; three credits*

SOC 362. SOCIOLOGY OF ADDICTION
A social scientific approach to the nature, role, and effects of chemical and psychological addiction in society. Explores a variety of addiction issues as they relate to the social institutions of family, education, politics, and medicine. (Same as CJ 362.) Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; three credits*

SOC 364. STEREOTYPING AND PREJUDICE
This course will analyze and discuss issues related to stereotyping and prejudice, including psychological theory and empirical research on the topic. We will examine the origins, functions, and consequences of stereotyping and prejudice as well as measurement strategies. We will examine issues surrounding the persons both engaging in and targeted by stereotyping and prejudice and discuss historical and contemporary social and political issues relevant to the course. (Same as PSYC 364.) Prerequisite: PSYC 105 with a grade of "C" or higher. *One semester; three credits*

SOC 365. DEVIANT BEHAVIOR
An exploration of theoretical perspectives on deviance, problems in defining deviance and specific categories of deviance. Deviant behaviors discussed may include but are not limited to prostitution, gambling, transgenderedness, pornography, mental illness, sexualities, and physical disability. (Same as CJ 365.) Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; three credits*

SOC 380-387. SELECTED TOPICS IN SOCIOLOGY
Directed work on a special topic or project in Sociology. Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; one to three credits*

SOC 390-396. HONORS SPECIAL TOPICS IN SOCIOLOGY
Directed work on a special topic or project in Sociology open to members of the Honors Program or by permission of the instructor. *One semester; one to three credits*

SOC 450-451. INDEPENDENT RESEARCH IN SOCIOLOGY
These courses are intended for advanced (junior status or higher) students who wish additional experience in research. In SOC 450 the student will investigate in depth a specialized topic in sociology. In SOC 451 the student will further investigate the topic by engaging in empirical research that is then analyzed, interpreted, and presented in a manuscript. These courses are recommended for students who may intend to continue their education in a graduate program. Prerequisites: Permission of instructor and the Chair of Behavioral Sciences. *One to two semesters; one to three credits each*

SOC 480-487. ADVANCED TOPICS IN SOCIOLOGY
Directed work on a special topic or project in Sociology. Prerequisite: SOC 101 with a grade of "C" or higher. *One semester; one to three credits.*

■ SPANISH COURSES

SPAN 101. ELEMENTARY SPANISH I
Fundamentals of grammar and syntax. Intensive drills in understanding, speaking and reading. Fluency of oral-aural skills is the main objective. Not open for credit to native speakers of Spanish with formal education delivered in Spanish beyond age 10. *One semester; three credits*

SPAN 102. ELEMENTARY SPANISH II
Fundamentals of grammar and syntax. Intensive drills in understanding, speaking and reading. Fluency of oral-aural skills is the main objective. Not open for credit to native speakers of Spanish with formal education delivered in Spanish beyond age 10. Prerequisite: SPAN 101. *One semester; three credits*

SPAN 201. INTERMEDIATE SPANISH I
Continued attention to essentials of grammar and composition. Readings in the short story and cultural texts. Not open for credit to native speakers of Spanish with formal education delivered in Spanish beyond age 10. Prerequisites: SPAN 102. Offered in the Fall semester. *One semester; three credits*

SPAN 202. INTERMEDIATE SPANISH II
Continued attention to essentials of grammar and composition. Readings in the short story and cultural texts. Not open for credit to native speakers of Spanish with formal education delivered in Spanish beyond age 10. Prerequisites: SPAN 102. Offered in the Fall semester. *One semester; three credits*

SPAN 300. INTERNSHIP: SERVING A MULTICULTURAL COMMUNITY I
Students minoring in Spanish may be placed in the offices of cooperating firms, institutions, and organizations to gain on-the-job experience under supervision. The main focus will be the use of oral communication skills in a work setting. Offered in the Fall and Spring semesters; based on availability for placement under Career Services offerings. Prerequisites: SPAN 202 and Instructor Approval. *One semester; three credits*

SPAN 301. COMPOSITION AND CONVERSATION I
Continued study of Spanish grammar and composition. Drill on difficult constructions and theme writing. Reports and discussions on selected aspects of Hispanic civilization. Not open for credit to native speakers of Spanish with formal education delivered in Spanish beyond age 10. Prerequisites: SPAN 202 or the equivalent. Offered in the Fall semester. *One semester; three credits*

SPAN 302. COMPOSITION AND CONVERSATION II
Continued study of Spanish grammar and composition. Drill on difficult constructions and theme writing. Reports and discussions on selected aspects of Hispanic civilization. Not open for credit to native speakers of Spanish with formal education delivered in Spanish beyond age 10. Prerequisites: SPAN 202 or the equivalent. Offered in the Spring semester. *One semester; three credits*

SPAN 313. SPANISH LITERATURE AND CIVILIZATION
The study of the cultures of Spain and Latin America as reflected in their history, literature, and art from their origins to the present. Prerequisite: Two years of college Spanish or equivalent. Offered in the Fall semester. *One semesters; three credits*

SPAN 314. SPANISH LITERATURE AND CIVILIZATION II
Continued study of the cultures of Spain and Latin America as reflected in their history, literature, and art from their origins to the present. Prerequisite: Two years of college Spanish or equivalent. Offered in the Spring semester. *One semester; three credits*

SPAN 316. BUSINESS SPANISH
An introduction to business and technology in the Spanish-speaking world from a personal, everyday life perspective. Study includes banking, telecommunications, computers, the Internet, corporate organization, interviewing, resume writing, and business correspondence. Prerequisite: Two years of college Spanish or the equivalent. Offered in the Spring semester. *One semester; three credits*

SPAN 320. INTERNSHIP: SERVING A MULTICULTURAL COMMUNITY II
Students minoring in Spanish may be placed in the offices of cooperating firms, institutions, and organizations to gain on-the-job experience under supervision. The main focus will be the use of reading and oral communication skills in a work setting. Offered in the Fall and Spring semesters; based on availability for placement under Career Services offerings. Prerequisites: SPAN 300 or 301/302 and Instructor Approval. *One semester; three credits*

SPAN 340. INTERNSHIP: SERVING A MULTICULTURAL COMMUNITY III
Students minoring in Spanish may be placed in the offices of cooperating firms, institutions, and organizations to gain on-the-job experience under supervision. The main focus will be the use of reading, writing, and oral communication skills in a work setting. Offered in the Fall and Spring semesters; based on availability for placement under Career Services offerings. Prerequisites: SPAN 320 and 301/302 and Instructor Approval. *One semester; three credits*

SPAN 380-389. SPECIAL TOPICS IN SPANISH.
Topics of special interest related to Spanish literature, language, or culture. Prerequisite: Spanish 302 or 314 and permission of instructor. *One semester; one to three credits*

SPAN 400-410. RESEARCH TOPICS IN SPANISH
Original writing projects or independent study and research in literature, pursued under the guidance of a member of the Spanish faculty. Syllabus and credit hours contracted by the student with the Spanish professor. *One semester each; one to three credits*

SPAN 480-489. SPECIAL TOPICS IN SPANISH.
Topics of special interest related to advanced study of Spanish literature, language, or culture. Prerequisite: SPAN 302 or 314 and permission of instructor. *One semester; one to three credits*

■ SPEECH COURSE

SPCH 125. SPEECH COMMUNICATION
A study of the principles of public speaking. Emphasis placed on differences between spoken and written language, organization, persuasive argument, and delivery skills. *One semester; three credits*

■ SPORT MANAGEMENT COURSES

Requirements for the concentration are found on page 66. Requirements for the minor are found on page 67.

SMGT 301. SPORT SPONSORSHIP AND SALES
Designed as an exploration of strategies and tactics utilized to sell and generate revenue in the business cycle. This course will focus on sales proposal development, sponsor solicitations, licensing rights, new business development, endorsements and corporate partnerships. The course also provides an examination of ticket sales department structure, techniques, and strategies. Offered in the Spring semester. *One semester; three credits*

SMGT 315. SPORT FACILITY AND EVENT MANAGEMENT
Designed as an in depth study of the managerial activities related to sport facilities and event operations. This course will focus on facility design, planning, personnel, marketing facilities and events, developing revenue streams, scheduling, and operating. An emphasis is placed on utilizing available resources to achieve organizational goals. Offered in the Fall semester. *One semester; three credits*

SMGT 410. MANAGEMENT OF SPORT INDUSTRIES
Focuses on management concepts and business skills as they relate to the sport industry. An in-depth look at the organizational structure and method of operation of major sectors of the sports enterprise, examination of important contemporary issues in sport industry and other administrative aspects of sports enterprises. Prerequisite: junior standing. Offered in the Spring semester. *One semester; three credits*

SMGT 420. MARKETING AND PUBLIC RELATIONS IN SPORT
This course introduces students to marketing and public relations skills crucial to success in every sport business and examines the unique features of sport marketing that set sports apart from other industries. Includes marketing sport as a product and marketing non-sport products using sport as a promotional tool. Prerequisite: junior standing. Offered in the Fall semester. *One semester; three credits*

SMGT 430. SPORT INDUSTRIES AND THE LAW
Focuses on an analysis of legal problems and issues confronting the sport manager including suits against the organization, safety, collective bargaining and arbitration. Includes contract law, tort law, labor law, and administrative law as they apply to the sport industry. Prerequisite: junior standing. Offered in the Fall semester.

SMGT 440. FINANCIAL MANAGEMENT FOR SPORT ADMINISRATION
An examination of financial methods and procedures as they apply to sport administration, taxation, valuation, cost analysis, and budgeting. Topics covered include accounting principles, financial statements, industry ratios, securing funds and related concepts that help determine the viability

and strength of businesses in the sport industry. Prerequisite: MIS 153 and junior standing. Offered in the Spring semester.

SMGT 450-454. SPECIAL TOPICS IN SPORT MANAGEMENT
Selected topics of interest to individual students or small groups. *One semester; three credits.*

SMGT 455. PRACTICUM AND PROJECT IN SPORT MANAGEMENT
This course is designed to explore and put to practical use the entire body of knowledge gained in previous SMGT courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific problems in the sport industry. Prerequisite: SMGT 410 and 420. Offered as needed.

■ STATISTICS COURSES

STAT 221. ELEMENTARY BUSINESS STATISTICS
A basic course in general statistical methods with applications in the field of business and economics. Content includes analysis of data in terms of measures of central tendency or averages, measures of dispersion and skewness, probability theory, and basic aspects of tests of hypotheses. Prerequisite: MATH 105, (107 and 110), 117, 129 or 131 and MIS 153. *One semester; three credits*

STAT 222. INTERMEDIATE BUSINESS STATISTICS
A further study in statistical methods and its application in the field of business and economics. The course content consists of additional analysis on testing hypotheses; basic quality control evaluation; time series analysis including trend, seasonal and cyclical computations; index numbers, linear regression and correlation with an introductory approach to non-linear, multiple, partial and rank correlation. Prerequisite: MATH 105, 106, 117, 129 or 131, MIS 153 and STAT 221. *One semester; three credits*

■ THEATRE COURSES

THEA 107-108. THEATRE PRODUCTION WORKSHOP I
Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; one credit each*

THEA 115. INTRODUCTION TO THE THEATRE
A brief but comprehensive study of the theatre, designed to arouse a wide range of interests—critical, historical, artistic—needed for a well-rounded appreciation of the whole. Includes attendance at plays for evaluation. *One semester; three credits*

THEA 127-128. THEATRE PRODUCTION WORKSHOP II
Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; two credits each.*

THEA 207-208. THEATRE PRODUCTION WORKSHOP I
For the student who wants more experience with the production process. Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; one credit each.*

THEA 221. ACTING I
This course is designed for students interested in doing live theatre. Students will learn the basics of acting, theatre design, and technical theatre. The final project will be a live performance where students perform a character and/or provide design/technical support in one or more of the following areas: props, publicity, costumes, sound, lights, scenic construction, directing, stage management, and playwriting. Previous theatre experience is not required. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *One semester; three credits*

THEA 227-228. THEATRE PRODUCTION WORKSHOP II
For the student who wants more experience with the production process. Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; two credits each.*

THEA 231-239. SPECIAL TOPICS IN THEATRE
Topics in the areas of speech or theatre, based on special interest of students or special expertise of faculty. *One semester; one to three credits*

THEA 307-308. THEATRE PRODUCTION WORKSHOP I
For the student who wants more experience with the production process. Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; one credit each.*

THEA 315. HISTORY OF THE THEATRE
An in-depth study of the theatre including samples of dramatic literature from ancient Greece to the present. (Same as ENG 315). Prerequisite: Any 200 level English Literature course. *One semester; three credits*

THEA 317. FIELD STUDY IN LIVE THEATRE
A study of live theatre. The plays covered will be seen during the semester at local Memphis theatres. Emphasis will be placed on contact with the professional theatre as well as opportunities to analyze and discuss the productions seen. *One semester; three credits*.

THEA 321. ACTING II
Continues development of skills acquired in Acting 221 emphasizing emotional preparation, emotional activities, script analysis, and exploration of character through physical technique. Prerequisite THEA 221 or permission of department chair. *One semester; three credits.*

THEA 327-328. THEATRE PRODUCTION WORKSHOP II
For the student who wants more experience with the production process. Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; two credits each.*

THEA 377. ORAL INTERPRETATION OF LITERATURE
The development of responsiveness to prose, poetry, and drama and the ability to communicate the logical, emotional, and aesthetic elements to others. Students certifying in elementary education will study children's literature in the content of this course. *One semester; three credits*

THEA 401-402. INDEPENDENT STUDY IN THEATRE
An individual study project that will have as its end result the presentation of a well-researched thesis or an approved project in Fine Arts. Syllabus and credit hours contracted by the student with the Chair of the Visual & Performing Arts program. *One semester each; one to three credits*

THEA 407-408. THEATRE PRODUCTION WORKSHOP I
For the student who wants more experience with the production process. Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; one credit each.*

THEA 421-426. SPECIAL TOPICS IN THEATRE
Topics in the areas of speech or theatre, based on special interest of students or special expertise of faculty. *One semester each; one to three credits each*

THEA 427-428. THEATRE PRODUCTION WORKSHOP II
For the student who wants more experience with the production process. Theatre is a collaborative event. Students participating in this course will receive instruction and development in the following areas: props, publicity, costumes, sound lights, scene construction, and acting. The final project will be a live performance where students either provide technical support or perform a character in a play. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *Eight semesters; two credits each*

THEA 475. SENIOR RECITAL
Rehearsal of monologues or concert theatre piece culminating in performance before an audience. Program will be evaluated and approved by instructor prior to public performance. Written work includes script analysis, character profiles, and detailed written critiques of videotapes of performances. *One semester; three credits*

COLLEGE OF ADULT PROFESSIONAL STUDIES

COLLEGE OF ADULT PROFESSIONAL STUDIES

Any policies not listed in this section can be found on pages 27-36 of the catalog.

ADMINISTRATION

TONI M. BENNETT, *Dean*

MARGARET COLEMAN, *Chair, Business Studies, CAPS*

STEVE RIVERA, *Chair, Professional Psychology, CAPS*

MISSION

The mission of the College of Adult Professional Studies (CAPS) is to continue the Lasallian tradition by consistently providing quality education to adult learners and working professionals. CAPS strives to offer career-focused educational programs taught by esteemed faculty and practitioners with real-world experience. Through a philosophy of lifelong learning, our adult students are prepared to transform their lives, workplaces and communities.

PROGRAM DESCRIPTION

We understand that adult professional students are not traditional students. That is why our degree programs are designed with adults in mind. The College of Adult Professional Studies was created to meet the educational needs of working adults so they can realize their dreams of earning a college degree. CAPS presents a curriculum through which a student may earn an Associate's and/or Bachelor's degree by attending classes at times compatible with full-time employment. We offer an accelerated, flexible learning format with 8-week terms. Courses are offered in a hybrid model giving adult students face-to-face time with faculty and peers on CBU's midtown campus once a week along with the flexibility to complete the remaining coursework for the week online. All courses are offered one night per week at either 5:45pm - 7:45pm OR 7:55pm - 9:55pm, followed by three hours each week of online instruction via lecture/online discussion/quizzes & tests. Online course components for each course are available 24/7.

Thirty semester hours of credit may be earned in each academic year (six hours in each eight-week term), making it possible for a student to complete all degree requirements in fewer than five years. Academic work transferred from other colleges will shorten this time proportionally.

CAPS ADMISSIONS & REGISTRATION

(See pages 14-19 in the 2016-17 Catalog for additional information)

An applicant may seek admission to a degree program or as a special student. Degree-seeking students are those working on an Associate's or Bachelor's degree at Christian Brothers University. An applicant for special status may be admitted as a special/conditional student or as a transient student.

Degree Student: A degree student is one who has been fully admitted to one of the CAPS degree programs.
Full-Time Student: A student who registers for 12 or more credit hours of course work in each full semester.
Part-Time Student: A student who is enrolled in less than 12 credit hours of course work in each full semester.
Special Student: A special student is one who is admitted as a visiting student and is non-degree seeking.
Transient Student: A student who is a degree-seeking student at another college or university, enrolling for credit in selected courses at Christian Brothers University. A letter from the visitor's college or university certifying official that the student is in good standing is required along with an official copy of a transcript.
Readmit Student: Students who have previously attended Christian Brothers University and have been out of school for at least two 8-week terms must submit an application for readmission. Approval from appropriate departments must be secured before readmission is granted.

ADMISSIONS PROCEDURES

- Complete an online application.
- Request official transcripts* from ALL colleges/universities. If the student has earned less than 24 transferable hours of college credit, he/she must also request an official high school transcript. Any additional items and information requested by Admissions.
- Apply for Federal Assistance by filing the Free Application for Federal Assistance (FAFSA), listing Christian Brothers University as one of the schools to receive the results of your evaluation. Our School Code number is 003482.
- Individual consideration will be given to applicants who may not meet all the specific requirements. Students desiring this consideration must submit either an essay and a letter of recommendation to support their ability to succeed in the program or a placement exam along with an interview with the Dean of the College of Adult Professional Studies.

* **Official transcripts must be received by mail directly from a previous institution to CBU. CBU will also accept electronic transcripts via approved vendors. Faxed, hand delivered, or "Issued to Student" transcripts will not be accepted as official documents.**

Upon acceptance to the CAPS program, students must submit a health form and complete required placement testing prior to enrollment.

All incoming degree-seeking students to the College of Adult Professional Studies are required to take an English placement test to assess their current level of readiness for college work.

In order to most effectively place students in initial courses and maximize academic success, students will also take a placement test in math and in computer skills.

CAPS EXPENSES & FINANCIAL AID

(See page 20 in the 2017-18 Catalog for additional information)

TUITION & FEES

The CAPS Program Tuition & Fees below apply to the 2017-2018 school year. Please note that all tuition and fees are subject to change at anytime when circumstances so warrant.

Tuition (per credit hour)	$405.00
Activity & Services Fee, per semester	$50.00
Technology Fee, per semester	$50.00
Parking & Grounds Fee (All Students)	$30.00
Late Registration Fee	$250.00
Returned Check Fee	$30.00
* Graduation Fee (Non-Refundable)	$130.00
Payment Plan Enrollment, per semester	$40.00
Payment Plan Late Fee	$20.00

* *The graduation fee is applied at the beginning of the semester in which graduation is anticipated. This application fee is applicable for one year. After this time, students who have not completed their degree requirements will be removed from the graduation list, and they must reapply for graduation, as well as repay the graduation fee.*

GENERAL EDUCATION COURSE REQUIREMENTS

(See page 28 and 29 for "The Pyramid of Learning", "Student Outcomes" and "Matrix of G.E.R. Outcomes")

MATHEMATICS (3 hours)
CMAT 104

STATISTICS (3 hours)
CBUS 205, CPSY 354; this outcome can be challenged by the independent study course MATH 121.

ENGLISH (9 hours)
(a) Composition: CENG 110 & 120 (or equivalency examination).
(b) Literature: One of CENG 200, 220, 246

RELIGIOUS STUDIES (3 hours at 200 Level and 3 hours at 300 Level for Professional Psychology majors; Business Studies majors may take 6 hours at the 200 and/or 300 Level).
CRS 217, 218, 230, 240, 270, 330, 340, 385, or 391.

SOCIAL SCIENCE / HISTORY (6 hours)
CANT 160; CHIS 107, 108, 151, 152; CHUM 210; CPOLS 112; CPSY 105; CSOC 101.
(Professional Psychology majors must take CPSY 105 and CSOC 101).

NATURAL AND PHYSICAL SCIENCES (3-4 hours)
CANT 126, 128; CCHE 106; CSCI 126, 190, 192.

MORAL VALUES (3 hours)
CPHI 219, 220, 223, 224, or 320.

AESTHETICS (0 additional hours)
CSPN 100, CSPN 101, CSPN 102, CSPN 201, CSPN 202; or any foreign language course.

ADULT PROFESSIONAL STUDIES CORE (12 Semester Hours)

ORIENTATION (3 hours)
CORI 101

SPEECH (3 hours)
CSPH 125

FOREIGN LANGUAGE (3 hours)
CSPN 100 or 101

COMPUTER (3 hours)
CMIS 153

The above courses have been approved to meet the desired outcomes as of this printing. Courses may meet more than one outcome; however, each student must take a minimum of 45 hours of General Education Courses. Special Topics courses (courses without a permanent course number or description) may be used to satisfy general education requirements, but must be approved on an annual basis by the College of Adult Professional Studies Curriculum Committee. Students should consult with their advisor before assuming a Special Topics course will meet a requirement.

CAPS ACADEMIC PROGRAMS

(See pages 27-35 for additional information)

ASSOCIATE'S DEGREES: To qualify for an Associate's Degree from Christian Brothers University, you must complete all degree requirements as outlined while maintaining an overall Grade Point Average of at least 2.0 as well as a minimum average of 2.0 in satisfaction of major requirements. To fulfill residency requirements, 25% of total hours applied toward a degree must be earned at CBU (see school or department requirements for any further restrictions on courses in your major area).

Specific course requirements in major and minor fields are listed under 'Degree Requirements' for each school in the course catalog. Students may graduate under the catalog in effect when they enter Christian Brothers University or any subsequent catalog. You must notify the Office of the Registrar if you want to upgrade to a subsequent catalog.

ASSOCIATE OF ARTS IN GENERAL STUDIES

ASSOCIATE OF ARTS IN PROFESSIONAL PSYCHOLOGY

ASSOCIATE OF SCIENCE IN APPLIED HEALTH SERVICES

ASSOCIATE OF SCIENCE IN BUSINESS STUDIES

BACHELOR OF ARTS IN PROFESSIONAL PSYCHOLOGY

The Bachelor of Arts in Psychology provides fundamentals of psychology, with focus in areas of demand and growth potential with concentrations in:

- **CONSUMER BEHAVIOR:** Designed to give understanding of motivation, persuasion, sales, and promotional strategy to support marketing efforts in a business environment.
- **CRIMINAL JUSTICE:** Designed to provide a broad understanding of the criminal justice system and a fundamental knowledge of the social and behavioral sciences, focusing on topics such as criminology, law enforcement, corrections, public administration, juvenile justice, and counseling.
- **ORGANIZATIONAL PSYCHOLOGY:** Designed to apply the principles and science of psychology to human resources development and management, focusing on the psychology of organizations, motivations and supervision, employee selection and development, legal considerations, evaluation, and organizational development.
- **PUBLIC HEALTH:** Designed to allow students to explore the ways in which the social, political, behavioral and biological sciences contribute to the understanding of patterns and distributions of health and disease as well as an emphasis on evidence-based health care and public health.

BACHELOR OF SCIENCE IN BUSINESS STUDIES

A Bachelor of Science in Business Studies gives the student an edge by preparing them for leadership roles in the business world. Learn organizational behavior, corporate planning, international business, and strategic planning with concentrations in:

- **ENTREPRENEURSHIP:** Designed to focus on the creation of social and economic value by developing the core capabilities of idea generation, opportunity recognition, resource acquisition, and entrepreneurial management. Students will develop a workable business plan that identifies and develops an entrepreneurial opportunity.
- **INDUSTRIAL & ORGANIZATIONAL PSYCHOLOGY:** Designed to provide a background in organizational behavior, general management, and human resources, through the application of psychological science to issues ranging from organizations and personnel, to technology, equipment and work environments.
- **INFORMATION SECURITY:** The Information Security concentration focuses on the protection of information privacy and integrity in modern information systems and networks. This is a vital field in both the business and government sectors today, and the US Bureau of Labor Statistics has predicted a growth rate of at least 30% in this field.
- **LEADERSHIP:** Designed to develop and enhance a student's ability to lead and manage people and organizations. The concentration will focus on (1) students understanding and accepting their own unique leadership skills and abilities; (2) an appreciation of the complexity of successful leadership; (3) identification of skills needed to engage a highly effective team; and (4) a demonstration of effective leadership.
- **MANAGEMENT:** Designed to endow you with the knowledge, analytic capability, critical thinking, leadership skills, and responsibility essential to successful and responsible business careers in a rapidly changing and technologically driven global business environment.
- **MANAGEMENT OF INFORMATION SYSTEMS:** MIS combines Computer Science with core business courses, and is designed to provide you with necessary skill sets in information systems project management, database management, networks, and web development to join the workforce in the various lucrative fields of information technology (IT). Coursework focuses on topics such as networks and security, systems design and analysis, database design and mining, web applications and development, and project management.
- **MARKETING:** Designed to focus on the needs and wants of an organization's key stakeholders, by understanding how customer perceptions and preferences evolve and how these can be influenced. Students pursuing this concentration acquire a solid grounding in applying the basic understanding of consumer and organizational buying patterns and the development of for- profit and non-profit successful marketing strategies.

- **NONPROFIT MANAGEMENT:** Designed to provide students with an increased knowledge of non-profit organizational management decisions ranging from fundraising strategies, grant writing, financial management to organizational leadership.\
- **PROJECT MANAGEMENT:** The Project Management Institute (PMI) defines project management as: "the application of knowledge, skills, tools, and techniques to project activities in order to meet stakeholder needs and expectations from a project". In today's complex, global, and highly competitive business environment, it is essential that organizations be able to keep projects on track in regards to scope, time, quality, and cost. CBU's Project Management concentration will provide one with the knowledge and tools to excel and take a leadership role in this critical business area.
- **PUBLIC HEALTH ADMINISTRATION:** Designed to prepare students to assume leadership roles in the public and private sectors of health services management and policy analysis as well as effectively create and implement policies and manage programs that promote the public's health.
- **SERVANT LEADERSHIP:** Designed to provide students with a unique combination of business and humanities courses to help students integrate their Christian faith with their careers. The courses provide a foundation for those interested in careers in the non-profit and religious sectors, as well as students interested in applying a faith-based approach to work in the for-profit arena.

EXPERIENTIAL LEARNING ASSESSMENT

Students may apply for and be granted college-level credit for knowledge and understanding related to the student's degree program and gained from worksite or other experiences. Documentation is evaluated for credit by the Department Chair overseeing the area in which credit is sought. The student must submit all appropriate documentation to the Dean of Adult Professional Studies along with the "Experiential and Non-Credit Learning Assessment" application and the application fee. The Department Chair will complete the evaluation form detailing what, if any, credit should be awarded and then forward the material back to the Dean of Adult Professional Studies. Upon payment of appropriate fees, the Office of the Registrar will be notified to post the credit. There is no GPA associated with awarding this type of credit and is not subject to the maximum of 30 allowable credits for non-traditional credit. The credit awarded will not be posted to the student's transcript until the student has earned 12 hours of academic credit at Christian Brothers University.

PRIOR LEARNING ASSESSMENT (PLA) POLICY

Students have the option to create PLA portfolios for college credit evaluation. The student will complete CBU's online course to learn how to prepare a portfolio. At the end of the course, the student submits the portfolio for review by an examiner who is an expert in that subject matter. Credit is awarded based on the recommendation of the portfolio examiner.

The following are important considerations in determining PLA:

- Credit is awarded for college-level learning, and not simply for experience.
- Awarded credit must apply to the student's degree program.
- PLA credit cannot be awarded for any course for which the student has received transfer or CBU credit (i.e., duplicate credit).
- PLA credit cannot be awarded for any course that the student has failed at CBU or any other educational institution.

All students must meet the residency requirements for earning a CBU degree. These requirements are outlined in the current CBU catalog.

BLOCK APPLIED HEALTH SERVICES FREE ELECTIVE CREDIT (15-24 SEMESTER HOURS)

In the Applied Health Services paradigm, if a student has completed Emergency Medical Technician – Basic or Emergency Medical Technician – Advanced Certification/Licensure, fifteen credit hours in Applied Health Services Electives will be posted to the student's record upon submission of an official Intent to Graduate form and a current and official EMT/Paramedic certification from the State of Tennessee.

If a student has completed Emergency Medical Services – Paramedic or Paramedic Certification/Licensure, fifteen credit hours in Applied Health Services Electives and nine credit hours in Free Electives will be posted to the student's record upon submission of an official Intent to Graduate form and a current and official EMT/Paramedic certification from the State of Tennessee.

* For students considering continuing to a Bachelor's degree, it is important to discuss the selection of electives with their advisor.

CAPS CLASS ATTENDANCE POLICY

Accelerated hybrid courses meet for "in-class" and "online" learning; therefore, students are expected to attend all in-class sessions and to participate in all online sessions as required by the instructor. Failure to do so may be considered an unexcused absence without prior approval by the course instructor. An absence is defined as (1) failure to attend a face to face class session and/or (2) failure to submit at least one piece of graded online coursework in a given week. In the case of major emergencies (including but not limited to: serious illness/injury, military deployment and work-related travel) the professor may assign extra course work for the student. It is the student's responsibility to communicate with professor about any circumstances that conflict with class attendance. If a student accumulates two or more unexcused absences during an eight-week term, the final grade can be lowered a letter grade at the discretion of the professor.

Tardiness disrupts the class and disturbs other classmates; therefore, punctuality for all classes is essential.

CAPS CODE OF CONDUCT

The student is expected to commit to the highest level of academic integrity when involved in and fulfilling requirements for this program. Academic dishonesty on any level and of any form will not be tolerated. This applies not only to active involvement but also to passive knowledge.

Students should refer to *The Compass* (student handbook) for specific conduct policies as well as disciplinary procedures located on the Student Life webpage.

CAPS CLASS SCHEDULE

The College of Adult Professional Studies offers five eight-week terms per year — August, October, January, March, and June. All CAPS courses are generally taught as evening classes meeting one night per week, with each session lasting two hours (either 5:45 - 7:45 p.m. OR 7:55 - 9:55 p.m.), although there are some exceptions.

COURSE REQUIREMENTS FOR ASSOCIATE OF ARTS IN GENERAL STUDIES

AGNS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to Page 200 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Critical Reading & Writing	CENG 110	3	
Writing & Research	CENG 120	3	
Literature & Writing for Professionals I	#	3	
Mathematics	CMATH 104	3	
Philosophy/Moral Values	#	3	Choose from: CPHI 220, 223, 224, or 322
Natural or Physical Science	#	3	
Social Science or History	#	3	
Social Science, Political Science or History	#	3	
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Aesthetics			Fulfilled by Foreign Language Requirement
TOTAL HOURS FOR GER		**30**	

COLLEGE OF ADULT PROFESSIONAL STUDIES CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Foundation of Excellence	CORI 101	3	
Speech	CSPH 125	3	
Foreign Language	CSPN 101	3	
Computer	CMIS 153	3	
TOTAL HOURS FOR APS CORE		**12**	

FREE ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		24	
TOTAL HOURS FOR ELECTIVES		**24**	

TOTAL CREDITS REQUIRED FOR ASSOCIATE DEGREE COMPLETION 66

2.0 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR ASSOCIATE OF ARTS IN PROFESSIONAL PSYCHOLOGY

APPY

GENERAL EDUCATION REQUIREMENTS: (# - Refer to Page 200 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Critical Reading & Writing	CENG 110	3	
Writing & Research	CENG 120	3	
Literature & Writing for Professionals I or II	#	3	
Mathematics	CMAT 104	3	
Philosophy/Moral Values	#	3	Choose from: CPHI 220, 223, 224, or 322
Natural or Physical Science	#	3	
Social Science or History	CPSY 105	3	Grade of "C" or Higher Required
Social Science, Political Science or History	CSOC 101	3	
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Aesthetics			Fulfilled by Foreign Language Requirement
TOTAL HOURS FOR GER		**30**	

COLLEGE OF ADULT PROFESSIONAL STUDIES CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Foundation of Excellence	CORI 101	3	
Speech	CSPH 125	3	
Foreign Language	CSPN 101	3	
Computer	CMIS 153	3	
TOTAL HOURS FOR APS CORE		**12**	

SCHOOL OF ARTS CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Human Development	CPSY 218	3	
Personality	CPSY 219	3	
Social Psychology	CPSY 353	3	
Psychopathology	CPSY 317	3	
TOTAL HOURS FOR PSYC CORE		**12**	

FREE ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		12	
TOTAL HOURS FOR ELECTIVES		**12**	

TOTAL CREDITS REQUIRED FOR ASSOCIATE DEGREE COMPLETION 66

2.0 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR ASSOCIATE OF SCIENCE IN APPLIED HEALTH SERVICES

AAHS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to Page 200 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Critical Reading & Writing	CENG 110	3	
Writing & Research	CENG 120	3	
Literature & Writing for Professionals I or II	#	3	
Mathematics	CMAT 104	3	
Philosophy/Moral Values	#	3	Choose from: CPHI 220, 223, 224, or 322
Natural or Physical Science	#	3	
Social Science or History	#	3	
Social Science, Political Science or History	#	3	
Religious Studies	#	6	
Aesthetics			Fulfilled by Foreign Language Requirement
TOTAL HOURS FOR GER		**30**	

COLLEGE OF ADULT PROFESSIONAL STUDIES CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Foundation of Excellence	CORI 101	3	
Speech	CSPH 125	3	
Foreign Language	CSPN 190	3	
Computer	CMIS 153	3	
TOTAL HOURS FOR APS CORE		**12**	

APPLIED HEALTH SERVICES ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Applied Health Services Electives		15	Refer to page 202 for information on block credit from EMT Licensure.
TOTAL HOURS FOR APPLIED HEALTH SERVICES CORE		**15**	

FREE ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		9	
TOTAL HOURS FOR ELECTIVES		**9**	

TOTAL CREDITS REQUIRED FOR ASSOCIATE DEGREE COMPLETION 66

2.0 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR ASSOCIATE OF SCIENCE IN BUSINESS STUDIES

ABUS

GENERAL EDUCATION REQUIREMENTS: (# - Refer to Page 200 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Critical Reading & Writing	CENG 110	3	
Writing & Research	CENG 120	3	
Literature & Writing for Professionals I or II	#	3	
Mathematics	CMAT 104	3	
Philosophy/Moral Values	#	3	Choose from: CPHI 220, 223, 224, or 322
Natural or Physical Science	#	3	
Social Science or History	#	3	
Social Science, Political Science or History	#	3	
Religious Studies--RS (200 Level)	#	3	
Religious Studies--RS (300 Level)	#	3	
Aesthetics			Fulfilled by Foreign Language Requirement
TOTAL HOURS FOR GER		**30**	

COLLEGE OF ADULT PROFESSIONAL STUDIES CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Foundation of Excellence	CORI 101	3	
Speech	CSPH 125	3	
Foreign Language	CSPN 100	3	
Computer	CMIS 153	3	
TOTAL HOURS FOR APS CORE		**12**	

SCHOOL OF BUSINESS CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Accounting	CACC 260	3	
Business Law I	CBLW 301	3	
Principles of Microeconomics	CECN 214	3	
Foundations of Management	CMGT 227	3	
Principles of Marketing	CMKT 311	3	
TOTAL HOURS FOR BUSINESS CORE		**15**	

FREE ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		9	
TOTAL HOURS FOR ELECTIVES		**9**	

TOTAL CREDITS REQUIRED FOR ASSOCIATE DEGREE COMPLETION 66

2.0 CUMULATIVE GPA REQUIRED

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN BUSINESS STUDIES

BSST

GENERAL EDUCATION REQUIREMENTS: (# - Refer to Page 200 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Critical Reading & Writing	CENG 110	3	
Writing & Research	CENG 120	3	
Literature & Writing for Professionals I or II	#	3	
Mathematics	CMAT 104	3	
Statistics	CBUS 205	3	
Philosophy/Moral Values	#	3	Choose from: CPHI 220, 223, 224, or 322
Natural or Physical Science	#	3	
Social Science or History	#	3	
Social Science, Political Science or History		3	
Religious Studies	#	6	
Aesthetics			Fulfilled by Foreign Language Requirement
TOTAL HOURS FOR GER		**33**	

COLLEGE OF ADULT PROFESSIONAL STUDIES CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Foundation Of Excellence	CORI 101	3	
Speech	CSPH 125	3	
Foreign Language	CSPN 100	3	
Computer	CMIS 153	3	
TOTAL HOURS FOR APS CORE		**12**	

SCHOOL OF BUSINESS MAJOR REQUIREMENTS: (2.0 GPA in Major/Concentration Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Accounting	CACC 260	3	
Managerial Accounting	CACC 270	3	
Business Law I	CBLW 301	3	
Business Law II	CBLW 302	3	
Business Research Methods	CBUS 206	3	
Principles of Microeconomics	CECN 214	3	
Principles of Macroeconomics	CECN 215	3	
Managerial Economics	CECN 420	3	
Business Writing	CENG 371	3	
Financial Management I	CFIN 327	3	
Financial Management II	CFIN 427	3	
Foundations of Management	CMGT 227	3	
Business Policy Strategic Planning	CMGT 498	3	
Introduction To MIS	CMIS 231	3	
Principles of Marketing	CMKT 311	3	
TOTAL HOURS FOR MAJOR AREA		**45**	
Business Studies Concentration	See Next Page(s)	15-17	
TOTAL HOURS FOR MAJOR & CONCENTRATION		**60-62**	

SCHOOL OF BUSINESS MAJOR-SPECIFIC ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Upper Division Business Electives		9-12	
Free Electives		9	
TOTAL HOURS FOR ELECTIVES		**18-21**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION 123

CONCENTRATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN BUSINESS STUDIES

(All Business Studies majors are required to select one of the following concentrations; 2.0 GPA required in concentration.)

ENTREPRENEURSHIP REQUIREMENTS — ENTR

COURSE	COURSE NUMBER	CREDITS	NOTES
Market and Consumer Behavior	CMKT 334	3	
Selling and Sales Management	CMKT 338	3	
Entreprenuership	CMKT 440	3	
Practicum and Project in Marketing	CMKT 455	3	
CMGT/CMKT Elective (300/400 Level)		3	CMKT 464 Recommended
TOTAL HOURS FOR ENT CONCENTRATION		**15**	

INDUSTRIAL & ORGANIZATIONAL PSYCHOLOGY REQUIREMENTS — IOPS

COURSE	COURSE NUMBER	CREDITS	NOTES
Organizational Behavior and Management	CMGT 352	3	
Industrial and Organizational Psychology	CPSY 350	3	
Human Factors	CPSY 306	3	
Human Resourses Management	CMGT 412	3	
Choose one of the following:		3	
Psychology of Persuasion	CPSY 453		
Stereotyping and Prejudice	CPSY 364		
Personality	CPSY 219		
Seminar In Leadership	CMGT 490		
Highly Effective Teams	CMGT 350		
Leading With Positivity	CMGT 340		
Cases In Leadership	CMGT 420		
TOTAL HOURS FOR IOPS CONCENTRATION		**15**	

INFORMATION SECURITY REQUIREMENTS — IFSC

COURSE	COURSE NUMBER	CREDITS	NOTES
Information Security / Lab	CMIS 481/L	4	
Digital Forensics / Lab	CMIS 482/L	4	
Security Compliance and Auditing	CMIS 483	3	
Database Design and Business Intelligence	CMIS 471	3	
Cyber Security Internship / Practicum	CMIS 455	3	
TOTAL HOURS FOR IFSC CONCENTRATION		**17**	

LEADERSHIP REQUIREMENTS — LEAD

COURSE	COURSE NUMBER	CREDITS	NOTES
Organizational Behavior	CMGT 352	3	
Seminar in Leadership	CMGT 490	3	
Highly Effective Teams	CMGT 350	3	
Leading with Positivity	CMGT 340	3	
Cases in Leadership	CMGT 420	3	
TOTAL HOURS FOR LEAD CONCENTRATION		**15**	

CONCENTRATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN BUSINESS STUDIES

(All Business Studies majors are required to select one of the following concentrations; 2.0 GPA required in concentration.)

MANAGEMENT REQUIREMENTS — MGMT

COURSE	COURSE NUMBER	CREDITS	NOTES
International Business	CMGT 320	3	
Human Resources Management	CMGT 412	3	
Seminar In Leadership	CMGT 490	3	
Practicum/Project	CMGT 455	3	
Upper Division School of Business Elective		3	
TOTAL HOURS FOR MGMT CONCENTRATION		**15**	

MANAGEMENT INFORMATION SYSTEMS REQUIREMENTS — MIS

COURSE	COURSE NUMBER	CREDITS	NOTES
Operations Mgmt. or Information Security	CMGT 428 or CMIS 481	3	
Systems Analysis	CMIS 351	3	
App & Web Development	CMIS 470	3	
Database Design	CMIS 471	3	
Practicum/Project Mgmt	CMIS 455	3	
TOTAL HOURS FOR MIS CONCENTRATION		**15**	

MARKETING REQUIREMENTS — MKTG

COURSE	COURSE NUMBER	CREDITS	NOTES
Marketing Research and Intelligence	CMKT 324	3	
Market and Consumer Behavior	CMKT 334	3	
Marketing Policy and Strategy	CMKT 411	3	
Promotional Strategy	CMKT 433	3	
Practicum and Project in Marketing	CMKT 455	3	
TOTAL HOURS FOR MKTG CONCENTRATION		**15**	

NONPROFIT MANAGEMENT REQUIREMENTS — NPMG

COURSE	COURSE NUMBER	CREDITS	NOTES
Nonprofit Management	NPMG 310	3	
Nonprofit Governance	NPMG 350	3	
Fundraising and Grantwriting	NPMG 410	3	
Nonprofit Accounting	NPMG 420	3	
Project in Nonprofit Management	NPMG 455	3	
TOTAL HOURS FOR NPMG CONCENTRATION		**15**	

PROJECT MANAGEMENT — PJMT

COURSE	COURSE NUMBER	CREDITS	NOTES
Organizational Behavior	CMGT 352	3	
Project Management	PJMT 401	3	
Project Control and Risk Management	PJMT 403	3	
Highly Effective Teams	CMGT 350	3	
Practicum	PJMT 455	3	
TOTAL HOURS FOR PJMT CONCENTRATION		**15**	

CONCENTRATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN BUSINESS STUDIES

(All Business Studies majors are required to select one of the following concentrations; 2.0 GPA required in concentration.)

PUBLIC HEALTH ADMINISTRATION REQUIREMENTS — PUHL

COURSE	COURSE NUMBER	CREDITS	NOTES
Public Health	PHLT 101	3	
Fundamentals of Epidemiology	PHLT 102	3	
Introduction to Health Policy and Management	PHLT 313	3	
Program Planning and Evaluation	PHLT 410	3	
Public Health Elective (300/400 Level)		3	Choose from CANT 350; PHLT 335, 340, 342, 390, or 391
TOTAL HOURS FOR PHAD CONCENTRATION		**15**	

SERVANT LEADERSHIP REQUIREMENTS — SVLP

COURSE	COURSE NUMBER	CREDITS	NOTES
Organizational Behavior and Management	CMGT 352	3	
Seminar in Leadership	CMGT 490	3	
Servant Leadership	CMGT 330	3	
Practicum and Project in Management	CMGT 455	3	
Servant Leadership Elective Courses		3	
Choose one of the following:			
Nonprofit Management	NPMG 310		
Christian Ethics	CRS 230		
Introduction to Sustainability	CHUM 210		
Psychology of Persuasion	CPSY 453		
Religious Dimensions of Work	CRS 240		
Justice and Society	CRS 330		
Contemporary Social Problems	CSOC 202		
Contemporary Moral Issues/Theories of Human Nature	CPHI 220 OR 224		
African-American Theology	CRS 340		
TOTAL HOURS FOR SVLP CONCENTRATION		**15**	

COURSE REQUIREMENTS FOR BACHELOR OF ARTS IN PROFESSIONAL PSYCHOLOGY PPSY

GENERAL EDUCATION REQUIREMENTS: (# - Refer to Page 200 for Course Options)

COURSE	COURSE NUMBER	CREDITS	NOTES
Critical Reading & Writing	CENG 110	3	
Writing & Research	CENG 120	3	
Literature & Writing for Professionals I or II	#	3	
Mathematics	CMAT 104	3	
Statistics	CPSY 354	3	
Philosophy/Moral Values	#	3	Choose from: CPHI 220, 223, 224, or 322
Natural or Physical Science	#	3	
Social Science or History	CSOC 101	3	
Social Science or History	CPSY 105	3	Grade of "C" or Higher Required
Religious Studies–RS (200 Level)	#	3	
Religious Studies–RS (300 Level)	#	3	
Aesthetics			Fulfilled by Foreign Language Requirement
TOTAL HOURS FOR GER		**33**	

COLLEGE OF ADULT PROFESSIONAL STUDIES CORE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Foundation of Excellence	CORI 101	3	
Speech	CSPH 125	3	
Foreign Language	CSPN 101	3	
Computer	CMIS 153	3	
TOTAL HOURS FOR APS CORE		**12**	

LIBERAL ARTS CORE REQUIREMENTS: (*One course from Social Sciences or Humanities Cluster must have a "global perspective".)

COURSE	COURSE NUMBER	CREDITS	NOTES
Foreign Language	CSPN 102, 201 & 202	9	
Fine Arts	*	3	
School Of Arts Electives	*	3	
TOTAL HOURS FOR APS CORE		**15**	

PROFESSIONAL PSYCHOLOGY MAJOR REQUIREMENTS: (Professional Psychology Concentration Required)(2.0 GPA in Major Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Human Development	CPSY 218	3	
Personality	CPSY 219	3	
Psychopathology	CPSY 317	3	
Social Psychology	CPSY 353	3	
Fundamentals of APA Writing Style & Ethics	CPSY 235	3	
Cognitive Psychology	CPSY 440	3	
Practicum In Psychology	CPSY 460	3	
Psychology Comprehensives	CPSY 497	0	
TOTAL HOURS FOR PROFESSIONAL PSYCHOLOGY		**21**	

PHLTY, ORG. PSYC., CRIMINAL JUSTICE OR CONSUMER BEHAVIOR CONCENTRATION REQUIREMENTS: (See Next Page for Requirements)(2.0 GPA in Conc. Required)

COURSE	COURSE NUMBER	CREDITS	NOTES
Professional Psychology Concentration	See Next Page	27-30	
TOTAL MAJOR REQUIREMENTS		**51**	

FREE ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Free Electives		12-15	
TOTAL HOURS FOR MAJOR-SPECIFIC ELECTIVES		**12-15**	

TOTAL CREDITS REQUIRED FOR BACHELOR DEGREE COMPLETION . . . . 123 **2.0 CUMULATIVE GPA REQUIRED**

CONCENTRATION REQUIREMENTS FOR BACHELOR OF ARTS IN PROFESSIONAL PSYCHOLOGY

(All Applied Psychology majors are required to select one of the following concentrations; 2.0 GPA required in concentration.)

CONSUMER BEHAVIOR REQUIREMENTS — CSBH

COURSE	COURSE NUMBER	CREDITS	NOTES
Principles of Microeconomics	CECN 214	3	
Principles of Macroeconomics	CECN 215	3	
Principles of Marketing	CMKT 311	3	
Marketing Research & Intelligence	CMKT 324	3	
Market & Consumer Behavior	CMKT 334	3	
Selling & Sales Management	CMKT 338	3	
Promotional Strategy	CMKT 433	3	
Problem Solving & Decision Making	CPSY 305	3	
Human Factors	CPSY 306	3	
Psychology of Persuasion	CPSY 453	3	
TOTAL HOURS FOR CSBH CONCENTRATION		**30**	

CRIMINAL JUSTICE REQUIREMENTS — CJ

COURSE	COURSE NUMBER	CREDITS	NOTES
Public Administration	CCJ 150	3	
Criminal Justice	CCJ 200	3	
Criminology	CCJ 205	3	
Criminal Law	CCJ 210	3	
Corrections or Policing		3	Choose from CCJ 215 or CCJ 220
Juvenile Justice	CCJ 225	3	
Criminal Justice Elective		9	
TOTAL HOURS FOR CJ CONCENTRATION		**27**	Students must sucessfully complete training at Police Academy and apply for Experential Learning Credit or take the specified CJ courses to complete the CJ option.

ORGANIZATIONAL PSYCHOLOGY REQUIREMENTS — OPSY

COURSE	COURSE NUMBER	CREDITS	NOTES
Business Law	CBLW 301 or 302	3	
Principles of Microeconomics	CECN 214	3	
Principles of Macroeconomics	CECN 215	3	
International Business	CMGT 320	3	
Foundations of Management OR Organizational Behavior & Management	CMGT 227 or 352	3	
Human Resources Management	CMGT 412	3	
Principles of Marketing	CMKT 311	3	
Industrial & Organizational Psychology	CPSY 350	3	
School of Business Elective		6	Choose School of Business Elective
TOTAL HOURS FOR OPSY CONCENTRATION		**30**	

PUBLIC HEALTH REQUIREMENTS — PUHT

COURSE	COURSE NUMBER	CREDITS	NOTES
Public Health	PHLT 101	3	
Fundamentals of Epidemiology	PHLT 102	3	
Intro to Health Policy and Management	PHLT 313	3	
Global Health	CANT 350	3	
Public Health of Mental Illness	PHLT 335	3	
Fund. of Social and Behavioral Public Health	PHLT 340	3	
Social Determinants of Health and Well-Being	PHLT 342	3	
Public Health Research Methods	PHLT 390	3	
Qualitative Research Methods in Public Health	PHLT 391	3	
Program Planning and Evaluation	PHLT 410	3	
TOTAL HOURS FOR PHLT CONCENTRATION		**30**	

ACADEMIC COURSES

Christian Brothers University reserves the right to cancel classes at any time due to insufficient enrollment.

■ ACCOUNTING COURSES

CACC 260. FINANCIAL ACCOUNTING (formerly ACCT 260)
This course will provide the student with an understanding of how financial accounting information is used in business decision making and its importance as a field of study regardless of major. Basic transaction analysis, journal entries, and T-accounts are used to provide the structure for understanding the interplay between management decisions and the analysis of financial statements. Prerequisites: CMAT 104 or higher. *One semester; three credits*

CACC 270. MANAGERIAL ACCOUNTING (formerly ACCT 270)
Managerial accounting introduces the student to methods of using accounting information within an organization to plan operations, control activities, and make decisions. Accounting methods covered include cost-volume profit analysis, profit planning, variance analysis and other techniques that aid in decision making and evaluation of business performance. Prerequisite: CACC 260 with a grade of "C" or higher. *One semester; three credits*

CACC 385. FRAUD EXAMINATION (formerly ACCT 385)
This course gives a comprehensive view of the growing significance of fraud in today's business world. This course will examine: the nature of fraud, the types of fraud, recent developments in fraud, and the victims of fraud. Students will learn to perform an analysis of fraud using specialized software. (Same as CCJ 375) Prerequisite: Must be a junior or senior. *One semester; three credits*

■ ALGEBRA COURSES

CALG 105. INTRODUCTORY ALGEBRA (formerly ALG 105)
This course is designed for students who need a review in basic math skills. Topics include real number operations, exponents, percents, and an introduction to variables and algebraic expressions. The course does not supply any portion of the math credits required in any CBU degree program. Students may not receive credit for CALG 105 after completing any Math course numbered 100 or above. *One semester; three credits*

CALG 108. INTRODUCTORY ALGEBRA II (formerly ALG 108)
This course is a continuation of CALG 105. Topics include exponents, polynomial operations, factoring, rational expressions, and solving equations and inequalities. The course does not supply any portion of the math credits required in any CBU degree program. Students may not receive credit for CALG 108 after completing any Math course numbered 100 or above. *One semester; three credits*

CALG 118. INTRODUCTORY ALGEBRA III (formerly ALG 118)
This course is a continuation of Algebra 108. Topics include graphing linear equations and inequalities, solving systems of linear equations, application problems, solving quadratic and rational equations, and radicals. The course does not supply any portion of the math credits required in any CBU degree program. Students may not receive credit for ALG 108 after completing any Math course numbered 100 or above. Prerequisite: CALG 108 or passing of a placement exam. *One semester; three credits*

■ ANTHROPOLOGY COURSES

CANT 126. FORENSIC ANTHROPOLOGY
This course is the subspecialty of Physical Anthropology that involves excavation and identification of human remains for legal purposes. Students are exposed to the human skeleton and taught to examine bones for sex, age, ancestry, and stature differences. Interpretation of skeletal trauma is stressed. The most recent techniques and analyses in the forensic sciences, along with current and controversial trends in anthropology are discussed. Authentic case studies are used to illustrate the applied field of anthropology. This course is intended for applied psychology and science students. It assumes a basic familiarity with skeletal anatomy. (Same as CSCI 126) Prerequisite: CALG 118 or higher. Corequisite: CANT126L. *One semester; three credits*

CANT 126L. FORENSIC ANTHROPOLOGY LAB
Laboratory to accompany CSCI 126. Hands-on laboratory sessions will be used to teach basic techniques of skeletal analysis. Laboratory topics to include basic anatomy of the human skeleton, differences between animal and human remains, determination of the time interval since death, age, sex, ancestry, stature, the cause and manner of death, facial reconstruction, case report writing, etc. Please note: Students will be expected to respectfully handle animal and human remains. (Same as CSCI 126L) Prerequisite: CALG 118 or higher. Corequisite: CANT 126. *One semester; one credit*

CANT 128. PHYSICAL ANTHROPOLOGY
This course is designed to introduce the student to the field of physical/biological anthropology, with an emphasis on human evolution. The larger themes investigated are the fundamentals of biological anthropology, major principles underlying our evolutionary history, and a review of the fossil evidence in an attempt to understand the development of the human species. Prerequisite: CALG 118 or higher. Corequisite: ANTH 128L. *One semester; three credits*

CANT 128L. PHYSICAL ANTHROPOLOGY LAB
Laboratory to accompany CANT 128. It includes working with hominid casts, and primate and modern human skeletal material. Prerequisite: CALG 118 or higher. Corequisite: CANT 128. *One semester; one credit*

CANT 160. CULTURAL ANTHROPOLOGY (formerly ANTH 160)
This course, which deals primarily with the concerns of cultural anthropology, focuses on the study of human diversity, and what defines humanity. It explores the beliefs, values, behaviors, technologies, and environments of a wide variety of cultures in an attempt to understand and appreciate

variations within the human community in addition to evolution and modern biological variation. In attempting to understand the world's diversity, students have the opportunity to better understand themselves, their potentials, and their limitations. *One semester; three credits*

CANT 190-199. SPECIAL TOPICS IN ANTHROPOLOGY
Courses in different areas of anthropology that are not offered on a regular basis. *One semester; one to three credits*

CANT 350. GLOBAL HEALTH (formerly ANTH 350)
The course will introduce students to the main concepts of the public health field and the critical links between public health and social and economic development. Students will get an overview of the determinants of health, how health status is measured, and the influences of various factors including social, economic, and political issues on the health of individuals and of communities. It will also introduce students to key concerns regarding nutrition, reproductive health, infectious diseases, and chronic diseases. Material will include key concepts, be practical in orientation, and global in coverage but with an important focus on the developing world and on the health of the poor. *One semester; three credits*

CANT 380-387. SPECIAL TOPICS IN ANTHROPOLOGY
Courses in different areas of anthropology that are not offered on a regular basis. *One semester; one to three credits*

■ ART COURSES

CART 101. ART APPRECIATION (formerly ART 101)
The student will be exposed to different areas of the visual arts which will include the study of the visual elements and the principles of design. The course will also cover a brief survey of the highlights of art from the Paleolithic period to modern times. *One semester; three credits*

CART 106. PHOTOSHOP ESSENTIALS (formerly ART 106)
This course is an introduction to the user interface, tools, and features of Adobe Photoshop. Students begin working with the industry standard for creating raster/bitmap graphics. This incredibly deep program is used for graphic design, web design, image manipulation, photo restoration, digital illustration. lighting effects, and animation. By the end students will have progressed from a beginning to intermediate skill level able to command many of the powerful tools Photoshop has to offer. Payment of expendable materials fee is required. Basic computer skills are necessary for the best outcome for this course. *One semester; three credits.*

CART 108. INDESIGN ESSENTIALS (formerly ART 108)
This course is an introduction to the user interface, tools, and features of Adobe InDesign, a powerful but intuitive page layout application. Students work through basic toward advanced techniques ranging from: type controls; graphics file management, layers and document setup. Students will explore designing a range of documents from simple and attractive to complex and spectacular. Payment of expendable materials fee is required. Basic computer skills are necessary for the best outcome for this course. *One semester; three credits.*

CART 130-135. SPECIAL TOPICS IN ART
These courses are designed to permit intensive study into topics of special interest and timelines in the area of Art. *One semester; one to three credits*

■ BUSINESS LAW COURSES

CBLW 301. BUSINESS LAW I (formerly BLAW 301)
The origins and general survey of contract law along with the nature, formation, execution, and interpretation of contracts in the common law system. Emphasis is on instruction in legal principles that govern typical business situations and on the rules of law and procedure applied by the courts in the United States. *One semester; three credits*

CBLW 302. BUSINESS LAW II (formerly BLAW 302)
Continuation of BLAW 301. In-depth study of the Uniform Commercial Code and its far reaching effects on modern business transactions; the laws of agency, partnerships and corporations, and the legal concept of property. *One semester; three credits*

CBLW 390-395. SPECIAL TOPICS IN BUSINESS LAW
These courses are designed to permit intensive study into topics of special interest and timelines in the area of Business Law. *One semester; one to three credits*

■ BUSINESS ADMINISTRATION COURSES

CBUS 160-164. SPECIAL TOPICS IN BUSINESS ADMINISTRATION
Each course is designed to permit intensive study in topics of special interest and timeliness in one or more areas of business administration. Offered as needed. *One semester; one to three credits*

CBUS 205. BUSINESS PROBABILITY AND STATISTICS (formerly BUS 205)
This course covers basic concepts and methods of probability and statistics for use in the business disciplines. Topics include: quantitative analysis, measurement scales, analysis and description of data, types and methods for probability estimation, probability distributions, and measures of central tendency, skewness, and dispersion. Use of computer spreadsheet models for probability and statistics is covered. Prerequisites: CMIS 153, CMAT 104 or MATH 105 or higher, or equivalent GER math. *One semester; three credits*

CBUS 206. BUSINESS RESEARCH METHODS (formerly BUS 206)
This course covers the basic concepts and methods for business research data analysis. Topics covered include: estimation, inference, analysis of variance, regression, and hypothesis testing. These are illustrated using modern computer spreadsheet models. Prerequisites: CBUS 205 or STAT 221, CMIS 153, and CMAT 104. *One semester; three credits*

CBUS 260-264. SPECIAL TOPICS IN BUSINESS ADMINISTRATION
Each course is designed to permit intensive study in topics of special interest and timeliness in one or more areas of business administration. Offered as needed. *One semester; one to three credits*

CBUS 360-364. SPECIAL TOPICS IN BUSINESS ADMINISTRATION
Each course is designed to permit intensive study in topics of special interest and timeliness in one or more areas of business administration. Offered as needed. *One semester; one to three credits*

■ CHEMISTRY COURSES

CCHE 106. CHEMISTRY OF COOKING
This course takes an in-depth and hands-on approach to the chemical nature and transformations that occur during classic and modern cooking techniques. A study of basic chemical principles, the scientific method, experimental design, and method optimization will be employed to understand the effects of cooking processes on food. *One semester; three credits*

■ CRIMINAL JUSTICE COURSES

CCJ 150. PUBLIC ADMINISTRATION (formerly CJ 150)
A history and overview of the field of Public Administration as a profession and an academic discipline. It is designed to give the student a solid and in-depth understanding of past, present, and future problems of administrators in managing government organizations in the political environment. Interrelationships between chief executives, legislators, the judiciary, interest groups, and bureaucracies are considered. *One semester; three credits*

CCJ 180-187. SPECIAL TOPICS IN CRIMINAL JUSTICE
These courses are designed to permit intensive study into topics of sepcial interest and timeliness in the area of Criminal Justice. *One semester; one to three credits*

CCJ 200. CRIMINAL JUSTICE (formerly CJ 200)
An analysis of the structure, functions, and decision process of social agencies that deal with the management and control of crime and criminal offenders. Includes study of the nature, causes, and role of criminal behavior in society. *One semester; three credits*

CCJ 205. CRIMINOLOGY (formerly CJ 205)
This course will offer an introduction to theoretical explanations for the causes of crime. We will take a psychosocial approach to understanding crime causation and prediction through the use of data and specific theories. *One semester; three credits*

CCJ 210. CRIMINAL LAW (formerly CJ 210)
Criminal Law is an examination of some of the substantive aspects of criminal law, including: principles of criminal liability, specific analysis of elements of crimes, and substantive defenses to crimes. Throughout the course, there is an ongoing examination of Constitutional safeguards that control the substantive and procedural aspects in the criminal justice system. Course instruction consists of lecture, use of hypothetical case studies and reading and analysis of selected laws and court decisions. *One semester; three credits*

CCJ 215. CORRECTIONS (formerly CJ 215)
This course will offer a comprehensive look at the components that make up the corrections system in the United States. The history and future of the corrections system will be analyzed through an examination of the political and social climate in our country. *One semester; three credits*

CJ 220. POLICING (formerly CJ 220)
This course is an in-depth study of law enforcement in the United States, the largest and most visible part of the criminal justice system. Students will focus on the differences and functions of federal, state, local, county and private policing in this country. *One semester; three credits*

CCJ 225. JUVENILE JUSTICE (formerly CJ 225)
The focus of this course is to examine the juvenile delinquency phenomenon through the historical context of delinquency, the changing legal environment (including major court decisions which have transformed the juvenile system), exploring the theories of the causes of juvenile delinquency, and discussion of juvenile delinquency prevention and control programs. *One semester; three credits*

CCJ 280-287. SPECIAL TOPICS IN CRIMINAL JUSTICE
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Criminal Justice. Offered as needed *One semester; one to three credits*

CCJ 365. DEVIANT BEHAVIOR (formerly CJ 365)
An exploration of theoretical perspectives on deviance, problems in defining deviance and specific categories of deviance. Deviant behaviors discussed may include but are not limited to prostitution, gambling, transgenderedness, pornography, mental illness, sexualities, and physical disability. (Same as SOC 365). Prerequisite: CSOC 101 with a grade of "C" or higher. *One semester; three credits*

CCJ 370. APPLICATIONS OF MEMORY (formerly CJ 370)
An examination of the application of memory in such diverse areas as courtroom testimony (e.g., factors influencing witnesses, hypnosis, repressed memory, false memory), memory for everyday events, memory aids, and advertising. The relevant theories and research in each area are examined. (Same as CPSY 370.) Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CCJ 375. FRAUD EXAMINATION (formerly CJ 375)
This course gives a comprehensive view of the growing significance of fraud in today's business world. This course will examine the nature of fraud, the types of fraud, recent developments in fraud, and the victims of fraud. Students will learn to perform an analysis of fraud using specialized

software. (Same as CACC 385.) *One semester; three credits*

CCJ 380-387. SPECIAL TOPICS IN CRIMINAL JUSTICE
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Criminal Justice. Offered as needed *One semester; one to three credits*

■ ECONOMICS COURSES

CECN 214. PRINCIPLES OF MICROECONOMICS (formerly ECON 214)
Attention is focused on the micro concept of economic analysis, and primary attention given to the theory of the firm and partial equilibrium problems arising within any enterprise economy. Attention is also given to government regulation of business, the theory of income distribution as it pertains to the determination of wages, rents and profits, and international trade. *One semester; three credits*

CECN 215. PRINCIPLES OF MACROECONOMICS (formerly ECON 215)
This course focuses attention on the aggregate or macroeconomic relationships and gives attention to the central problems of economic organization, the functioning of the price system, the economic role of government, the determination of national income, employment, the rate of inflation, and fiscal and monetary policy. Further, the student is introduced to the interactions between aggregate markets such as the product market, the factor/labor market, and the money market. Prerequisite: CECN 214. *One semester; three credits*

CECN 280-287. SPECIAL TOPICS IN ECONOMICS
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Economics. *One semester; one to three credits.*

CECN 303. MONEY AND BANKING (formerly ECON 303)
A general survey of credit and credit instruments, activities and policies of financial institutions such as commercial and savings banks, the Federal Reserve System, and investment banks. Study of the place of money in modern economic life, including its relation to prices, employment, and business activity. Prerequisites: CECN 214 and 215. *One semester; three credits.*

CECN 380-387. SPECIAL TOPICS IN ECONOMICS
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Economics. *One semester; one to three credits.*

CECN 420. MANAGERIAL ECONOMICS (formerly ECON 420)
This courses focuses on the application of economics theory to the problems and decisions faced by business managers in a market-oriented economy. The economic aspects of business departments such as marketing, finance, accounting, and law are explored and integrated into the applicable economic theories and models. Thus, in a very general sense, this course attempts to provide the student with a method of looking at the world of microeconomics through the eyes of an economist and from the perspective of a business person. Prerequisites: CECN 214 and 215. *One semester; three credits*

CECN 480-487. SPECIAL TOPICS IN ECONOMICS
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Economics. *One semester; one to three credits.*

■ ENGLISH COURSES

CENG 102. ENGLISH READINESS FOR ADULTS (formerly ENG 102)
This course prepares students to write clear, concise, and correct sentences and paragraphs. The class begins with an intensive review of grammar, punctuation, and usage, then students will work on designing and composing coherent paragraphs. Exercises and assignments in this course will allow students to practice proofreading and revising. *One semester; three credits*

CENG 110. CRITICAL READING AND WRITING (formerly ENG 110)
Practice in effective writing and clear thinking at all levels, with emphasis on reading comprehension and the essay response. Specific steps include: formulating purpose, identifying an audience, thesis development, and organization of cohesive essays through the process of prewriting, composing, and rewriting. Prerequisite: Satisfactory performance on a placement test. *One semester; three credits*

CENG 120. WRITING AND RESEARCH (formerly ENG 120)
This course emphasizes the process of constructing a focused, logical, coherent, well-supported thesis or point of view. The objective is to critically analyze sources and effectively integrate source material into complex arguments appropriate to audience, purpose and occasion. Students will employ prewriting exercises, correct use of source citations, and editing for clarity. This course culminates in submission of a research paper. Prerequisite: CENG 110 or equivalent. *One semester; three credits*

CENG 180-187. SPECIAL TOPICS IN ENGLISH
These courses are designed to permit intensive study into topics of special interest and timeliness in the areas of composition or literature. *One semester; one to three credits.*

CENG 200. LITERATURE AND WRITING FOR PROFESSIONALS I (formerly ENG 200)
Instructors select specific topics of study for this course. These will serve as mechanisms to emphasize the interconnectedness of reading and writing. Practice in analysis of information and ideas, planning and developing theses, structuring research papers, and writing bibliographies is emphasized. In addition, students read, reflect, and report on written works in order to develop and deepen analytical and argumentative writing and research skills. Course content may vary. Prerequisite: CENG 110 and CENG 120 or equivalent. *One semester; three credits*

CENG 220. LITERATURE AND WRITING FOR PROFESSIONALS II (formerly ENG 220)
As in CENG 200, instructors select specific topics of study for this course, which will serve as mechanisms to emphasize the interconnectedness of reading and writing. Continued practice in analysis of information and ideas, planning and developing theses, structuring research papers, and writing bibliographies is emphasized. In addition, students read, reflect, and report on written works in order to develop and deepen analytical and argumentative writing and research skills. Course content may vary. Prerequisite: CENG 110 and CENG 120 or equivalent. *One semester; three credits*

CENG 246. CREATING CONSUMER CULTURE IN AMERICAN LITERATURE
An examination of the rise in industrialization, capitalism, and consumerism in America in the late 1800s and early 1900s and the ways in which that culture is manifested through a focus on fashion in the novels of major American authors. Prerequisite: CENG 110 and 120. *One semester; three credits.*

CENG 280-287. SPECIAL TOPICS IN ENGLISH
These courses are designed to permit intensive study into topics of special interest and timeliness in the areas of composition or literature. *One semester; one to three credits.*

CENG 371. BUSINESS COMMUNICATIONS (formerly ENG 371)
An examination of logical and psychological patterns of business communication and adaptation to varying audiences. A study of forms of written and oral communication in the business worlds from correspondence for both routine and problems situations to proposals and both short and long reports, all in context of relevant technologies. Prerequisite: CENG 120. *One semester; three credits*

CENG 380-387. SPECIAL TOPICS IN ENGLISH
These courses are designed to permit intensive study into topics of special interest and timeliness in the areas of composition or literature. *One semester; one to three credits.*

■ FINANCE COURSES

CFIN 327. FINANCIAL MANAGEMENT I (formerly FIN 327)
An introduction to the basic concepts, principles and analysis techniques of finance as applied to business organizations. The basis for virtually all financial analysis methodology lies in discounted cash flow analysis which is covered in this course. DCF techniques are then applied to areas of basic corporate decision-making involving the acquisition or replacement of physical assets and the decision to pursue capital projects. CFIN 327 is a quantitative, problem solving course. Prerequisites: CACC 260, CECN 214, CMIS 153, CBUS 205 and CMAT 104 or MATH 105 or higher. *One semester; three credits*

CFIN 427. FINANCIAL MANAGEMENT II (formerly FIN 427)
Extends the knowledge of financial management and provides insights into the complexity of the decisions faced by practicing financial managers. Various topics are covered in the course with major emphasis on capital budgeting. Other topics covered include working capital management, international mergers and acquisitions, financial engineering, optimal capital structure, and enterprise value. Prerequisite: CFIN 327. *One semester; three credits*

CFIN 480-487. SPECIAL TOPICS IN FINANCE
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of finance. *One semester; one to three credits.*

■ HISTORY COURSES

CHIS 107. WORLD HISTORY TO 1500 (formerly HIST 107)
This course is an introduction to origins and development of the major world societies through the post-classical period. Major topics include the changing status of women, the origins and spread of world religions, the nature and results of cross-cultural encounters, different approaches to understanding the human relationship to the natural world, and the various factors behind the decline and collapse of civilizations. *One semester; three credits*

CHIS 108. WORLD HISTORY SINCE 1500 (formerly HIST 108)
This course is an introduction to the histories of Asia, Europe, Africa, and Latin America since 1500. Major topics include the changing status of women, the origins and effects of imperialism, the origins and spread of nationalism, the Industrial Revolution, the World Wars, decolonization, the Cold War, and globalization. *One semester; three credits*

CHIS 151. AMERICAN SOCIETY TO 1877 (formerly HIST 151)
A survey of Colonial America; the Revolution; Confederation and Constitution; Ante-Bellum Period; the Civil War and Reconstruction. *One semester; three credits*

CHIS 152. AMERICAN SOCIETY SINCE 1877 (formerly HIST 152)
A survey of post-Civil War Industrialization and Reform; the Progressive Era; World War I; the Depression and the New Deal; World War II; the Cold War; Recent Developments. *One semester; three credits*

CHIS 180-187. SPECIAL TOPICS IN HISTORY
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of History. *One semester; one to three credits.*

CHIS 280-287. SPECIAL TOPICS IN HISTORY
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of History. *One semester; one to three credits.*

CHIS 380-387. SPECIAL TOPICS IN HISTORY
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of History. *One semester; one to three credits.*

HUMANITIES COURSE

CHUM 210. INTRODUCTION TO SUSTAINABILITY (formerly HUM 210)
This class will use common texts, discussions, collaborative activity, and field trips to explore the meanings of environmental and community sustainability from multiple cultural and academic perspectives. Guest speakers from local community organizations and businesses as well as CBU professors from different departments will engage students with what sustainability means in their professional and civic activity. Students will collaborate as a class or work in groups to design a project that achieves sustainability-related outcomes. *One semester; three credits*

BUSINESS MANAGEMENT COURSES

CMGT 227. FOUNDATIONS OF MANAGEMENT (formerly MGMT 227, MGMT 337)
An introductory management class examining organizations and the role of managers. The course is organized around the four functions of management: planning, organizing, leading and controlling. Broader themes such as ethics and organizational culture are also discussed. *One semester; three credits*

CMGT 240-249. SPECIAL TOPICS IN MANAGEMENT
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Management. Offered as needed. *One semester; one to three credits*

CMGT 320. INTERNATIONAL BUSINESS (formerly MGMT 320)
An introduction to the field of international business and the implications of international trade and globalization upon American business. Topics include the comparison of political economies and cultures, global trade and investment strategies, foreign investment, regional economic integration, foreign exchange markets, strategic alliances and global marketing. Prerequisite: CECN 214 and 215 or ECE/CH E/CE/ME 314. *One semester; three credits*

CMGT 330. SERVANT LEADERSHIP (formerly BMGT 330)
This course enables students to define and understand the concept of Servant Leadership from a theoretical and practical perspective. Students will be introduced to the foundational Servant Leadership theory, as described by Robert Greenleaf, and to the current applications of Servant Leadership. Each week students will discuss theoretical and practical readings about the ten characteristics of Servant Leadership. Students learn and apply self-reflection tools to determine how well they are able to act as a servant leader in their work, home and community lives. Prerequisite: CMGT 227 or 352. *One semester; three credits*

CMGT 340. LEADING WITH POSITIVITY (formerly BMGT 320)
Bringing about change in an organization-no matter what one's position-requires a unique set of skills. This course assists students in creating, fostering and managing organizations where people thrive and perform at their best. By building on emerging theory of positive organizational scholarship (POS) as applied in today's fluid organizational contexts, this course develops a framework for the study and application of positive emotions, engagement, relationships, and outcomes at work. *One semester; three credits*

CMGT 350. HIGHLY EFFECTIVE TEAMS (formerly BMGT 350)
In the fast-paced, highly networked environment in which most organizations operate today, teams accomplish much of the work that gets done. In this course, students learn about the make-up of teams: characteristics, structures, culture and dynamics. They consider the role and function of individuals on a team, as well as the contribution teams make in the larger organizational context. A major focus is on the formation and development of teams and on leadership processes that empower high-performing teams. Prerequisite: CMGT 227 or 352. *One semester; three credits*

CMGT 352. ORGANIZATIONAL BEHAVIOR AND MANAGEMENT (formerly MGMT 352)
The psychology of organizations and their effect on individuals and groups. Topics include motivation theory, power and authority, communication, teamwork, leadership, job design and organizational structures. Other issues include globalization, cultural diversity, ethics and technology. *One semester; three credits*

CMGT 362. HAPPINESS 101: THE SCIENCE AND BUSINESS BEHIND POSITIVE PSYCHOLOGY
The course covers positive psychology and its application in business. The investigates the scientific approach to happiness and how this translates into different areas of life, including work. Through interactive and engaging classroom activities students begin to discover the secrets of living a more engaged, fulfilling, and joyful life. Special attention will be paid to how the science of happiness is being used in the corporate setting. *One semester; three credits*

CMGT 380-387. SPECIAL TOPICS IN MANAGEMENT
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Management. Prerequisite: CMGT 227. Offered as needed. *One semester; one to three credits*

CMGT 412. HUMAN RESOURCES MANAGEMENT (formerly MGMT 412)
Personnel administration principles and philosophy. Man as employer and employee. Major topics include recruiting, hiring, training, promotion, health and welfare, and employee safety. In addition, the legal environment surrounding human resource issues will be studied. Prerequisite: CMGT 227 or 352. Offered in the Fall semester. *One semester; three credits*

CMGT 418. OPERATIONS AND SUPPLY CHAIN MANAGEMENT (formerly MGMT 418)
This course is designed to introduce the students to the operation function of the organization with an emphasis on the supply chain processes. Operation and Supply Chain managers are challenged to improve organizational productivity by reducing costs, creating flexible processes, and improving product and service quality. Emphasis will be placed on analyzing process strategies, performance and quality, inventory control and lean systems, supply chain development, location, and transportation analysis. The course will integrate quantitative modeling with business problem

solving by using the tools of forecasting, decision making, linear programming, inventory models, waiting line analysis, and project management models. Prerequisites: CMKT 311, CMGT 352 or 227, and CBUS 206 (or equivalent). *One semester; three credit hours*

CMGT 420. CASES IN LEADERSHIP (formerly BMGT 420)
This course provides students with an opportunity to synthesize what they have learned about leadership through the analysis of cases. Students will demonstrate mastery of primary leadership competencies, concepts, principles and practices. By displaying leadership competence by addressing leader dilemmas and reflecting on their experience, students focus on and integrate their learning upon the identification, analysis and solution of leadership problems in organizations and society today. Prerequisite: CMGT 227 or 352. *One semester; three credits*

CMGT 428. OPERATIONS MANAGEMENT (formerly MGMT 428)
This course is designed to strengthen the student's knowledge of and ability to use management science models. In-depth study of modeling such as linear and goal programming, queuing models, simulation, and more advanced decision making models will be the focus. Prerequisite: CMIS 153 and CBUS 205. Offered in the Spring semester. *One semester; three credit hours*

CMGT 430. ETHICAL DECISION MAKING IN BUSINESS (formerly MGMT 430)
This course is an applied course in business and managerial ethics. Various ethical theories will be applied to contemporary business situations. In addition, the course will focus on raising the awareness of the student to ethical issues, principles and arguments by examining the social and corporate environment in which they will be living and working. Prerequisite: CPHI 220 or equivalent, CMGT 227 or 352, CMKT 311 and CFIN 327. *One semester; three credits*

CMGT 455. PRACTICUM AND PROJECT IN MANAGEMENT (formerly MGMT 455)
This course is designed to explore and put to practical use the entire body of knowledge gained in previous MGMT courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific management problems. Prerequisite: Permission of the instructor. *One semester; three credits*

CMGT 490. SEMINAR IN LEADERSHIP (formerly MGMT 490)
Readings, critical evaluation and analysis of selected topics in current management literature, research and practice. Individual and group analyses and presentations of assigned topics. Major research project to be presented to faculty and senior students. Prerequisites: CMGT 227 or 352, CMKT 311 and CFIN 327. *One semester; three credits*

CMGT 495-497. SPECIAL TOPICS IN MANAGEMENT
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Management. Prerequisite: CMGT352. Offered as needed. *One semester; one to three credits.*

CMGT 498. BUSINESS POLICY/STRATEGIC PLANNING (formerly MGMT 498)
This course will consist of a series of lectures and practice exercises in research methods and case analysis. The study of corporate and business level policy and strategy making is developed using a top-management perspective. A research report along with case analysis papers will be prepared by each member of the class. In-class case assignments will be used for discussion and evaluation. Prerequisites: CFIN 327, CMGT 227 or 352 and CMKT 311. *One semester; three credits*

■ MANAGEMENT INFORMATION SYSTEMS COURSES

CMIS 151. INTRODUCTION TO INFORMATION TECHNOLOGY BASICS
This course develops and expands students' business information processing, presentation, and organizational skills utilizing Microsoft Word, PowerPoint, and Outlook. It provides broad coverage of introductory technology concepts and fundamental principles for the effective use of computer-based applications in both academic and career settings. Information coverage will include text, training files, email, word processor documents, presentations, etc. *One semester; three credits*

CMIS 153. INTRODUCTION TO COMPUTER BUSINESS APPLICATIONS (formerly MIS 153)
This course is intended to provide to students a working knowledge of modern computation and business information processing via the common tools of word processing, presentation, spreadsheet, and data base management. Information coverage will include text, numerical, graphical, and functional representations via common business applications such as break-even analysis, present value determination, depreciation schedules, loan amortization tables, etc. *One semester; three credits*

CMIS 180-187. SPECIAL TOPICS IN MIS
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Management Information Systems. *One semester; one to three credits.*

CMIS 231. INTRODUCTION TO MIS (formerly MIS 231)
The purpose of this course is to introduce the fundamentals of Management Information Systems. This course discusses components of information systems (hardware, software, databases, and data communication technologies) and uses examples and cases to demonstrate important uses of information systems in organizations. Topics include: transaction processing, e-commerce, supply chain systems, customer relationship management systems, marketing information systems, decision support systems, knowledge management systems, and ethics and security issues. Prerequisite: CMIS 153 . *One semester; three credits*

CMIS 280-287. SPECIAL TOPICS IN MIS
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Management Information Systems. *One semester; one to three credits.*

CMIS 351. SYSTEMS ANALYSIS AND DESIGN (formerly MIS 351)
This course presents methods for analyzing and designing business IT systems. The course emphasizes the Systems Development Life Cycle (SDLC)

methodology. Classical and object oriented methods and tools are applied to business analysis and problem solving situations with adjustments as required to today's business environment. Included are requirements analysis and use case analysis, process models, data models, consistency of process and data models, justification and costing techniques, conversion and implementation procedures. A case study is employed to provide a practical "hands-on" approach. Prerequisite: CMIS 231 or permission of instructor. *One semester; three credits*

CMIS 380-387. SPECIAL TOPICS IN MIS
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Management Information Systems. *One semester; one to three credits.*

CMIS 455. PRACTICUM AND PROJECT IN MIS (formerly MIS 455)
This course is designed to explore and put to practical use the entire body of knowledge gained in previous MIS courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific MIS problems. Prerequisite: Permission of the Instructor. *One semester; three credits*

CMIS 460-466 SPECIAL TOPICS IN MIS
Course designed to permit intensive study into topics of special interest and timeliness in the area of Management Information Systems Management. Prerequisites depend upon topics and approval of instructor. Offered as needed. *One semester; one to three credits*

CMIS 470. APPLICATION AND WEB DEVELOPMENT (formerly MIS 470)
This course familiarizes students with the modern web based application development and programming environment. It also teaches students the basics of key Internet technologies (HTML, JavaScript, Dynamic HTML, CSS, ASP, PHP, AJAX, and XML), and trains students into the application and usage of key Internet tools. Upon completion of this course, students will be able to create and maintain modern advanced dynamic Web sites. Prerequisites: CMIS 153 and 231, or permission of instructor. *One semester; three credits*

CMIS 471. DATA BASE DESIGN AND BUSINESS INTELLIGENCE (formerly MIS 471)
The course presents database design and management and emphasizes the relational model and Structured Query Language. Topics include: database models, query languages, query optimization, database implementation, distributed processing, data mining, and business intelligence. Prerequisite: CMIS 153 and 231, or permission of the instructor. Offered as needed. *One semester; three credits*

CMIS 481. INFORMATION SECURITY (formerly MIS 481)
This course provides an overview of security challenges and strategies of countermeasure in the information systems environment. Topics include: definition of terms, concepts, elements, and goals incorporating industry standards and practices with a focus on availability, vulnerability, integrity and confidentiality aspects of information systems.This course includes access control to information systems and applications encompassing authentication and accounting for end-users and system administrators. The course also addresses the broad topic of risk management, how risk, threats, and vulnerabilities impact information systems, how to assess and manage risk based on defining an acceptable level of risk for information systems, and business continuity planning and disaster recovery. Prerequisite: CMIS 231 (or equivalent). Corequisite: CMIS 481L. Offered as needed. *One semester; three credits*

CMIS 481L. INFORMATION SECURITY LAB (formerly MIS 481L)
This lab accompanies CMIS 481 and provides hand on exercises to compliment the concepts covered in MIS 481. Prerequisite: CMIS 231 (or equivalent). Corequisite: CMIS 481. Offered as needed. *One semester; one credit*

CMIS 482. DIGITAL FORENSICS (formerly MIS 482)
This course covers information system forensics investigation and response. Areas of study include: concepts and procedures for investigating computer and cyber-crime and methods for collecting, analyzing, recovering and preserving forensic evidence. Using modern digital forensic tools and preparing forensic reports is also covered. Prerequisite: CMIS 481. Corequisite: 482L. Offered as needed. *One semester; three credits*

CMIS 482L. DIGITAL FORENSICS LAB (formerly MIS 482L)
This lab accompanies CMIS 482 and provides hand on exercises to compliment the concepts covered in CMIS 482. Prerequisite: CMIS 481. Co-requisite: CMIS 482. Offered as needed. *One semester; one credit*

CMIS 483. SECURITY COMPLIANCE AND AUDITING (formerly MIS 483)
This course offers an overview of the American Legal System, privacy laws and issues, and the legal and accounting processes involved in implementing and maintaining business IT systems. It includes: the principles, the approaches and the methodology in auditing information systems to ensure the processes and the procedures are in compliance with pertinent laws and regulatory provisions especially in the context of information systems security. Prerequisite: CMIS 481. Offered as needed. *One semester; three credits*

■ MARKETING COURSES

CMKT 311. PRINCIPLES OF MARKETING (formerly MKTG 311)
Addresses the marketing-management functions directed toward organizational customers and prospects who buy goods and services necessary for the operation of their own businesses. Concepts of purchasing strategy, material management, and organizational buying behavior are integrated into electronic developments, strategic alliances and partnerships, and just in time. Prerequisite: Junior standing and CECN 214. *One semester; three credits*

CMKT 324. MARKETING RESEARCH AND INTELLIGENCE (formerly MKTG 324)
The study of techniques and principles for systematically monitoring environments-collecting, recording, analyzing, and interpreting data that can aid decision makers who are involved with marketing of goods, services, or ideas. The application of intelligence and research findings in the development of marketing strategy is emphasized. The class employs research cases and projects to enhance students' practical research and intelligence skills. Prerequisite: CMKT 311. *One semester; three credits*

CMKT 334. MARKET AND CONSUMER BEHAVIOR (formerly MKTG 334)
This investigation into consumer behavior brings together relevant research and applications from the behavioral sciences and other fields of marketing. The course will evaluate the decision process that individuals use as they obtain and use goods and services. The course will investigate the factors employed to identify and measure market segments. Emphasis is placed on an analysis of consumer behavior as a basis for marketing strategy. Prerequisite: CMKT 311. *One semester; three credits*

CMKT 338. SELLING AND SALES MANAGEMENT (formerly MKTG 338)
This course will provide a detailed investigation of that portion of the Marketing Mix pertaining to promotion with specific emphasis on Personal Selling. While some discussion will be given to sales techniques, the major emphasis will be concerned with the management of the outside sales force and the activities of that sales force. Prerequisite: CMKT 311. *One semester; three credits*

CMKT 370-375. SPECIAL TOPICS IN MARKETING
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Marketing. *One semester; one to three credits.*

CMKT 411. MARKETING POLICY AND STRATEGY (formerly MKTG 411)
This course is designed to introduce students to the activities that are necessary for the organization to provide the products and/or services necessary to meet the company's goals. The operations and supply chain managers are challenged to improve productivity while reducing costs, creating flexible processes that will meet the ever changing customer needs, and improving product and service quality. Emphasis will be placed on process strategies and analysis, quality and performance, inventory controls and lean systems, supply chain development and integration, location, and transportation analysis. The tools used will include forecasting, decision making, linear programming, inventory models, waiting line analysis, and project management models. Prerequisite: CMKT 311 and 324. *One semester; three credits*

CMKT 433. PROMOTIONAL STRATEGY (formerly MKTG 433)
This course is designed to provide the student with the communication processes used in marketing. The course builds on the base of an understanding of consumer behavior by treating the fields of advertising, sales promotion, personal selling, reseller stimulation, and other communications skills as part of the overall promotional mix. The course develops fundamental considerations as a background to a focus on managerial issues and problems. The various communication methods are treated as variables to communicate the want satisfying attributes of products and services. Prerequisite: CMKT 311. *One semester; three credits*

CMKT 440. ENTREPRENEURSHIP (formerly MKTG 440)
This course provides a foundation for an understanding of the variables and functions in the start-up of new business ventures. More and more businesses are being started, and the opportunities are there for such actions. The development of strategic plans and feasibility studies are essential for successful introduction of new businesses. It includes the study of theory, while developing a practical knowledge of the marketing management system and key concepts for new ventures. This course is designed to enable new enterprises a stronger opportunity to achieve a higher quality of success. Prerequisites: CMGT 227 (or 352) and CMKT 311. *One semester; three credits*

CMKT 455. PRACTICUM AND PROJECT IN MARKETING (formerly MKTG 455)
This course is designed to explore and put to practical use the entire body of knowledge gained in previous Marketing courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific marketing problems. Prerequisite: Permission of the Instructor. *One semester; three credits*

CMKT 464. REAL ESTATE (formerly BMKT 464)
An investigation into Real Estate by providing a basic understanding of real estate considerations involved in any business organization. This course can serve as the foundation for future courses or can serve as an overview course for the student not taking any other real estate courses. This course also introduces specific principles of budget and credit management. *One semester; three credits*

CMKT 470-475. SPECIAL TOPICS IN MARKETING
Courses are designed to permit intensive study into topics of special interest and timeliness in the area of marketing. Prerequisite: CMKT 311. Offered as needed. *One semester; three credits*

■ MATH COURSES

CMAT 104. INTRODUCTORY APPLIED MATH (formerly MATH 104)
This course contains introductory topics in mathematics for students in arts and business. Topics include: lines, linear systems, linear programming, financial math and an introduction to statistics. Prerequisite: CALG 118 or MATH 103 or passing of placement exam or equivalent. *One semester; three credits*

■ NATURAL SCIENCE COURSES

CSCI 126. FORENSIC ANTHROPOLOGY
This course is the subspecialty of Physical Anthropology that involves excavation and identification of human remains for legal purposes. Students are exposed to the human skeleton and taught to examine bones for sex, age, ancestry, and stature differences. Interpretation of skeletal trauma is stressed. The most recent techniques and analyses in the forensic sciences, along with current and controversial trends in anthropology are discussed. Authentic case studies are used to illustrate the applied field of anthropology. This course is intended for applied psychology and science students. It assumes a basic familiarity with skeletal anatomy. (Same as CANT 126) Prerequisite CALG 118 equivalent or higher. Corequisite: CSCI 126L. *One semester*; *three credits*

CSCI 126L. FORENSIC ANTHROPOLOGY LAB
Laboratory to accompany CSCI 126. Hands-on laboratory sessions will be used to teach basic techniques of skeletal analysis. Laboratory topics to include: basic anatomy of the human skeleton, differences between animal and human remains, determination of the time interval since death, age, sex, ancestry, stature, the cause and manner of death, facial reconstruction, case report writing, etc. Please note: Students will be expected to respectfully handle animal and human remains. (Same as CANT 126L) Prerequisite: CALG 118 equivalent or higher. Corequisite: CSCI 126. *One semester; one credit*

CSCI 190 ENVIRONMENTAL SCIENCE
An interdisciplinary approach to the study of the environment, along with the scientific basis for understanding how environmental systems work. Topics include: discussion of the economic impact and consequences of the disruptions of natural systems, the importance of public policy, and how environmental issues are linked to our everyday life. Prerequisite: CMAT 104 or higher. Corequisite: CSCI 190L. Offered as needed. *One semester; three credits*

CSCI 190L. ENVIRONMENTAL SCIENCE LABORATORY
A combination of laboratory experiences and field trips to illustrate the principles covered in CSCI 190. Visits to sewage treatment plant, pest control center, land fill and forests will be scheduled when possible. Prerequisite: CMAT 104 or higher. Corequisite: CSCI 190. Offered as needed. *One semester; one credit*

CSCI 192 DISEASE AND SOCIETY
Disease and society. This course covers the major diseases that are currently discussed and are concerns in today's society. These diseases include (but are not limited to) cancer, influenza, ebola, tuberculosis, autoimmune diseases, AIDS and other sexually transmitted diseases. In addition to studying diseases and their transmission, basic biology of the body systems will also be covered. Prerequisite: CMAT 104. *One semester; three credits*

CSCI 195-199. SPECIAL TOPICS IN NATURAL SCIENCE
Courses in different areas of the natural sciences that are not offered on a regular basis. These include courses taught by visiting faculty members with special or unique qualifications or new courses taught by existing faculty members. Prerequisite: CMAT 104 or higher. Corequisite: corresponding lab course. *One semester; three credits*

CSCI 195L-199L. SPECIAL TOPICS IN NATURAL SCIENCE LABORATORY
Laboratory to accompany NSCI 195-199. Prerequisite: MATH 104 or higher. Corequisite: corresponding CSCI 195-199 course. O*ne semester; one credit*

■ NON-PROFIT MANAGEMENT COURSES

NPMG 310. NONPROFIT MANAGEMENT
This course is designed to expose the students to comprehensive knowledge and skills for managing today's non-profit organizations. It will review areas essential to effective leadership of today's non-profit organization such as: methods of developing, supervising, motivating, and recognizing volunteers and staff; communicating effectively within an organization; staff-volunteer relations; and stress, conflict, crisis management, and social responsibility. Managers in non-profit organizations face the challenge of working with both paid and unpaid stakeholders in the organization's future. It will also explore HRM topics such as legal employment issues, recruiting and hiring practices, diversity in the workplace, compensation and benefits, performance appraisal, and discipline. Students will identify a project for the practicum. Prerequisite: CMGT 227. *One semester; three credits*

NPMG 350. NON-PROFIT GOVERNANCE
Students will understand the relationship between volunteer boards and the non-profit organization, its staff and its functions. The course will address relevant questions in board development. A distinction will be made between governance and management. Topics addressed will include: the role of board members in developing and upholding bylaws, assisting in fundraising, serving on committees, accountability, and the interaction between staff and board members. Students will prepare description of governance processes for the organization related to the project. Prerequisite: NPMG 310. *One semester; three credits*

NPMG 380-387. SPECIAL TOPICS IN NON-PROFIT MANAGEMENT
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Non-profit Management. *One semester; one to three credits.*

NPMG 410. FUNDRAISING AND GRANT WRITING
Practice in writing and editing a series of proposals of varying scope and complexity. The course will cover identifying funding sources; grant proposal evaluation; writing need statements, letters of intent, outlines, goals, and objectives; and creating and justifying a budget. Students will complete the draft of the concept portion of the project proposal. Prerequisite: NPMG 310. *One semester; three credits*

NPMG 420. NONPROFIT ACCOUNTING
This experiential course develops a comprehensive analysis of accounting for non-profit organizations. Students will prepare, interpret and use financial statements that comply with accepted principles of accounting. Topics will include financial measuring and reporting assets, and revenue recognition. Students will prepare the budget for the project. Prerequisite: NPMG 310. *One semester; three credits*

NPMG 455. PRACTICUM AND PROJECT IN NONPROFIT MANAGEMENT
This course is designed to explore and put to practical use the entire body of knowledge gained in previous NPMG courses. Project Management concepts will be covered, including use of project management tools. A comprehensive project will assess the student's ability to apply classroom principles and skills to specific non-profit management problems. Students will complete the project proposal, submit it to the program director, non-profit director and instructor. Prerequisite: Permission of the instructor. Prerequisite: NPMG 310, 350, 410, 420 and permission of the instructor. *One semester; three credits*

NPMG 480-487. SPECIAL TOPICS IN NON-PROFIT MANAGEMENT
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Non-profit Management. *One semester; one to three credits.*

■ ORIENTATION COURSE

CORI 101. FOUNDATION FOR EXCELLENCE (formerly ORIN 101)
This course is designed to prepare the returning adult student to succeed in the accelerated program and includes: an introduction to the concepts of study skills, personal management, and adult learning as well as the written and oral communications skills needed in the program. In addition, this course is intended to facilitate a dynamic learning opportunity for students about creating and achieving healthy living goals. Students will explore and create relationships with other participants to aid them in their end goal of creating a healthy living plan for their own use. *One semester; three credits*

■ PHILOSOPHY COURSES

CPHI 220. CONTEMPORARY MORAL ISSUES (formerly PHIL 220)
A philosophical examination of a number of significant and controversial contemporary moral problems. Topics will vary but may include: abortion, capital punishment, sexual morality, animal rights, environmental ethics, freedom of speech, discrimination, and affirmative action. The treatment of these topics will develop in the context of the tradition of philosophical ethics. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

CPHI 223. BUSINESS ETHICS (formerly PHIL 323, PHIL 223)
An analysis of business ethics, the responsibilities of business firms to employees, owners, consumers, and society. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

CPHI 224. THEORIES OF HUMAN NATURE (formerly PHIL 224)
An examination of several major theories of human nature with special emphasis on the ethical implications of these theories. A consideration of such questions as whether humans are by nature either good or evil, individual or social, free or determined in their actions, and whether they have some natural purpose or end. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

CPHI 320. CONTEMPORARY PHILOSOPHY (formerly PHIL 320)
An introduction to the major currents of 20th Century philosophical thought in America and Europe. The focus will be on the question of the meaning of subjective existence. Answers to this question will be examined from the perspectives of analytic philosophy, pragmatism, existentialism, and contemporary continental thought. Prerequisites: sophomore standing or higher. *One semester; three credits*

CPHI 322. MEDICAL ETHICS (formerly PHIL 322)
A review and evaluation of various theories of moral philosophy and an investigation into some of the current moral issues in the fields of biology and medicine. Prerequisite: sophomore standing or higher. (Satisfies the "Moral Values" general education requirement). *One semester; three credits*

■ POLITICAL SCIENCE COURSE

CPOL 112. AMERICAN GOVERNMENT (formerly POLS 112)
This course is a survey of the American political system. Topics include the Constitution, federalism, interaction between the three branches of the federal government (legislative, executive, and judicial), political actors outside government (interest groups, media, political parties), state and local government, political culture, civil liberties, civil rights, and public policy. *One semester; three credits*

■ PRIOR LEARNING COURSE

CPLA 100. PRIOR LEARNING ASSESSMENT PORTFOLIO COURSE
An accelerated course that will help students identify areas of learning they may want to have evaluated for college-level equivalency. The course will also guide students through the preparation and compilation of all components required for the evaluation of a portfolio of prior learning. Online course through The Council for Adult & Experiential Learning. Prerequisite: permission of the Instructor and CENG 110 and 120 or equivalent. Pass/Fail grading. *One semester; three credits.*

■ PROJECT MANAGEMENT COURSES

PJMT 401. PROJECT MANAGEMENT
This first course is an overview of the project management discipline and the associated knowledge areas, process groups, and processes. The focus is on developing methodologies for managing projects that includes planning and budgeting, organization and structure, scheduling, and resource allocation. Prerequisites: CMIS 153 and (CBUS 205 or STAT 221). *One semester; three credits*

PJMT 403. PROJECT CONTROL AND RISK MANAGEMENT
This course provides in-depth study of procedures, methods, and tools related to the execution and control of costs, time, and quality. Earned value concepts are developed and employed. Success factors, global projects, and risk management are also addressed. Prerequisite: PJMT 401. *One semester; three credits*

PJMT 455. PROJECT MANAGEMENT PRACTICUM
This course is designed to explore and put to practical use the entire body of knowledge gained in previous PJMT courses. A comprehensive project will test the student's ability to apply project management and business skills to develop a workable, manageable, and effective business systems solution. Prerequisite: PJMT 401, 403, CGMT 352, and senior standing. *One semester; three credits.*

PJMT 480-487. SPECIAL TOPICS IN PROJECT MANAGEMENT
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Project Management. Offered as needed. *One Semester; one to three credits.*

■ PSYCHOLOGY COURSES

CPSY 105. GENERAL PSYCHOLOGY (formerly PSYC 105)
An introduction to the discipline of psychology as a science of behavior. Areas of study include: biological aspects of psychology, learning, perception, personality, abnormal behavior, psychological research, social and developmental psychology. Professional Psychology majors must complete the course with a grade of "C" or higher. *One semester; three credits*

CPSY 218. HUMAN DEVELOPMENT (formerly PSYC 218)
An examination of developmental trends, principles, and processes through the lifespan. This course investigates human development at all stages and ages with attention to biological, social, and cognitive development. Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CPSY 219. PERSONALITY (formerly PSYC 219)
A survey of major personality theories and perspectives in terms of conceptions, applications, and research. Emphasis is placed on current theories and research in personality. Approaches to personality assessment and research methods in personality are considered throughout the course. Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CPSY 235. FUNDAMENTALS OF APA WRITING STYLE AND ETHICS (formerly PSYC 235)
Students will learn to write an APA-style research paper. They will write an APA-style research proposal with the potential of completing the research in the Correlational or Experimental Methods course. Students will also learn other research reporting methods including PowerPoint and poster presentations. Students will complete certification in APA ethics. Open to other students by instructor permission only. Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CPSY 280-287. SELECTED TOPICS IN PSYCHOLOGY
Directed work on a special topic or project in psychology. *One semester; one to three credits*

CPSY 305. PROBLEM SOLVING AND DECISION MAKING (formerly PSYC 289, PSYC 235)
The objective of this course is to improve people's ability to solve problems and make decisions using psychological material discussed in class. Students will learn to improve their practical problem solving skills by learning to recognize and overcome conceptual blocks to problem solving. Topics to be covered include: creativity, methods of problem solving, memory aids, decision-making tools, avoiding biases of judgment, etc. Students will be given assignments revolving around practical problems and decisions (e.g., how to improve time management). Prerequisite: CPSY 105 or equivalent with a grade of "C" or higher. *One semester, three credits*

CPSY 306. HUMAN FACTORS (formerly PSYC 301, PSYC 306)
Human factors, also called engineering psychology, ergonomics or usability engineering, deals with the importance of designing for human use. Equipment that is not ergonomically sound will be operated a little more slowly and be a little more prone to error. Our goal in this class is to provide a solid foundation in the principles of human performance and a broad overview of the field of human factors. This class provides the student with an understanding of the variables that influence human performance and the ways in which the human factors expert draws on this knowledge. The analysis of human performance requires frequent contact with real-world situations in which people actually perform. This course provides an integrated approach to the study of human factors, embedding the principles of human factors within a foundation based on contemporary views of human performance. Product design will be discussed in terms of usability and consumer behavior/preferences. Topics include the following: perception, cognition, and environment. Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CPSY 317. PSYCHOPATHOLOGY (formerly PSYC 230 , PSYC 317)
A survey of various types of mental disorders including: their causes, symptoms, diagnosis, and treatment. Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CPSY 350. INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY (formerly PSYC 352, PSYC 350)
This course examines the contributions of psychology to effective human resources development and management. The course content is designed for Psychology and Business majors and focuses on the practical applications of psychology in the business world. Topics include: the psychology of organizations, motivation and supervision, employee selection and development, legal considerations, evaluation, and organizational development. Prerequisite: CPSY 105 or equivalent with a grade of "C" or higher. *One semester; three credits*

CPSY 353. SOCIAL PSYCHOLOGY (formerly PSYC 353)
A study of the social-psychological aspects of human interactions. Areas of study include: affiliation, social perception, attribution processes, interpersonal attraction, aggression, attitude formation, attitude change, conformity, compliance, cooperation, competition, group structure, and group dynamics. Prerequisite: CPSY 105 or equivalent with a grade of "C" or higher. *One semester; three credits*

CPSY 354. CORRELATIONAL RESEARCH METHODS AND STATISTICS (formerly PSYC 354)
An introduction to the fundamentals of research methods and statistical analysis in the Behavioral Sciences. Students will learn and apply basics of research methodology and basic statistical techniques with an emphasis on correlational methods. Students will conduct a correlational research project which will be presented to other students and faculty. Prerequisites: CPSY 235 and CALG 118, ALG 120 OR MATH 103. Required for Professional Psychology majors. Open to other students by instructor permission only. *One semester; three credits*

CPSY 364. STEREOTYPING AND PREJUDICE (formerly PSYC 364)
This course will analyze and discuss issues related to stereotyping and prejudice, including psychological theory and empirical research on the topic. We will examine the origins, functions, and consequences of stereotyping and prejudice as well as measurement strategies. We will examine issues surrounding the persons both engaging in and targeted by stereotyping and prejudice and discuss historical and contemporary social and political issues relevant to the course. Prerequisite: CPSY 105 or equivalent with a grade of "C" or higher. *One semester; three credits*

CPSY 370. APPLICATIONS OF MEMORY (formerly PSYC 370)
An examination of the application of memory in such diverse areas as courtroom testimony (e.g., factors influencing witnesses, hypnosis, repressed memory, false memory), memory for everyday events, memory aids, and advertising. The relevant theories and research in each area are examined. (Same as CCJ 370.) Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CPSY 380-389. SPECIAL TOPICS IN PSYCHOLOGY
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Psychology. *One semester; one to three credits.*

CPSY 440. COGNITIVE PSYCHOLOGY (formerly PSYC 440)
This course is designed to investigate the nature of the thinking mind. Cognitive psychology involves understanding how we gain information of the world, how it is transformed into knowledge, stored in memory, and accessed when needed. Topics include: attention, memory, problem solving, creativity, and language. Prerequisite: CPSY 105 with A grade of "C" or higher and CPSY 235. *One semester; three credits*

CPSY 453. PSYCHOLOGY OF PERSUASION (formerly PSYC 453)
This course examines the scientific and social psychological processes that underlie persuasion, Attitude formation and measurement as well as resistance to persuasion will also be examined. Persuasion as it applies to political campaigns, propaganda, and advertising and consumer behavior will be addressed, along with other relevant topics. Prerequisite: CPSY 105 with a grade of "C" or higher. *One semester; three credits*

CPSY 460. PRACTICUM IN PSYCHOLOGY (formerly PSYC 460)
The practicum offered for majors with senior status includes several options. The first is a formal internship consisting of 100 hours of professional in-field experience. It is a well-structured program in which students will be required to meet a number of objectives related to their goals, their developing competence, and their interests in psychology and related fields. A 2.5 GPA is required to pursue this option. The second option involves a research assistantship in which seniors will assist practicing graduate-level and professional-level researchers in conducting their projects. Sound performance in the statistics and research courses is a prerequisite for this option. A third option involves the opportunity to be a learning facilitator mentored by a full-time faculty member. In this capacity, the student provides support services to a faculty member in a specific course. These services include preparation of presentation materials, development of study guides, the convening and leading of study groups, peer editing, and the compilation of course-related research. This option may be particularly valuable to students seeking careers in academic fields. The guidelines and requirements for this option have been developed and are made available to interested students upon request. A final option is an individually-designed project suited to the needs, interests, and academic strengths of the student. The project will be conducted under the direction of a full-time faculty member. Guidelines for the formal proposals are available. Plans for any of these options should be developed and approved by the Practicum Director the semester before the course is taken. Permission of the Practicum Director is required. Prerequisite: CPSY 235, 354 and senior standing. *One semester; three credits*

CPSY 480-487. SPECIAL TOPICS IN PSYCHOLOGY
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Psychology. *One semester; one to three credits.*

CPSY 497. PSYCHOLOGY COMPREHENSIVES (formerly PSYC 497)
Seniors will be required to take a comprehensive examination on selected areas of psychology. Students are required to have completed or be currently enrolled in their final psychology courses before taking the exam. This course commences through email and requires monitored email access, so students are responsible for contacting the instructor at the beginning of the semester to confirm enrollment and schedule the exam. Prerequisite: CPSY 105 with a grade of "C" or higher, CPSY 219, 317, 353, 354 and 440. Pass/Fail grading. *One semester; zero credit*

■ PUBLIC HEALTH COURSES

PHLT 101. INTRODUCTION TO THE SCIENCE OF PUBLIC HEALTH
This CAPS program course provides students with an introduction to fundamental concepts and approaches underlying public health. Topics covered include evidence and prevention-based perspectives on health; the social context of health and health disparities; environment and health; health and our food system; the role of community in public health; effective public health interventions; ethical issues in public health; and future directions in public health. Special focus will be paid to the South, Memphis, and the topic of HIV/AIDS. *One semester; three credits*

PHLT 102. FUNDAMENTALS OF EPIDEMIOLOGY
This course provides students with an introduction to the concepts and methods of epidemiology. Epidemiology topics related to important biologic, social, and environmental determinants of diseases and public health related problems in specific populations will be covered. Emphasis will be placed on principles and methods of epidemiological disease surveillance as well as prevention and control of infectious and chronic diseases in the Southeastern United States and the Mid-South region. *One semester; three credits*

PHLT 180-187. SPECIAL TOPICS IN PUBLIC HEALTH
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Public Health. *One semester; one to three credits.*

PHLT 280-287. SPECIAL TOPICS IN PUBLIC HEALTH
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Public Health. *One semester; one to three credits.*

PHLT 313. INTRODUCTION TO HEALTH POLICY AND MANAGEMENT
Introduction to health policy making and health care organizations in the United States. Students will be introduced to concepts from public policy, economics, organizational behavior, and political science. Issues in U.S. health policy and the present organization of the U.S. health care system will also be reviewed. Essentials of health policy and law, including how policy and law can impact health care and public health systems. Use of practical tools such as: strategic planning, economic evaluation tools, and decision analysis will be covered. Prerequisite: PHLT 101. *One semester; three credits*

PHLT 335. PUBLIC HEALTH OF MENTAL ILLNESS
Overview of the methods of identification and treatment of mental illness today. Explores current research and debates surrounding the definition, prevention, and treatment of mental health disorders. Students will also be introduced to concepts in public health, psychology, and psychiatry prevalent in health services delivery and research. The history of mental health treatment and current policy, systems, and services both past and present will also be discussed. Prerequisite: PHLT 101. *One semester; three credits*

PHLT 340. FUNDAMENTALS OF SOCIAL AND BEHAVIORAL PUBLIC HEALTH
An introduction to the social and behavioral concepts and theories associated with the field of Public Health. Health behavioral development, change, and decision making will be explored in relation to how they influence individual and population level health and disease. Examples of how social and behavioral theories are used to understand health behaviors and guide health promotion interventions will also be reviewed. Prerequisite: PHLT 101. *One semester; three credits*

PHLT 342. SOCIAL DETERMINANTS OF HEALTH AND WELL-BEING
This course will examine the social determinants of health and health inequalities as well as evaluate appropriate public health responses. Students will explore current theories explaining development and persistence of inequalities of health. Students will be introduced to basic terms, concepts, and measurements related to health, public health, population health, and health inequalities. Examples of how a social science approach can improve our understanding of health and illness at a population level will be discussed. Target: Psychology Degree Seeking Students Prerequisite: PHLT 101. *One semester; three credits*

PHLT 390. PUBLIC HEALTH RESEARCH METHOD
Introduces students to fundamental concepts and principles in Public Health research and evaluation. Emphasis will be placed on: identifying and developing important research questions in public health; identifying the appropriate study design for answering the research question; and designing a research study that answers the research question. This course will provide a basic grounding in research skills to enable students to develop hypotheses; identify and collect necessary data; evaluate their data; and communicate important findings to various audiences. Prerequisite: PHLT 101. *One semester; three credits*

PHLT 391. QUALITATIVE RESEARCH METHODS IN PUBLIC HEALTH
Introduction to the fundamental principles of conducting qualitative research in public health. Emphasis will be placed on acquiring the strategies and techniques needed to conduct qualitative research among human research participants. This course will also focus on: developing qualitative research studies; theory and formulation of research question of hypothesis; design, sampling, and data collection; data analyses; and dissemination and implications of qualitative research methods. Prerequisite: PHLT 101. *One semester; three credits*

PHLT 392-396. SPECIAL TOPICS IN PUBLIC HEALTH
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Public Health. *One semester; one to three credits.*

PHLT 410. PROGRAM PLANNING AND EVALUATION
Introduction to designing and implementing program evaluations in health related settings. Students will examine leading evaluation models relevant to formative, process, and outcome evaluations. Methodological considerations including threats to validity and basic analytical techniques will be reviewed in terms of their applicability to program evaluation. Quantitative and qualitative approaches will also be discussed. Prerequisite: PHLT 101. *One semester; three credits*

PHLT 480-487. SPECIAL TOPICS IN PUBLIC HEALTH
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Public Health. *One semester; one to three credits.*

■ RELIGIOUS STUDIES COURSES

CRS 217. OLD TESTAMENT (HEBREW SCRIPTURES) (formerly RS 217)
Using the Old Testament as a text and a guide, the course explores the origins and early history of the Jewish people to the Maccabean revolt and encompasses concepts such as Covenant, Prophecy, Messiah. *One semester; three credits*

CRS 218. NEW TESTAMENT (formerly RS 218)
A discussion of the Christian scriptures from literary, historical, and theological points of view concentrating on the life and teachings of Christ and the spread of Christianity after His death and resurrection. *One semester; three credits*

CRS 230. CHRISTIAN ETHICS (formerly RS 230)
A critical investigation of the theological convictions grounding Christian understandings of doing what is right and being a good human person.

This will include approaches to ethics from within both Catholic and Protestant Christianity, along with analysis of selected moral issues. *One semester; three credits*

CRS 240. THE RELIGIOUS DIMENSION OF WORK (formerly RS 315, RS 240)
A study of the relationships between work and religion in western society. Career, studied from several perspectives, will be viewed ultimately as a vocation-a call from God. *One semester; three credits*

CRS 270. WORLD RELIGIONS (formerly RS 350, 270)
A survey of the great eastern and western religious traditions. The course covers: the history, beliefs, practices, symbols, and sacred scriptures of select religions, including indigenous religions, Hinduism, Buddhism, Judaism, Christianity, Islam, and new religious movements. The course will include visits to religious sites in Memphis. *One semester; three credits*

CRS 290-295. SPECIAL TOPICS IN RELIGIOUS STUDIES
Selected topics of special interest at an advanced level. Topics vary with instructor. Prerequisite: any CRS 200 level course. *One semester; one to three credits*

CRS 330. JUSTICE AND SOCIETY (formerly RS 330)
A study of issues relating to justice and human rights in contemporary social life (economic, political, cultural), focusing on the contributions of developing social justice teachings of the churches. Prerequisite: any RS 200 level course. *One semester; three credits*

CRS 340. AFRICAN AMERICAN THEOLOGY (formerly RS 340)
This course examines the unique contributions of African Americans to Christian theology. Discussion of African religions, slave spirituals and narratives, and the ongoing marginalization of African Americans due to structural racism will serve as an introduction. The focus of the course will be on contemporary developments beginning in the late 1960s, which will be explored through close reading of works of Black Liberation Theology. Prerequisite: any CRS 200 level course. *One semester; three credits*

CRS 385. THE GOSPELS (formerly RS 385)
A study of the four Gospels using contemporary techniques of biblical interpretation with particular emphasis on the developing Jewish tradition in the early Christian Community. Prerequisite: any CRS 200 level course. *One semester; three credits*

CRS 391: RELIGION IN AMERICAN PUBLIC LIFE (formerly RS 391)
The course examines the historical and contemporary role of religion in American public life. Topics include: the United States' current diverse religious landscape, distinctions between private and public demonstrations of religion, civil religion, the First Amendment, and the role of religion in matters of race, gender, and medical sciences. Prerequisite: any CRS 200 level course.

CRS 395-399. SPECIAL TOPICS IN RELIGIOUS STUDIES
Selected topics of special interest at an advanced level. Topics vary with instructor. Prerequisite: any CRS 200 level course. One semester; *one to three credits*

■ SOCIOLOGY COURSES

CSOC 101. INTRODUCTION TO SOCIOLOGY (formerly SOC 101)
An introduction to the sociological perspective. Sociology seeks to explain the origin and functioning of social behavior as it appears in such areas as the family, religion, economic structures, political structures, schools, deviant behavior, cultural norms, and other areas of human social interaction. As part of the process, students will be introduced to basic sociological terms, concepts, and theories. *One semester; three credits*

CSOC 202. CONTEMPORARY SOCIAL PROBLEMS (formerly SOC 202)
The course focuses on a "systems approach" to social reality and provides students with the opportunity to comprehend, analyze, and evaluate social conditions, problems, and alternative solutions. Seeks to explore the critical assumptions that inform clashing views on controversial social issues. Students develop and practice skills of social policy analysis. Prerequisite: CSOC 101 with a grade of "C" or higher and junior standing. *One semester; three credits*

CSOC 280-287. SPECIAL TOPICS IN SOCIOLOGY
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Sociology. *One semester; one to three credits*

CSOC 365. DEVIANT BEHAVIOR (formerly SOC 365)
An exploration of theoretical perspectives on deviance, problems in defining deviance and specific categories of deviance. Deviant behaviors discussed may include but are not limited to prostitution, gambling, transgenderednesss, pronography, mental illness, sexualities, and physical disability. (Same as CCJ 365) Prerequisite: CSOC 101. *One semester; three credits*

CSOC 380-387. SPECIAL TOPICS IN SOCIOLOGY
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of Sociology. *One semester; one to three credits*

■ SPANISH COURSES

CSPN 100. CONVERSATIONAL SPANISH (formerly SPAN 100)
This course takes a blended learning approach and is designed to promote conversational fluency through proper and practical use of fundamental grammar, vocabulary, and syntax. The main emphasis will be oral communication, with fluency of oral-aural skills as the main objective. (Not open for credit to native speakers of Spanish). *One Semester; three credits*

CSPN 101. ELEMENTARY SPANISH I (formerly SPAN 101)
Fundamentals of grammar and syntax. Intensive drills in understanding, speaking and reading. Fluency of oral-aural skills is the main objective. *One semester; three credits*

CSPN 102. ELEMENTARY SPANISH II (formerly SPAN 102)
Fundamentals of grammar and syntax. Intensive drills in understanding, speaking and reading. Fluency of oral-aural skills is the main objective. Prerequisite: CSPN 101. *One semester; three credits*

CSPN 190. SPANISH FOR FIRST RESPONDERS
This course is designed to train non-Spanish-speaking First Responders to handle basic Spanish-language questions, expressions, words, commands, and phrases that will enable them to assist Spanish-speaking persons in emergencies. This will be achieved by learning emergency vocabulary, reinforced by language structure and use in conversation scenarios. *One semester; three credits*

CSPN 195-199. SPANISH FOR THE PROFESSIONS
Topics of special interest for professionals in fields in which Spanish is a need. The course is comprised of the fundamentals of oral communication, vocabulary, and grammar, with intensive drills in understanding, speaking, and using appropriate expressions in life-like situations. Practical, efficient use of oral-aural skills in professional contexts is the main objective. Not open for credit to native speakers of Spanish. *One semester; one to three credits*

CSPN 201. INTERMEDIATE SPANISH I (formerly SPAN 201)
Continued attention to essentials of grammar and composition. Readings in the short story and cultural texts. Not open for credit to native speakers of Spanish. Prerequisites: CSPN 102. *One semester; three credits*

CSPN 202. INTERMEDIATE SPANISH II (formerly SPAN 202)
Continued attention to essentials of grammar and composition. Readings in the short story and cultural texts. Not open for credit to native speakers of Spanish. Prerequisites: CSPN 202. *One semester; three credits*

■ SPEECH COURSE

CSPH 125. SPEECH COMMUNICATION (Formerly SPCH 125)
A study of the principles of public speaking. Emphasis placed on differences between spoken and written language, organization, persuasive argument, and delivery skills. *One semester; three credits*

CSPN 180-187. SPECIAL TOPICS IN SPEECH
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of speech communication. *One semester; one to three credits*

CSPN 280-287. SPECIAL TOPICS IN SPEECH
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of speech communication. *One semester; one to three credits*

CSPN 380-387. SPECIAL TOPICS IN SPEECH
These courses are designed to permit intensive study into topics of special interest and timeliness in the area of speech communication. *One semester; one to three credits*

■ THEATRE COURSE

THEA 221. ACTING I
This course is designed for students interested in doing live theatre. Students will learn the basics of acting, theatre design, and technical theatre. The final project will be a live performance where students perform a character and/or provide design/technical support in one or more of the following areas: props, publicity, costumes, sound, lights, scenic construction, directing, stage management, and playwriting. Previous theatre experience is not required. Evening rehearsal hours will be required beyond regularly scheduled class meetings. *One semester; three credits*

GRADUATE PROGRAMS & POLICIES

GRADUATE PROGRAMS

SCHOOL OF ARTS
Master of Arts in Catholic Studies
Master of Arts in Teaching
Master of Education
Master of Science in Educational Leadership

SCHOOL OF BUSINESS
Master of Accountancy
Master of Business Administration
Master of Business Administration in Healthcare Management

SCHOOL OF ENGINEERING
Master of Science in Engineering Management
Master of Science in Computer Information Systems

SCHOOL OF SCIENCES
Master of Science in Physician Assistant Studies

GRADUATE ADMISSIONS POLICIES - DEGREE SEEKING STATUS (MACC, MACS, MAT, MBA/HMBA, MED, MCIS, MSEL, & MSEM)

A bachelor's degree or its equivalent from an accredited American college or university or from a foreign institution of acceptable standing is required for admission. Each applicant is admitted on the presumption that a bachelor's degree or its equivalent will be earned by the time of graduate matriculation, or the student's admission is void.

Applicants for admission to a master's degree program at Christian Brothers University should demonstrate a high promise of success and should submit:

1. One official transcript* of previous academic credits from each of the colleges or universities previously attended (official transcripts submitted that are not in English will require an official translation - World Education Srrvices (WES) course-by-course report or Educational Perspectives detailed evaluation). MAT and Licensure only candidates must submit 2 copies of official transcripts for each college or university previously attended;
2. Two letters of recommendation from former teachers or immediate supervisors qualified to attest to the applicant's preparation for and ability to do graduate study; or, in the case of a licensure candidate, those who can attest to the individual's capability to become a teacher;
3. A completed Graduate School Application Form with application fee;
4. (Foreign Applicants Only) Proof of English proficiency is required if English is not the applicant's native language, or was not the language of instruction for the applicant's baccalaureate degree, or if the applicant does not hold a graduate degree from a regionally accredited United States institution of higher learning. Proof of English proficiency may be demonstrated by means of the TOEFL exams, IELTS, and in some cases the CAE or CPE. (Please note that the admissions requirements for the MSPAS program are provided in the next section):

   For the MACC, MACS, MAT, MBA/HMBA, MED, MSCIS, MSEL, and MSEM programs, the following scores reflect the minimum admissible level of proficiency: TOEFL (520 paper version; 185 the computer-based test; and 68 for the internet-based test); or IELTS (5.5); or CAE (grade C); or CPE (grade C). For PA Program requirements, see below.
5.
   - MAT and Post-Baccalaureate Teacher Education Program - Acceptable score on the Praxis I CORE
   - MED - Acceptable score on the Graduate Record Examination (GRE) or Miller Analogies Test. Exemption granted for those who hold an Apprentice or Professional teaching license and have attained an acceptable G.P.A. in their professional education coursework or hold a transitional or interim license but have passed all Praxis II tests required for licensure and have attained an acceptable G.P.A. in their professional education coursework.
   - MSEL and Fast Track Educational Leadership Program – Admissions testing not required for those who hold an Apprentice or Professional License and have at least three years of teaching experience. The Fast Track requires individuals to already possess a master's degree.
   - MAcc - Official test score report from GMAT or GRE (waived for CBU BS in Accounting and BSBA Finance concentration students and accounting majors at Rhodes College and the University of Memphis). Successful completion of an undergraduate degree with a major in accounting or the equivalent coursework. Applicants must meet the general requirements for entry into a Graduate Program at Christian Brothers University as well as the standards for admission to the Master of Accountancy Program. The admissions committee of the Master of Accountancy program bases all decisions upon the prospective student's overall and accounting grade point averages (GPA's) the personal interview, personal and professional references, GMAT score, knowledge of the profession and prior accounting experiences.
     Applicants are required to have the following course equivalencies (prerequisites) prior to beginning the MAcc:
     - ACCT 260 - Accounting Principles
     - ACCT 270 - Managerial Accounting
     - ACCT 264, 364: Intermediate Financial Accounting I, II (may be taken concurrently with select graduate courses)

     The following courses are also strongly recommended:
     - ACCT 319 - Cost Accounting
     - ACCT 366 - Intermediate Financial Accounting III
     - ACCT 412 - Auditing
     - ACCT 430 - Federal Income Tax

- MBA/HMBA - Official test score report from GMAT or GRE. Documentation of previously earned graduate degree or professional certification may be accepted as a waiver of this requirement at the discretion of the MBA Director.

6. And any other requirements set by a specific graduate program.

GRADUATE ADMISSIONS POLICIES - DEGREE SEEKING STATUS (MASTER OF PHYSICIAN ASSISTANT STUDIES PROGRAM)

At minimum, a bachelor's degree from an accredited American college or university or an equivalent degree from a foreign institution of acceptable standing is required for admission. Each applicant is admitted on the presumption that a bachelor's degree or a foreign institution degree equivalent will be earned by the time of graduate matriculation, or the student's admission is void.

For admission into the Master of Science in Physician Assistant Studies Program, applicant must demonstrate a high promise of success.

1. To apply to the PA Program, submit an application through The Central Application Service for Physician Assistants (CASPA). The PA Program will accept applications through CASPA from June 1, 2017 to December 1, 2017 for a January 8, 2018 matriculation date. The program will accept applicants on a rolling admissions basis. Fees will apply, payable to CASPA, for CASPA. No supplemental graduate application or graduate application fee is required by the program.
2. Submit official transcripts from all colleges and universities attended to CASPA. If you are an international applicant, you must have your international transcripts evaluated through World Education Services (WES), which is a university requirement, with results sent to CASPA.
3. Two references will be requested by CASPA.
4. (Foreign Applicants Only) Proof of English proficiency is required if English is not the applicant's native language, or was not the language of instruction for the applicant's baccalaureate degree, or if the applicant does not hold a graduate degree from a regionally accredited United States institution of higher learning. Proof of English proficiency may be demonstrated by means of the TOEFL exams or IELTS:

   For the MSPAS program, the following minimum scores are required for admission: TOEFL (577 paper version; 230 for the computer-based test; and 90 for the internet based test); or IELTS (6.5).
5. No GRE or MCAT is required by the program.
6. No healthcare experience, exposure, or shadowing is required by the program (see seat preference below).
7. Qualified applicants must successfully complete all required prerequisite courses with a grade or grade equivalent of "C" or better, earn a cumulative undergraduate/graduate GPA of 3.0 (4.0 scale) or higher, and earn a prerequisite science GPA of 3.0 (4.0 scale) or higher to be considered for the program. If an applicant repeats a course, the repeat grade will be used to calculate GPAs. The program can conditionally accept an applicant if the applicant is able to show the ability to complete all admission requirements prior to the date of matriculation.
8. Prerequisite courses include: general biology I & II with labs, anatomy and physiology I & II with labs (will accept 1 semester of anatomy and 1 semester of physiology with labs), microbiology with lab, general chemistry I & II with labs, organic chemistry I & II with labs, a statistics course, a psychology course, and a medical terminology course.
9. Seat preference will be given to: Metro-Memphis residents or those living in the mid-south, Christian Brothers University students and graduates, those who take science courses acceptable for a natural science degree, those who take advanced science courses, those with healthcare experience or exposure, and those who have served in the armed forces.
10. Interviews will be extended to highly-qualified applicants. An interview is required for admission into the program.
11. The program admissions committee will base all decisions upon the applicant's overall application.
12. The program will not grant advanced standing.
13. Specific questions regarding the program and its plans should be directed to the Program Director and/or the appropriate institutional official(s).
14. The PA Program accreditation status is published on its webpage.

GRADUATE ADMISSIONS POLICIES - NON-DEGREE SEEKING STATUS

Applicants for admission for non-degree status are required to submit a completed Graduate School Application Form and one official transcript of all previous academic credits from each of the colleges and universities attended. Permission of the graduate director over the course area is required before the special graduate status will be granted. Because students admitted to this status are not officially admitted to a degree program, they are not eligible for federal financial aid. Students wishing to become degree seeking must reapply through the appropriate admission office and meet all the admission requirement for a regular, degree-seeking student. Requirements and regulations prevailing for the semester of formal admission to a graduate program will govern the student's program.

Students unable to submit an official transcript from each previous college or university attended have the first semester to submit the required documents if they submit the minimum requirements which follow:

1. Graduate Student Application
2. One official transcript* providing evidence of a bachelor degree awarded from a regionally accredited college or university in the United States or have acceptable proof of an equivalent degree from a foreign institution
3. Any other materials required by the graduate department
   Students in this status must complete the admission process within the first semester by providing all official transcripts from every university attended along with any additional credentials specified by the graduate program director. If all the transcripts and specified credentials are not received by the end of the first semester, the student will not be allowed to continue.

Falsification of admission records by the student is grounds for immediate dismissal.

Each applicant will be notified officially of the results of their application by a letter from a Graduate Program Director. Official acceptance to the Graduate Program in a specific academic year is granted only by a Graduate Program Director.

*** Official transcripts must be received by mail directly from a previous institution to CBU. CBU will also accept electronic transcripts via approved vendors. Faxed, hand delivered, or "Issued to Student" transcripts will not be accepted as official documents.**

GRADUATE ACADEMIC POLICIES

BASIC REQUIREMENTS

In addition to the following general graduate programs requirements, individual programs may have additional standards in their Graduate Program Publications.

Once a student graduates from a master's program and the graduation GPA is locked in, a grade change cannot be made.
Courses from one master's earned at Christian Brothers University cannot satisfy the requirements for another master's at Christian Brothers University unless the course requirements or courses overlap.

Graduating students only have three business days after the official graduation date to remove an incomplete grade. If this is not done, the student's graduation date is postponed, and the student must refile for graduation. If a student fails to do this, his/her graduation date will be delayed. It will be the graduation date after the form is completed and all course work is completed.

CREDIT HOURS FOR GRADUATION

A minimum of 30 semester hours at or above the 600 level is required for a master's degree. Students may earn up to six of these credit hours by completing a thesis.

TIME LIMITS FOR DEGREE ELIGIBILITY

A student normally completes all requirements for the master's degree within three years of initial enrollment. The degree must be completed within five years of initial enrollment.

ADVISOR

Each graduate student will be assigned an academic advisor to coordinate the student's studies toward the completion of the degree. The advisor is usually the Director of the program. The Director may, however, assign students to other faculty members.

COMPREHENSIVE EXAMINATION

A written and/or oral comprehensive examination may be required by individual degree programs.

CLASSIFICATION OF STUDENTS

An applicant may seek admission to a degree program or to the status as a special student. Degree students are those working for a master's degree at Christian Brothers University. An applicant for special status may be admitted as a conditional student or as a visiting student.

Degree Student: A degree student is one who has been admitted to a graduate program.

Full-Time Student: One who registers for nine or more credit hours of course work in any semester.

Part-Time Student: One who does not qualify as a full-time student.

Special Student: A special student is one who is admitted as a visiting student and is not eligible for financial aid. No more than 15 hours (Special students in the Reading Specialist Program may take up to 18 hours) may be accumulated as a Special Student. Credit earned under the special graduate status - but none that has been earned at another institution (transfer credit) - will be officially recorded. This credit may be applied toward degree requirements if a student later is admitted to a degree program, and if the credit is appropriate to the degree objective. However, admission as a special graduate student in no way assures subsequent admission to a degree program.

Visiting: One who is normally a degree student at another college or university who enrolls for credit in selected courses at Christian Brothers University. A letter from the visitor's college or university certifying official that the student is in good standing is required along with an official copy of a transcript. A visiting student is not eligible for financial aid.

STUDENT RESPONSIBILITY

It is the student who is ultimately responsible for knowing and following the courses and graduation requirements published in this catalog. The student is also responsible for becoming familiar with the academic polices, curriculum requirements and associated deadlines as outlined in the catalog, whether is it is in hard copy or posted to the University Website. Although the academic advisor is there to aid the student with matters related to their program of study, it is ultimately the student's responsibility for meeting all stated requirements for the degree and the polices associated with the degree. The student is also responsible for any changes that might occur that are posted in the CBU Connection, sent through the official CBU email address, or posted to the University Website, as these are the primary forms of communication with all students.

COURSE NUMBERING

No credit for courses below the 600 level is allowed towards a graduate degree.

GRADUATE GRADES

Listed below are the graduate grades and corresponding number of quality points per credit hour.

GRADE	QUALITY POINTS	MEANING
A	4.0	Excellent
B+	3.5	
B	3.0	Good
C+	2.5	

C	2.0	Pass
P	0.0	Pass (Master of Education-Student Teaching, 0-credit Physician Assistant Program Course)
F	0.0	Failure
FA	0.0	Failure - Excessive Absences
FN	0.0	Failure - Never Attended
I	0.0	Incomplete (until removed)
AU	—	Satisfactory Audit
UA	—	Unsatisfactory Audit
W	—	Withdraw

QUALITY POINTS are used to compute the student's grade point average (GPA). The GPA is the ratio of accumulated quality points to accumulated earned semester credit hours.

Only graduate courses earned at the 600 level or above at Christian Brothers University are included in the computation for graduation.

THE WITHDRAWAL GRADE "W" is given for a course taken by the student who is allowed to withdraw from the course after the add/drop period and before the end of the withdrawal period. The last day for withdrawing from a course is listed in the University Calendar posted on the CBU website.

THE INCOMPLETE GRADE "I"

Instructors will penalize a student for failing to submit required work by the end of the final grading period. Alternatively, an instructor may agree to give a student a temporary grade of "I" if asked by the student in a timely fashion. Instructors are under no obligation to agree to give a grade of "I." The grade of "I" can only be given after the student, the instructor and the dean of the particular school in which the incomplete grade is being given sign an "Incomplete Contract" specifying the work to be completed and return it to the Office of the Registrar for the posting of the incomplete grade. Incompletes can only be given if the paperwork is completed at least one week prior to the deadline for entering grades. Exceptions to this deadline may only be made by the Associate Registrar. These will only be granted for a documented illness, a serious family emergency, or another issue of comparable magnitude. Requests made by students for an exception to this deadline must be received by the Associate Registrar by the last day of exams. The "I" grade will not be computed in the GPA. When the "I" is changed to a grade, that grade will be calculated into the GPA, and the "I" will show next to the new grade. The "I" grade does not satisfy the prerequisite if the course is needed to continue to the next course. The grade is changed to and "I/F" if all the work is not completed by the midterm of the following semester for day courses or the end of the following term for evening courses. The "Incomplete Contract" form is located on the CBU website.

Failure to attend a class or ceasing to attend a class does not constitute a drop, and a grade of "F" will be recorded.

GRADE CHANGES

A change in grade, other than the removal of an incomplete will require the approval of the faculty member, as well as the Director and/or Department Chair and Dean of the school before the grade change can be processed by the Office of the Registrar. Grades may not be changed for work submitted after the final grade submission deadline, unless an incomplete grade contract is on file with the Office of the Registrar

Students who are graduating may not have a grade changed once the graduation is finalized and the graduating GPA is locked in. Graduating students only have three business days after the official graduation date to remove an incomplete grade and graduate. If this is not done, the student's graduation date is postponed, and the student must refile for graduation.

GRADE APPEALS

A student who has evidence that he or she has been assigned a final grade in a capricious, prejudicial, or arbitrary manner may appeal the assigned grade within two weeks after the beginning of the subsequent academic semester (or term). The student should file for a grade appeal formally in the Academic Affairs Office. Then, the student should discuss the grade in question with the instructor involved. If not satisfied, the graduate student should discuss the situation with his or her graduate director. The student should discuss the matter with the Graduate Director if s/he is still not satisfied. If no resolution is reached, the student should refer the matter to the Dean of the appropriate school. If the matter remains unresolved, the student may then appeal the case to the Grade Appeals Committee. The judgment of the Committee is final.

REPEATING COURSES

A graduate course may be repeated only once (a total of two enrollments) in an attempt to improve the grade. The last grade received in a course is used in the calculation of the student's grade point average. A student may not repeat any course off-campus that has been previously attempted.

COURSE AUDITS

A student may earn the grade of "AU" for a satisfactorily completed course audit. The "AU" grade has neither quality points nor credit hour values.

MINIMUM GRADE REQUIREMENTS

Graduation from a graduate program requires a cumulative GPA of 3.0 or better.

CONTINUATION IN PROGRAM

All participants are expected to maintain a grade point average of 3.0 or higher on a 4.0 point grade scale. Persons who fail to attain and maintain the 3.0 GPA may be allowed to continue in the program on a probationary basis. Failure to remove the probationary condition within two semesters will cause the participant to be dismissed from the program. A person dismissed from the program may reapply after being out of the program for one academic year.

ACADEMIC DECELERATION (PHYSICIAN ASSISTANT STUDIES STUDENTS ONLY)

Deceleration is the departure of a student from his or her entering cohort where the student remains matriculated in the Physician Assistant Studies (PA) Program. Students who fail to meet academic standards in the PA Program may be subject to academic deceleration. Reasons for deceleration may include failure to maintain a cumulative GPA above 3.000 at the end of two consecutive semesters, a course failure, or a lapse in professionalism.

Decelerated students will be required to sign a contract that stipulates the reason for deceleration, conditions of deceleration, first day of absence and return date. The contract will be student specific and based on circumstances that led to deceleration as well as the needs of the student. Deceleration may occur either as a result of a recommendation by the PA Program's Student Progress Committee (SPC).

READMISSION

To be readmitted, a graduate student who has been suspended or has been absent for a semester (including Summer Session if required for the program) must make application for readmission to the student's graduate degree program at least six weeks before registration and by the application deadline for the Physician Assistant Program for the following year's matriculating cohort. Any student applying for readmission who does not have a minimum acceptable GPA must have his or her records reviewed by the Vice President for Academics or an administrator delegated by the Vice President for this purpose. Readmission is not automatic; the Vice President for Academics or his or her delegate may approve or refuse the application.

EXPERIENTIAL ASSESSMENT

Students may apply for and be granted college-level credit for knowledge and understanding related to the student's degree program and gained from work-site or other experiences, except for the Physician Assistant Program. Advanced standing will not be granted for the Physician Assistant Program. Documentation is evaluated for credit by the Graduate Program Director in the area in which credit is sought. The student must submit all appropriate documentation to the Graduate Program Director along with the "Experiential Learning Assessment" application and the application fee. The Graduate Program Director will complete the evaluation form detailing what, if any, credit should be awarded. Upon receipt of the paperwork and proof of payment, the Office of the Registrar will process the credit. Students must earn 12 hours of academic credit at Christian Brothers University before the credit awarded will be posted to the student's transcript.

GRADUATION

Christian Brothers University has only one graduation ceremony a year in May, although there are three official graduation dates. Students may graduate in May, August, or December. Only those students who can complete their course work within the academic year of the graduating ceremony can walk.

All students planning to receive a diploma in May or August must "Apply to Graduate" via BannerWeb no later than December 1st. Students planning to receive a diploma in December must file a graduation application by September 15th. The $130 graduation fee is applied at the beginning of the semester in which graduation is anticipated. This fee is applicable for one year. After this time, students who have not completed their graduation requirements will be removed from the graduation list, and they must reapply for graduation, as well as repay the fee. Those filing after the stated deadlines will be assessed a non-refundable late fee of $50.00.

Students must complete a graduation application via BannerWeb before they can graduate. If a student has completed his/her degree requirements but failed to complete the graduation application, the degree will be conferred at the end of the next semester once the application is completed.

Students of the MSPAS Program must demonstrate proficiency in the Didactic Comprehensive Evaluation to move to the clinical phase of the program and the Summative Assessment to complete graduation requirements and be declared eligible for the Physician Assistant National Certifying Examination (PANCE).

Graduating students will have three business days after the official graduation date to remove any incomplete grades, send in any transcripts from other universities, or to have a grade changed in order to be graduated for a particular graduation date. Once a student is graduated, his or her cumulative graduating GPA is locked in and no grade change can be made. Once a student graduates and wants to come back to CBU to take additional courses or enter another program, he or she must reapply through the appropriate admission process or office to reapply into a new program

ATTENDANCE

Any student who has missed a total of eight (8) hours of class time may be given a grade of "F" after the last day to withdraw from classes has passed. All students are expected to attend class beginning with the first class meeting. Students taking courses in the 8-week accelerated programs should plan to attend the first class meeting as each class is equivalent to one week of class time.

TRANSFER CREDITS

A student may transfer credits earned at another regionally accredited college or university only if:

1. the student is a degree student,
2. the courses to be transferred are graduate courses appropriate to the Christian Brothers University graduate program,
3. prior courses were completed within five years before admission to the Christian Brothers University graduate program,
4. grade of "B" (3.0 on a scale of 4.0) or better was achieved, and
5. the transfer is recommended by the Graduate Director and approved by the Office of the Registrar.

A maximum of nine semester credit hours with grades of B or better may be transferred from another college or university. The PA Program does not accept transfer credits.

UNDERGRADUATES TAKING GRADUATE LEVEL COURSES

Undergraduate seniors with special permission may be allowed to take up to nine hours of graduate level coursework. An undergraduate student wishing to use the graduate credit as part of their total number of hours for the undergraduate degree may not use that course(s) as part of the master's program. Students should consult with the Office of Financial Aid for additional eligibility requirements. Students enrolled in a dual enrollment pathway may be allowed additional credit.

POLICY FOR WITHDRAWAL FROM CLASS

All requests for course withdrawals, both complete and partial, must be submitted to the Office of the Registrar by the student. Partial requests are made by completing the online "Withdrawal" form located on the Registrar's Web page. Anyone requesting a "complete withdrawal" will be required to come to the Office of the Registrar to secure the necessary signatures to complete the withdrawal process.

The date on the "complete withdrawal" form will count as the official date of notification for processing the withdrawal. This is the date that will be used by all offices for processing the withdrawal, return to Title IV calculation, and tuition adjustments.

If a faculty member assigns a failing grade for a course due to academic misconduct (e.g. plagiarism, cheating, etc.), a grade of "F" will be immediately assigned, and a withdrawal will be prohibited. If the student wishes to appeal his or her final grade for the course, the student may immediately begin the grade appeal process.

OBTAINING A SECOND MASTER'S DEGREE AT CBU

Any student interested in completing a second master's degree at CBU can do so (at the discretion of the Program Director of the particular program) by taking an additional 20-26 graduate credit hours depending on program. Any student admitted into the Physician Assistant Program must take all courses to earn a MSPAS degree.

Program directors of each program will specify which additional courses must be taken to fulfill additional credit hour requirements. Admission policies and procedures are the same as those for any student applying to the program, except that an application fee is not required. The application service used by the Physician Assistant Program will require a fee. The Physician Assistant Program does not require a supplemental application or fee.

Grades for the courses being credited toward the second degree program will be used to calculated the GPA for both degrees. Students must have at least a 3.0 cumulative graduate grade point average for the required courses in each of the programs. Students seeking a second degree are subject to the policies and procedures of each degree program.

For those students seeking a second degree in the MED and MSEL programs, a minimum of 21 hours must be completed in the second degree program.

GRADUATE EXPENSES PER SEMESTER 2017-18

Tuition

Master of Accountancy, per semester hour (includes books and meals)	$695.00
Master of Business Administration, per semester hour (includes books and meals)	$695.00
Master of Education, per semester hour	$600.00
Master of Arts in Teaching, per semester hour	$600.00
Master of Science in Educational Leadership, per semester hour	$600.00
Master of Science in Computer Information Systems	$725.00
Master of Science in Engineering Management	$725.00
Master of Arts in Catholic Studies	$420.00
Master of Science in Physician Assistant Studies Program, per semester	$11,300.00
Master of Science in Physician Assistant Studies Program, fees per semester	$1,500.00

OTHER FEES

Application Fee, all programs excluding Graduate Education & Graduate Engineering (payable only once) Non-Refundable	$50.00
Application Fee, Graduate Education (payable only once) Non-Refundable	$35.00
Application Fee, Graduate Engineering (payable only once) Non-Refundable	$75.00
Late Registration Fee	$250.00
Technology Fee	$100.00
Intern/Student Teaching Fee	$150.00
LiveText online portfolio	$100.00
EdTPA (third party evaluation as required by CAEP, our accrediting body)	$300.00
Alternative Licensure Type I/II Fee	$650.00
MSEL Administrative Internship Fee	$150.00
MSEL Practicum Fee	$625.00
Experiential Credit Assessment Fee	$50.00
Experiential Credit Posting Fee	$100.00
Experiential Credit Graduate, per credit hour fee	$150.00
Returned Check Charge	$30.00
*Graduation Fee (Non-Refundable)	$130.00
Parking and Grounds Fee (all students)	$30.00
Payment Plan Enrollment, per semester	$40.00
Payment Plan Late Fee	$20.00

Policies regarding expenses and financial aid are found on pages 21-26.

All tuition and fees are subject to change at any time when circumstances so warrant. Information on indirect costs (books, transportation, etc.) is available in the Student Financial Aid Office.

* *The graduation fee is applied at the beginning of the semester in which graduation is anticipated. This application fee is applicable for one year. After this time, students who have not completed their degree requirements will be removed from the graduation list, and they must reapply for graduation, as well as repay the graduation fee.*

GRADUATE PROGRAM IN ARTS

— SCHOOL OF ARTS —

ADMINISTRATION

DR. SCOTT D. GEIS, *Dean*

REV./DR. R. BRUCE CINQUEGRANI, *Director of Catholic Studies Program*

THE MASTER OF ARTS IN CATHOLIC STUDIES has as its major goal the broadening and deepening of the understanding of the Catholic faith through the study of Catholic theology and the interdisciplinary study of Catholicism's influence in the world. The program offers systematic and critical exploration of the diverse ways in which the Catholic tradition informs theology, culture, institutions, and identity.

The study of the Catholic faith will help individuals develop an intellectual and academic approach to Catholicism which does justice to the richness and profound truth of Catholicism as a Christian religious tradition. An additional goal is that through the study of Catholicism, individuals will come to understand and deepen their knowledge and love of God, seek the well-being of humankind, and provide well-reasoned motives for the practice of Christian principles. This program will help prepare students for diverse ministries, such as primary and secondary school religion teaching, religious education in parish settings, pastoral leadership, and social service.

The degree is a 30-hour degree program with the courses being offered on the CBU campus on weekends. Students must take nine of the ten courses listed below as well as MACS 699 Thesis. Students are assigned a final paper or thesis that is based on one of the students' nine term papers. The students are advised and graded jointly by the director and the professor for whom the paper was originally written.

COURSE REQUIREMENTS FOR MASTER OF ARTS IN CATHOLIC STUDIES — MACS

COURSE REQUIREMENTS FOR MACS

COURSE	COURSE NUMBER	CREDITS	NOTES
Catholic Thought & Culture Through the Ages	MACS 600		Must take 9 of the following: MACS 600-690, and complete a thesis (MACS 699) for a total of 30 hours.
Catholic Biblical Studies	MACS 610		
Catholic Spirituality	MACS 620		
God & the Human Person	MACS 630		
Christology	MACS 640		
Theology of Sacraments & Worship	MACS 650		
Moral Theology	MACS 660		
Catholic Social Ethics	MACS 670		
Catholicism & Other Faith Traditions	MACS 680		
Ecclesiology & Ministry	MACS 690		
Thesis	MACS 699		
TOTAL HOURS FOR MACS		**30**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION 30

GRADUATE PROGRAMS IN EDUCATION

— SCHOOL OF ARTS —

ADMINISTRATION

DR. SCOTT D. GEIS, *Dean*

DR. RICHARD POTTS, *Director, MSEL Program*

DR. SAMANTHA M. ALPERIN, *Chair; Director of Teacher Education; Director, MAT Program*

DR. CORT CASEY, *Director, MEd Program*

DR. LAVERN TERRELL, *Director of Field Experience*

FACULTY

SAMANTHA M. ALPERIN, *Professor*
BSBA, University of Tennessee; MAT, EdD, University of Memphis;

WENDY ASHCROFT, *Associate Professor*
BA, Rhodes College; M.E.D., Memphis State University; EdD, Memphis State University

CORT CASEY, *Associate Professor*
BBA, University of Mississippi, MAT; University of West Alabama; EdD, University of Memphis

RICHARD POTTS, *Associate Professor*
BA, Southern Illinois University; MEd, MA, and EdD, The University of Memphis

BROTHER MICHAEL A. SCHMELZER, *Assistant Professor*
BA, Christian Brothers College; MAT, St. Mary's College;
PhD, The Ohio State University

LAVERN TERRELL, *Associate Professor*
BM, Samford University; MA, Clark-Atlanta University; EdD, East Tennessee University

NANCY WILDER, *Assistant Professor*
BS, MEd, The University of Memphis

MISSION

GRADUATE PROGRAMS IN EDUCATION at Christian Brothers University aim to engage men and women in a self-reflective process of lifelong learning characterized by integrity, competence, compassion, creativity, and leadership. The goals of the graduate programs in education are to prepare individual educators to reflect the values and traditions of the Christian Brothers, to work effectively and collaboratively in rapidly changing schools and related settings, and to prepare educators and others for positions of leadership. Education programs at the graduate level include the Master of Arts in Teaching (MAT) for initial teaching licensure with a choice of concentrations; the Master of Education (MEd) for advanced professional development; the Master of Science in Educational Leadership (MSEL); and the LANCE in the post-baccalaureate and licensure programs, a Catholic teacher-service program that combines graduate study, spiritual development, and community living for teachers in the Catholic schools.

GRADUATE PROGRAMS IN EDUCATION

Non-degree programs at the graduate level also include post-baccalaureate teaching licensure; post-master's licensure in beginning and advanced school administration and supervision; second endorsement options; and the master's plus 30, a post-master's option for individuals wanting to take additional graduate credit hours to advance on their school's salary scale.

MASTER OF ARTS IN TEACHING (MAT) PROGRAM

The Master of Arts in Teaching (MAT) program is designed to provide initial teaching licensure at the following levels: Early Childhood (Pre-K - 3), Elementary (K-5), Middle School (6-8), Secondary (6-12), Special Education Interventionist (Pre-K-8 or 6-12), Spanish, French, German (K-12) and Visual Arts (K-12). The MAT program admits only those individuals who wish to earn an initial teaching license and a graduate degree simultaneously.

Candidates for both degree and initial teaching licensure face additional requirements because of licensure. Tennessee requires that all individuals seeking initial teaching licensure must provide evidence of a strong general education and mastery of a major in the arts or sciences earned at the undergraduate level. State and national standards for initial teaching licensure may mandate that an individual complete undergraduate deficiencies in either general education or a major area in the arts or sciences in addition to required graduate credit hours.

Licensure requirements include the successful completion of undergraduate or other content deficiencies, field experiences, and internal and external assessments, including the Praxis II tests. Completion of coursework for the degree must be complemented by successful completion of all licensure requirements before CBU recommends for the license. Praxis II tests vary with the licensure track, but students must meet the milestones of passing content knowledge test for each licensure track as well as the PLT (Principles of Learning and Teaching) test that is appropriate to the age group of each licensure track before a student is allowed to Student

Teach or Intern Teach. Student and Intern Teaching must be taken in the final semester; no classes should be taken after the student/intern teaching semester. CANDIDATE MUST NOTIFY FACULTY IF OBTAINING A TEACHING POSITION WHICH AFFECTS THE STUDENT TEACHING SEMESTER.

MASTER OF ARTS IN TEACHING (MAT) ALTERNATIVE LICENSURE OPTION

The alternative licensure options for the MAT degree at Christian Brothers University are not available to all candidates for the MAT. The individual applicant for a alternative licensure program, as required by the State of Tennessee, is jointly selected for admission into the program simultaneous with an offer of employment as a teacher of record into a school district, system, or school with which Christian Brothers University has established a particular partnership. Those admitted to a alternative licensure program are part of a cohort and must proceed at the same pace as other cohort members to maintain eligibility for the program. The MAT program for alternative licensure differs from the regular MAT in that supervised field experience occurs over the whole of the program, rather than through a culminating experience. While all other common courses and requirements for a particular concentration are the same, MAT candidates in an alternative licensure program take a series of practical courses in conjunction with their status in the program. Each course holds zero credits, however a $625 fee is attached to each course.

ADDITIONAL COURSES REQUIRED FOR ADDITIONAL ENDORSEMENTS

Additional courses for additional endorsements are selected from among licensure requirements used for the MAT initial licensure concentrations and are chosen with respect to the teacher's previous coursework in professional education, professional goals, and the State of Tennessee's guidelines for additional endorsements. *Additional endorsement programs include the successful completion of content deficiencies, field experiences, and internal and external assessments, including the Praxis II tests. Completion of coursework for the MEd must be complemented by successful completion of all additional requirements before CBU recommends for the additional endorsement.*

Upon registering for CIED 670 students will be assessed a $400.00 fee ($100.00 live text and $300.00 edTPA).

ALL LICENSURE TESTS MUST BE COMPLETED AND PASSED BEFORE THE FINAL STUDENT INTERN TEACHING SEMESTER OR STUDENT WILL BE PUT ON A COMPLIANCE HOLD UNTIL ALL TESTS ARE PASSED. NO EXCEPTIONS.

COURSE REQUIREMENTS FOR MASTER OF ARTS IN TEACHING

MAT

COMMON REQUIREMENTS FOR MAT

COURSE	COURSE NUMBER	CREDITS	NOTES
Professional Foundations I	EDFD 600	3	
Professional Foundations II	CIED 600	3	
Educating Special Needs Learners	EDDL 630	3	
Classroom Mangement	CIED 609	3	
Portfolio & Practicum TVAAS	CIED 670	1	
Portfolio & Practicum I	CIED 671	1	
Portfolio & Practicum II	CIED 672	1	
Teaching Practicum III	CIED 673	4	
Professional Seminar & Portfolio III	CIED 674	1	
TOTAL HOURS FOR COMMON REQUIREMENTS		**20**	

EARLY CHILDHOOD CONCENTRATION REQUIREMENTS — EACH

COURSE	COURSE NUMBER	CREDITS	NOTES
Characteristics of Early Childhood Dev	ECED 630	3	
Curr & Methods in Reading/Lang Arts, Pre-K-3	READ 605	3	
Methods of Teaching Early Childhood Educ	ECED 631	3	
Curr & Methods in Math, Pre-K-6	CIED 622	3	
Curr & Methods in Science, Pre-K-6	CIED 611	3	
Curr & Methods in Social Studies, Pre-K-6	CIED 612	3	
Rhythmic Activities & Games	CIED 615	1	
Creative Expression in Elem Sch, Pre-K-6	CIED 624	1	
TOTAL HOURS FOR EARLY CHILDHOOD		**20**	

ELEMENTARY EDUCATION CONCENTRATION REQUIREMENTS — ELEM

COURSE	COURSE NUMBER	CREDITS	NOTES
Child Development & Learning	EDFD 615	3	
Curr & Methods in Reading/Lang Arts, Pre-K-3	READ 605	3	
Curr & Methods in Reading/Lang Arts, 4-8	READ 606	3	
Curr & Methods in Science, Pre-K-6	CIED 611	3	
Curr & Methods in Social Studies, Pre-K-6	CIED 612	3	
Rhythmic Activities & Games	CIED 615	1	
Curr & Methods in Math, Pre-K-6	CIED 622	3	
Creative Expression in Elem Sch, Pre-K-6	CIED 624	1	
TOTAL HOURS FOR ELEMENTARY EDUCATION		**20**	

MIDDLE GRADES CONCENTRATION REQUIREMENTS — MIDD

COURSE	COURSE NUMBER	CREDITS	NOTES
Differentiating Instruction Middle/Sec Schools	CIED 618	2	
Middles School Strategies	CIED 627	3	
Adolescent Development & Learning	EDFD 617	3	
Curr & Methods In Reading/Lang Arts, 4-8	READ 606	3	
Curriculum & Methods		6	Choose 2 Courses From: CIED 611, 612, 622, or READ 628
Literacy Across The Curriculum	READ 629	3	
TOTAL HOURS FOR MIDDLE GRADES		**20**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION. 35-40

3.0 CUMULATIVE GPA REQUIRED

CONCENTRATIONS CONTINUED ON NEXT PAGE

COURSE REQUIREMENTS FOR MASTER OF ARTS IN TEACHING (CONT'D)

MAT

SECONDARY EDUCATION CONCENTRATION REQUIREMENTS — SEED

COURSE	COURSE NUMBER	CREDITS	NOTES
Curr & Assess in Secondary Schools	CIED 630	3	
Adolesecent Development & Learning	EDFD 617	3	
Literacy Across the Curriculum	READ 629	3	
Curriculum & Methods		3	Choose one course from: CIED 633, 634, 635, 636, 637, or 638
Electives		6	For English concentration only: One elective and READ 628 Young Adult Literature (required)
TOTAL HOURS FOR SECONDARY EDUCATION		**18**	

SPECIAL EDUCATION K-8 CONCENTRATION REQUIREMENTS — SEDK

COURSE	COURSE NUMBER	CREDITS	NOTES
Curriculum and Methods in Mathematics, PreK-8	CIED 622	3	
Direct Instruction for Exceptional Learners	EDDL 633	3	
Models of Instruction for Exceptional Learners PreK-8	EDDL 634	3	
Assessment of Exceptional Learners	EDDL 640	3	
Family Consultation & Support	EDDL 651	3	
Methods of Teaching Language Arts PreK-3	READ 605	3	
TOTAL HOURS FOR SPECIAL EDUCATION		**18**	

SPECIAL EDUCATION 6-12 CONCENTRATION REQUIREMENTS — SEDS

COURSE	COURSE NUMBER	CREDITS	NOTES
Curriculum and Methods in Mathematics, PreK-8	CIED 622	3	
Direct Instruction for Exceptional Learners	EDDL 633	3	
Models of Instruction for Exceptional Learners 6-12	EDDL 635	3	
Assessment of Exceptional Learners	EDDL 640	3	
Family Consultation & Support	EDDL 651	3	
Methods of Teaching Language Arts 4-8	READ 606	3	
TOTAL HOURS FOR SPECIAL EDUCATION		**18**	

VISUAL ART CONCENTRATION REQUIREMENTS — VISU

COURSE	COURSE NUMBER	CREDITS	NOTES
Child Development & Learning	EDFD 615	3	
Adolesecent Development & Learning	EDFD 617	3	
Literacy Across The Curriculum	READ 629	3	
Teaching Visual Arts, K-12	CIED 638	3	
Elective		3	
TOTAL HOURS FOR VISUAL ART		**15**	

WORLD LANGUAGE CONCENTRATION REQUIREMENTS — WLNG

COURSE	COURSE NUMBER	CREDITS	NOTES
Child Development & Learning	EDFD 615	3	
Adolesecent Development & Learning	EDFD 617	3	
Curr & Assess in Secondary Schools	CIED 630	3	
Literacy Across the Curriculum	READ 629	3	
Curr & Methods in Reading/Lang Arts, Pre-K-3	READ 605	3	
Teaching Foreign Language Methods	CIED 637	3	
Elective		3	Choose From: READ 606 or 628
TOTAL HOURS FOR WORLD LANGUAGE		**21**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION . . . . .35-40 **3.0 CUMULATIVE GPA REQUIRED**

COURSE REQUIREMENTS FOR MASTER OF EDUCATION

MED

The Master of Education (MEd) program is designed primarily for the advanced professional development of already-licensed teachers. Concentrations in the MEd degree may be used to achieve additional endorsements in several licensure areas. Additional endorsements blend core MEd degree requirements with the specific coursework required for the endorsement. A minimum of 32 graduate credit hours is required to award the MEd degree.

COURSE REQUIREMENTS FOR MED

COURSE	COURSE NUMBER	CREDITS	NOTES
The Teacher as Leader: Renewing the Profession	LEAD 601	3	
Strategies for Whole School Renewal	LEAD 615	3	
The Philosophy and Ethics of Education	EDFD 605	3	
Mid-Point Assessment & Portfolio Development	EDFD 639	2	
Inquiry Course		3	Choose From: EDFD 640 or 641
Capstone Project	EDFD 675	4	
Elective Courses		15	Any Combination of CIED, EDDL, READ, LEAD, EDFD, or EDTC Courses
TOTAL HOURS FOR MED		**33**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION. 33

Candidates for the M.Ed. degree who are part of Memphis Teaching Fellows (MTF) or Teach for America (TFA) may be eligible for up to 9 hours of experiential learning credit.

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS, AND MEDICINE (STEMM) COLAB EDUCATION CERTIFICATE PROGRAM

The Graduate Certificate in Science, Technology, Engineering, and Mathematics, and Medicine (STEMM) Education is designed for all K-12 educators to improve literacy and integration of STEM concepts across all disciplines such as English, Literature, Social Studies, and Fine Arts. The certificate includes the study of STEM teaching principles, project-based learning methods, collaborative learning and assessment, and a focus on integration of mathematics and computer programming skills.

Science, Technology, Engineering, and Mathematics, and Medicine (STEMM) CoLab is a partner ship between Christian Brothers University and Christian Brothers High School to provide a rigorous and innovative STEMM education program for high school students. STEMM CoLab developed this certificate program with the objective to improve educator pedagogy in STEM education across the academic disciplines while focusing on two (2) themes: (1) curriculum authoring and (2) technology integration. Courses: CIED 693, 694, 695, and 696.

All classes can be applied toward the M.Ed. Program upon successful completion.

COURSE REQUIREMENTS FOR MASTER OF EDUCATION - READING SPECIALIST

READ

COURSE REQUIREMENTS FOR MED - READING SPECIALIST

COURSE	COURSE NUMBER	CREDITS	NOTES
The Teacher as Leader: Renewing the Profession	LEAD 601	3	
The Philosophy and Ethics of Education	EDFD 605	3	
Mid-Point Assessment & Portfolio Development	EDFD 639	2	
Educational Research	EDFD 640	3	
Capstone Project[1]	EDFD 675	4	
Foundations of Literacy (SMILA Summer)	READ 630	6	
Integration of Literacy (SMILA Summer II)	READ 631	6	
Reading Assessment Strategies	READ 633	3	
The Reading/Writing Connection	READ 634	3	
TOTAL HOURS FOR MED - READING SPECIALIST		**33**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION. 33

COURSE REQUIREMENTS FOR MASTER OF SCIENCE IN EDUCATIONAL LEADERSHIP MSEL

The Master of Science (MS) degree in Educational Leadership prepares individuals for roles in administration, supervision, and school leadership in K-12 settings. The courses and modules in this degree program are designed to meet standards for the Tennessee Instructional Leadership Licenses in Tennessee. The program leading to the MS degree in Educational Leadership requires a minimum of 31 graduate credit hours. Admission to the program requires three (3) years of successful teaching experience.

COURSE REQUIREMENTS FOR MSEL

COURSE	COURSE NUMBER	CREDITS	NOTES
Policy Perspectives For Educators	LEAD 605	3	
School, Parent & Community Partnerships	LEAD 607	3	
Exploring School Leadership	LEAD 610	3	
Strategies for Whole School Renewal	LEAD 615	3	
Supervision & Teacher Development	LEAD 620	3	
Managing the Modern School	LEAD 625	3	
Educational Research	EDFD 640	3	
Capstone Project	EDFD 675	4	
Law for School Leaders	LEAD 648	3	
Administrative Internship	LEAD 674	3	
Leadership Practicum I	LEAD 661	0	
Leadership Practicum II	LEAD 662	0	
TOTAL HOURS FOR MSEL		**31**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION 31

COURSE REQUIREMENTS FOR TENNESSEE INSTRUCTIONAL LEADERSHIP LICENSURE PROGRAM

(FAST TRACK LEADERSHIP PROGRAM)

The Tennessee Instructional Leadership Licensure program prepares individuals for roles in administration, supervision, and school leadership in K-12 settings. The courses and modules in this licensure program are designed to meet standards for the Beginning Tennessee Instructional Leadership License in Tennessee (ILL-B). The program requires individuals to already possess a master's degree. It requires 18 hours of graduate credit hours. Admission to the program requires three (3) years of successful teaching experience.

COURSE REQUIREMENTS FOR TN INSTRUCTIONAL LEADERSHIP LICENSURE

COURSE	COURSE NUMBER	CREDITS	NOTES
Policy Perspectives for Educators	LEAD 605	3	
Exploring School Leadership	LEAD 610	3	
Strategies for Whole School Renewal	LEAD 615	3	
Supervision & Teacher Development	LEAD 620	3	
Managing the Modern School	LEAD 625	3	
Leadership Practicum I	LEAD 661	0	
Leadership Practicum II	LEAD 662	0	
Administrative Internship	LEAD 674	3	
TOTAL HOURS FOR TN LEADERSHIP LICENSURE		**18**	

TOTAL CREDITS REQUIRED FOR FAST TRACK LEADERSHIP PROGRAM 18

GRADUATE PROGRAMS IN BUSINESS

— SCHOOL OF BUSINESS —

ADMINISTRATION

DR. BJOERN CLAASSEN, *Interim Dean*

DR. M. SCOTT LAWYER, *Director of Graduate Business Programs*

DR. JENNIFER WESKE, *Director of Master of Accountancy Program*

FACULTY

DAVID L. ARCHER, *Associate Professor*
BS, Purdue University; MBA, MPH, Columbia University

DANIEL M. BRANDON JR., *Professor*
BS, Case-Western Reserve University; MS, PhD, University of Connecticut

BJOERN CLAASSEN, *Associate Professor*
BBA, University of Georgia; MBA in Finance, Kennesaw State University; PhD, University of Mississippi

LINDA CHRISTENSEN, *Associate Professor*
BSBA, University of Missouri; MBA, Memphis State University; PhD, University of South Carolina; C PA

JENNY COWELL, *Instructor*
BA, University of Tennessee; MBA, Union University

RONALD H. EATON, *Associate Professor*
BBA, MBA, Memphis State University; PhD, University of Arkansas; CPA

M. SCOTT LAWYER, *Associate Professor*
BPA, JD, University of Mississippi

JUDY RAMAGE LAWRENCE, *Professor*
BBA, Memphis State University; MS, University of Arkansas; DBA, Nova Southeastern University; CPA

ANDREW J. MORGRET, *Associate Professor*
BSEd, MED, MBA, Memphis State University; CPA; CGMA

SARAH T. PITTS, *Professor*
BS, Lenoir Rhyne College; MBA, JD, University of Houston

BEVALEE B. VITALI, *Associate Professor of Management*
BBA, MBA, University of Central Arkansas; PhD, University of Memphis

FATHER PAUL WATKINS, OP, *Assistant Professor*
BA, Tulane University; MA, Graduate Theological Union; M. Div., Dominican School of Philosophy and Theology; MBA, University of Virginia; EdD, The University of Memphis

JENNIFER WESKE, *Associate Professor*
BBA, Stephen F. Austin State University; MBA, The University of Memphis; PhD, Northcentral University; CPA; CGMA; CFE

COURSE REQUIREMENTS FOR MASTER OF ACCOUNTANCY

MACC

The School of Business offers a 30 or 31-hour course of study in the Master of Accountancy (MAcc) degree. This degree offers concentrations in Forensic Accounting and Financial Management. Students currently enrolled in the CBU B.S. in Accounting degree may apply for the program during their senior year. Students beginning the program with a bachelor's degree from another institution will submit an application to the Director of the Master of Accountancy Program. Applicants from institutions other than CBU, Rhodes College, or the University of Memphis are required to complete the graduate application for admission and submit GMAT or GRE test scores. The GMAT or GRE is waived for students who have a previous graduate degree or certification in the accounting field. THE GMAT or GRE is waived for students who have a previous graduate degree or certification in the accounting field. All candidates will be interviewed. A student may be permitted to transfer up to 9 hours of credit into the program for any courses taken at another university at the graduate level which includes up to 6 hours for professional exam review courses. Each student will take four core accounting courses. In addition, students have the option of selecting a concentration in one of the two areas by completing the concentration courses. The courses offered in this program will be available only in the spring and fall semesters.

COMMON REQUIREMENTS FOR MACC

COURSE	COURSE NUMBER	CREDITS	NOTES
IFRS Regulations & Research	MACT 604	3	
International Accounting	MACT 620	3	
Tax & Business Strategy	MACT 630	3	
Asset Valuation & Business Strategy	MACT 660	3	
Advanced Accounting	MACT 665	3	Cannot take if completed ACCT 465 as undergrad
Governmental & Non-Profit	MACT 675	3	Cannot take if completed ACCT 376 as undergrad
Concentration or Elective Credits		12-14	
TOTAL HOURS FOR COMMON REQUIREMENTS		**30-32**	

FORENSIC ACCOUNTING CONCENTRATION REQUIREMENTS

FRAC

COURSE	COURSE NUMBER	CREDITS	NOTES
Information Security	MACT 681		Students must take a minimum of 13 hours from the available concentration courses. Choose from: MACT 681, 681L, 683, 685, 685L, 686, 686L, or 690.
Information Security Lab	MACT 681L		
Forensic Accounting	MACT 685		
Forensic Analytics and Lab	MACT 686		
Forensic Analytics Lab	MACT 686L		
Information Technology Control & Audit	MACT 690		
Compliance Auditing	MACT 683		
TOTAL HOURS FOR FORENSIC ACCOUNTING		**13-14**	

FINANCIAL MANAGEMENT CONCENTRATION REQUIREMENTS

FMGT

COURSE	COURSE NUMBER	CREDITS	NOTES
Financial Information Systems	MACT 640	3	
Effective Financial Incentives	MACT 670	3	
Strategic Competitive Advantage	MACT 680	3	
Intiatives in Specialized Industries	MACT 695	3	
TOTAL HOURS FOR FINANCIAL MANAGEMENT		**12**	

ELECTIVE COURSES: (Students will select a minimum of 2 electives from the electives below or from the coursework outside of their chosen concentration in addition to the concentration **if the student had ACCT 465 and ACCT 376 at the undergraduate level**.

COURSE	COURSE NUMBER	CREDITS	NOTES
Interviewing Techniques & Expert Testimony	MACT 645	3	
CPA Review Course	MACT 650	3	
Internship / CPA Review	MACT 655	3	
Forensic Analytics	MACT 686	3	
TOTAL HOURS FOR ELECTIVES		**6**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION. 30-32

COURSE REQUIREMENTS FOR MASTER OF BUSINESS ADMINISTRATION

CMBA

The School of Business offers a 35-hour course of study leading to the Master of Business Administration (MBA) degree. The core curriculum consists of eight courses, preceded by a two-hour orientation course (which is a prerequisite for the remaining eight courses). In addition, a student must complete three elective courses. A student may be able to transfer up to nine hours of graduate level business-related course work into the program to meet the requirements of the elective course work, but under no circumstances will be permitted to transfer in any coursework to meet the requirements of the core curriculum coursework.

TRANSFER OF GRADUATE CREDIT – MBA PROGRAM

Every transfer of graduate credit from any institution must be approved in advance by the Director of Graduate Business Programs.

COURSE REQUIREMENTS FOR CMBA

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation	CMBA 600	2	
Business Ethics	CMBA 601	3	
Managerial Economics	CMBA 602	3	
Financial Statement Analysis	CMBA 603	3	
Strategic Financial Management	CMBA 604	3	
Strategic Management	CMBA 605	3	
Analytical Business Research	CMBA 606	3	
Strategic Marketing	CMBA 607	3	
Capstone Project	CMBA 608	3	
MBA Elective Series		9	
TOTAL HOURS FOR CMBA		**35**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION 35

COURSE REQUIREMENTS FOR MASTER OF BUSINESS ADMINISTRATION IN HEALTH CARE MANAGEMENT HMBA

The School of Business offers a 35-hour course of study leading to the Master of Business Administration in Health Care Management (HMBA) degree. This program is targeted for individuals who currently work in the field of health care, those who want to explore a career in this field, or those making a transition into the health care sector. The curriculum consists of 11 courses, preceded by a two-hour orientation course: Introduction to Health Care Management. A student may be able to transfer up to nine hours of graduate level health care management-related coursework into the program to replace equivalent courses approved by the Director of Graduate Business Programs. Transfer of credits from other programs that are not health care management-related will not be accepted.

COURSE REQUIREMENTS FOR HMBA

COURSE	COURSE NUMBER	CREDITS	NOTES
Introduction to Healthcare Management	HMBA 600	2	
Current Issues in Healthcare Management	HMBA 601	3	
Human and Legal Aspects of Healthcare Management	HMBA 602	3	
Healthcare Managerial Economics	HMBA 603	3	
Financial and Accounting Considerations in Healthcare Management	HMBA 604	3	
Healthcare Research and Information Technology	HMBA 605	3	
Healthcare Marketing	HMBA 606	3	
Epidemiology	HMBA 607	3	
Capstone Project	HMBA 608	3	
HMBA Electives		9	
TOTAL HOURS FOR HMBA		**35**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION 35

GRADUATE PROGRAMS IN ENGINEERING

— SCHOOL OF ENGINEERING —

ADMINISTRATION

DR. SIRIPONG MALASRI, *Dean*
DR. DIVYA CHOUDHARY, *Director of Graduate Programs in Engineering*

FACULTY

JAMES AFLAKI, *Professor*
BS, University of District of Columbia; MS, PhD, University of Maryland, MCSE

CHADWICK BAKER, *Professor Emeritus*
BS, Christian Brothers College; MS, PhD, Duke University

MICHAEL BELK, *Adjunct Lecturer*
BS, University of Memphis; MEM, Christian Brothers University; PMP

SUSAN BELL, *Adjunct Lecturer*
AS, State Technical Institute at Memphis; BS, Memphis State University; MEM., Christian Brothers University

DIVYA CHOUDHARY, *Associate Professor, Electrical Engineering*
BEE, Mumbai University; MS, PhD, University of Memphis

SUSAN B. FENTRESS, *Adjunct Assistant Professor*
BS, University of Wisconsin; JD, Marquette University Law School

NEAL JACKSON, *Professor Emeritus*
BS, Memphis State University, MS, University of Arkansas;
PhD, University of Mississippi

SIRIPONG MALASRI, *Professor*
BE, Chulalongkorn University (Thailand); MEngr, Asian Institute of Technology (Thailand);
PhD, Texas A&M University, PE, CPLP Professional

CHARLES MCCAIN, *Adjunct Lecturer*
BS, Purdue University; MBA, Gannon University; CPA

R. EUGENE McGINNIS, *Associate Professor, Civil Engineering*
BS, MS, Memphis State University; PE

ASIT K. RAY, *Professor*
BS, Calcutta University; MS, PhD, Lehigh University

CHRISTINE SCIFERT, *Adjunct Lecturer*
BS, Hamline University; MS, University of Iowa; MEM Christian Brothers University

KIMBERLY G. STROHKIRCH, *Adjunct Lecturer*
BS, The University of Memphis; MSE., Purdue University

ERIC B. WELCH, *Professor*
BS, MS, PhD, Mississippi State University

YONGQUAN ZHOU, *Adjunct Lecturer*
BE, ME, Wuxi Institute of Light Industry (China); MS, Rochester Institute of Technology; CPP

MISSION

Graduate Engineering offers the **MASTER OF SCIENCE IN ENGINEERING MANAGEMENT (MSEM)** and the **MASTER OF SCIENCE IN COMPUTER INFORMATION SYSTEMS (MSCIS)** degrees.

MSEM builds upon the bachelor's degree preparation in several engineering disciplines, other technical programs such as physics and chemistry and quantitative management. The purpose of these degree programs is to prepare individuals to successfully address supervisory and managerial needs in technical environment. Students will take courses in technical fields, finance and accounting for technical managers, computer applications for management, and systems simulation.

MSCIS prepares individuals for professional success in modern and emerging areas of computer information technology/systems.

COURSE REQUIREMENTS FOR MASTER OF SCIENCE IN ENGINEERING MANAGEMENT MSEM

The Master of Science in Engineering Management is targeted toward the graduates of engineering, engineering technology, and science degrees. Applicants with business degress will be considered on a case-by-case basis. The program emphasizes the theories, concepts, and applications of the engineering management discipline. Students will conduct research to identify and propose solutions to engineering management problems. The Master of Science in Engineering Management degree consists of two options: Thesis and Non-Thesis.

The Non-Thesis option is recommended for the working engineer or technically prepared professional who has professional industrial experience and who will take an increasingly active role in the organization's decision-making process and for individuals who want to pursue the master's degree full-time following the bachelor's degree. The Non-Thesis option consists of eight core and three elective courses. The degree can be completed with in-class or online courses. Most classes are offered as online sections also.

The Thesis option is recommended for those who either plan to continue on to Doctorial work or are employed at a research intensive organization. The Thesis option consists of nine core and two elective courses.

COURSE REQUIREMENTS FOR MSEM

COURSE	COURSE NUMBER	CREDITS	NOTES
Theory & Applications in Engineering Mangement	ENGM 600	3	
Engineering Financial Management & Accounting	ENGM 603	3	
Quality Assurance	ENGM 605	3	
Operations Research **or** Advanced Engineering Economy	ENGM 607 or 610	3	
Technical Project Management	ENGM 612	3	
Strategic Management in a Technical Environment	ENGM 616	3	
Engineering Law	ENGM 621	3	
Choose from Thesis or Non-Thesis Options:			
Engineering Management Capstone Project **or** Research	ENGM 690 **or** 699	3-6	Non-Thesis Option: (3 hrs.); Thesis Option: (6 hrs.)
Thesis I **and** Thesis II	ENGM 696 **&** 697		
Electives		6-9	Non-Thesis Option: (9 hrs.); Thesis Option: (6 hrs.)
TOTAL HOURS FOR MSEM		**33**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION. 33

ELECTIVE MSEM COURSES:

ENGM 607. Operations Research
ENGM 610. Advanced Engineering Economy
ENGM 611. Entrepreneurship for Engineering Managers
ENGM 613. Construction Equipment & Methods
ENGM 615. Engineering Construction Management
ENGM 616. Strategic Management in a Technical Environment
ENGM 617. Construction Estimating & Cost Control
ENGM 635. Management of Information Systems
ENGM 636. Computer Networks & Cybersecurity
ENGM 637. Database and Big Data Management
ENGM 638. Introduction to Data Science
ENGM 640. Principles of Packaging
ENGM 642. Sustainability
ENGM 643. Healthcare Packaging
ENGM 644. Transport Packaging
ENGM 645. Principles of Packaging Development
ENGM 650. Regulatory Affairs and Quality Systems
ENGM 652. Quality Systems for the Medical Device Industry
ENGM 670. Principles of Engineering Mechanics
ENGM 671. Principles of Electrical & Computer Engineering
ENGM 672. Thermal Systems Basics
ENGM 691-693. Special Topics
ENGM 694. Internship
ENGM 698. Professional Seminar & Technical Communication
ENGM 699. Research

*International students with 5.5 IELTS score or TOEFL iBT internet-based test score between 68 and 76 will need to take ENGM 698 Professional Seminar & Technical Communication as one of the required courses instead of ENGM 616 Strategic Management.

COURSE REQUIREMENTS FOR MASTER OF SCIENCE IN COMPUTER INFORMATION SYSTEMS

MSCIS

The Master of Science in Computer Information Systems is targeted toward the graduates of engineering, engineering technology, and science degrees. Applicants with business degrees will be considered on a case-by-case basis. MSCIS will prepare students for professional success in modern and emerging areas of computer information technology/systems. The Master of Science in Computer Information Systems degree consist of two options: Thesis and Non Thesis.

The Non-Thesis option is recommended for students who do not plan to pursue a Ph.D. and prefer not to perform an extensive research effort. The Non-Thesis option consists of eight core and three elective courses. The degree can be completed with in-class or online courses. Most classes are offered as online sections.

The Thesis option is recommended for those who either plan to continue on to Doctorial work or are employed at a research intensive organization. The Thesis option consist of nine core and two elective courses.

MSCIS COURSE REQUIREMENTS

COURSE	COURSE NUMBER	CREDITS	NOTES
Operations Research	ECIS 607	3	May substitute ENGM 607
Technical Project Management	ECIS 612	3	May substitute ENGM 612
Management of Information Systems	ECIS 635	3	
Computer Netwroks and Cyber Security	ECIS 636	3	
Database and Big Data Management	ECIS 637	3	
Data Science	ECIS 638	3	
Software Programming for Engineers	ECIS 639	3	
Choose from Thesis or Non-Thesis Options:			
Computer Info. Systems Capstone Project **or** Research	ENGM 690 **or** 699	3-6	Non-Thesis Option: (3 hrs.); Thesis Option: (6 hrs.)
Computer Info. Systems Thesis I **and** Thesis II	ENGM 696 **&** 697		
Electives		6-9	Non-Thesis Option: (9 hrs.); Thesis Option: (6 hrs.)
TOTAL HOURS FOR MSCIS		**33**	

MSCIS ELECTIVES

COURSE	COURSE NUMBER	CREDITS	NOTES
Special Topics	ECIS 691-695		
Internship	ECIS 694		
Professional Seminar & Technical Communications	ECIS 698		
Theory and Applications in Engineering Management	ENGM 600		
Engineering Finance and Accounting	ENGM 603		
Quality Assusrance	ENGM 605		
Advanced Engineering Economy	ENGM 610		
Strategic Management in a Tech Environment	ENGM 616		
Engineering Law	ENGM 621		

* International students with 5.5 IELTS score or TOEFL iBT internet-based test score between 68 and 76 will need to take ENGM 698 Professional Seminar as one of the required courses instead ENGM/ECIS 612 Technical Project Management.

COURSE REQUIREMENTS

There are two degree options for the Master of Science in Computer Information Systems: the Thesis option and the Non-Thesis option, each requiring a total of 33 credit hours for graduation. Below is the curriculum for each option

THESIS OPTION

Core Courses *(21 credits)*

ECIS 607. Operations Research
ECIS 612. Technical Project Management
ECIS 635. Management of Information Systems
ECIS 636. Computer Networks & Cyber Security
ECIS 637. Database and Big Data Management
ECIS 638. Data Science
ECIS 639. Software Programming for Engineers

Thesis *(6 credits)*

ECIS 696. Thesis I
ECIS 697. Thesis II

Elective Courses *(6 credits; choose 2 courses)*

ECIS 691-695. Special Topics
ECIS 694. Internship
ECIS 698. Professional Seminar & Technical Communications
ENGM 600. Theory and Applications in Engineering Management
ENGM 603. Engineering Finance and Accounting
ENGM 605. Quality Assurance
ENGM 610. Advanced Engineering Economy
ENGM 616. Strategic Management in a Tech Environment
ENGM 621. Engineering Law

NON-THESIS OPTION

Core Courses *(21 credits)*

ECIS 607 Operations Research
ECIS 612 Technical Project Management
ECIS 635 Management of Information Systems
ECIS 636 Computer Networks & Cyber Security
ECIS 637 Database and Big Data Management
ECIS 638 Data Science
ECIS 639 Software Programming for Engineers

Project or Research *(3 credits)*

ECIS 690 Capstone Project
OR
ECIS 699 Research

Elective Courses *(9 credits; choose 3 courses)*

ECIS 691-695 Special Topics
ECIS 694 Internship
ECIS 698 Professional Seminar & Technical Communications
ENGM 600 Theory and Applications in Engineering Management
ENGM 603 Engineering Finance and Accounting
ENGM 605 Quality Assurance
ENGM 610 Advanced Engineering Economy
ENGM 616 Strategic Management in a Tech Environment
ENGM 621 Engineering Law

GRADUATE PROGRAM IN PHYSICIAN ASSISTANT STUDIES

— SCHOOL OF SCIENCES —

ADMINISTRATION

DR. JAMES W. MCGUFFEE, *Dean*

TERESA R. PRESTON, MBA, MPAS, PA-C, *Associate Professor, Director of Physician Assistant Studies Program*

FACULTY

ROBERT BOOTH, EMPA-C, *Adjunct Instructor, Faculty*
BS, University of Mississippi; MS, University of New England; PA-EMR, University of Texas Health Sciences Center

WESLEY ADAM BOYD, PA-C, *Instructor, Clinical Coordinator*
BA, MS, University of Memphis; MSPAS Christian Brothers University

INGRID CANTRELL, PA, *Adjunct Faculty*
BS, Florida State University; MS, Trevecca Nazarene University; MS, University of South Florida; MPH, University of South Florida

JOHN J. DAVIS, PA-C, *Adjunct Faculty*
BA, University of Memphis

MALINDA E.C. FITZGERALD, *Professor*
BS, MS, The University of Memphis; PhD, University of Tennessee

JOHN KAUFMANN, *Instructor*
BA, Rhodes College; PharmD, Wingate University School of Pharmacy

TASHA SABINO, PA-C, *Adjunct Faculty*
BA, University of North Carolina - Chapel Hill; MSPAS, University of Utah

ANTHONY P. SCHNUERER, PA-C, *Assistant Professor, Director of Clinical Education*
AS, Cuyahoga Community College; BA, Cleveland State University

CHERYL A. SCOTT, BSN, CNL, *Instructor, Director of Clinical Simulation*
BSN, University of Akron; MPA, University of Memphis

SANDRA THOMPSON-JAEGER, *Associate Professor*
BS, Ouachita Baptist University; MS, PhD, University of Munich, Germany

CHERESE WASHINGTON TOOLEY, MD, *Associate Professor, Medical Director*
BS, Millsaps College; MD, College of Medicine, University of Mississippi

GARY B. TOOLEY, PA-C, *Associate Professor, Director of Academic Studies*
BS, University of North Florida; MS, University of North Florida

SARA VERMA, PA-C, *Instructor, Clinical Coordinator*
BS, Colorado State University; MSPAS, Christian Brothers University

MISSION

To educate diverse and exemplary individuals to prepare them to become caring, competent, ethical and professional physician assistants who will positively affect their patients, community, and the health care system.

VISION

Christian Brothers University PA Program graduates are prepared to assume leadership roles, practice clinically in a wide variety of primary care and specialty settings, and to engage in life-long learning. The program emphasizes evidence-based primary care and preventive medicine, the provision of health care to the medically underserved, and utilization of information technology to achieve these goals. The Program promotes interdisciplinary team care, patient advocacy, and the delivery of primary health care for all patients.

THE MASTER OF SCIENCE IN PHYSICIAN ASSISTANT STUDIES PROGRAM

The PA program at Christian Brothers University is committed to the training of PAs to better serve the community, region, state, and national healthcare needs. The program is comprised of course work completed over 15 months, followed by 14 months of clinical rotations. Its 110-credit curriculum is based on active-learning, student engagement, and an integrative approach. The program has partnered with nationally renowned medical facilities to offer exceptional clinical experiences that occur during both didactic and clinical phases of the program with a focus in orthopedic medicine. The population surrounding the university and the student body has great diversity and the faculty are committed to the success and the well-being of our PA students. In keeping with the university, the program embraces educating minds, touching hearts, and remembering the presence of God.

COURSE REQUIREMENTS FOR MASTER OF SCIENCE IN PHYSICIAN ASSISTANT STUDIES

COURSE REQUIREMENTS FOR DIDACTIC PHASE

COURSE	COURSE NUMBER	CREDITS	NOTES
Orientation to Medical History & Physical Examination	MPAS 600	1	
Hematology & Oncology	MPAS 601	2	
Infectious Disease	MPAS 602	2	
Dermatology	MPAS 603	2	
Pulmonology	MPAS 604	5	
Pharmacology I	MPAS 605	2	
Genetics	MPAS 606	1	
Foundations of PA Practice I	MPAS 607	1	
Gastroenterology & Nutrition	MPAS 608	4	
Cardiology & Vascular Disease	MPAS 609	6	
Pharmacology II	MPAS 610	2	
Foundations of PA Practice II	MPAS 611	1	
Nephrology, Urology & Men's Health	MPAS 612	4	
Neurology	MPAS 613	4	
Otorhinolaryngology & Ophthalmology	MPAS 614	3	
Endocrinology	MPAS 615	3	
Pharmacology III	MPAS 616	2	
Foundations of PA Practice III	MPAS 617	1	
Orthopedics & Rheumatology	MPAS 618	4	
Women's Health	MPAS 619	2	
Behavioral Health	MPAS 620	3	
Pediatrics	MPAS 621	2	
Geriatrics	MPAS 622	2	
Principles of Surgery & Emergent Management	MPAS 623	2	
Pharmacology IV	MPAS 624	2	
Foundations of PA Practice IV	MPAS 625	1	
Didactic Comprehensive Evaluation	MPAS 626	0	
TOTAL HOURS FOR DIDACTIC PHASE		**64**	

COURSE REQUIREMENTS FOR CLINICAL PHASE

COURSE	COURSE NUMBER	CREDITS	NOTES
Family Medicine (6 weeks)	MPAS 701	5	
Orthopedics (6 weeks)	MPAS 702	5	
Internal Medicine (6 weeks)	MPAS 703	5	
Behavioral Medicine (6 weeks)	MPAS 704	5	
Surgery (6 weeks) (can be two 3-week rotations: 3 weeks in general surgery and 3 weeks in a subspecialty)	MPAS 705	5	
Emergency Medicine (6 weeks) (can be two 3-week rotations: 3 weeks in the ED and 3 weeks in urgent care)	MPAS 706	5	
Pediatrics (6 weeks) (can be in family medicine if enough peds patients seen)	MPAS 707	5	
Prenatal & Gynecologic Care (6 weeks) (can be two 3-week rotations, 3 weeks in prenatal and 3 weeks in gyne)	MPAS 708	5	
Elective (6 weeks) (can be two 3-week rotations in 2 different areas)	MPAS 709	5	
Summative Assessment	MPAS 710	0	
Orientation to Practice-Based Learning & Improvement (will run throughout the entire clinical phase)	MPAS 711	1	
TOTAL HOURS FOR CLINICAL PHASE		**46**	

TOTAL CREDITS REQUIRED FOR MASTER'S DEGREE COMPLETION 110

Christian Brothers University (CBU) has applied for Accreditation-Provisional from the ARC-PA. CBU anticipates matriculating its first class in January 2018, pending achieving Accreditation-Provisional status at the September 2017 ARC-PA meeting. Accreditation-Provisional is an accreditation status granted when the plans and resource allocation, if fully implemented as planned, of a proposed program that has not yet enrolled students appear to demonstrate the program's ability to meet the ARC-PA Standards or when a program holding Accreditation-Provisional status appears to demonstrate continued progress in complying with the Standards as it prepares for the graduation of the first class (cohort) of students.

GRADUATE COURSES

BUSINESS

MACT MASTER OF ACCOUNTANCY

MACT 604. IFRS REGULATIONS AND RESEARCH
This course leads students to explore similarities and differences between GAAP and International Financial Reporting Standards (IFRS). Cannot be taken if student has taken ACCT 491. Offered in the Spring semester. Online format. *One semester; three credits*

MACT 620. INTERNATIONAL FINANCE AND ACCOUNTING
This course includes a review and analysis of international finance and a study of the accounting regulations and research currently in process. An emphasis will be on identifying current research and international accounting issues from a management perspective. Students will be required to research current issues and topics. Offered in the Fall semester. *One semester; three credits*

MACT 630. TAX AND BUSINESS STRATEGY
This course provides a framework for recognizing tax planning opportunities and tax strategies in the business environment. This course bridges the gap between traditional business courses that analyze a broad spectrum of factors affecting business decision-making without consideration to the role of taxes and traditional tax accounting courses that concentrate on administrative issues while ignoring the richness of the context in which tax factors operate. *One semester; three credits*

MACT 640. FINANCIAL INFORMATION SYSTEMS
This course emphasizes ways to enhance the effectiveness of systems designed to collect, process, and share financial information. Students will discover and evaluate how to accomplish the integration of systems, procedures, and people to deliver effective and valuable business processes. This course is available to the CMBA. Hybrid format course. *One semester; three credits*

MACT 645. INTERVIEWING TECHNIQUES AND EXPERT TESTIMONY
This class includes observation of court room procedures and cases. An intensive review of interviewing techniques for investigative purposes is presented along with the requirements and expectations for expert testimony. The collection of sufficient evidence is covered in addition to the required techniques and procedures associated with expert testimony. *One semester; three credits*

MACT 650. CPA REVIEW COURSE
This course includes a review of accounting problems and concepts common on the certification exams. This course will work through a standard set of review books in preparation for the certification exam chosen by the student with departmental approval. In lieu of this course and MACT 652, students may substitute an approved CPA review course. Offered in the Fall semester. *One semester; three credits*

MACT 652. PROFESSIONAL CERTIFICATION REVIEW COURSE
This course will include a review of managerial, financial, forensic or technical problems common on a certification exam. This course will work through a standard set of review books in preparation for the CIA, CMA, CPA or CFE certification exam. *One semester; three credits*

MACT 655. INTERNSHIP/CERTIFICATION REVIEW
Students are required to obtain an accounting internship with an approved employer. Alternately, students can combine this course with MACT 650 and take an approved professional review course. A successful attempt at one portion of the exam or the successful completion of 100% of homework for 2 sections of the CPA exam is required to pass this class when taken with MACT 650. Offered in the Fall semester. *One semester; three credits*

MACT 660. ASSET VALUATION AND BUSINESS STRATEGY
This course involves learning methods to value assets and businesses. In addition, students explore various contexts, such as acquisitions and divestitures, and analyze valuation forecasts to accompany these business strategies. Students develop models using Microsoft Excel. *One semester; three credits*

MACT 665. ADVANCED ACCOUNTING
Advanced Accounting is a continuation of Intermediate Accounting in that it further explores financial accounting topics with an emphasis on consolidated financial statements. Coverage also includes accounting for partnerships. Offered in the Fall semester. *One semester; three credits*

MACT 670. EFFECTIVE FINANCIAL INITIATIVES
This course focuses on a fundamental financial management objective; specifically, to motivate and improve the responses of external and internal parties to financial information. Students will learn to evaluate outcomes and motivate employees through effective reinforcement and future-oriented financial management initiatives. This course is available to the CMBA. Hybrid course format. *One semester; three credits.*

MACT 675. GOVERNMENTAL AND NON-PROFIT
This course examines the procedures used by government units, particularly municipalities and not-for-profit entities. Emphasis in the course is on budgetary and fund accounts. Offered in the Spring semester. *One semester; three credits*

MACT 680. STRATEGIC COMPETITIVE ADVANTAGE
This course involves fostering essential competencies and skills required for the fulfillment of the strategic partnership role of financial management professionals. Students will discover and acquire skills to cope with uncertainties, manage risks, and partner with top management to accomplish strategic competitive advantages. This course is available to the CMBA. Hybrid course format. *One semester; three credits*

MACT 681. INFORMATION SECURITY
This course provides an overview of security challenges and strategies of countermeasure in the information systems environment. Topics include definition of terms, concepts, elements, and goals incorporating industry standards and practices with a focus on availability, vulnerability, integrity

and confidentiality aspects of information systems. This course includes access control to information systems and applications encompassing authentication and accounting for end-users and system administrators. The course also addresses the broad topic of risk management, how risk, threats, and vulnerabilities impact information systems, how to assess and manage risk based on defining an acceptable level of risk for information systems, and business continuity planning and disaster recovery. *One semester; three credits*

MACT 681L. INFORMATION SECURITY LAB
This lab accompanies ACCT 681 and provides hands on exercises to complement the concepts covered in MIS 481. *One semester; one credit*

MACT 683. SECURITY COMPLIANCE & AUDITING
This course offers an overview of the American Legal System, privacy laws and issues, and the legal and accounting processes involved in implementing and maintaining business IT systems. It includes the principles, the approaches and the methodology in auditing information systems to ensure the processes and the procedures are in compliance with pertinent laws and regulatory provisions especially in the context of information systems security. Hybrid course format. *One semester; three credits*

MACT 685. FORENSIC ACCOUNTING
This course gives a comprehensive view of forensic accounting including both civil and criminal accounting fraud related activities. This course will explore false business valuations, employer fraud, information security fraud, and counter-terrorism. Offered in the Fall semester. *One semester; three credits*

MACT 686. FORENSIC ANALYTICS
This course will offer methods and techniques for forensic accounting investigations. This class will use Microsoft Access, Excel and PowerPoint in a forensic setting. In addition, statistical techniques such as Bedford's Law, correlation, and time-series analysis will be used to detect fraud and errors. This is a hands-on class that will give students experience in different analytic techniques to detect fraud. *One semester; three credits*

MACT 686L. FORENSIC ANALYTICS LAB
This lab accompanies MACT 686 and provides hands-on exercises to complement the concepts covered in MACT 686. Prerequisite: MACT 681. Corequisite: MACT 686. Offered as needed. *One semester; one credit*

MACT 690. INFORMATION TECHNOLOGY CONTROL & AUDIT
This course gives a comprehensive view of auditing using computer systems and computer software. Audit techniques previously learned will be studied and practiced using technology. Offered in the Fall semester. Hybrid course format. *One semester; three credits*

MACT 695. INITIATIVES IN SPECIALIZED INDUSTRIES
This course emphasizes finding revenue streams and impacting the profitability and competitive positioning of businesses in specialized industries, such as healthcare and distribution. Students will learn to partner with executive management to identify strategic and operational opportunities. This course is available to the CMBA. *One semester; three credits*

MACT 696-699. SPECIAL TOPICS IN ACCOUNTING
Each course is designed to permit intensive study into topics of special interest and timeliness in one or more areas of accounting. Offered as needed. *One semester; one to three credits*

■ CMBA MASTER OF BUSINESS ADMINISTRATION

CMBA 600. INTRO TO GRADUATE BUSINESS
The objectives of the Orientation Course are to develop espirit de corps among all new MBA students, as well as the faculty and staff of the program; to give the participants concrete, take-away knowledge in the fundamentals of business education and to set appropriate expectations about the effort, quality and cooperation needed to complete the program. This course provides a basic overview of undergraduate business concepts needed to proceed in the MBA program and allows the student to assess their strength and weaknesses at this particular point in their program. Students will receive lectures from faculty members who will teach the fundamental courses in the core courses and be tested on those principles. Also as a part of the residency, participants are introduced to the goals, expectations and methods that are used throughout the program, including case analysis methodology, business plan preparation and business research and analysis skills and techniques. The ongoing emphasis on relational learning will be explained and stressed as well. The successful completion of this course is required prior to a student proceeding with the Core Courses. Prerequisite: Permission of the Director of Graduate Programs. Pass/Fail Grading. *Two credits*

■ CMBA CORE COURSES

CMBA 601. BUSINESS ETHICS
Students will concentrate on the understanding of worldviews and their effects in the workplace and how ethical decision-making models rely heavily on the understanding of our own and others worldviews. Some of the topics to be considered include the Sarbanes Oxley Act, earnings management, responsibilities of the board of directors and officers, the auditing function, the role of institutional investors and other stakeholders, as well as issues relating to executive compensation. Extensive use of case studies will be used and required weekly. Prerequisite: CMBA 600. *Three credits*

CMBA 602. MANAGERIAL ECONOMICS
This course analyzes business problems in terms of microeconomic principles and methods. Students are required to apply the economic method to managerial decisions in demand estimation, production and cost analysis, and pricing and competitive strategies. Course material integrates economic theory with statistical techniques and concepts from other business disciplines through a series of analytical models. Prerequisite: CMBA 600. *Three credits*

CMBA 603. FINANCIAL STATEMENT ANALYSIS
The basic concepts of understanding corporate financial statements are developed and explained, with an emphasis on the necessity of understanding these statements, the underlying methodologies used in preparing them and the implications of choices made by accountants. Tools for analyzing profitability, liquidity, leverage, alternatives available within generally accepted accounting principles on financial statements, in terms of management's financial reporting strategy are also explored. Prerequisite: CMBA 600. *Three credits*

CMBA 604. STRATEGIC FINANCIAL MANAGEMENT
Financial management techniques, policies and theories are discussed and cases, as well as problem-scenario analyses using these topics are fully explored. These topics and policies include: strategies for acquiring and applying current and long-term assets, working capital, total capitalization and profit distribution (presented in the context of share price maximization). Other topics include global financial strategies, leasing, risk analysis, project evaluation and cost of capital. Prerequisite: CMBA 600. *Three credits*

CMBA 605. STRATEGIC MANAGEMENT CONCEPTS AND APPLICATIONS
This course examines strategic alternatives and choices to be made by companies in view of the opportunities and threats, maximizing their strengths and minimizing their weaknesses. The creation of core competencies to enhance these strategic choices as well as their sustainable competitive advantages is examined. Tiered levels of management are also reviewed. The course integrates learning experiences gained in the prior courses by concentrating on decisions to be made at the senior management level. Prerequisite: CMBA 600. *Three credits*

CMBA 606. ANALYTICAL BUSINESS RESEARCH
This course will involve the study of techniques and principles for systematically monitoring environments-collecting, recording, analyzing and interpreting data using various statistical tools that provide assistance to decision makers that are involved in the selling and marketing of goods, services and ideas. Among the topics covered are data sources, research design, data measurements, sampling procedures, hypothesis testing, correlation and regression and non-parametric techniques. Prerequisite: CMBA 600. *Three credits*

CMBA 607. STRATEGIC MARKETING
The course is designed to enhance the student's ability to formulate and implement a marketing plan, and to better understand the relationship of marketing to other business functions. It will emphasize application of marketing concepts through the use of cases, simulations, or projects. Prerequisite: CMBA 600. *Three credits*

CMBA 608. CAPSTONE PROJECT
Every student will complete either: an individual thesis involving the in-depth analysis of a selected company with recommended solutions to problems observed and analyzed to senior management of that organization and the course instructors, a marketing plan on a company or organization of the instructor's choice, a new venture business plan for a five year period that will include the acquisition and consolidation of a target company in small groups, or an online business simulation requiring management level decision making and strategy for the success of a company in a given industry in small groups. These projects will incorporate the total learning experiences of the program core courses. Prerequisite: CMBA 601-607 courses. *Three credits*

■ MBA ELECTIVE COURSES

MACC, MECO, MFIN, MITM, MMGT, MMKT 652-658. SPECIAL TOPICS
Selected special topics in accounting, economics, finance, information technology, management, and marketing. The topics may vary from semester to semester. Course may be repeated more than once depending on topic. Prerequisite: Permission of the instructor. *Three credits*

■ CMBA ELECTIVE COURSES

BANK 681-683 COMMERCIAL BANKING CONCENTRATION
Concentration objectives include increased knowledge of non-traditional financial services, monetary & fiscal policies, theory of interest rates, technology & e-commerce, human behavior, development of sales culture and customer relations, market & business development, asset & liability management, branch planning, consumer, investment, and loan portfolio management, real estate lending, and risk management. Certificate will be awarded upon successful completion of the Paul W. Barret Jr. Graduate School of Banking 3-year residential program as offered at CBU. Other equivalent programs may qualify upon approval by the MBA Director. A student will complete no fewer than 100 contact hours in this field. Prerequisite: Permission of the MBA Director. *Nine credits*

CMBA 614-619. SPECIAL CMBA TOPICS
These courses are designed to permit intensive, directed study into topics of special interest to the student that are timely for a concentrated study in particular subject area in the field of Business. Prerequisite: Permission of the MBA Director. *One to four credits*

CMBA 621. ADVERTISING & PROMOTION
This course is a portion of the CMBA curriculum intended for those pursuing a concentration in marketing. This course offers a comprehensive view of advertising and sales promotions as it relates to a company's marketing and/or business issues and provides the necessary tools to manage a firm's competitive position and deploy resources in marketing communications. Contemporary theoretical frameworks as well as conduct practical cases will be studied. Objectives include development of capacity to think strategically about marketing communication tools, build skills in conducting, implementing and executing marketing communication programs, and strengthening understanding of sales promotions in a global market environment. *Three credits*

CMBA 622. GLOBAL MARKETING
This course is a portion of the CMBA curriculum intended for those pursuing a concentration in marketing. This course will provide students with

the tools necessary to perform the duties of an international marketer through the use of cases, discussion, lecture, readings, and videos. Students will learn as marketers engaged in international marketing by learning to identify foreign market opportunities, select and execute a market entry strategy, and design and manage a successful marketing mix. The value of standardization and optimization for success in both home and foreign markets will be addressed. *Three credits*

CMBA 623. DIGITAL MARKETING
This course is a portion of the CMBA curriculum intended for those pursuing a concentration in marketing. This course encompasses a survey of digital marketing approaches ranging from email and social media to content curation and digital competitive intelligence. Students in this course will receive hands-on experience with many of today's cutting edge digital marketing tools, as well as learn to critique and create digital marketing strategies. *Three credits*

CMBA 627. SPORT MANAGEMENT
This course focuses on management concepts, strategies and activities related to businesses operating within the sport industry. This course is designed to provide students with the basic principles and applications of management and leadership as they relate to the sport industry. Topics include functions of management, organizational behavior, management theories, management styles, and theories and styles of leadership as they pertain to the sport industry. *Three credits*

CMBA 628. SPORT MARKETING AND COMMUNICATIONS
This course focuses on the marketing and public relations strategies crucial for fostering demand for the sport product. Students will gain a better understanding of the unique characteristics of sport products and services and how this impacts the marketing mix. Topics include consumer behavior, promotional strategy and market research. *Three credits*

CMBA 629. SPORT FACILITY AND EVENT MANAGEMENT
This course focuses on managerial activities related to sport facilities and event operations. This course examines facility design, planning, personnel, marketing of facilities and events, risk management, developing revenue streams, scheduling and operating. The course will emphasize problem solving and projecting future industry trends. *Three credits*

CMBA 630. BRANDING & INTEGRATED MARKETING COMMUNICATIONS
This course is a portion of the CMBA curriculum intended for those pursuing a concentration in marketing. This course explores the art and science of Branding and Strategic Brand Management, including why brands are important, what they represent to consumers, and how to manage them properly. Students are provided with the necessary tools to manage a firm's competitive position and deploy resources in marketing communications. Contemporary theoretical frameworks as well as conduct practical cases will be studied. Objectives include development of capacity to think strategically about marketing communication tools, build skills in conducting, implementing and executing marketing communication programs, and strengthening understanding of sales promotions in a global market environment. *Three credits*

CMBA 631. INVESTMENTS
This course is a portion of the CMBA curriculum intended for those pursuing a concentration in finance. The course intended to both prepare the student to assume professional duties in the field of investment management or to prepare the student for general financial management responsibilities which include investments. Discussions will explore implications within both an investment management firm and a general corporate environment. Key learning will be focused on the process of assembling securities into portfolios, ranging from the concepts of asset allocation, investment models, equity and fixed income portfolios, the use of derivatives to adjust portfolio risk and finally to evaluate portfolio performance. Prerequisite: CMBA 601-608. *Three credits*

CMBA 632. GLOBAL FINANCE
The objective and goals of this course are to equip the student with knowledge enabling the student to address the challenges that a global financial manager faces in today's ever-demanding financial environment. This course focuses on the international aspects of financial management. Topics include currency markets and exchange rate determination, transfer of funds, banking services, international financial institutions, parity conditions, foreign exchange exposure and management, and valuation of international projects. *Three credits*

CMBA 633. CASES IN FINANCE
This course is intended to explore advanced topics in general financial management. The participants will select from a variety of topics proposed by the instructor in advance of the course. The instructor and students will discuss selected cases in order to discover and evaluate alternative courses of action introduced by the case. The course is designed to provide students with an opportunity to explore, at a more advanced level, financial analysis techniques, develop analytical skills required to evaluate financial decisions in a corporate environment, prepare analyses and argue points in defense of analysis, and evaluate contemporary financial events. *Three credits*

CMBA 634. CONTENT MARKETING
The course is designed to enhance understanding of content marketing strategy as a long-term engagement strategy. Upon completion of the course, a successful student will be able to develop and communicate the business case for content marketing strategy, understand how a content marketing strategy fits with traditional marketing strategies and tactics, learn how to create messages and content that appeal to target audiences, and develop a comprehensive plan for content marketing from development to implementation and measurement. *Three credits*

CMBA 635. CORPORATE SOCIAL RESPONSIBILITY
The course focuses on Corporate Social Responsibility (CSR), social initiatives and their impact on today's business environment. The course is designed to introduce a deeper understanding of corporate social responsibility as a key marketing and communications strategy that has direct impact on business. The course will utilize content from multiple sources including, books, guest speakers, online resources, class discussions, case analyses and practical experience. Upon completion of the course, a successful student will be able to develop and communicate the business case

for corporate social responsibility investments with both traditional and digital marketing strategies and tactics as well as develop a comprehensive analysis of corporate social responsibility programs from development to implementation and measurement. *Three credits.*

CMBA 641. ORGANIZATIONAL BEHAVIOR
This course is a portion of the CMBA curriculum intended for those pursuing a concentration in general management. The course studies individual and group behavior as they relate to organizational effectiveness. Emphasis is placed on motivation, leadership, power and politics, the effect of organization design on effectiveness, and group processes. The psychological, interpersonal, and behavioral dynamics in organizations are applied to the management decision making and methods of analyzing and improving performance are also addressed. *Three credits*

CMBA 642. BUSINESS LAW
This course is a portion of the CMBA curriculum intended to teach the nature of both the law as well as the regulatory environments in which all businesses, both global and domestic, and their managers must direct. Topics in this course include the foundations of law and the courts systems, and constitutional, administrative, corporate, contracts, tort, international, property (both real and intellectual), antitrust and employment welfare and discrimination laws. *Three credits*

CMBA 643. BARGAINING & NEGOTIATIONS
The course focuses on two-party negotiations in a variety of settings using a mix of discussion, lecture, readings, videos, and review of prior course content. The majority of class sessions revolve around the results of prior negotiations between class members. Class discussions will review the experiences in terms of the effectiveness of behaviors, tactics and strategies and provide analyses that will be helpful for future negotiations. Weekly readings will enhance what students learn in the negotiations and subsequent discussions. *Three credits*

CMBA 661. GLOBAL HEALTHCARE ECONOMICS
The course uses the tools of economic thinking and economic analysis to examine the current state of health and healthcare in both the United States and International Economies. Economics concepts to be discussed include scarcity, rationing, the roles of the free market and government, sensitivity to price, determinants of the demand for, and the supply of, healthcare, and production possibilities. These and other tools will be used to examine such topics as changing demographics, alternative production and delivery systems, health insurance, regulation of the health sector, the reimbursement approval process, the emergence of consumer driven healthcare, and the legal environment. *Three credits*

CMBA 662. GLOBAL MARKETING IN THE BIOMEDICAL INDUSTRY
The course will provide students with the tools necessary to perform the duties of an international healthcare marketer through a challenging combination of cases, discussion, lecture, readings, and videos focused on the biomedical industry. Students will earn to identify foreign market opportunities, select and execute a market entry strategy, and design / manage a successful marketing mix. Students will gain exposure to the essentials of market analysis (buyer behavior and customer analysis) and the tools marketers rely on the fill customers' and consumers' expectations. Special topics may include marketing consumer OTC products vs. physician preference products, ramifications of the direct to consumer marketing trend for prescribed products, product pricing in a reimbursement driven world, and balancing marketing / advertising materials vs. regulatory approved label content. *Three credits*

CMBA 663. GLOBAL SUPPLY CHAIN MANAGEMENT IN THE BIOMEDICAL INDUSTRY
An introduction to global strategy and a description of the role of supply chain management in an iterative lifecycle process within the biomedical industry. Topics may include: understanding regulated global supply chains and supply chain management; regulatory challenges in global supply chain management; global logistics management; extending global supply chains; and global purchasing and supply management. *Three credits*

EXLD 611. LEADERSHIP AND PERSONAL DEVELOPMENT
This course is designed to look at leadership from the individual perspective. It focuses on the importance of self-discovery, self-assessment, and self-development. The course is an introduction to the principles and practices of positive interpersonal relationships for leadership development. The course investigates each student's life crucibles (past), current leadership experiences (present), and personal leadership goals and development plans (future). *Three credits*

EXLD 612. APPLICATION OF LEADERSHIP
This course covers theories of leadership from trait theory (the first recognized theory of leadership) to the most current leadership thinking today. Students will investigate the relationship between leadership theories, societal trends, organization theory, and management thought throughout history. Emphasis will be placed on modern day applications of each theory and lessons leaders can take away from each theory. *Three credits*

EXLD 613. ORGANIZATIONAL CHANGE AND DEVELOPMENT
This course looks at change and development in organizations and communities and the ways leaders affect and influence that change. Some of the most current change techniques such as appreciative inquiry and world café will be studied. Students will use a computer simulation to learn how change manifests in an organizational setting. *Three credits*

FPLN 681-683 FINANCIAL PLANNING CONCENTRATION
Concentration objectives include increased knowledge of the technical aspects, practical application, ethical and professionalism of financial planning. Students will gain knowledge of the process of financial, insurance, investment, income tax, retirement & employee benefit planning and estate planning. Certificate will be awarded upon successful completion of the Certificate in Financial Planning Program as offered at CBU. Other equivalent programs may qualify upon approval by the MBA Director. A student will complete no fewer than 100 contact hours in this field. Prerequisite: Permission of the MBA Director. *Nine credits.*

NPMT 681-683 NON-PROFIT MANAGEMENT CONCENTRATION
Concentration objectives include increased knowledge of non-profit organizational management decisions ranging from fundraising

strategies, grant writing, financial management to organizational leadership. Concentration will be awarded upon successful completion of the 501(c)ollege as 100 cumulative hours of professional development workshops, webinars, or conferences, as offered by the Alliance for Nonprofit Excellence. Other equivalent programs may qualify upon approval by the MBA Director. Prerequisite: Permission of the MBA Director. *Nine credits.*

PMGT 681. PROJECT MANAGEMENT
The course in project management is designed to develop an integrated approach to project management that will cover optimization models, practical management and organizational practices, and the use of computer applications and software. The focus will be on developing a process and model for managing projects that includes planning and budgeting, organization and structure, scheduling using Gantt and PERT/CPM, resource allocation, and performance and control techniques. Students will be required to complete a project plan, and guest speakers from the field of project management will supplement the class. *Three credits*

PMGT 682. PROJECT ORGANIZATION, PLANNING AND LEADERSHIP
This course examines processes involved with project planning and leadership. Areas examined include scope, communications and closure. The course includes a review of program/portfolio management and reporting relationships. Also covered is a detailed study of organizational, management, and current theory on projected organizations. Prerequisite: PGMT 681. *Three credits*

PMGT 683. PROJECT ANALYSIS AND CONTROL
This course provides in-depth study of procedures and processes related to the control of costs, risk, scheduling, and related activities. Computer methods including MS Project and other programs will be examined. In addition, in-depth analysis of cost, time and quality variance will be studied. Prerequisite: PMGT 681. *Three credits*

■ HMBA HEALTHCARE MANAGEMENT COURSES

HMBA 600. INTRODUCTION TO HEALTHCARE MANAGEMENT
This course serves as an introduction course examining the mixed results of the recent efforts to apply management principles to health care delivery. It will utilize lectures and group activities facilitated by faculty members who will teach fundamental portions of the Healthcare Management MBA courses. Students are introduced to the goals, expectations, and methods that are used throughout the program including case analysis methodology, business plan preparation and business research, and analysis skills and techniques. The ongoing emphasis on relational learning will be explained and stressed as well. Pass/Fail Grading. *Two credits*

HMBA 601. CURRENT ISSUES IN HEALTHCARE MANAGEMENT
This course is designed to expose students to major US healthcare initiatives through a series of seminars led by leading healthcare executives. The course will also look at the Healthcare systems in countries around the world and how they compare with the methods in the United States. Prerequisite: HMBA 600. *Three credits*

HMBA 602. HUMAN AND LEGAL ASPECTS OF HEALTHCARE MANAGEMENT
In this course, students will learn to recognize potential legal problems in various healthcare settings, identify the issues and rights that are implicated, and propose solutions or plans of action. There is an emphasis on formulating analyses clearly, both orally and in writing. Among the subject areas covered are licensing, professional liability, confidentiality, informed consent, professional relationships, access issues, and antitrust. *Three credits*

HMBA 603. HEALTHCARE MANAGERIAL ECONOMICS
This course utilizes the tools of economic thinking and economic analysis to examine the current state of health and healthcare in both the United States and international economies. Economic concepts to be discussed include scarcity, rationing, the roles of the free market and government, sensitivity to price, determinants of the demand for, and the supply of, healthcare, and production possibilities. These and other tools will be used to examine such topics as changing demographics, alternative production and delivery systems, health insurance, regulation of the health sector, the reimbursement approval process, the emergence of consumer driven healthcare, and the legal environment. *Three credits*

HMBA 604. FINANCIAL AND ACCOUNTING CONSIDERATIONS IN HEALTHCARE MANAGEMENT
A balanced approach to understanding the cost basis of healthcare finance, as well the Cost Accounting approach to reimbursement for that care. Additional topics include financial management of working capital and investment decision models, long term capital structure, the process of negotiating and implementing a managed care contract, and mergers and acquisitions of health care organizations. Prerequisite: HMBA 603. *Three credits*

HMBA 605. HEALTHCARE RESEARCH AND INFORMATION TECHNOLOGY
As the recent changes in healthcare are now data driven and data clarified, the proper use of the available data is extremely important. Topics will include data driven analysis and data mining to determine various scenarios for possible future healthcare applications, as well as the effectiveness of existing applications (open heart surgery vs. catherization and stent placement as well as the cost benefits of same). Prerequisite: HMBA 604. *Three credits*

HMBA 606. HEALTHCARE MARKETING
Students will learn to identify foreign and domestic market opportunities, select and execute a market entry strategy, and design / manage a successful marketing mix. Students will gain exposure to the essentials of market analysis (buyer behavior and customer analysis) and the tools marketers rely on to fill customers' and consumers' expectations. *Three credits*

HMBA 607. EPIDEMIOLOGY
This course will offer an introduction to the science of disease development in humans. It will cover the principles and methods of epidemiological investigation and how they relate to the business and the development of Healthcare systems. *Three credits*

HMBA 608. CAPSTONE PROJECT
Every student will complete one of three options to tie together important concepts from the Healthcare MBA curriculum: a working marketing plan for an organization to be selected by the instructor, a case study of an existing health care organization by applying principles of strategic management, marketing, and competitive analysis in health care organizations, or a functioning and comprehensive three year business plan or, in the alternative, a complete set of operating policies for a non-profit health care facility/institution. Prerequisite: HMBA 605 and HMBA 606 or prior approval by director. *Three credits*

HMBA 611. PUBLIC HEALTH POLICY CONSIDERATIONS
This course will utilize numerous guest speakers, lawmakers, providers and funders to address the future of healthcare in the U.S. from both an economic and political perspective. In light of current economic and political pressures, this course examines the concepts underlying federal entitlement programs, private sector health benefit programs, alternative health policy approaches, potential insurance reforms, tax policy as it relates to health care insurance, tax credits versus deductions, and federal regulation of prices for and supply of services. *Three credits*

HMBA 612. STRATEGIC PLANNING AND MANAGEMENT OF HEALTHCARE SYSTEMS
This case study driven course will cover the operational management of interrelated systems, inpatient and outpatient systems and the future of all existing delivery systems given the new political realities as well as the existing and potential future economic conditions of the U.S, within a global economy. Mergers, acquisitions, divestitures and practice consolidations are also studied. *Three credits*

HMBA 613. SUPPLY CHAIN AND PROJECT MANAGEMENT IN HEALTHCARE SYSTEMS
An introduction to both U.S. and global strategies and a description of the role of well-organized and operated supply chain management systems as an essential lifecycle process within the healthcare industry. Topics may include: understanding regulated national and global supply chains and supply chain management; regulatory challenges in various supply chains. Students will explore project management topics and skills, including the core body of knowledge, project life cycle and other aspects of project management as it relates to the health care industry. *Three credits*

HMBA 652-658. SPECIAL TOPICS
These courses are designed to permit intensive study into topics of special interest to the student that are timely for a concentrated study in particular subject area in the field of Business. Prerequisite: Permission of the MBA Director. *One to four credits*

■ CATHOLIC STUDIES

MACS 600. CATHOLIC THOUGHT AND CULTURE THROUGH THE AGES
An interdisciplinary exploration of the wisdom of the Catholic tradition expressed through works of intellect and imagination from the beginning of the Church up to contemporary times. Classics in literature, art, theology, philosophy, music, the sciences, and/or architecture are discussed. Emphasis is placed on recognizing the integrity of the grounding Catholic vision and on tracing the unified development and expansion of that vision over time. *Three credits*

MACS 610. CATHOLIC BIBLICAL STUDIES
What is a Catholic approach to the study of the Bible? The course will begin with the Church's teaching on biblical interpretation as contained in such documents as Divino Afflante Spiritu, Dei Verbum, and "The Interpretation of the Bible in the Church." Selected texts from the Old and New Testaments will then be studied using the Catholic Church's approach to biblical interpretation in contrast to fundamentalism. *Three credits*

MACS 620. CATHOLIC SPIRITUALITY
An exploration of the relationship between religious experience and theological reflection as seen in the works of outstanding spiritual writers of the Catholic tradition, including St. Benedict, St. Francis and St. Clare, St. John Baptist de La Salle. This will include attention to prayer, forms of spirituality, and asceticism. *Three credits*

MACS 630. GOD AND THE HUMAN PERSON
An investigation of the Catholic doctrine of the human person in relation to God, including topics such as creation and fall, sin and grace, justification and sanctification, and eschatological fulfillment. *Three credits*

MACS 640. CHRISTOLOGY
Understanding the person, presence and mission of Christ in Scripture, doctrine, and dogma, and in contemporary theology. *Three credits*

MACS 650. THEOLOGY OF SACRAMENTS AND WORSHIP
An examination of the historical development of sacramental life in the Church and theological reflection on the sacraments. This will include contemporary approaches to the theology of sacraments, especially in relation to Christology and ecclesiology. *Three credits*

MACS 660. MORAL THEOLOGY
A study of the foundations of the Christian moral life, including freedom and moral agency, moral norms and moral reasoning, the place of scripture, tradition, and authority in the moral life, virtues and development of moral character. *Three credits*

MACS 670. CATHOLIC SOCIAL ETHICS
Critical analysis of the Biblical and theological foundations for Catholic social teaching and the teachings of the Catholic Church on matters such as war and peace; the rights and duties of states and citizens; the rights, duties, and obligations of members of a family; the rights, duties, and obligations of parents with respect to their children. *Three credits*

MACS 680. CATHOLICISM AND OTHER FAITH TRADITIONS
Drawing upon the teachings of Vatican II and other ecclesial documents, this course will explore the relationship between Catholicism and other faith traditions, both Christian and non-Christian. *Three credits*

MACS 690. ECCLESIOLOGY AND MINISTRY
A consideration of the nature and structure of the Catholic Church, including its apostolic origins, the Church as communion and sacrament, magisterium and authority, the relation of the local and universal Church, evangelization, ministry and mission. Students will reflect upon their ministry plans/work in relation to the Church's mission. *Three credits*

MACS 699. THESIS
The thesis is a substantial revision and development of a term paper written for a different course in the program. Students are advised and graded jointly by the director and professor for whom they originally wrote the paper. *Three credits*

EDUCATION

■ CURRICULUM AND INSTRUCTION IN EDUCATION (CIED)

CIED 600. PROFESSIONAL FOUNDATIONS II
Students acquire background and skill in curriculum design and instructional strategies and methods, instructional planning and guidance, analysis of patterns of classroom dynamics, classroom assessment, and classroom inquiry in conjunction with perspectives on school reform, teacher leadership, and lifelong professional development. Restricted to students in the MAT program or by permission of instructor and program director. *Three credits*

CIED 601. ANALYSIS OF TEACHING (Formerly MED 601)
Students develop skill in analyzing patterns of classroom dynamics and become proficient in identifying specific instructional behaviors associated with specific learner outcomes. The student acquires perspective in observing and being observed in live classroom settings and is involved in real decision-making issues. These activities lead to the refinement of instruction and the improvement of learner performance. *Three credits*

CIED 602. CONTEMPORARY INSTRUCTIONAL GUIDANCE
Students investigate and implement best practices in classroom management and instructional guidance, focusing on the challenges of engaging learners in self-management and effective classroom participation. *Three credits*

CIED 603. CONTEMPORARY CLASSROOM METHODS (Formerly MED 636)
Students develop skill in decision-making in the K-12 classroom. Approaches to managing the classroom, selecting resources, creating sound instructional strategies, designing instructional units and lesson plans, and reaching decisions that orchestrate the complex implementation of effective learning are considered. *Three credits*

CIED 605. URBAN TEACHING STRATEGIES.
Candidates develop skills and strategies for investing under-resourced urban students in educational achievement. Restricted to TFA and MTF. *Three credits.*

CIED 606. CLASSROOM LEADERSHIP.
Candidates apply leadership theories and practices to create engaging and disciplined learning environments for under-resourced urban students. Restricted to TFA and MTF. *Three credits.*

CIED 608. ASSESSMENT OF LEARNING AND PRACTICE (Formerly MED 608)
Students explore various means of acquiring data to determine learning progress among both groups and individuals, with emphasis on hard-to-measure dimensions of learning. Students consider standard measures of learning, standards-driven instruction, and emerging alternative approaches to developing and assessing authentic products, projects and performances. Students gain experience with traditional designs for evaluation and new assessment tools. *Three credits*

CIED 609. CLASSROOM MANAGEMENT AND METHODS
Students develop and practice competence in various classroom management methods, including unit and lesson planning, interpersonal and group communication skills, and principles of effective classroom organization. Designed for initial teaching licensure students. Course topics include analyzing, comparing, evaluating, and applying various theories and methods of classroom motivation, management, and discipline. Ten hours of field experience required. *One semester; three credits*

CIED 610. CURRICULUM DESIGN AND DEVELOPMENT (Formerly MED 610)
Students examine a variety of curriculum designs and the process of planned educational change, looking for evidences of the dimensions of learning in contemporary curricular models. Using a constructivist emphasis, students create curriculum based on current theories of design. Theoretically derived alternatives are also evaluated in terms of implementation and assessment within particular instructional environments. *Three credits*

CIED 611. CURRICULUM AND METHODS IN SCIENCE, Pre-K-8
Students examine theory and practice in transforming the methods of inquiry and the knowledge base of the sciences into the elementary and middle school science curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and materials, including the integration of technology into the elementary and middle school science curriculum. *Three credits*

CIED 612. CURRICULUM AND METHODS IN SOCIAL STUDIES, Pre-K-8 (Formerly MED 658)
Students examine theory and practice in transforming the methods of inquiry and the knowledge base of the social studies into the elementary and middle school social studies curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and materials, including the integration of technology into the elementary and middle school social studies curriculum. *Three credits*

CIED 613. CHARACTER EDUCATION (Formerly MED 614)
Students examine approaches to character education as currently practiced in K-12 schools in the United States. Various models are reviewed and evaluated for effectiveness. Research into programs currently in use in the Mid-South will be required. *Three credits*

CIED 615. RHYTHMIC ACTIVITIES AND GAMES
Students explore activities and games designed for elementary age students. *One credit*

CIED 618. DIFFERENTIATED INSTRUCTION MIDDLE/SECONDARY SCHOOLS (Formerly CIED 604)
Students identify, analyze, compare, and justify varied approaches to creating viable learning environments that successfully serve the needs of diverse learner populations. *Two credits*

CIED 622. CURRICULUM AND METHODS IN MATHEMATICS, Pre-K-8
Students examine theory and practice in transforming the methods of inquiry and the knowledge base of mathematics into the elementary and middle school mathematics curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and materials, including the integration of technology into the elementary and middle school mathematics curriculum. *Three credits*

CIED 624. CREATIVE EXPRESSION IN ELEMENTARY SCHOOLS, Pre-K-5
Candidates integrate concepts of music, visual art, drama, and dance into the elementary classroom. *One credit*

CIED 626. INTEGRATING CURRICULUM (Formerly MED 609)
Students examine features of integrated curricula and review designs of quality work, including standards-driven instruction, essential elements of quality work, integration of content to strengthen transfer of knowledge, and frameworks for designing both integrated and interdisciplinary work. Students create original work for learners which includes a product focus, product standards, novelty and variety, choice, freedom from initial failure, and authenticity. A variety of performance-based and alternative assessments are included in the integrated framework. *Three credits*

CIED 627. MIDDLE SCHOOL STRATEGIES (Formerly MED 612)
Students review the elements of high performing middle schools and the characteristics of the young adolescent. Specific components include interdisciplinary teaming, flexible block-of-time scheduling, quality and authentic work designed to address needs of the adolescent, alternative assessment, teacher-based guidance, exploratory experiences, classroom/team management, and current middle school issues. Emphasis is given to the developing and changing roles and relationships of middle school teacher leaders. *Three credits*

CIED 630. CURRICULUM AND ASSESSMENT IN 6-12 SCHOOLS
Students planning to teach in the secondary school setting engage in curriculum design and development in their content areas and plan assessment strategies that encourage higher dimensions of learning and understanding in high school students. *Three credits*

CIED 633. TEACHING MATHEMATICS, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary mathematics. *Three credits*

CIED 634. TEACHING SCIENCE, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary science. *Three credits*

CIED 635. TEACHING ENGLISH/LANGUAGE ARTS, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary English. Prerequisite: READ 629. *Three credits*

CIED 636. TEACHING HISTORY/SOCIAL STUDIES, 6-12
Required curriculum and instructional methods course for all students completing a licensure program in secondary history. *Three credits*

CIED 637. TEACHING FOREIGN LANGUAGE, K-12
Required curriculum and instructional methods course for all students completing a licensure program in a foreign language. *Three credits*

CIED 638. TEACHING ART K-12
Required curriculum and instructional methods course for all students completing a licensure program in visual arts. *Three credits*

CIED 653. INTERNSHIP (Formerly MED 653)
Under the guidance of an assigned cooperating or mentor teacher and a University supervisor, the graduate student assumes the responsibilities of a classroom teacher. During the internship, students must complete a portfolio representing their impact on student learning and their own professional development while in an initial licensure program. Students must also enroll in CIED 654, Professional Seminar. Restricted to students who entered under previous catalogs. *Three credits*

CIED 654. PROFESSIONAL SEMINAR (Formerly MED 654)
A weekly seminar for intern teachers. Students review professional development and resolve issues arising from the intern experience. Students must also be enrolled in CIED 653, Intern Teaching. Restricted to students who entered under previous catalogs. *One credit*

CIED 669. EDUCATION TEACHER PERFORMANCE ASSESSMENTS PRACTICUM
This is a job-embedded practicum that supports candidates as they complete a series of performance based assessments in their classroom setting. The first major instructional task provides candidates with an opportunity to conduct a complete cycle of instruction, beginning with assessment, then integrating that assessment into planning, analyzing student performance and learning gains, accommodating diverse learners and using best practices, and finally, reflecting on the cycle of instruction. The second major instructional task guides candidates through the process for completing and submitting edTPA (Education Teacher Performance Assessment). This task requires candidates to complete a structured series of lessons that focuses on planning, instruction, and assessment through the learning process. Restricted to candidates who are enrolled as licensure only, non-degree seeking. Offered in the Spring semester. *Three credits*

CIED 670. PORTFOLIO AND PRACTICUM - TVAAS
This one-hour course will explore virtual teaching scenarios, assessments, and reflections of best practices as outlined by the state department of education. May be taken any semester prior to the final semester; recommended for a semester when not taking CIED 671 or CIED 672. There is a $100.00 LiveText fee and a $300.00 EdTPA fee attached to this course. *One credit*

CIED 671. PORTFOLIO AND PRACTICUM I
Students in the MAT degree program or other post-baccalaureate teacher licensure programs acquire classroom experience while engaging in a first phase of required assessment activities leading to initial development of their portfolio. Must be taken the semester before student teaching. *One credit*

CIED 672. PORTFOLIO AND PRACTICUM II
Students in the MAT degree program or other post-baccalaureate teacher licensure programs acquire classroom experience while engaging in a second phase of required assessment activities leading to further development of their portfolio. Must be taken the semester before student teaching. Prerequisite: CIED 671. *One credit*

CIED 673 TEACHING PRACTICUM III OR INTERN TEACHING
Culminating semester-long experience of supervised teaching for students in the MAT degree program or other post-baccalaureate teacher licensure programs. During Teaching Practicum III, students are expected to improve their instructional methods and classroom management, to become more reflective and analytical about their own professional practice, and to utilize clinical methods, assessment strategies, and classroom inquiry techniques to investigate their impact on student learning. Students continue to compile their portfolio and are required to take CIED 674, Professional Seminar and Portfolio III, with CIED 673. There is a $150.00 fee attached to this course. Prerequisite: Permission of Department Chair. Pass/Fail grading. *Four credits*

CIED 674. PROFESSIONAL SEMINAR AND PORTFOLIO III
Seminar accompanies CIED 673 and supports students in their experience of supervised teaching in the MAT degree program or other post-baccalaureate teacher licensure programs. During the seminar, students complete the final components of required assessments for their licensure program, including their portfolio. Prerequisite: CIED 672. *One credit*

CIED 675. JOB EMBEDDED CLINICAL FIELD EXPERIENCE
This zero-credit course is for students teaching full time as teachers of record ONLY. Students will be supervised and mentored during their time enrolled in this course. A $625.00 fee will be automatically assessed to those enrolled. Pass/Fail grading. *One semester, zero credits; Repeatable one time*

CIED 676. JOB EMBEDDED CLINICAL FIELD EXPERIENCE
This zero-credit course is for students teaching full time as teachers of record ONLY. Students will be supervised and mentored during their time enrolled in this course. A $625.00 fee will be automatically assessed to those enrolled. Pass/Fail grading. *Zero credits. Repeatable one time*

CIED 677. JOB EMBEDDED CLINICAL PRACTICE
This zero-credit course is for students teaching full time as teachers of record ONLY. Students will be supervised and mentored during their time enrolled in this course. A $625.00 fee will be automatically assessed to those enrolled. Pass/Fail grading. *One semester, zero credits*; *Repeatable until ready for CIED 678*

CIED 678. JOB EMBEDDED CLINICAL PRACTICE
This zero-credit course is for students teaching full time as teachers of record ONLY. Students will be supervised and mentored during their time enrolled in this course. A $625.00 fee will be automatically assessed to those enrolled. Pass/Fail grading. *One semester, zero credits; Repeatable one time*

CIED 680-690. SPECIAL TOPICS
Selected topics of interest. Permission of the Director of the Graduate Education Program required. *One to three credits*

■ EARLY CHILDHOOD EDUCATION (ECED)

ECED 630. CHARACTERISTICS OF EARLY CHILDHOOD EDUCATION
This course explores the nature and development of children Pre-K-third grade. Students explore models and theories of early childhood development and research based approaches to design developmentally appropriate strategies for early childhood students. *Three credits*

ECED 631. METHODS OF TEACHING EARLY CHILDHOOD EDUCATION
Students examine theory and practice of methods and inquiry as they pertain to the early childhood classroom. Emphasis is placed on transforming these practices into the early childhood curriculum, emphasizing content and performance standards, planning for instruction, teaching methods, and the integration of technology across the curriculum. *Three credits*

EDUCATION OF THE DIVERSE LEARNER (EDDL)

EDDL 630. SURVEY OF EXCEPTIONAL LEARNERS
This course surveys and assesses the physical, psychological, social, and learning characteristics and needs of atypical learners with emphasis on skills and techniques for identifying and teaching such learners in a heterogeneous classroom. Requires interviews with and observations of practitioners in special education and a practicum experience of at least ten hours. *Three credits*

EDDL 631. INCLUSION AND THE GENERAL SETTING
Candidates in this course will develop practical knowledge on how to create successful inclusion environments for students with disabilities. While this course provides a broad perspective of inclusive practices, there will be a particular focus on Science and Social Studies as related to projects and activities. Candidates will gain knowledge on how to plan and implement inclusive strategies, as well as, adapt the general content to meet the needs of special learners. This course includes a 5-hour observation requirement to be completed in a co-teaching setting. *Three credits*

EDDL 632. TEACHING DIVERSE LEARNERS (Formerly MED 632)
Students explore issues and themes in multicultural education, studying human diversity with its many faces and learning to develop culturally appropriate curricula, classrooms, and schools. *Three credits*

EDDL 633. DIRECT INSTRUCTION FOR EXCEPTIONAL LEARNERS
Candidates will acquire background and understanding of reading, math and writing challenges in elementary students who have mild or moderate disabilities. This course will help candidates acquire a set of skills that will enable them to determine what core academic concepts are necessary for each student. Candidates will also learn effective instructional methods for teaching these basic skills. Candidates will gain their knowledge through course readings, application assignments, observations/field experiences, lectures, demonstrations, and group discussions. *Three credits*

EDDL 634. MODELS OF INSTRUCTION FOR EXCEPTIONAL LEARNERS PRE-K-8
Candidates will acquire background and understanding of instructional strategies related to teaching students with mild or moderate disabilities in the upper grades. Students will use generalizations about classroom practice to develop key principles for use of the instructional strategies. Emphasis will be placed on the integration of research findings and theories of instructional models that apply to teaching Pre-K-8 students that need to be involved in higher level thinking. This course will prepare students to plan and implement appropriate lessons, assessments, activities, assignments, teaching strategies, and develop collaborative relationships that actively engage students in their own learning thus creating lifelong learners. *Three credits*

EDDL 635. MODELS OF INSTRUCTION FOR EXCEPTIONAL LEARNERS 6-12
Candidates will acquire background and understanding of instructional strategies related to teaching students with mild or moderate disabilities in the upper grades. Students will use generalizations about classroom practice to develop key principles for use of the instructional strategies. Emphasis will be placed on the integrations of research findings and theories of instructional models that apply to teaching middle and high school students who need to be involved in higher level thinking. This course will prepare candidates to plan and implement appropriate lessons, assessments, activities, assignments, teaching strategies, and develop collaborative relationships that actively engage students in their own learning, thus creating lifelong learners. *One semester; three credits*

EDDL 638. USING APPLIED BEHAVIOR ANALYSIS TO CREATE SUCCESSFUL LEARNING ENVIRONMENTS
Candidates will learn the principles of behavior analysis and how to apply them to managing classroom behavior in the following ways: selecting and writing behavioral goals and objectives, collecting data on the seven dimensions of behavior, applying procedures for reducing maladaptive behavior and increasing appropriate behavior, teaching useful target skills, and understanding the functions of behavior in order to complete a functional behavior assessment and behavior intervention plan. Candidates will also learn positive behavior support strategies as they relate to class-wide and school-wide behavior intervention programs. *Three credits*

EDDL 640. ASSESSMENT OF EXCEPTIONAL LEARNERS
Candidates will become familiar with formal and informal assessment strategies used in the identification and service of students. This course provides in-depth information on standardized testing and hands-on learning related to criterion-referenced assessments. Candidates will have opportunities to review formal assessments by teachers, psychologists, therapists, and medical professionals. In addition, the field experience component will include administering an informal criterion-referenced test. Prerequisite: EDDL 630. *Three credits*

EDDL 651. FAMILY CONSULTATION AND SUPPORT
Candidates will acquire the knowledge to engage, support and collaborate with the families of students with disabilities. Candidates will gain an understanding of the impact of identification and diagnosis on families, transitioning students between various school settings, transitioning between post school and adulthood, and collaboration with community to aid in post school opportunities. Candidates will also acquire knowledge in the diversity of students and backgrounds, and the law of education. *Three credits*

EDDL 680-690. SPECIAL TOPICS
Selected topics of interest. Permission of the Director of the Graduate Education Program required. *One to three credits*

FOUNDATIONS OF EDUCATION (EDFD)

EDFD 600. PROFESSIONAL FOUNDATIONS I
Students acquire background in the professional foundations of education, emphasizing perspectives on the profession of teaching, the teacher as a leader, the history of schooling, philosophies of curriculum, social and cultural influences on schools and classrooms, the diversity of student populations, and the politics, economics, and law of education. Restricted to students in the MAT program or by permission of instructor and program director. *Three credits*

EDFD 602. PORTFOLIO AND PROFESSIONAL DEVELOPMENT
Students in the advanced professional development programs analyze and assess their professional growth, review and update their professional

portfolios, establish a professional and development plan, and present this plan to the faculty. Restricted to students in the MEd and MSE.L. programs for advanced professional development. *Two credits*

EDFD 603. FOUNDATIONS OF EDUCATION (Formerly MED 643).
Students gain an overview of the philosophical, curricular, cultural, social, historical, legal, economic, and political foundations of education as necessary background for professionalism in teaching. Students reflect on the past and engage current issues to develop perspectives for professional practice. *Three credits*

EDFD 605. PHILOSOPHY AND ETHICS OF EDUCATION (Formerly MED 605)
Students explore the historical bases of educational philosophy and ethics, interpreting modern issues and problems through an ethical and philosophical perspective and with particular attention to the Lasallian tradition. Students also develop or refine their own reflective philosophies of education and ethical principles as a value component in educational decision-making. *Three credits*

EDFD 606. LEGAL AND SOCIAL ISSUES (Formerly MED 606)
Students examine the statutory and judicial influences upon education, both historical and current. Through exposure to social and cultural issues and dilemmas, students engage in dialogue about personal and professional rights and responsibilities as an educator. The student prepares position papers on the legally and socially appropriate roles of the educator in both private and public educational settings. Same as LEAD 648. *Three credits*

EDFD 607. SCHOOL, FAMILY, AND COMMUNITY (Formerly MED 607)
Students examine family, cultural, and community patterns in relation to the educator's roles and responsibilities to develop and foster strong educational partnerships. Same as LEAD 607. *Three credits*

EDFD 608. FUNDAMENTALS OF URBAN EDUCATION.
Candidates develop understanding of and gain experience with the challenges of teaching in urban situations with under-resourced students. Restricted to TFA and MTF. *Three credits.*

EDFD 610. HUMAN DEVELOPMENT (Formerly MED 600)
Students acquire background in human development over the lifespan, investigate stages from childhood to adulthood with respect to physical, cognitive, and social development, and develop educational applications. *Three credits*

EDFD 612. ADVANCED EDUCATIONAL PSYCHOLOGY (Formerly MED 602)
Students explore applications of psychological principles and their potential role in instruction. Special attention is given to the application of psychological principles for the improvement of teaching and learning. Students are challenged to develop critical thinking skills and recognize their personal set of coherent views relevant to their own practice. Opportunities for conducting research in the application of educational psychology are provided. *Three credits*

EDFD 614. MORAL DEVELOPMENT AND EDUCATION (Formerly MED 614)
Students examine and critically assess several theories of moral development—classical, modern, and contemporary. The focus is on how human beings acquire morally responsible character traits and the ability to engage in moral reasoning. The ideas considered form the foundation for evaluating the appropriateness of various educational approaches to teaching values. *Three credits*

EDFD 615. CHILD DEVELOPMENT AND LEARNING
Students explore models and theories of child development and research-tested approaches in order to implement developmentally appropriate strategies of teaching, learning, and instructional guidance in the elementary and middle-level classroom and school. *Three credits*

EDFD 617. ADOLESCENT DEVELOPMENT AND LEARNING (Formerly MED 617)
Students examine the special nature of adolescence as a developmental stage, or set of stages, with respect to physical, cognitive, and social dimensions of the adolescent experience. Applications in developmentally appropriate educational practices for middle and high school are also considered. *Three credits*

EDFD 639. MIDPOINT ASSESSMENT AND PORTFOLIO DEVELOPMENT
This course is required for the Master of Education Degree. Course will be taken during the third semester of the program. *Two credits*

EDFD 640. EDUCATIONAL RESEARCH (Formerly MED 603)
Students acquire research skills in natural settings by pursuing questions and issues within a typical classroom or school building or relative to matters of educational policy and practice. The student designs, employs and evaluates investigations using both qualitative and quantitative approaches. This course is especially appropriate for students who are contemplating additional graduate work beyond the master's degree, who will undertake a thesis or dissertation, and who wish a broad preparation in inquiry skills for these purposes. *Three credits*

EDFD 675. CAPSTONE PROJECT (Formerly MED 675)
Under the direction of an assigned advisor, students design, implement, and evaluate a project relevant to a current issue or problem of practice, presenting their results in a public forum. Students must also complete program assessments to determine their progress toward program goals. Prerequisite: EDFD 640. *Four credits*

EDFD 680-690. SPECIAL TOPICS
Selected topics of interest. Permission of the Director of the Graduate Education Program required. *One to three credits*

■ EDUCATIONAL TECHNOLOGY (EDTC)

EDTC 620. USING TECHNOLOGY IN INSTRUCTION
Students explore the potential of the computer and other technologies as an aid to teaching and learning in the classroom. Students become efficient users of information technology in terms of (1) understanding the role of computers in the classroom, (2) evaluating a variety of software packages and apps for instructional use, and (3) using the internet as a resource in education. *Three credits*

■ GENERAL EDUCATION (EDUC)

EDUC 553. TEACHING PRACTICUM III OR JOB EMBEDDED CLINICAL PRACTICE
Culminating semester-long experience of supervised teaching for students in the MAT degree program or other post-baccalaureate teacher licensure programs. During Teaching Practicum III, students are expected to improve their instructional methods and classroom management, to become more reflective and analytical about their own professional practice, and to utilize clinical methods, assessment strategies, and classroom inquiry techniques to investigate their impact on student learning. Students will compile their portfolio and are required to take EDUC 554. There is a $150.00 fee attached to this course. Prerequisite: Permission of Department Chair. *Four credits*

EDUC 554. PROFESSIONAL SEMINAR AND PORTFOLIO III
Seminar accompanies EDUC 553 and supports students in their experience of supervised teaching in the MAT degree program or other post-baccalaureate teacher licensure programs. During the seminar, students complete the final components of required assessments for their licensure program, including their portfolio. Prerequisite: CIED 672. *One credit*

EDUC 600. INTRODUCTION TO GRADUATE TEACHER EDUCATION
This zero credit course will introduce graduate students to the complexities involved in graduate studies including proper APA style, department expectations, licensure requirements, among other topics. This course must be taken in the student's first semester of graduate studies. Offered Fall, Spring, and Summer semesters. *Zero credits*

■ LEADERSHIP (LEAD)

LEAD 601. TEACHER AS LEADER: RENEWING THE PROFESSION (Formerly MED 640)
Students analyze teacher leadership through multiple frameworks: the sociology of the teaching profession, organizational behavior in educational settings, reform and renewal efforts, adult development models, professional standards for teachers, and leadership strategies. Advocacy skills are developed through personal and collaborative plans for ongoing professional development. *Three credits*

LEAD 605. POLICY PERSPECTIVES FOR EDUCATORS (Formerly MED 641)
Students examine the organizational behavior of schools and school systems, analyzing the politics, economics, finance, and sociology of education, with special emphasis on the teacher's and principal's roles as professional leaders with perspective vision on schools and society. Students acquire in-depth understanding of the challenges of change and the moral exercise of power. *Three credits*

LEAD 607. SCHOOL, PARENT AND COMMUNITY PARTNERSHIPS
Program participants acquire and apply knowledge about the important role of strong community and public relations for schools and develop skills and plans conducive to effective community and public relations. Same as EDFD 607. *One semester; three credits*

LEAD 610. EXPLORING SCHOOL LEADERSHIP (Formerly MED 670)
Students explore the roles and responsibilities of school leaders and assess their own capacity for leadership in a K-12 setting. The role of the principal in creating community in the school, the nature of skillful moral leadership in a rapidly changing world, and the art of reflection on the craft of administration are emphasized. Restricted to participants in the Educational Leadership Program or by permission of instructor. *Three credits*

LEAD 615. STRATEGIES FOR WHOLE SCHOOL RENEWAL (Formerly MED 639)
Students explore strategies for renewing schools based on research into effective and ineffective practices for bringing about broad-based and whole-school change. Issues of school culture and context, leadership, and factors that resist change are investigated and engaged through case studies combined with principles for effective practice. *Three credits*

LEAD 620. SUPERVISION AND TEACHER DEVELOPMENT
Students examine varied approaches to supervision and teacher development in school settings, emphasizing the role of the supervisor as a facilitator of school improvement and as a collaborative partner in enhancing school curriculum and classroom practices. Restricted to participants in the Educational Leadership Program or by permission of instructor. *Three credits*

LEAD 625. MANAGING THE MODERN SCHOOL
Students acquire background about the multiple management functions of schools and school leaders, including responsibilities for academic programs, student services, human and fiscal resources, facilities and technology, community and public relations, legally sound operations, and central office communications. Through a problem-based approach, students integrate these functions and experience the complexity of ethical leadership in the school environment. Restricted to participants in the Educational Leadership Program or by permission of instructor. *Three credits*

LEAD 630. ORGANIZATIONAL INQUIRY (Formerly MED 665)
Students develop the art and science of conducting inquiry into organizational issues and problems, with the aim of improving schools and school systems. Using both quantitative and qualitative methods, students conduct evaluation studies about school effectiveness and academic achievement and in-depth inquiries into school culture, climate, systems, structures, and specific programs with a school-wide impact. *Three credits*

LEAD 648. LAW FOR SCHOOL LEADERS
Program participants acquire and develop conceptual knowledge about legal issues that impact schools and the legal environment of schools, develop

awareness of and alertness to legal risks and responsibilities, conduct legal research, and consult with school leaders about legal problems and use of legal counsel. Same as EDFD 606. *Three credits*

LEAD 661. LEADERSHIP PRACTICUM I
This module is designed in conjunction with a mentor to provide students with meaningful experiences in the Pre-K - 12 setting. A $625.00 fee will be automatically assessed to those enrolled. *Pass/Fail; Zero credit*

LEAD 662. LEADERSHIP PRACTICUM II
This module is designed in conjunction with a mentor to provide students with meaningful experiences in the Pre-K - 12 setting. A $625.00 fee will be automatically assessed to those enrolled. *Pass/Fail; Zero credit*

LEAD 663. LEADERSHIP PRACTICUM III
This module is designed in conjunction with a mentor to provide students with meaningful experiences in the Pre-K - 12 setting. A $625.00 fee will be automatically assessed to those enrolled. *Pass/Fail; Zero credit*

LEAD 674. ADMINISTRATIVE INTERNSHIP
After being selected for the internship by a school or school system, program participants engage in school- and system-based leadership activities supported by a mentoring team and University faculty. Enrollment restricted to those completing the internship route. There is a $100.00 fee attached to this course. *Pass/Fail; Three credits*

LEAD 680-690. SPECIAL TOPICS IN EDUCATIONAL LEADERSHIP
Special topic courses or directed studies in educational leadership, administration, and supervision approved by the Department of Education and the Director of the Educational Leadership Program. *One to three credits*

■ READING EDUCATION (READ)

READ 605. CURRICULUM AND METHODS IN LANGUAGE ARTS, Pre-K-5
Student examine the theory and practice in transforming the methods of inquiry and the knowledge base of the language arts into language curriculum, emphasizing content and performance standards, planning for instruction, teaching methods and materials, including the integrating of technology into the elementary school language arts curriculum. Specialized instruction in teaching grades K-3 to read is an integral part of this course. *Three credits*

READ 606. CURRICULUM AND METHODS IN LANGUAGE ARTS, 6-8
Students examine theory and practice in transforming the methods of inquiry and the knowledge base of the language arts into the language curriculum, emphasizing content and performance standards, planning for instruction, teaching methods and materials, including the integration of technology into the middle school language arts curriculum. Specialized instruction in teaching grades 4-6 how to read is an integral part of this course. *Three credits*

READ 628. YOUNG ADULT LITERATURE (Formerly CIED 628)
Students engage in the study of literature written for adolescents and learn how to integrate literature into the teaching of the language arts and literacy instruction in the middle school and the high school. *Three credits*

READ 629. LITERACY ACROSS THE CURRICULUM (Formerly CIED 629)
Students planning to teach in the middle and secondary school setting learn about the importance of teaching reading within the content areas and about using reading and writing strategies to strengthen student literacy and learning. *Three credits*

READ 630. FOUNDATIONS OF LITERACY
This four-week intensive course of study incorporates a research-based, structured, and multisensory approach designed to help assist children in the acquisition of reading, speaking, listening, writing, and thinking skills. *Six credits*

READ 631. INTEGRATION OF LITERACY
This four-week intensive course of study further extends the training provided in the Foundations of Literacy, READ 630. Participants will apply skills that utilize advanced techniques in the language continuum. *Six credits*

READ 632. THE CHALLENGED READER (Formerly CIED 632)
Candidates master instructional strategies used to enhance the learning and instruction of K-12 students with reading disabilities in both the regular and special education classroom. Topics include assessment, modification of instruction, research-based instructional practices in reading, and technology. *Three credits*

READ 633. READING ASSESSMENT STRATEGIES
This course is designed to provide knowledge and experience with a variety of evaluation tools and techniques to assess individual learner strengths and needs as well as how to create appropriate learning experiences based on assessment data. This course is required for the Reading Specialist Endorsement. *Three credits*

READ 634. THE READING AND WRITING CONNECTION
This course will provide strategies to promote various kinds of writing as well as an understanding of the writing process. Strategies to integrate content areas to support the reading and writing growth will be explored. This course is required for the Reading Specialist Endorsement. *Three credits*

■ RELIGIOUS EDUCATION (RLED)

RLED 620. PASTORAL FOUNDATIONS OF CATHOLIC EDUCATION
Students examine key dimensions of Catholic theology as a support for understanding the role and mission of Catholic education and to understand

their responsibilities as leaders and teachers in Catholic schools. *Three credits*

RLED 625. CATHOLIC EDUCATION AND THE LASALLIAN TRADITION
Students explore the foundations of education from a Catholic perspective and in relation to the Lasallian tradition and mission. *Three credits*

RLED 630. CURRENT ISSUES IN CATHOLIC EDUCATION
Students analyze contemporary concerns in the Catholic school environment from historical, theological, and educational perspectives. *Three credits*

RLED 640. THE CATHOLIC TEACHER
Students examine the unique position of the Catholic school teacher as role model, catechist, inspiring intellectual, and spiritual mentor. *One credit*

RLED 645. THE CATHOLIC SCHOOL LEADER
Students examine the unique position of the Catholic school leader in its spiritual, instructional, community-building, and managerial dimensions. *One credit*

RLED 650. SPIRITUALITY AND EDUCATION
Students consider the spiritual dimensions of teaching and learning, the role of spiritual development in the life of the teacher and the community life of the school, and the curriculum and co-curriculum of the school. *Three credits*

RLED 651. CURRICULUM AND METHODS IN RELIGIOUS EDUCATION, K-6
Students explore appropriate curriculum and instruction for religious education programs and courses in the elementary school or at the elementary level. *Three credits*

RLED 652. CURRICULUM AND METHODS IN RELIGIOUS EDUCATION, 7-12
Students explore appropriate curriculum and instruction for religious education programs and courses in the secondary school or at the secondary level. *Three credits*

RLED 660. LASALLIAN STUDIES FOR EDUCATORS
Students study key documents from the Lasallian tradition of education and analyze the scope and substance of the Lasallian educational mission worldwide. *Three credits*

RLED 680-690. SPECIAL TOPICS IN RELIGIOUS EDUCATION
Special topic courses or directed studies in religious education or Catholic education approved by the Chair of the Department of Education and the Director of the Graduate Education Program. *One to three credits*

ENGINEERING

■ COMPUTER INFORMATION SYSTEMS (ECIS)

ECIS 607. OPERATIONS RESEARCH
Models and methods of operations research in solving engineering and management problems. Includes linear models, linear programming, duality, post optimality and network analysis and simulation. (Same as ENGM 607). *Three credits*

ECIS 612. TECHNICAL PROJECT MANAGEMENT
Development and management of engineering and technology projects. Project proposal preparation; resource and cost estimating; and project planning, organizing, and controlling: network diagrams and other techniques. Role of project manager: team building, conflict resolution, and contract negotiations. (Same as ENGM 612). *Three credits*

ECIS 635. MANAGEMENT OF INFORMATION SYSTEMS
Basic principles of Management Information Systems. Topics in current networking and communication technologies and their impacts on performance and productivity in an organization. Software and hardware components of a network and database technology. (Same as ENGM 635). *Three credits*

ECIS 636. COMPUTER NETWORKS & CYBER SECURITY
Relationship between computer systems, network services and cybersecurity. HTTP, HTTPS, SMTP, DNS, SSH and other network services. Security, privacy and usability issues in a network environment. (Same as ENGM 636). *Three credits*

ECIS 637. DATA BASE AND BIG DATA MANAGEMENT
Survey of current database approaches and systems. Topics include DBMS types; architecture; introduction to SQL; query optimization. DB management project required. (Same as ENGM 637). *Three credits*

ECIS 638. DATA SCIENCE
Practical tools used to analyze and interpret data. A review of probability, statistics and software programming. Data pre-processing techniques, supervised learning techniques in classification and regression, unsupervised learning techniques in clustering and visualization techniques. (Same as ENGM 638). *Three credits*

ECIS 639. SOFTWARE PROGRAMMING FOR ENGINEERS
The course introduces concepts of python programming for engineering and IT applications. Topics include variables, conditionals and loops, functions, files and input/output, and object oriented techniques. *Three credits*

ECIS 690. COMPUTER INFORMATION SYSTEMS CAPSTONE PROJECT
Technical project complete with written report or thesis. This will be a significant report on an investigation into a computer information systems topic which has been approved by the School of Engineering. *Three credits*

ECIS 691-695. SPECIAL TOPICS
Selected topics of interest. *One to three credits*

ECIS 696 - 697. COMPUTER INFORMATION SYSTEMS THESIS I & II
Thesis and oral presentation prepared demonstrating proficiency in analyzing, solving, and implementing a solution to a computer information systems problem. *Three credits*

ECIS 698. PROFFESIONAL SEMINAR & TECHNICAL COMMUNICATIONS
The course is designed to help graduate students in engineering with their academic and professional writing, oral presentation skills and data visualization techniques. *Three credits*

ECIS 699. RESEARCH
Methods used in computer information systems. Emphasis on problem solving, and implementing a solution to a computer information systems problem. *Three credits*

■ ENGINEERING MANAGEMENT (ENGM)

ENGM 600. ENGINEERING MANAGEMENT THEORY AND APPLICATIONS
Management theories, concepts, and applications in an engineering or other technical environment; roles and responsibilities of the engineering manager as integral part of an organization's overall performance; motivation and leadership theories and methodologies. *Three credits*

ENGM 603. ENGINEERING FINANCIAL MANAGEMENT AND ACCOUNTING (Formerly MEM 603)
Understanding of financial decisions by corporations. Uses and limitations of accounting information. Topics include return on investment; return on assets; asset management; capital planning; budgets, controls, taxes, profit centers; financial and risk analysis. *Three credits*

ENGM 605. QUALITY ASSURANCE
Statistical quality control methods for products and services; design of quality control systems; control of quality control inputs. Lecture and problem solving. *Three credits*

ENGM 607. OPERATIONS RESEARCH
Models and methods of operations research in solving engineering and management problems. Includes linear models, linear programming, duality, post optimality and network analysis and simulation. *Three credits*

ENGM 610. ADVANCED ENGINEERING ECONOMY
Application of engineering economic analysis in complex decision situations. Inflation and price changes; uncertainty evaluation using non-probabilistic techniques; capital financing and project allocation; evaluations involving equipment replacement, investor-owned utilities, and public works projects; probabilistic risk analysis. *Three credits*

ENGM 611. ENTREPRENEURSHIP FOR ENGINEERING MANAGERS
Organizational and financial planning and evaluation, Cost and location studies and market analysis to determine commercial feasibility of new products and services. *Three credits*

ENGM 612. TECHNICAL PROJECT MANAGEMENT
Development and management of engineering and technology projects. Project proposal preparation; resource and cost estimating; and project planning, organizing, and controlling: network diagrams and other techniques. Role of project manager: team building, conflict resolution, and contract negotiations. *Three credits*

ENGM 613. CONSTRUCTION EQUIPMENT & METHODS
Surveying quantities of equipment, labor and materials for general construction projects: excavation, concrete and formwork, carpentry, masonry, structural steel, lath and plaster, interior finishes. *Three credits*

ENGM 615. ENGINEERING CONSTRUCTION MANAGEMENT
Development of the project schedule including estimate and contractual scheduling requirements examined. The application of the Critical Path Method (CPM) and Program Evaluation Review Technique (PERT) to construction planning, scheduled vs. actual job expenditures, cost forecasting. Proposal solicitation and preparation, bidding strategy, estimate types and content, quantity survey, ethics, and an introduction to computer use in estimating. *Three credits*

ENGM 616. STRATEGIC MANAGEMENT IN A TECHNICAL ENVIRONMENT
Strategic planning process and strategic management in practice; corporate vision and mission; product, market, organizational, and financial strategies; external factors; commercialization of new technologies; and competition and beyond. *Three credits*

ENGM 617. CONSTRUCTION ESTIMATING AND COST CONTROL
Methods of making quantity surveys, estimating construction cost, construction scheduling and methods of cost control. The study of labor relations as they affect construction cost, scheduling and job control. Cost estimating project and report. Offered as needed. *One semester; three credits*

ENGM 621. ENGINEERING LAW
Legal principles and procedures; contracts and patents; liability, product liability, computer and environmental law; government regulation. *Three credits*

ENGM 635. MANAGEMENT OF INFORMATION SYSTEMS
Basic principles of Management Information Systems. Topics in current networking and communication technologies and their impacts on performance and productivity in an organization. Software and hardware components of a network and database technology. *Three credits.*

ENGM 636. COMPUTER NETWORKS & CYBER SECURITY
Relationship between computer systems, network services and cybersecurity. HTTP, HTTPS, SMTP, DNS, SSH and other network services. Security, privacy and usability issues in a network environment. *Three credits*

ENGM 637. DATA BASE AND BIG DATA MANAGEMENT
Survey of current database approaches and systems. Topics include DBMS types; architecture; introduction to SQL; query optimization. DB management project required. *Three credits*

ENGM 638. INTRODUCTION TO DATA SCIENCE
A review of probability and statistics. Software tools to analyze, interpret and visualize data. Data pre-processing techniques, supervised learning techniques for classification and regression, unsupervised learning techniques for clustering. *Three credits.*

ENGM 639. SOFTWARE PROGRAMMING FOR ENGINEERS
The course introduces concepts of python programming for engineering and IT applications. Topics include variables, conditionals and loops, functions, files and input/output, and object-oriented techniques. *Three credits*

ENGM 640. PRINCIPLES OF PACKAGING
Packaging materials, container types, processes, technology, and equipment. Packaging development process, testing and evaluation methods, standards, and equipment. Government regulations. Special projects. *Three credits*

ENGM 642. SUSTAINABILITY
Sustainability criteria and sustainable packaging. Steps to sustainable packaging. Design for optimizing materials and energy. Real-life design and material innovations. Life cycle assessment, examples and carbon footprints. Current state of implementations of sustainable packaging. Special projects. *Three credits*

ENGM 643. HEALTHCARE PACKAGING
Introduction to the basics of materials used for healthcare packaging including materials selection. The steps used for packaging design and development and use of suitable conversion process from raw materials to packages. The considerations used for aseptic packaging and added sterilization process, if needed. Storage and distribution of final products to customers with codes imprinted on products for quick identification of source details. Finally the most important steps of scope, planning, preparation, and for receiving of FDA validation. *Three credits*

ENGM 644. TRANSPORT PACKAGING
Transport packaging related organizations, test protocols, and testing equipment. Distribution hazards including shock, vibration, compression, and temperature/humidity. Shipping container design. Interior packaging design. Unit load design. Packaging performance testing. ISTA laboratory, package, and professional certifications. *Three credits*

ENGM 645. PRINCIPLES OF PACKAGING DEVELOPMENT
Review common packaging materials, packaging forms, and special packaging techniques for certain product commodities. Overview current practices and state of the art of packaging design from concept to prototype. Learn to use ArtiosCAD, and other computer drafting and modeling software create virtual package design. Utilize hand tools, Artios sample cutting table, thermal former machine to create prototype package. Prepare packaging specifications and design documentation for procurement and manufacturing. Discuss impacts of packaging design on manufacturing/fabrication cost, packaging operations, end use, and environment. Make aware of packaging related laws and regulations, and be sensitive to copyright and intellectual property protection. (Same as CHE and ME 411). *Three credits*

ENGM 650. REGULATORY AFFAIRS AND QUALITY SYSTEMS
Develop a basic understanding of regulatory affairs and quality systems related to medical devices to provide a better cross-functional working relationship and process efficiency. *Three credits*

ENGM 652. QUALITY SYSTEMS FOR THE MEDICAL DEVICE INDUSTRY
Develop a basic understanding of quality system requirements for medical device manufacturers based on both FDA and ISO standards. *Three credits*

ENGM 670. PRINCIPLES OF ENGINEERING MECHANICS
Basic principles of engineering mechanics; statics, mechanics of materials, dynamics, and fluid mechanics. This course is designed for high school STEM instructors who do not have engineering background. *Three credits.*

ENGM 671. PRINCIPLES OF ELECTRICAL AND COMPUTER ENGINEERING
Basic principles of electrical and computer engineering; electricity, power, circuits, electronics, computer hardware and software. This course is designed for high school STEM instructors who do not have engineering background. *Three credits.*

ENGM 672. THERMAL SYSTEM BASICS
Basic principles of thermal systems; thermodynamics, heat transfer. This course is designed for high school STEM instructors who do not have engineering background. *Three credits*

ENGM 690. ENGINEERING MANAGEMENT CAPSTONE PROJECT
Technical project complete with written report or thesis. This will be a publishable and significant report on an investigation into a scientific and/or engineering management topic which has been approved by the School of Engineering. *Three credits*

ENGM 691-693. SPECIAL TOPICS
One to Three credits

ENGM 694. INTERNSHIP
Practical experience under the supervision of qualified professionals. Midterm progress report, final oral presentation and final written report are required. Minimum time of 200 hours. Prerequisite: Permission of the program director. *Three credits*

ENGM 696 - 697. THESIS I & II
Thesis and oral presentation prepared demonstrating proficiency in analyzing, solving, and implementing a solution to an engineering management problem. Prerequisite: ENGM 695. *Two semesters; three credits each*

ENGM 698. PROFESSIONAL SEMINAR AND TECHNICAL COMMUNICATION
One to three credits

ENGM 699. RESEARCH
One to three credits

■ MSCIS MASTER OF SCIENCE IN COMPUTER INFORMATION SYSTEMS

ECIS 607. OPERATIONS RESEARCH
Models and methods of operations research in solving engineering and management problems. Includes linear models, linear programming, duality, post optimality and network analysis and simulation. *Three credits*

ECIS 612. TECHNICAL PROJECT MANAGEMENT
Development and management of engineering and technology projects. Project proposal preparation; resource and cost estimating; and project planning, organizing, and controlling: network diagrams and other techniques. Role of project manager: team building, conflict resolution, and contract negotiations. *Three credits*

ECIS 635. MANAGEMENT OF INFORMATION SYSTEMS
Basic principles of Management Information Systems. Topics in current networking and communication technologies and their impacts on performance and productivity in an organization. Software and hardware components of a network and database technology. *Three credits*

ECIS 636. COMPUTER NETWORKS & CYBER SECURITY
Relationship between computer systems, network services and cybersecurity. HTTP, HTTPS, SMTP, DNS, SSH and other network services. Security, privacy and usability issues in a network environment. *Three credits*

ECIS 637. DATA BASE AND BIG DATA MANAGEMENT
Survey of current database approaches and systems. Topics include DBMS types; architecture; introduction to SQL; query optimization. DB management project required. *Three credits*

ECIS 638. DATA SCIENCE
Practical tools used to analyze and interpret data. A review of probability, statistics and software programming. Data pre-processing techniques, supervised learning techniques in classification and regression, unsupervised learning techniques in clustering and visualization techniques. *Three credits*

ECIS 639. SOFTWARE PROGRAMMING FOR ENGINEERS
The course introduces concepts of python programming for engineering and IT applications. Topics include variables, conditionals and loops, functions, files and input/output, and object-oriented techniques. *Three credits*

ECIS 690. COMPUTER INFORMATION SYSTEMS CAPSTONE PROJECT
Technical project complete with written report or thesis. This will be a significant report on an investigation into a computer information systems topic which has been approved by the School of Engineering. *Three credits*

ECIS 691-695. SPECIAL TOPICS
Selected topics of interest. *One to three credits*

ECIS 696 - 697. COMPUTER INFORMATION SYSTEMS THESIS I & II
Thesis and oral presentation prepared demonstrating proficiency in analyzing, solving, and implementing a solution to a computer information systems problem. *Three credits*

ECIS 698. PROFFESIONAL SEMINAR & TECHNICAL COMMUNICATIONS
The course is designed to help graduate students in engineering with their academic and professional writing, oral presentation skills and data visualization techniques. *Three credits*

ECIS 699. RESEARCH
Methods used in computer information systems. Emphasis on problem solving, and implementing a solution to a computer information systems problem. *Three credits*

ENGM 600. ENGINEERING MANAGEMENT THEORY AND APPLICATIONS
Management theories, concepts, and applications in an engineering or other technical environment; roles and responsibilities of the engineering manager as integral part of an organization's overall performance; motivation and leadership theories and methodologies. *Three credits*

ENGM 603. ENGINEERING FINANCIAL MANAGEMENT AND ACCOUNTING
Understanding of financial decisions by corporations. Uses and limitations of accounting information. Topics include return on investment; return on assets; asset management; capital planning; budgets, controls, taxes, profit centers; financial and risk analysis. *Three credits*

ENGM 605. QUALITY ASSURANCE
Statistical quality control methods for products and services; design of quality control systems; control of quality control inputs. Lecture and problem solving. Three credits ENGM 607. OPERATIONS RESEARCH Models and methods of operations research in solving engineering and management problems. Includes linear models, linear programming, duality, post optimality and network analysis and simulation. *Three credits*

ENGM 610. ADVANCED ENGINEERING ECONOMY
Application of engineering economic analysis in complex decision situations. Inflation and price changes; uncertainty evaluation using non-probabilistic techniques; capital financing and project allocation; evaluations involving equipment replacement, investor-owned utilities, and public works projects; probabilistic risk analysis. *Three credits*

ENGM 616. STRATEGIC MANAGEMENT IN A TECHNICAL ENVIRONMENT
Strategic planning process and strategic management in practice; corporate vision and mission; product, market, organizational, and financial strategies; external factors; commercialization of new technologies; and competition and beyond. *Three credits*

ENGM 621. ENGINEERING LAW
Legal principles and procedures; contracts and patents; liability, product liability, computer and environmental law; government regulation. *Three credits*

■ PHYSICIAN ASSISTANT STUDIES (MPAS)

MPAS 600. ORIENTATION TO MEDICAL HISTORY & PHYSICAL EXAMINATION
This course orients students to the basic mechanics of the medical history, physical examination, and medical documentation of care. Students will learn the proper use of medical equipment, how to take vitals, how to conduct a medical interview, how to perform a comprehensive complete physical examination, and how to record information in a variety of clinical settings and situations, as well as interpersonal and communication skills, through a series of lectures, labs, and group activities. This course will amalgamate and continue into the system-based courses throughout the didactic phase of the program, as appropriate, to build on the basic skills learned in this course. *One credit*

MPAS 601. HEMATOLOGY & ONCOLOGY
This course covers the physiology of the hematologic system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered blood and oncologic disorders through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with blood dyscrasia symptomatology, coagulation disorders, disorders of platelets and vessel walls, red and white blood cell disorders, thrombosis, hemostasis, anemias, blood transfusions, sickle cell, thalassemia, malaria, hemochromatosis, myeloproliferative diseases, leukemia, multiple myeloma, lymphoma, and immunity. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Two credits*

MPAS 602. INFECTIOUS DISEASE
This course covers the physiology of the immune system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered infectious diseases through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as an approach to a patient with infectious disease symptomatology; bacterial, viral, parasitic, and helminthic diseases; as well as healthcare-associated infections, and bioterrorism. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Two credits*

MPAS 603. DERMATOLOGY
This course covers the anatomy and physiology of the integumentary system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered skin diseases through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as common skin infections, hair and nail disorders, scaling diseases, skin cancers, blistering and pigmentary disorders, acne, and drug eruptions. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Two credits*

MPAS 604. PULMONOLOGY
This course covers the anatomy and physiology of the pulmonary system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered lung diseases and disorders through symptoms-based and systems-based

approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with a pulmonary complaint, diseases of the pleurae, obstructive and restrictive lung diseases, pulmonary infections, pulmonary neoplasms, inflammatory diseases, vascular diseases, occupational lung diseases, and disorders of sleep. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Five credits*

MPAS 605. PHARMACOLOGY I

This course introduces students to the science of pharmacology and the pharmacokinetics and pharmacodynamics in the management of hematologic, oncologic, infectious, dermatologic, and pulmonary diseases and disorders. Topics include items such as black box warnings, indications, contraindications, cautions, dosing, drug interactions, adverse reactions, safety, monitoring, drug classes, drug elimination, and mechanisms of action of commonly prescribed medications used in the treatment of these diseases and disorders. *Two credits*

MPAS 606. GENETICS

This course covers the principles of genetics and molecular mechanisms of health and disease to include gene expression, mutation as the origin of normal variation and genetic disorders, polymorphism, family history, and genograms. Students learn about common genetic concerns related to pregnancy, the newborn, the emerging adult, and the family unit. The methods for analysis of human DNA and its associated role in evaluating a patient with suspected genetic disease, genetic counseling, and chromosomal, monogenic, and multifactorial genetic disorders are outlined and the basics of genetic screening, testing, and treatment are discussed. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *One credit*

MPAS 607. FOUNDATIONS OF PA PRACTICE I

This first course presents the basic concepts, facts, and principles that are essential in understanding the fundamental elements of the physician assistant profession. Utilizing the team-based learning approach, students will develop an appreciation of the unique contributions of various professionals in the community. Lectures, small group discussions, reflective paper, readings, and flipped classroom sessions are the teaching strategies for this course. Topics addressed during this semester will include the impact of racial, ethnic, and socioeconomic health disparities on health care delivery; evaluation of personal values and stereotyping; differing health care beliefs, values, and expectations; health care delivery systems and policies; interprofessional competencies; research literacy; professional conduct; strategies on test taking; social media; library resources; the physician assistant profession, its historical development, and current trends; the physician/physician assistant team; political issues that affect physician assistant practice; and physician assistant professional organizations; as well as medical statistics, medical research, and education on searching, interpreting, and evaluating medical literature and how this applies to individualized patient care. Student self-assessment and reflection will occur during this course. Professionalism will be assessed. *One credit*

MPAS 608. GASTROENTEROLOGY & NUTRITION

This course covers the anatomy and physiology of the digestive system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered diseases and disorders of the esophagus, stomach, biliary tree, liver, gallbladder, pancreas, small intestine, colon, rectum, and anus through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with a gastrointestinal complaint and diseases, disorders, and neoplasia common to the gastrointestinal tract. In addition, nutritional assessment, nutritional requirements, nutritional counseling, nutritional disorders, enteral and parenteral nutritional, vitamin and nutritional deficiencies, electrolyte imbalance and management, and fluid regulation are discussed. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Four credits*

MPAS 609. CARDIOLOGY & VASCULAR DISEASE

This course covers the anatomy and physiology of the cardiovascular system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered heart and vascular diseases and disorders through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with a cardiac or vascular complaint, ischemic heart disease, hypertension, heart failure, cardiomyopathies, valvular heart disease, cardiac rhythm disorders, congenital heart disease, cardiac infections, pericardial disease, and peripheral vascular disease. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Six credits*

MPAS 610. PHARMACOLOGY II

This course is a continuation of Pharmacology I. It addresses the pharmacologic management of gastrointestinal, nutritional, cardiac, and vascular diseases and disorders. Topics include items such as black box warnings, indications, contraindications, cautions, dosing, drug interactions, adverse reactions, safety, monitoring, drug classes, drug elimination, and mechanisms of action of commonly prescribed medications used in the treatment of these diseases and disorders. *Two credits*

MPAS 611. FOUNDATIONS OF PA PRACTICE II

This second course continues to build on the basic concepts, facts, and principles that are essential in understanding the fundamental elements of the physician assistant profession. Utilizing the team-based learning approach, students will develop an appreciation of the unique contributions of various professionals in the community. Lectures, small group discussions, reflective paper, readings, and field experiences are the teaching strategies for this course. Topics addressed during this semester will include diversity issues related to civil rights, evidence-based medicine, HIPPA, critical thinking and reasoning, problem-solving and medical decision-making skills, clinical judgement, electronic medical records, medical ethics, infection control, and blood borne pathogens. Students will become certified in BLS. Student self-assessment and reflection will occur during this course. Professionalism will be assessed. *One credit*

MPAS 612. NEPHROLOGY, UROLOGY & MEN'S HEALTH

This course covers the anatomy and physiology of the genitourinary system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered renal diseases and disorders through symptoms-based and systems-based approaches. This course also covers the anatomy, physiology, physical examination, medical history, medical documentation, and diseases and disorders specific to the male patient. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with a urinary complaint or a male with a genitalia complaint, renal failure, chronic kidney disease, glomerulopathies, non-glomerular disease, genitourinary infections and neoplasia, urinary obstruction, dialysis, and penile disorders. This course also provides an in-depth instruction in fluid, acid-base, and electrolyte disorders. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Four credits*

MPAS 613. NEUROLOGY

This course covers the anatomy and physiology of the neurological system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered central and peripheral nervous systems diseases and disorders through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with a neurologic complaint, traumatic brain injuries, coma, spinal cord injuries, demyelinating diseases, neuromuscular diseases, epilepsy and seizure disorders, peripheral neuropathies, headaches, cerebrovascular disease, central nervous system infections, tremors, and movement disorders. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Four credits*

MPAS 614. OTORHINOLARYNGOLOGY & OPHTHALMOLOGY

This course covers the anatomy and physiology of the head, ear, nose, paranasal sinuses, throat, and eyes and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered diseases and disorders related to Otorhinolaryngology and Ophthalmology through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with a hearing, nasal, sinus, oropharynx, or vision complaint; and associated diseases and disorders. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Three credits*

MPAS 615. ENDOCRINOLOGY

This course covers the anatomy and physiology of the endocrine organs and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered endocrine gland diseases and disorders through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with endocrine-related symptomatology, diabetes mellitus, and disorders of the hypopituitary-pituitary axis, thyroid, parathyroid, and adrenal glands. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Three credits*

MPAS 616. PHARMACOLOGY III

This course is a continuation of Pharmacology II. It addresses the pharmacologic management of renal, urinary, genitalia, neurologic, ear, eyes, nose, throat, sinuses, and endocrine diseases and disorders. Topics include items such as black box warnings, indications, contraindications, cautions, dosing, drug interactions, adverse reactions, safety, monitoring, drug classes, drug elimination, and mechanisms of action of commonly prescribed medications used in the treatment of these diseases and disorders. *Two credits*

MPAS 617. FOUNDATIONS OF PA PRACTICE III

This third course continues to build on the basic concepts, facts, and principles that are essential in understanding the fundamental elements of the physician assistant profession. Utilizing the team-based learning approach, students will develop an appreciation of the unique contributions of various professionals in the community. Lectures, small group discussions, reflective paper, readings, and field experiences are the teaching strategies for this course. Topics addressed during this semester will include interpersonal and communication skills, effective exchange of medical information, collaboration with patients, their families and other health professionals, and basic counseling and patient education skills; as well as alternative medicine, community disaster preparedness, public health as it relates to the role of the practicing physician assistant, coding, billing, and reimbursement. Student self-assessment and reflection will occur during this course. Professionalism will be assessed. *One credit*

MPAS 618. ORTHOPEDICS & RHEUMATOLOGY

This course covers the anatomy and physiology of the musculoskeletal system and the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered orthopedic diseases and disorders through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a patient with a musculoskeletal complaint, muscular dystrophies, fibromyalgia, radiculopathies, disorders of the spine, disorders of the upper extremity, disorders of the lower extremity, fractures, osteoporosis, common arthridites, focal nerve entrapments, crystal-induced arthridites, musculoskeletal infectious processes, sports physicals, sports injuries, and clearance for sports participation. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Four credits*

MPAS 619. WOMEN'S HEALTH

This course covers the anatomy and physiology of diseases and disorders specific to the female patient to include the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered female diseases and disorders through symptoms-based and systems-based approaches of the female patient. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as an overview of women's health, contraception, pregnancy, cervical and breast disease, the Bethesda System, breast health, and sexually transmitted diseases, as well as disorders of the vagina, ovaries, and uterus. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Two credits*

MPAS 620. BEHAVIORAL HEALTH

This course covers the physiology of disorders specific to the behavioral health to include the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered psychiatric disorders through symptoms-based and systems-based approaches. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these disorders. Management of patients with these disorders across the life span from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to the psychiatric patient, taking the psychiatric history, conducting a targeted physical examination on a psychiatric patient, an overview of psychological disorders commonly encountered in clinical practice, psychiatric and behavioral assessment tools, addictions, anxiety and dissociative disorders, somatoform disorders, chronic pain, psychosexual disorders, personality disorders (including psychotic disorders), and mood disorders. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Three credits*

MPAS 621. PEDIATRICS

This course covers the anatomy and physiology of diseases and disorders specific to the pediatric patient to include the epidemiology, etiology, risk factors, pathogenesis, pathophysiology, complications, and differential diagnoses of commonly encountered newborn, infant, toddler, child, and adolescent diseases and disorders through symptoms-based and systems-based approaches of the pediatric patient, as well as nutrition specific to the pediatric patient. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and interpreting diagnostic studies to evaluate these diseases and disorders. Management of patients with these diseases and disorders during childhood from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to a pediatric patient and pediatric illnesses, pediatric growth and development, evaluation of the newborn, pediatric screening, acute pediatric problems, adolescent medicine, Pediatric Advanced Life Support (PALS), and problems specific to pediatrics. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Two credits*

MPAS 622. GERIATRICS

This course covers the diseases and disorders as each pertains specifically to the geriatric patient to include diseases and disorders related to neurology, psychiatry, the cardiovascular system, pulmonology, nephrology, gastroenterology, oncology, hematology, endocrinology, metabolism, mobility, rheumatology, and infectious disease, as well as nutrition specific to the geriatric patient. Epidemiology, risk factors, and complications will be discussed. Emphasis is placed on interviewing and eliciting a medical history, performing a focused physical examination, and ordering and

interpreting diagnostic studies to evaluate diseases and disorders of a geriatric patient. Management of the geriatric patient from initial presentation through follow-up for acute, chronic, and emergent cases will be covered, as will referral when necessary, preventive medicine, and patient education. Associated medical documentation and clinical skills, as appropriate, will be taught. Topics include items such as approach to the geriatric patient, principles of gerontology, principles of geriatrics, geriatric syndromes, and principles of palliative medicine and ethics to include the unique changes in human physiology that occur in advancing age, the physical changes which occur in normal aging, hospice, palliative care, end-of-life issues, death, and dying. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. *Two credits*

MPAS 623. PRINCIPLES OF SURGERY & EMERGENT MANAGEMENT
This course covers the principles of surgery and emergent management. There will be a focus on the evaluation and management of emergent conditions of the neurologic, cardiovascular, pulmonary, gastrointestinal, and musculoskeletal systems, as well as on psychiatric, dental, optic, dermatologic, and wound emergencies. Topics will range from primary and secondary surveys in an emergency room to deadly animal bites, hypothermia, burns, and altered mental status. Many emergency topics will be covered in this course. Students will also learn about pre- and postoperative care, intraoperative care, post-operative care, and common surgical complications. Students will learn through an integrated curriculum to include computer-based, lecture-based, and collaborative instructional modalities that will include classroom, laboratory, simulation, group, community, and clinical experiences. Students will become recertified in BLS and certified in ACLS. *Two credits*

MPAS 624. PHARMACOLOGY IV
This course is a continuation of Pharmacology III. It addresses the pharmacologic management of musculoskeletal diseases, disorders, and injuries and behavioral health diseases and disorders. Topics include items such as black box warnings, indications, contraindications, cautions, dosing, drug interactions, adverse reactions, safety, monitoring, drug classes, drug elimination, and mechanisms of action of commonly prescribed medications used in the treatment of these diseases, disorders, and injuries. In addition, pharmacologic management specific to women, newborns, infants, toddlers, children, adolescents, and geriatric populations will be discussed. *Two credits*

MPAS 625. FOUNDATIONS OF PA PRACTICE IV
This final Foundations course continues to build on the basic concepts, facts, and principles that are essential in understanding the fundamental elements of the physician assistant profession. Utilizing the team-based learning approach, students will develop an appreciation of the unique contributions of various professionals in the community. Lectures, small group discussions, reflective paper, readings, and field experiences are the teaching strategies for this course. Topics addressed during this semester will include diversity issues related to sexuality, domestic violence and abuse, medical error prevention, patient safety, quality improvement, risk management, physician assistant licensure and credentialing, the laws and regulations regarding professional practice, and contract negotiations. Student self-assessment and reflection will occur during this course. Professionalism will be assessed. *One credit*

MPAS 626. DIDACTIC COMPREHENSIVE EVALUATION
This pass/fail course is the culminating evaluation for students nearing completion of their didactic phase. It is comprised of a comprehensive written examination, a multi-station observed clinical skills evaluation, a comprehensive patient care assessment, and a professionalism assessment. Students must pass all four of the components in order to move to the clinical phase of the program. Pass/Fail grading. *Zero credits*

MPAS 690-695. SPECIAL TOPICS - DIDACTIC PHASE
Special topics in Physician Assistant Studies are departmentally approved and assigned. *One to nine credits*

MPAS 701. FAMILY MEDICINE PRACTICUM
This six-week clinical practicum is an outpatient-based medical experience that introduces students to the clinical aspects of family practice/primary care. Students will build on the skills of history taking, performing physical examinations, developing differential diagnoses, formulating diagnoses, designing prevention and treatment plans, and documenting common medical conditions learned throughout the didactic phase of the program and apply these skills in the family practice setting. Students will participate in a variety of primary care procedures. Emphasis will be placed on caring for the entire family ranging from the newborn to the geriatric patient. *Five credits*

MPAS 702. ORTHOPEDICS PRACTICUM
This six-week clinical practicum introduces students to clinical experience in orthopedics. Students will build on the skills of history taking, performing physical examinations, developing differential diagnoses, formulating diagnoses, designing prevention and treatment plans, and documenting common medical conditions learned throughout the didactic phase of the program and apply these skills in the orthopedic practice setting. Students will have the opportunity to develop skills to care for patients with orthopedic problems in the in- and out-patient settings and to participate in pre-, intra-, and postoperative care. *Five credits*

MPAS 703. INTERNAL MEDICINE PRACTICUM
This six-week clinical practicum introduces students to the evaluation, diagnosis, and management of acute and chronic medical conditions of the adult population. Students will build on the skills of history taking, performing physical examinations, developing differential diagnoses, formulating diagnoses, designing prevention and treatment plans, and documenting common medical conditions learned throughout the didactic phase of the program and apply these skills in the internal medicine practice setting. Students will participate in a variety of primary care procedures. If hospital-based, students will have opportunities to assist with consults and admissions, manage patients from admission to discharge, order and interpret diagnostic tests commonly utilized in inpatient medical care, perform clinical hospital procedures, and become involved inpatient hospital documentation to include the admission summary, history and physical examination, daily progress note, consultation note, and discharge summary. *Five credits*

MPAS 704. BEHAVIORAL MEDICINE PRACTICUM
This six-week clinical practicum introduces students to a variety of behavioral medicine problems in inpatient- and/or outpatient-based settings. Students will build on the skills of history taking, performing physical examinations, developing differential diagnoses, formulating diagnoses,

designing prevention and treatment plans, and documenting common medical conditions learned throughout the didactic phase of the program and apply these skills in the psychiatric setting. Students will be exposed to psychiatric interviews, perform physical examinations, assist with individual and group psychological counseling, assist with psychological testing, and participate in the development of management strategies for the psychiatric patient. This practicum is designed to train students to recognize psychiatric medical conditions through clinical presentation and the psychiatric interview. *Five credits*

MPAS 705. SURGERY PRACTICUM
This six-week clinical practicum introduces students to the clinical evaluation, diagnosis, and management of patients in the surgical setting. Students will be trained in pre-operative, intra-operative, and post-operative patient care settings, as well as operating room protocol and techniques. Students will be exposed to emergent, non-emergent, and elective surgical cases. Students will learn common surgical procedures and the description, indications, contraindications, and complications of each. Additionally, students will gain experience in interpreting diagnostic tests utilized in the surgical environment and become more adept at documenting surgical notes and procedures. Students will spend three weeks in general surgery and an additional three weeks in either general surgery or a specialty surgery. *Five credits*

MPAS 706. EMERGENCY MEDICINE PRACTICUM
This six-week clinical practicum introduces students to the clinical evaluation, diagnosis, and management of patients in the emergency setting. Students will learn to evaluate and treat a wide variety of urgent, emergent, and life-threatening conditions. The student will learn to triage patients, interact with patient's families, and become more proficient at taking rapid, accurate histories, performing targeted physical examinations, ordering appropriate diagnostic tests, and formulating treatment plans. Clinical procedures performed during this rotation may include suturing, starting IVs, phlebotomy, endotracheal intubation, and Advanced Cardiac Life Support. *Five credits*

MPAS 707. PEDIATRICS PRACTICUM
This six-week clinical practicum introduces students introduces students to the clinical evaluation, diagnosis, and management of pediatric patients. Students will learn how to care for children ranging from neonates to adolescents through well-child and sick-child office visits. This practicum will reinforce the knowledge and clinical application for drug dosing, immunizations, growth and developmental milestones, common pediatric diagnostic procedures, and nutritional assessment, as well as documentation and communication with parents and pediatric patients. *Five credits*

MPAS 708. PRENATAL & GYNECOLOGIC CARE PRACTICUM
This six-week clinical practicum introduces students to prenatal and gynecologic care. Students will learn how to obtain and document an obstetrical and gynecological history and physical examination, screening techniques, diagnostic procedures, management plans, and contraceptive counseling and management. The practicum will enable students to strengthen their knowledge of pre-natal care, menstrual abnormalities, infertility, menopause, and sexually transmitted diseases. *Five credits*

MPAS 709. ELECTIVE PRACTICUM
This six-week clinical practicum allows the student to select an area or areas of medicine in which s/he desires to gain additional clinical experience. Students may return to a prior clinical setting or select a new specialty. Students will also prepare and give a formal case presentation. *Five credits*

MPAS 710. SUMMATIVE ASSESSMENT
This pass/fail course is the final evaluation of the program. It is comprised of a comprehensive written examination, a multi-station observed clinical skills evaluation, a comprehensive patient care assessment, and a professionalism assessment. Students must pass all four of the components in order to graduate and qualify to take to PANCE. *Zero credits*

MPAS 711. ORIENTATION TO PRACTICE-BASED LEARNING & IMPROVEMENT
This is a course to help orient the student to practice-based learning and improvement. Assignments will occur throughout the clinical phase. Students will use information learned throughout the didactic phase of the program in the Foundations of PA Practice courses in preparation of clinical practice. In addition, students will prepare a paper or article for submission to a peer-reviewed journal or prepare and present a poster. The format may consist of a case study, clinical review, or other format acceptable for journal publication or poster presentation. *One credit*

MPAS 790-795. SPECIAL TOPICS - CLINICAL PHASE
Special topics in Physician Assistant Studies are clinically based and departmentally approved and assigned. *One to twenty credits*

ACADEMIC CALENDARS 2017-2018

ACADEMIC CALENDAR FOR 2017-2018

16 Week Programs

FALL SEMESTER 2017			
AUGUST	17	Thursday	CBU Community Convocation
	18-20	Fri.-Sun.	Welcome Weekend
	19	Saturday	First Day of Classes
	25	Friday	Last Day to Add/Drop Courses
SEPTEMBER	4	Monday	Labor Day Holiday
	15	Friday	Graduation Application Deadline for December Candidates
OCTOBER	13	Friday	Last Day to Remove "I" Grades
	16	Monday	Mid-Term Grades Due 10:00 a.m.
	16-20	Mon.-Fri.	Fall Break
NOVEMBER	2	Thursday	Last Day to Withdraw from Courses
	23-26	Thurs.-Sun.	Thanksgiving Holiday
DECEMBER	1	Friday	Graduation Application Deadline for May and August Candidates
	8	Friday	
	11-16	Mon.-Sat.	Last Day of Classes
	18	Monday	Final Exams
			Grades Due 10:00 a.m.

SPRING SEMESTER 2018			
JANUARY	6	Saturday	First Day of Classes
	12	Friday	Last Day to Add/Drop Courses
	15	Monday	Martin Luther King Day - Holiday
MARCH	2	Friday	Last Day to Remove "I" Grades
	5	Monday	Mid-Term Grades Due 10:00 a.m.
	5-9	Mon.-Fri.	Spring Break
	22	Thursday	Last Day to Withdraw from Courses
	29- April 2	Thurs.-Mon.	Easter Holiday
APRIL	30	Monday	Last Day of Classes
MAY	1	Tuesday	Study Day
	2-7	Wed.-Mon.	Final Exams
	8	Tuesday	Grades Due 10:00 a.m.
	12	Saturday	Commencement

ACADEMIC CALENDAR FOR 2016-2017

All 8-Week Programs

FIRST FALL TERM 2017			
AUGUST	19	Saturday	First Day of Classes
	25	Friday	Last Day to Drop Courses*
SEPTEMBER	4	Monday	Labor Day Holiday
	15	Friday	Graduation Application Deadline for December Candidates
	22	Friday	Last Day to Withdraw from Courses
OCTOBER	13-14	Fri.-Sat.	Final Exams (Non-CAPS)
	16	Monday	Grades Due 10:00 a.m.

SECOND FALL TERM 2017			
OCTOBER	21	Saturday	First Day of Classes
	27	Friday	Last Day to Drop Courses*
NOVEMBER	23-26	Thurs.-Sun.	Thanksgiving Holiday
	24	Friday	Last Day to Withdraw from Courses
DECEMBER	1	Friday	Graduation Application Deadline for May and August Candidates
	15-16	Fri.-Sat.	Final Exams (Non-CAPS)
	18	Monday	Grades Due 10:00 a.m.

FIRST SPRING TERM 2018			
JANUARY	6	Saturday	First Day of Classes
	12	Friday	Last Day to Drop Courses*
	15	Monday	Martin Luther King Holiday
FEBRUARY	9	Friday	Last Day to Withdraw from Courses
MARCH	2-3	Fri.-Sat.	Final Exams (Non-CAPS)
	5	Monday	Grades Due 10:00 a.m.

SECOND SPRING TERM 2018			
MARCH	10	Saturday	First Day of Classes
	16	Friday	Last Day to Drop Courses*
	29-April 2	Thurs.-Mon.	Easter Holiday
APRIL	13	Friday	Last Day to Withdraw from Courses
MAY	4-7	Fri.-Mon.	Final Exams (Non-CAPS)
	8	Tuesday	Grades Due 10:00 a.m.
	12	Saturday	Commencement

SUMMER TERM 2018			
JUNE	2	Saturday	First Day of Classes
	8	Friday	Last Day to Drop Courses*
JULY	4	Wednesday	Independence Day Holiday
	6	Friday	Last Day to Withdraw from Courses
	27-28	Fri.-Sat.	Final Exams (Non-CAPS)
	30	Monday	Grades Due 10:00 a.m.

ACADEMIC CALENDAR FOR 2018
Summer Terms, Day and Professional Studies Programs

JUNE SESSION 2018 (5 Weeks)			
MAY	29	Tuesday	First Day of Classes
	30	Wednesday	Last Day to Add/Drop Courses
JUNE	19	Tuesday	Last Day to Withdraw from Courses
	28-29	Thurs-Fri	Final Exams
JULY	2	Monday	Grades Due 10:00 a.m.

JULY SESSION 2018 (5 Weeks)			
JULY	9	Monday	First Day of Classes
	10	Tuesday	Last Day to Add/Drop Courses
	30	Monday	Last Day to Withdraw from Courses
AUGUST	9-10	Thurs-Fri	Final Exams
	13	Monday	Grades Due 10:00 a.m.

ACADEMIC CALENDAR FOR 2018
Summer Terms, Graduate Education Program

JUNE SESSION 2018 (4 Weeks)			
JUNE	2	Saturday	First Day of Classes
	5	Tuesday	Last Day to Add/Drop Courses
	19	Tuesday	Last Day to Withdraw from Courses
	29	Friday	Final Exams
JULY	2	Monday	Grades Due 10:00 a.m.

JULY SESSION 2018 (4 Weeks)			
JUNE	30	Saturday	First Day of Classes
JULY	3	Tuesday	Last Day to Add/Drop Courses
	4	Wednesday	Independence Day Holiday
	17	Tuesday	Last Day to Withdraw from Courses
	27	Friday	Final Exams
	30	Monday	Grades Due 10:00 a.m.

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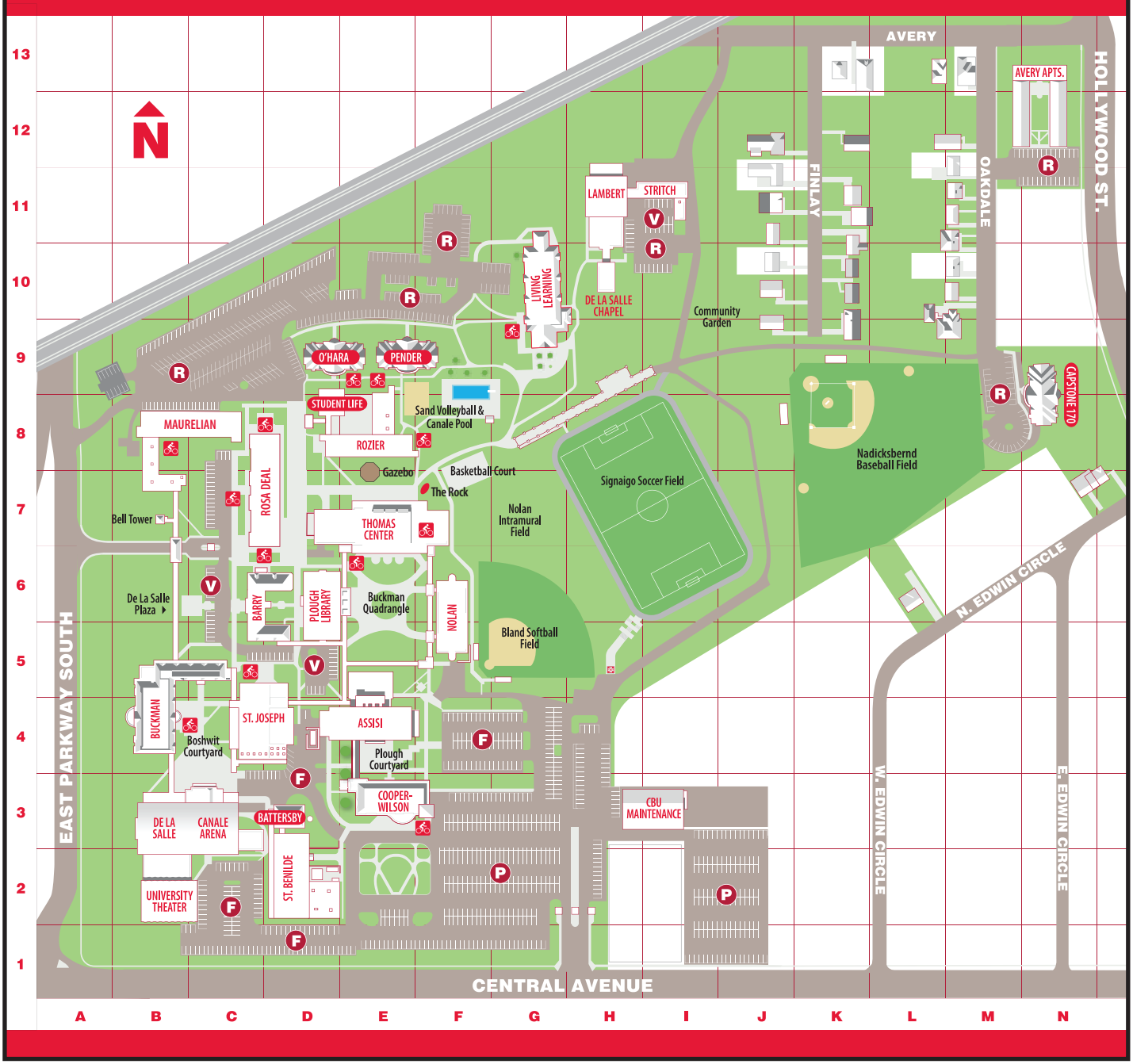
CAMPUS MAP

CHRISTIAN BROTHERS UNIVERSITY CAMPUS MAP



— A —
- Academics Office - Buckman Hall 202
- Academic Services - Barry Hall 33 (lower level)
- Administration & Finance - Barry Hall 111 (main level)
- Admissions (Undergraduate) - Buckman Hall 127
- Advancement Office - Barry Hall 101 (main level)
- Alfonso Dining Hall - Thomas Center (upper level)
- Alumni Office - Barry Hall 101 (main level)
- Aramark Food Services - Thomas Center (Alfonso Dining Hall)
- Arts, School of - Rosa Deal School of Arts 209
- Athletics - De La Salle Hall 13

— B —
- Barret School of Banking - Buckman Hall 348
- Bookstore - Thomas Center (lower level, north)
- Buccaneer Grill - Thomas Center (lower level, south)
- Business Office - Barry Hall 11 (lower level)
- Business, School of - Buckman Hall 334

— C —
- Campus Activities - Student Life (Rozier Center)
- Campus Ministry - Thomas Center (lower level)
- Campus Police & Safety - St. Joseph Hall (north side)
- Canale Arena - De La Salle Hall
- Canale Cafe - De La Salle Hall
- Career Services - Buckman Hall 207
- College of Adult Professional Studies - Buckman Hall 114
- Communications & Marketing - St. Joseph Hall (breezeway)
- Computer Center - St. Joseph Hall
- Counseling (Student) - Thomas Center (lower level)

— D —
- Dean of Students- Student Life (Rozier Center)

— E —
- Engineering, School of - Nolan Engineering 114
- Events Management - Thomas Center (lower level)

— H —
- Health Resources - Thomas Center (lower level)
- Human Resources - Thomas Center 115

— I —
- Institutional Research & Effectiveness - Buckman Hall 317
- Information Technology Services - St. Joseph Hall (breezeway)

— L —
- Language Center - Rosa Deal School of Arts 104

— M —
- Mail Room - St. Joseph Hall (breezeway)
- Math Center - Cooper-Wilson Center 321
- Mission & Identity - Barry Hall 101 (main level)
- Montesi Executive Center - Buckman Hall 211

— O —
- O'Donnell Archives - Stritch Hall

— P —
- Physical Plant-Maintenance - CBU Maintenance
- Plough Library
- President's Office - Barry Hall 105 (main level)
- Printing Services - St. Joseph Hall (breezeway)

— R —
- Office of the Registrar - Barry Hall 40 (lower level)
- Residence Life and Housing - Student Life (Rozier Center)
- Beverly & Sam Ross Gallery - Plough Library (lower level)

— S —
- Sabbatini Lounge - Thomas Center (upper level)
- School of Arts - Rosa Deal School of Arts 209
- School of Business - Buckman Hall 334
- School of Engineering - Nolan Engineering 114
- School of Sciences - Cooper-Wilson Center 102
- Spain Auditorium - Buckman Hall 106
- St. Joseph Chapel - Barry Hall (main level)
- Student Disability Services - Student Life (Rozier Center)
- Student Financial Aid - Barry Hall 21 (lower level)
- Student Life - Student Life (Rozier Center)
- Study Abroad - Buckman Hall - Buckman Hall 346
- Swashbuckler Fitness Center - Thomas Center (lower level, east)

—T—
- Tutoring - Barry Hall 39 (lower level)

—V—
- Veterans' Services - Barry Hall 40 (lower level, Registrar)

— W —
- Writing & Communications Corner - Rosa Deal School of Arts 102

RESIDENCE HALLS

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Living Learning Center	Maurelian Hall
O'Hara Hall	Pender Hall
Rozier Hall	Stritch Hall

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