

Fall 2012

2012-2013 Undergraduate Academic Catalog

Cedarville University

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INSPIRING GREATNESS

for

125

YEARS

1887-2012



CEDARVILLE

UNIVERSITY®

Inspiring Greatness

2012-13 Undergraduate Academic Catalog

ACADEMIC QUICK REFERENCE GUIDE

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INSPIRING GREATNESS

for

125

YEARS

1887–2012



2012–13 Academic Catalog

Home to 3,300 Christian students, Cedarville University is an accredited, Christ-centered, Baptist university of arts, sciences, professional, and graduate programs.

Established in 1887

The Cedarville University Catalog is published annually by the office of the registrar. While every effort is made to provide accurate and up-to-date information, the University reserves the right to change, without notice, statements in the catalog concerning policies, fees, curricula, course offerings, and other matters.

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A Word From Our President

Cedarville University's Christ-centered learning community provides an exceptional environment in which to prepare for your life's career and ministry.

We pray each student's experience at Cedarville is marked by tremendous growth — intellectually, physically, emotionally, socially, and spiritually. Those of us in the Cedarville family are committed to equipping students for lifelong

leadership and service for our Lord by offering an education marked by excellence and grounded in biblical truth.

Christians have countless opportunities to engage the world for Christ through business, medicine, law, engineering, education, the pastorate, missions, public office, counseling, and many other professions. At Cedarville, we strive to challenge you in pursuing a heart for God, forming a mind for truth, making friends for life, and committing to service for eternity. We want you to be both a committed Christian and a competent professional so that you can make a difference in this world for Jesus Christ.

This catalog is designed to answer many questions you may have. All of us in the faculty, staff, and administration at Cedarville stand ready to assist and encourage you.

God bless,

William E. Brown, Ph.D.
President, Cedarville University

History

Cedarville College was established on January 26, 1887, through the vision of five godly men who dreamed of a college that would provide Christian students with an education that was offered within a spiritual framework. Affiliated with the Reformed Presbyterian Church, the College attracted many local students and built its first building, now known as "Founders Hall," in 1895. Soon, Cedarville attracted a growing number of students and gained a reputation not only for its Bible teaching but also for its liberal arts program.

The turbulence of the first 50 years of the 20th century led to hard times for the College. After multiple attempts at revitalization, the trustees realized the school was no longer sustainable. The College would have to find another school with which to merge, another denomination to assume its operation, or close its doors.

At that time the trustees of the Baptist Bible Institute of Cleveland, Ohio, were seeking a campus on which to expand. Hearing of Cedarville College, they visited the campus and were convinced that Cedarville was the site that God had chosen for their school. Upon agreement by both trustee boards, ownership of the College was transferred on April 4, 1953. Cedarville College became a Baptist college of arts and sciences. James T. Jeremiah, the pastor who first suggested the Baptist Bible Institute-Cedarville College connection, was called to be the College's president.

Soon the College was alive and flourishing. By 1959, enrollment had grown to 255. Faculty, staff, and facilities were added. Six years later the student body had nearly tripled to 763. By the end of Dr. Jeremiah's 25-year tenure as president in 1978, the College's enrollment had grown to more than 1,200 students.

Paul Dixon was then called to lead Cedarville College. Through his leadership, the College continued to flourish in every area, and by the end of his tenure in 2003, there were nearly 3,000 students, more than 100 programs of study, and many new facilities.

In April of 2000, the board of trustees voted to change the

designation of the institution. Effective September 1, 2000, Cedarville College became Cedarville University.

William Brown took the helm of the institution in October 2003, poised to advance it forward into the next century. He did so through an expressed focus on training students to effectively engage the culture around them by thinking critically and serving compassionately.

Although much has changed since Cedarville's founding, the mission of the University has remained unchanged: to be a "Christ-centered learning community equipping students for lifelong leadership and service through an education marked by excellence and grounded in biblical truth." As a result, Cedarville has uniquely advanced liberal arts and professional programs alongside a conservative theological position. The faculty continues to be comprised solely of dedicated Christian professors who integrate the knowledge of their respective fields with key biblical perspectives.

The future looks bright for Cedarville University as it seeks God's continued blessing in this, its 125th year of service.

Profile

Home to 3,300 Christian students, Cedarville University is an accredited, Christ-centered, Baptist university of arts, sciences, professional, and graduate programs located in southwest Ohio. Since its founding in 1887, Cedarville has maintained its commitment to biblical truth and academic excellence to equip students for academic success, professional leadership, and spiritual influence. This intentional focus has earned Cedarville a national reputation as a leader in the liberal arts, health sciences, and professional programs, including graduate offerings in education and nursing and a professional program in pharmacy.

Cedarville's undergraduate curriculum is built upon a liberal arts core including biblical education, communications, global studies, humanities, physical education, science and mathematics, and the social sciences. The University's 85 undergraduate degree programs build upon this core and provide concentrated study leading to one of eight baccalaureate degrees. Master's and doctoral programs, built upon the University's strong undergraduate reputation, are also available.

Mission

Cedarville University is a Christ-centered learning community equipping students for lifelong leadership and service through an education marked by excellence and grounded in biblical truth.

The University achieves its mission by accomplishing the following objectives or "portrait statements" which reflect characteristics of a Cedarville University graduate:

Glorify God

The Cedarville graduate exemplifies devotion to the triune God, Christlike character, and faithfulness to the teachings of the Scriptures.

Think Broadly and Deeply

The Cedarville graduate evaluates ideas, practices, and theories across disciplines within the framework of God's revelation.

Communicate Effectively

The Cedarville graduate listens well, and produces and delivers clear, compelling, accurate, and truthful messages in a relevant, respectful manner.

Develop Academically and Professionally

The Cedarville graduate demonstrates competence and integrity in academic and professional endeavors.

Engage for Christ

The Cedarville graduate lives to further the mission of Christ in the world as an active influence in spiritual, moral, professional, and social spheres.

Recognition, Accreditation, and Licensure

Cedarville University is a five-year and graduate degree-granting institution chartered by the state of Ohio and certified by the Ohio Board of Regents. The University is accredited by the National Council for the Accreditation of Teacher Education and approved by the Ohio Board of Regents and the Association of Christian Schools International for the education of teachers. Teacher candidates receive their licenses from the Ohio Department of Education. The Bachelor of Science in Nursing degree is accredited by the Commission on Collegiate Nursing Education (CCNE). The Bachelor of Science degrees in mechanical, electrical, and computer engineering are each accredited by the Engineering Accreditation Commission of ABET, Inc. The Bachelor of Science Computer Science degree is accredited by the Computing Accreditation Commission of ABET, Inc. The Bachelor of Science in social work program is accredited by the Council on Social Work Education (CSWE). The Bachelor of Arts in athletic training program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The Bachelor of Arts in business administration program is accredited by the Association of Collegiate Business Schools and Programs (ACBSP). The Bachelor of Arts in music program, the Bachelor of Music programs, and the Bachelor of Music Education programs are accredited by the National Association of Schools of Music (NASM). Learn more at cedarville.edu/accreditations.

The University holds membership in the North Central Association of Colleges and Schools (ncahlc.org, 312-263-0456). This recognition signifies that the University is regionally accredited. The University also holds membership in the Council for Christian Colleges and Universities. For a listing of additional memberships, visit cedarville.edu/memberships.

Information concerning accrediting agencies and respective accreditation requirements is available in the office of the vice president for academics.

Setting

Cedarville University is located on 400 acres at the north edge of the village of Cedarville, Ohio, a quiet town with a population of approximately 4,000. Founded in 1816 at the junction of two state routes, the village and its surrounding area have long provided a wholesome environment for learning.

This pleasant setting continues today. Downtown Cedarville features the historic Cedarville Opera House, two banks, post office, pharmacy, convenience store/gas station, restaurants, hardware store, hair salon, barber, and coffee shops where many students like to relax and socialize with friends. Massie's Creek and an adjacent park offer hours of recreation, adventure, and reflection within a mile of the University.

Rolling hills and prospering farms border the village and University. This beautiful area, which extends westward to John Bryan State Park, has been recognized as one of the most scenic in the Midwest and serves as a popular spot for students.

Cedarville University is conveniently situated within easy access to shopping areas in the small cities of Xenia and Springfield. The University lies in the center of a triangle formed by three interstate highways, I-70, I-75, and I-71, and thus enjoys quick access to Columbus, Dayton, and Cincinnati. These metropolitan areas offer fine dining, professional sporting events, concerts, and employment opportunities.

Facilities



Alford Auditorium

Initially built as a church in 1853 and renovated by the University in 1903, Alford Auditorium has served the University in several capacities, such as a gymnasium, chapel, and theatre. The building with its newer annex now functions as classrooms and faculty offices.



Apple Technology Resource Center

The Apple Technology Resource Center was renovated in 1998 to further strengthen Cedarville's position as a national leader in instructional technology. The 24,000-square-foot facility houses six general classrooms, a 40-station general-use computer laboratory, a videoconferencing center, a computerized testing room, student lounges, and 17 offices. New electronic media facilities were added in 2004. These include four studios: a recording studio outfitted with a Mackie D8B and 2496 hard disc recording system, a television studio/control room equipped with three digital video cameras and "green screen" wall, a broadcast studio, and an audio computer studio. Apple also houses the department of social work faculty offices.



Athletic and Recreation Center

This complex features the Callan Athletic Center, Doden Field House, Fitness Center, and University Medical Services (UMS). It provides space for the departments of athletics, campus recreation, kinesiology and allied health, and UMS.



Callan Athletic Center

Constructed in 1981, the Callan Athletic Center includes the Stranahan Gymnasium, which seats nearly 3,000 fans and serves as the competition venue for basketball and volleyball programs, along with providing space for a variety of athletic team practices, intramural sports, and many other recreational activities. The entire facility features three full-length basketball courts, five volleyball courts, 10 badminton courts, nine team and general-use locker rooms, an athletics laundry facility, and a state-of-the-art athletics training room complex. The renovated second floor, opened in January 2003, includes six classrooms, an exercise science lab, and offices for coaches and faculty in the department of kinesiology and allied health.



Fitness Center

Also added in 2003, the Fitness Center is an open, inviting area featuring a 40-foot indoor climbing wall, capturing the attention of all who enter. This section of the Recreation Center also includes three racquetball courts, a 2,200-square-foot exercise studio, a varsity athletics free weight room, a 2,000-square-foot general use free weight room, 28 Nautilus strength training machines, 50 cardio machines, and a recreation equipment room.



Doden Field House

The Doden Field House is the largest section of the Recreation Center, added in 2003. This 60,000-square-foot area can host four basketball, volleyball, and tennis courts or two indoor soccer courts. It also includes three batting cages, a 200-meter track, and bleachers seating 1,000 spectators. The track is used for individual walking/jogging as well as for high school and college indoor track competitions. Cedarville's annual commencement is held in the Field House, accomodating nearly 7,000 attendees.



University Medical Services

Another section added to the complex in 2003 is University Medical Services, which provides ambulatory health care with a staff that consists of physicians and nurses. University Medical Services offers many health care services such as preventative care, illness care, wellness education, over-the-counter medications, allergy injection management, laboratory services, prescription medications, rehabilitation treatment, and an insurance claim service. See page 9 and page 282 for more information.



Carnegie Center for the Visual Arts

Located two blocks south of the main campus, this stately structure, donated by Andrew Carnegie, went through a major renovation in 2012. The building houses the administrative offices for the department of art, design, and theatre, upper-level studios for art students, and classrooms for drawing, painting, and two-dimensional design.



Centennial Library

The construction of the 66,000-square-foot, two-story library served as the cornerstone of the University's 1987 centennial celebration. This structure brings together the latest information technologies for higher learning and provides general study and specialized seating for over 800 students. Designed to house a collection of up to 250,000 volumes, the library also contains the MediaPLEX, the Curriculum Materials Center, computer and media-supported classrooms, a variety of individual and group study facilities, and the University archives.

The library collection consists of approximately 275,000 print, media, and digital items, including almost 1,000 journal subscriptions in print form, more than 9,000 e-journal subscriptions, and more than 53,000 e-books. As a member of OhioLINK, a cooperative of 90 institutional libraries, students and faculty have access to more than 12,000,000 unique titles through a centralized computer catalog with on-campus delivery. In addition, through OCLC, the Online Computer Library Center, the library has access to more than 236,000,000 books and other library materials in more than 72,000 libraries in all 50 states and 170 foreign countries.



Center for Biblical and Theological Studies

Situated on Cedar Lake, this innovative 59,000-square-foot structure supports Cedarville's Bible minor — which grounds students in God's Word — as well as the 10 Bible programs that prepare them for vocational ministry. The center includes a technology-equipped homiletics lab, two lecture halls, 14 classrooms, accessible faculty offices, email stations, a multimedia lab, and a 36-station computer lab, along with a lounge, gallery, and vending areas. The building also houses the University's academic enrichment center, which provides courses, programs, services, and events to cultivate academic success. It includes tutoring, first-year programming, disability services, workshops, consultations, and exploratory support.



Center for Teaching and Learning

This facility houses offices for the college of extended learning and the Center for Teaching and Learning, which works with faculty to create effective instructional solutions.



Collins Hall

Collins Hall houses the department of history and government, the travel study office, and the office for summer school and continuing education.



Dixon Ministry Center

The 120,000-square-foot Dixon Ministry Center, completed in 1996, includes the Jeremiah Chapel, the Christian ministries division, the department of music and worship, and seven classrooms.

The 3,400-seat chapel is the site of daily chapel services that bring the University family together for worship and instruction from God's Word.

The department of music and worship facilities include 15 instructional studios, 20 practice rooms, four rehearsal halls, a piano pedagogy suite, a piano laboratory, a computer laboratory, three specialized classrooms, a large conference room, and a beautiful 250-seat recital hall.



Engineering and Science Center

This facility demonstrates the University's firm commitment to providing a quality Christian education in the sciences. This 95,000-square-foot, three-story academic center is home to the department of science and mathematics and the Elmer W. Engstrom Department of Engineering and Computer Science. It contains 10 classrooms, including a 200-seat auditorium, 10 independent study laboratories, five conference rooms, 36 discipline-specific laboratories, 50 offices, and several lounges. The building also contains a 40-station general-use computer laboratory and features video and data connectivity in all offices, classrooms, and laboratories. Special features include three computer-equipped classrooms, a 16-inch reflecting telescope, an audio visual learning laboratory, an engine test cell, five electronic circuit laboratories, and a wind tunnel with an 18-inch test chamber.



Engineering Projects Laboratory

The 8,800-square-foot Engineering Projects Laboratory was opened in 2005 and houses a projects lab complete with a machine shop, welding area, ventilated paint and fiberglass booth, wood shop, and bays for up to six projects. The single-story steel building also features a multipurpose conference room and six faculty offices.



Founders Hall

This historic facility was renamed Founders Hall on Centennial Charter Day, January 26, 1987. Today this stately structure serves as Cedarville's administrative and academic headquarters with offices for the president, provost, and academic vice president.



Hartman Hall

Hartman Hall is home to theatre faculty offices and houses a conference room for the department of art, design, and theatre. A full-scale restoration of this historic home was completed in 2012.



Health Sciences Center

The newly constructed Health Sciences Center is home to the schools of nursing and pharmacy as well as the Center for Bioethics. This facility houses state-of-the-art classrooms and research and clinical laboratories, including one of the best simulation centers in the country. It also includes numerous student collaboration rooms and comfortable lounges for group interaction and individual study and relaxation.



Human Resource and Safety Center

Following its renovation in 2001, the Human Resource and Safety Center houses the administrative offices of human resources and campus safety.



Milner Business Administration Building

Opened in 1987 and featuring the latest in instructional technology, the George Milner Business Administration Building contains nine general classrooms, two computer classrooms, the trading center, the center for business innovation, and faculty offices for the school of business administration.



Patterson Hall

Formerly the home of the University's medical clinic, Patterson Hall now provides faculty office space for the department of media and applied communications.



Stevens Student Center

As the hub of student activity at Cedarville, the SSC houses food services, the bookstore, event rooms, classrooms, computer labs, the post office, a game room, the student radio station, theatre, and student government. The 150,000-square-foot building is also the home of admissions, financial aid, office of the registrar, and the student life division.

Dining options on campus include the dining hall's all-you-can-eat meals or casual meals in The Hive, Cedarville's snack shop. The President's Dining Room, used for special occasions, offers formal dining in an elegant setting. Many students and guests also enjoy Rinnova, the campus coffee shop.

The bookstore endeavors to provide students with the materials necessary to enjoy a successful college experience, including dorm supplies, Cedarville apparel, books, and more.

The theatre complex includes an impressive 400-seat theatre with modern technology and staging, as well as a movement studio, makeup suite, scene design lab, scene shop, offices, and dressing rooms.



Tyler Digital Communication Center

This facility, renovated in 2002, includes a graphic design lab, writing center, multimedia lab, three computer classrooms, seven general classrooms, and faculty offices. Offices for alumni relations, marketing, creative services, advancement, and information technology are also located in this building. Tyler also holds the Computer Assistance Center.



Williams Hall

Providing classrooms and offices, Williams Hall serves as the home of the academic departments of education, psychology, and English, literature, and modern languages.

Computer Network

Cedarville University is known nationally as a leader in campus computer networking and instructional technology, providing networked computers in each of the residence hall rooms, laboratories, and offices. One of the major advantages to the network, called CedarNet, is that students have access to over 150 commercial software packages directly from the residence hall rooms without going to a specialized laboratory.

CedarNet is a winner of the CAUSE Award for Excellence in Campus Networking. This prestigious national award recognizes colleges and universities that exemplify best practices in campus networking in higher education.

Equipment

The network features Intel computers with 4 GB or more of RAM, hard disk drive, DVD-RW/CD-RW drive, USB ports, Ethernet interface, and monitor. All computer laboratories offer high-quality laser printers and flatbed scanners. The library computer laboratory also features color printers, digital cameras, and other specialized equipment. Each residence hall room has two 100-Mbps network connections, for use by the University-provided computer and for student-provided systems. Students who bring their own notebook computers have wireless access in all campus buildings and in many outdoor areas.

Access

All students living in a residence hall benefit from 24-hour access to the network. Residence hall computers are replaced on a four-year cycle so that students always have current technology available. To enable students to take further advantage of the network, public laboratories are conveniently open to on- and off-campus students with a total of 180 stations available.

Wireless network access is provided in classroom areas, coed lounges, residence hall rooms, and in large gathering areas such as the Centennial Library, the Stevens Student Center, and the Dixon Ministry Center. Wireless access is also available outdoors on campus lawns and athletic fields.

Benefits

Students using the network can:

- Communicate electronically on campus with professors, friends, and classmates, or with friends and family around the world.
- Manage, display, and analyze data using spreadsheet, statistical, and database software.
- Search library holdings for personal and class research projects, papers, or presentations, even when the library is closed.
- Access their course schedule, college transcript, or business office account.
- Learn to use the network through online tutorials and training seminars for commonly used software applications.

Technology Advisory Council

The Technology Advisory Council consists of corporate leaders and professionals representing a variety of technology-oriented businesses. Annually, these experts advise the University and evaluate its plans for further strengthening Cedarville's position as a leader in instructional technology.

Dr. Eugene Apple, General Electric

Ms. Cathy Balas, Avetec

Mr. George Chessum, Resurrection Health Care

Mr. David Cossey, Union College

Mr. Greg Frye, Basco Shower Door

Mr. Brian Gammon, PNC Financial Services

Mr. Michael Gutman, Syllogistic

Mr. Bowe Hoy, Sword and Shield

Dr. Shawana Johnson-Kerr, Global Marketing Insights

Ms. Alice Kaltenmark, LexisNexis, Reed Elsevier

Mr. Ed Krupka, Burris Information Technology

Mr. Fred Laxton, Executive Consultants

Mr. Douglas Macrae, 38 Studios

Mr. Andrew Mininger, The Madison Park Company

Mr. Robert Murphy, J.W. Pepper and Son, Inc.

Mr. Jim Napier, Meggitt Training Systems

Mr. William Pardi, Microsoft Corporation

Mr. Chris Pool, First Column Enterprises

Mr. David Sherry, Brown University

Mr. Al Stevens, Opex Corporation

Mr. Al Stutz, Avetec

Mr. Craig Terrell, Vanguard Solutions

Dr. Michael Zastrocky, The Chronicle of Higher Education

University Student Services

The University recognizes the importance of providing our students with a high level of support and provides a full range of student services including career services, counseling, and a strong orientation program for new students.

Career Services

The career services office seeks to facilitate the development of each individual's knowledge base, networking ability, and lifelong career navigational skills.

Career services is staffed by professionals certified in the areas of resume writing and career coaching. Students may take advantage of workshops or individual appointments geared to assist them with resume writing, interviewing, networking, gaining admission to graduate school, or understanding the job search process. The Career Direct interest inventory and individual coaching sessions are also available to help students determine majors and occupations. The career services homepage (cedarville.edu/career) links to the very latest in network-based job search programs, guides to major employers, and directories for graduate schools.

Career fairs are held each year to provide an opportunity for prospective employers to meet with students. Potential employers also visit the University for individual on-campus recruiting days and interview sessions.

Students may register for a free account with *Jobs4Jackets*, a job-match database that enables students and employers to connect for employment needs. Students may browse job openings and upload a resumé for employer review. This is a service they may continue using as alumni.

Affiliations

National Association of Colleges and Employers (NACE)

National Career Development Association (NCDA)

Midwest Association of Colleges and Employers (MWACE)

Professional Association of Resume Writers and Career

Coaches (PARW/CC)

Highlights

Ranked as one of the top career services offices in the Noel-Levitz student satisfaction survey among all participating public and private institutions.

Employment statistics for Cedarville graduates consistently rank above the national averages provided by the National Association of Colleges and Employers (NACE).

Counseling Services

The counseling services office provides a place where students can find understanding, encouragement, and counsel as they deal with personal, interpersonal, and spiritual concerns.

Staffed by licensed professional counselors, this service offers individual 50-minute counseling sessions that work around each student's class schedule. Support groups that address specific topics of concern are available throughout the academic year. This service, for which students pay no additional charge, is offered by appointment. In the case of a crisis, the service is provided as needed.

Additional resources for counsel and guidance include the vice president for Christian ministries, faculty members, and staff members. Counseling services also offers referrals to both local and national mental health professionals. Faculty advisors are particularly prepared to assist students in program and course selection.

Location: SSC 163

Phone: 937-766-7855

Web: cedarville.edu/counseling

Email: counsel@cedarville.edu

Health Care and Medical Services

Student health care is provided by University Medical Services (UMS), a full-service ambulatory care facility that provides health care services similar to a family practice office. UMS is located adjacent to the Doden Field House and contracts with several local physicians and practitioners so that health care services are available to students right on campus. UMS is staffed by expert physicians, nurses, and paramedics that love caring for young adults and are committed to providing quality health care. The services of UMS include physician and nursing appointments, physicals for athletics and ministry participation, academic physicals, laboratory services, prescription dispensary services, allergy clinic services, immunization clinic, and travel immunization services, to name a few. UMS also works closely with area hospitals and specialists to coordinate referrals for students to specialty physicians and for other medical services such as radiology testing.

Phone: 937-766-7862

Fax: 937-766-7865

Web: cedarville.edu/ums

Email: ums@cedarville.edu

Another health care service available to students on campus is Cedarville University Emergency Medical Service (CUEMS), a volunteer EMS ambulance ministry manned by students who are nationally and state certified EMTs and/or paramedics. CUEMS responds primarily to emergencies on campus. Also, CUEMS provides mutual aid to the Cedarville Township and the surrounding community when needed. The students who are involved in the ministry volunteer their medical expertise to the Cedarville University family and strive to demonstrate Christ's love and compassion to their fellow students in time of need. To learn more about the ministry of CUEMS, visit the following website: cedarville.edu/ums. For information about how you can become an EMT, see page 23.

Housing

Residence hall living is an integral part of the educational process at Cedarville. All single students under 23 years of age, except those commuting from the home of their parents or legal guardian, are required to live in University residence halls. Students 25 years of age and older must secure off-campus housing.

Approximately 80 percent of the student body lives on campus in University housing. Men and women are housed in separate residence halls. All offer convenient laundry and lounge areas and house just two students per room. Each room is fully furnished and includes a live phone jack. Students must provide their own phone. Every residence hall room is equipped with a networked computer. Also, the residence halls have free wireless access.

Students select their room and roommate through an online housing system. Continuing students who are registered for the following semester are given priority. New students who have submitted their reservation deposit are granted access to the system after continuing students have made their selections. Complete information concerning residence hall staffing, furnishings, and policies is found on the residence life website. A student handbook will be mailed to new students prior to their arrival on campus.

Married students may find housing at Cedar Park, a University-owned apartment complex, or in one of many area apartments.

New Student Orientation

"Getting Started" takes place at the start of each semester, when new students are provided with opportunities designed to facilitate adjustments to their new surroundings. The program includes orientation for parents. Special interest sessions, question and answer times, small group meetings, and social activities provide opportunities to adjust to a new environment. Placement testing may be required during orientation.

Vehicles

There are no restrictions on vehicle registration; however, for academic reasons, freshmen are discouraged from bringing a vehicle their first semester. Please understand that parking is limited and upperclassmen are given priority. All vehicles parked on campus must be registered at cedarville.edu/campussafety.



Christian Ministries

Cedarville University is dedicated to ministry involvement as a vital part of each student's education and spiritual growth. Students are challenged to consider how their academic disciplines, interests, and abilities can be used to build relationships and share God's love with the people He intentionally places in their lives. Directed by the vice president for Christian ministries and coordinated through 14 full-time staff members, the Christian ministries division provides training and assistance to the hundreds of students who volunteer each year.

Chapel

It has been said that the heartbeat of Cedarville University is the daily chapel service held in the 3,400-seat James T. Jeremiah Chapel. At 10 a.m. each morning, the auditorium comes alive as the University gathers to worship, pray, hear from God's Word, and contemplate relevant issues facing the body of Christ today. Chapel is a place for students to grow and connect as speakers inspire and challenge the University family. Many students participate in one of the many chapel bands that lead worship each day. Alumni often mention chapel as one of the things they miss most after graduation.

Church Relations

Church relations seeks to engage Christ-centered churches and their leadership in order to build and strengthen strategic and reciprocal relationships, connect churches to the resources of Cedarville University, and promote student involvement in local

churches. This engagement occurs through a number of activities and efforts.

- Pastor Appreciation Days — several times each year a small group of pastors are invited to Cedarville and are honored and recognized for their ministry.
- Annual Conferences — Church relations sponsors or supports Cedarville conferences designed to equip and strengthen local churches, such as the annual Pastors Conference, Worship 4:24, Bioethics Conference, and the Critical Concerns Series, addressing complex social issues of the day.
- Regional and National Conferences — Cedarville staff members represent the University to pastors and churches at a number of regional and national conferences.

Community Ministries

Community ministries equips students for lifelong leadership and service by organizing and encouraging involvement in local church teams, community outreach teams, and spring break teams where students express their love for God by serving others. Cedarville University is located in a region known as the Miami Valley. The cities of Columbus, Dayton, and Cincinnati are close by, as well as hundreds of smaller communities. Dozens of student-led teams serve faithfully in these local communities and churches each week.

- Local Church Ministry Teams — students serve alongside church members in many areas such as worship/music, youth ministries, children's ministries, Awana ministries, nursery ministries, etc.
- Community Outreach Ministry Teams — students serve in various agencies and faith-based organizations including crisis pregnancy/abstinence and counseling ministries, evangelism/urban outreach ministries, public school tutoring and teaching English ministries, youth and children's ministries, jail/detention center ministries, hospital ministries, nursing home/elderly visitation ministries, special needs ministries, etc.
- Spring Break Ministry Teams — students have the opportunity to join a week-long team that travels to serve with ministries such as the John Perkins Foundation (Mississippi), Inner City Impact (Chicago), Sunshine Gospel Ministries (Chicago), Shepherd's Ministries (Wisconsin), and Urban Hope (Philadelphia).

Missions Involvement Services

Missions Involvement Services (MIS) provides unique opportunities for students to experience missions firsthand. Each year during breaks and in the summer, hundreds of students serve around the globe. This involvement assists missionaries in their work and helps students discern God's direction in their own lives. Participants raise their own financial and prayer support prior to leaving and report on their ministries upon returning.

Since 1971, over 6,000 MIS participants have served in 91 countries. Each year opportunities for service include medical, computer, engineering, sports, orphan care, teaching English as a second language, music, and physical labor. Students interested in cross-cultural ministries should contact the MIS office for details. Every student is encouraged to take advantage of an MIS opportunity.

Discipleship Ministries

While many ministries concentrate on "outreach" from campus, the focus of discipleship ministries is "in-reach" to campus. Opportunities include approximately 120 student-led small-group Bible studies as well as several prayer groups. Discipleship ministries is an excellent avenue for students to grow in their walk

with God and find opportunities to minister to fellow Cedarville University students. Engaged and seriously dating students may also enroll in Fit To Be Tied, which is a premarital preparation and mentoring program.

HeartSong Ministries

HeartSong ministries communicates the livable reality of the Gospel as seen through genuine worship. Whether at a large conference or small youth event, HeartSong intentionally balances music, Scripture, and life stories to engage audiences in a way that is distinctively Cedarville. Teams rehearse approximately six hours a week and travel a minimum of five weekends each semester and 10 weeks during the summer. Auditions are held each year during the first week of school. HeartSong is excited to reach out to thousands of young people across the country and introduce them to the incredible opportunities available at Cedarville University.

OneVoice Gospel Choir

OneVoice is a music ministry that is open to all students and uses various music styles including black gospel and contemporary Christian to spread the Gospel of Jesus Christ and encourage believers to celebrate the joy of the Lord. OneVoice includes a large volunteer choir and the OneVoice Ensemble and Band.

Selecting a Ministry

- Consider your interests. Select a ministry that allows you to do something you enjoy.
- Consider your vocational goals. There are many ministries that are directly related to the majors offered at Cedarville University. A ministry related to your chosen field can help you decide if you have made the right choice and in some cases may lead to an internship, reference, or employment.
- Talk with upperclassmen. Find someone who has experience in the ministry you are considering.
- Watch your email for ministry opportunities that will be announced.
- Talk with the Christian ministries staff in the Dixon Ministry Center. They are available to answer questions you might have.

cedarville.edu/serve

Student Life

Cedarville seeks to maintain a culture that reflects the values of the Kingdom of Heaven and the spirit of Jesus Christ. The student life program is designed to support this kind of environment and to contribute to each student's growth intellectually, spiritually,



socially, and physically. In each of these areas, the University recognizes the relevancy and authority of the Bible and accepts it as the final authority for faith and practice. Core values that shape the culture include love for God, love for neighbors, excellence in effort, and integrity in conduct.

Spiritual Emphasis

The University desires that each student grow in their relationship with Christ. Consequently, students are urged to regularly practice spiritual disciplines including worship, prayer, and Bible study. Daily chapel services provide spiritual encouragement and enrichment. We ask students to maintain the discipline of weekly corporate worship at a local church.

Spiritual growth is further encouraged through student prayer groups that meet regularly to pray for special needs. One day a year is set aside as a "Day of Prayer," a time when the entire University family gathers to pray together.

Community Covenant

Cedarville recognizes and values the Bible as an authoritative guide for how Christians should live. It also recognizes that God uses community and relationships with other believers to encourage growth. The Cedarville family believes that behavior, as individuals and as a community, should bring honor to God and reflect obedience to His Word. At the beginning of each year, all students are asked to affirm their desire to abide by the following Community Covenant:

We are a community of believers accountable to one another, called to reflect the character of Jesus Christ and to be obedient to His Word. We will be faithful in our support for the local church and in our practice of the spiritual disciplines. We will practice biblical principles of encouragement, exhortation, and reconciliation. We commit ourselves to integrity, kindness, purity, and self-control. We commit ourselves to continual growth in scholarship, leadership, and service.

Therefore, as a member of the Cedarville community, we regularly affirm our commitment to the Cedarville Covenant: *We will love God and others, live with integrity, and pursue excellence in all we do.*

The student handbook, *The Cedarville Experience*, is designed to help each student be successful academically, spiritually, and socially. It includes specific prohibitions to behaviors that are either sinful or harmful to this community, such as sexual immorality, use of alcohol, tobacco, or illegal drugs, and racial or sexual harassment. It also outlines some of the values that define and shape the culture here, including a simple dress code that seeks to remind students to dress and behave modestly and to take their academic work seriously. *The Cedarville Experience* can be accessed online at cedarville.edu/studenthandbook.

Cocurricular Opportunities

A wide variety of cocurricular activities are available for students, regardless of major. For information on the following, please see catalog sections as noted:

- Debate – Media and Applied Communications, page 128
- Engineering Competitions – Engineering and Computer Science, page 79
- Forensics – Media and Applied Communications, page 128
- Math Club – Science and Mathematics, page 167
- Miriam Maddox Forum – Media and Applied Communications, page 128
- Student Radio Station – Media and Applied Communications, page 129
- Theatre – Art, Design, and Theatre, page 41

Music Groups

Students with musical abilities may utilize their talents in any one of a number of musical groups. Membership in any of these musical groups is determined through auditions, which occur during Getting Started Weekend.

Instrumentalists may participate in the Symphonic Band, Brass Choir, University Orchestra, Jazz Band, Flute Choir, Yellow Jacket Pep Band, or various chamber ensembles.

Vocalists may sing with the Concert Chorale, Men's Glee Club, Women's Choir, Opera Ensemble, Jubilate ministry Choir, OneVoice (gospel choir), or one of the many small ensembles directed by the Christian ministries division.

Intercollegiate Athletics

Cedarville University provides intercollegiate competition for men in baseball, basketball, cross country, golf, indoor and outdoor track, soccer, and tennis. Intercollegiate sports for women include basketball, cross country, indoor and outdoor track, soccer, softball, tennis, and volleyball. Cedarville is a member of the NCAA Division II and the National Christian College Athletic Association.

Students interested in participating on an intercollegiate athletic team should visit the Cedarville University Athletics website (yellowjackets.cedarville.edu). Click the team sport you are interested in and fill out a prospective athlete questionnaire.



Campus Recreation

The campus recreation program provides 25 intramural sports, various outdoor pursuit trips, fitness programming, special events, and the 40-foot-high indoor climbing wall to help meet the fitness and recreational needs and interests of our University family. For a listing of activities and additional information, visit cedarville.edu/recreation.

Student Life Programs

The office of student life programs provides cultural, social, educational, and recreational activities. Programs include Christian concerts with groups like Owl City, Switchfoot, Newsboys, Third Day, and David Crowder Band; musical/talent nights; all-school parties; special interest trips; movies; topical discussions; and guest speakers. Involvement in campus organizations provides additional opportunities for learning and social interaction.

Leadership Opportunities

Student life programs provide opportunities for leadership development. FOCUS Leadership at Cedarville University is designed to enhance the character traits, knowledge base, and skills of developing student leaders. The philosophy of FOCUS assumes that inherent leadership potential varies in individuals based on personality strengths, intellect, and spiritual giftedness, but that all students can increase their leadership ability over time. Opportunities include, but are not limited to, the following:

- The Excel Initiative – Workshops for all students who desire enhanced leadership skills.
- The Character Forum – Panel discussions, chapel series, and awards develop and recognize strong character.
- Mentoring Programs – Veranda Life (women) and MMM (men) connect students with proven leaders for personal reflection and accountability.

Organizations

Student Government Association exists to provide a means by which the student body can express their thoughts and desires to the administration. SGA also orchestrates activities, chapels, organizations, and leadership opportunities for the benefit of the student body.

Academic

Major-Specific Organizations

Accounting Society promotes accounting awareness, establishes relationships with professionals in the accounting vocation, provides tutoring for students, and promotes fellowship among accounting students.

Alpha Delta Nu is an organization that supports students majoring in criminal justice.

Alpha Sigma is devoted to promoting critical thinking through philosophical and theological inquiry into issues central to the Christian worldview and our contemporary culture.

Athletic Training Organization promotes educational activities to develop closer contact with those involved in the athletic training/sports medicine profession.

Chi Delta Epsilon provides fellowship and seeks to stimulate professional interests and encourage professional growth among future teachers.

Chi Theta Pi provides advice and relevant experiences for students interested in the health-science professions.

Christian Nurses Association promotes spiritual and professional development for nurses and service for the community.

Christian Pharmacists Fellowship International (CPFI) serves to promote fellowship among Christian pharmacists, pharmacy students, and those they influence; to identify issues in the profession requiring group prayer, and to provide opportunities

for communication between students and professionals from numerous areas of the pharmacy profession.

Epsilon Alpha Pi is an organization for social work majors, which seeks to promote professional development, political and social awareness, and community outreach.

Epsilon Pi Lambda is a student organization that provides opportunities for students to grow in their appreciation of the fields of history and government and an outlet for pursuing knowledge, obtaining academic support, gaining fellowship, and providing service.

Health and Fitness Organization (HAFO) is the principal advocate and leadership organization for college and university health. The organization provides education, communication, products, and services, as well as promotes research and culturally competent practices to enhance its members' ability to advance the health of all students and the campus community.

Icarus Collective exists to promote the enjoyment and appreciation of poetry in all of its various forms.

Model United Nations (U.N.) Team is a simulation of the United Nations system. Students assume the roles of ambassadors to the United Nations and negotiate current global issues. The Cedarville University Model U.N. Team participates in an intercollegiate competition in which participants seek to deal with complex global concerns such as the environment, economic development, refugees, AIDS, disarmament, and human rights. As representatives of U.N. member nations, team members must master a great deal of detailed information about national policies while remaining in character — responding to debates and negotiations in the same manner as a U.N. delegate from that nation.

Omega Tau Kappa is dedicated to preparing members to be more effective science educators through professional development, service to the education profession, and social interaction.

Pi Epsilon Omega is for all students pursuing a major or minor in multi-age physical education, multi-age health education, and physical activity and sport study.

Psi Kappa Theta consists of students interested in psychology and behavioral sciences.

Renaissance Guild increases learning and awareness of medieval and Renaissance eras and provides fellowship with like-minded individuals.

Society of Engineers Aiding Missions (SEAM) has as its mission to educate, equip, and engage engineers in the cause of world missions.

Sport Management Organization (SMO) provides opportunities for networking and practical experiences that will help members successfully pursue professional careers within the sport industry and/or be more prepared for further academic pursuits.

Student CEOs is dedicated to enhancing communication between the school of business administration and its students, enhancing the relationship between faculty and students in the program, and participating in marketing and execution of departmental events and programs.

Women in Business is an organization dedicated to helping women in professions learn more about reaching goals in careers, at home, and in service. Women in Business provides a forum for addressing issues relevant to women, helps women connect with modern female business leaders, provides opportunities for impacting women in need, and establishes camaraderie among female students of professions.

Professional Organizations

American Society of Mechanical Engineers (ASME) is a student chapter of the American Society of Mechanical Engineers, promoting practical experience and professional development.

Association of Information Technology Professionals (AITP) provides management information systems, computer information systems, and computer science majors with opportunities to network with AITP members and learn about information systems careers through seminars and computer-related activities.

Financial Management Association (FMA) strives to educate students about financial practices, connect students to professionals in their field, and to provide students with valuable resources in their future workplaces.

Institute of Electrical and Electronics Engineers (IEEE) is a branch of the IEEE, which exists to promote technical and professional growth among electrical engineering students.

Music Educators National Conference (MENC) is the University's student chapter of MENC for music majors and others involved in pursuing a music teaching program.

Society for Technical Communication (STC) promotes the purposes and services of technical communication systems.

Society for Women Engineers (SWE) is an educational and service organization that empowers women to succeed and advance in the field of engineering and to be recognized for their life-changing contributions as engineers and leaders.

Society of Automotive Engineers (SAE) provides its members opportunities to gain broader insight into the engineering profession.

Society of Composers Inc. (SCI) seeks to further the cause of the composition and performance of new music in and around the campus community.

Society of Human Resources Management (SHRM) is an organization for students interested in human resources and labor relations.

Students in Free Enterprise (SIFE) is an organization that provides students the opportunity to make a difference and develop leadership, teamwork, and communication skills through learning, practicing, and teaching the principles of free enterprise.

Honor Organizations

Alpha Kappa Delta, the local chapter of Sigma Tau Delta, is an English honor organization that recognizes outstanding students in the English program.

Alpha Psi Omega is Cedarville's chapter of Alpha Psi Omega, the national honorary theatre organization, and seeks to promote awareness and appreciation of the theatre arts on campus. Membership is open to all majors and is based on meeting national criteria for dedication to and excellence in stagecraft.

Delta Mu Delta is an international honor society in business administration that recognizes junior and senior business majors who maintain excellent scholastic achievement.

Epsilon Omega is a local chapter of Phi Alpha Honor Society, the National Social Work Honor Society, committed to promoting a high standard of education for social workers.

Omega Mu is the Cedarville University chapter of Pi Sigma Alpha, the National Political Science Honor Society. The goal of this honor society is to promote the scholarly investigation of politics and to assist its members in developing their leadership potential in their sphere of influence.

Tau Beta Pi is a Cedarville University Engineering Honor Society, which recognizes junior and senior engineering majors for outstanding scholastic achievement combined with strong Christian character.

Tau Delta Kappa provides an opportunity for fellowship and exchange of ideas and supports students involved in the honors program.

Campus Community

Community Service Organizations

CUEMS is an organization of trained students who provide prompt and professional pre-hospital care and transportation to Cedarville students in need.

Habitat For Humanity is a student organization committed to demonstrating Christ's love in truth and deed by working with local housing organizations to provide housing.

Cross-Cultural Organizations

Amplified exists to educate Cedarville University students about urban ministries and better equip them for future ministry opportunities.

German Club is for students who are interested in German language and culture. The club meets weekly for language practice and monthly for meetings, activities, and trips.

International Justice Mission promotes awareness on campus of issues of injustice around the globe, particularly those issues addressed by the International Justice Mission based in Washington, D.C.

International Student Organization provides opportunities for international students to meet their distinctive needs and plan ways to share their unique contributions.

Mu Kappa is a fellowship organization serving missionary kids and international students.

The P.E.A.C.E. Project is a service and social organization that seeks to foster and promote a God-centered attitude of multiculturalism for the entire Cedarville family.

Rusul Salaam promotes the general awareness of the Islamic religion and a biblically based approach to engaging Muslims through ministry.

Societe de Francais promotes the use of the French language and increases the knowledge and appreciation of French culture to advance awareness of missions.

Spanish Club provides opportunities to practice language skills and learn about Spanish-speaking cultures through extracurricular activities.

Women of Vision is a women's organization that seeks to improve the quality of life for women and children throughout the world by linking students with women in the community and University in mentoring relationships for service.

Social/Service Organizations

Alpha Chi, a society for men, endeavors to cultivate Christian personality and leadership in its members.

Basilean is a men's organization that seeks to encourage God-honoring responsibility and fellowship through social and service opportunities.

Alpha Delta Gamma is a women's organization devoted to building relationships with women in the surrounding area and helping to meet their needs.

Alpha Delta Omega is an organization for women designed to encourage the development of its membership primarily through personal services to students and others.

Delta Omega Epsilon is a men's organization whose projects and activities provide social and service benefits for the University.

Delta Pi Sigma is a women's service organization whose purpose is to seek fulfillment in the lives of its members both spiritually and professionally. The primary focus is to serve the faculty and staff and their families in times of need.

Gamma Chi is a women's service organization formed for women with a passion for their local church. It helps women connect with local churches in or near Cedarville, believing that committed involvement in local churches during their years at Cedarville will prepare them to serve at churches in their future.

Kappa Sigma serves to provide fellowship, mentoring, and encouragement for married students on campus.

Phi Epsilon Beta is a women's organization promoting spiritual and social growth within its members.

Phi Gamma Psi promotes social interaction and enhances spiritual growth among women at the University.

Sigma Phi Lambda is a men's organization that seeks to further the cause of Christ through various activities and service opportunities.

Theta Rho Epsilon is a men's organization that seeks to develop character and friendships through social and service opportunities.

Zeta Pi Sigma cultivates a community of Christian men and is dedicated to the principles of leadership by example, encouragement through service, and spiritual growth through discipleship and accountability.

Special Interest Organizations

Acting on AIDS exists to create awareness and activism of the global AIDS pandemic by changing hearts on campus, to create awareness in communities, and to be an advocate for those impacted by AIDS.

Alpha Mu Beta encourages student fellowship through the outlet of ultimate Frisbee.

Alpha Sigma Lambda exists to provide opportunities for students to gain experience using American Sign Language and to minister to both deaf and hearing people within the Cedarville University family and the broader community.

Chess Club provides opportunities for fellowship and interaction with students who enjoy the game of chess.

Cedarville Photography Club is established to provide everyone within the Cedarville University family — students, staff, and faculty — the opportunity to learn, share, and fellowship about their common interests in all areas of photography and imaging as a hobby, artistic medium, and profession. Furthermore, the Cedarville Photography Club will promote a Christ-centered and Christ-honoring approach to photography and imaging as a medium for personal, artistic, and professional expression.

Cedarville Students for Life (SFL) is an organization dedicated to defending the dignity and value of every human life, from conception until death. SFL is a voice for the defenseless in our society. Through awareness-raising events and political advocacy, SFL equips students to take a stand against abortion and the willful destruction of innocent life.

College Democrats is an organization dedicated to the development of Christian leaders in the political arena.

College Republicans is an organization dedicated to the development of Christian leaders in the political arena.

Fusion Films provides a point of connection for Cedarville students who are enthusiastic about making student films, fosters a network of people who can provide the resources needed to make student films, and enhances Cedarville's student film community.

Officers Christian Fellowship exists to promote spiritual growth and camaraderie among Air Force and Army ROTC cadets.

ProTerraForma seeks to promote a healthy, God-centered view of creation care. This org strives to do this through campus outreach and education, recreational activities, and service opportunities that actively engage the student body and encourage environmental stewardship.

Sanctify Ministries seeks to encourage, equip, and support students in pursuing a lifestyle of purity during and beyond their college experience at Cedarville University.

Semper Fidelis Society is dedicated to encouraging and providing support for United States Marine Corps Officer candidates, reservists, and veterans.

Society of Engineers Aiding Missions (SEAM) exists to educate, equip, and engage engineers in the cause of world missions.

Students for Life seeks to educate students about issues concerning the sanctity of life and enable them to act in defense of the helpless and vulnerable.

Departmental Support

Delta Alpha Epsilon (DAE) is comprised of 12 to 16 selected student volunteers. The members of DAE strive to "Build Relationships by Serving." They represent the student body to Cedarville alumni and are devoted to serving alums. The organization also assists the advancement division with a variety of activities planned for alumni and friends of the University.

Discipleship Council, affectionately known as the "DC," is a select group of upperclassmen who assist the discipleship director in administration of discipleship small groups. Throughout the year, the DC examines the topic of discipleship through Bible study, group interaction, and shared ministry experience.

Ministry Council is a group of students who work closely with the director of community ministries to establish a personal connection between student ministry team leaders and the community ministries office. Ministry Council exists to serve, encourage, and equip student ministry team leaders through one-on-one and small-group interaction.

The Student Center Activities Board (SCAB) exists to develop and equip student leaders while serving the Cedarville University community by creating and implementing traditional, creative, and original student programs and events.



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Admission Procedures and Criteria

Apply online at cedarville.edu/myapplication

Cedarville University invites undergraduate applications from high school, transfer, and postbaccalaureate students with strong academic credentials and a clear testimony of faith in Jesus Christ.

All undergraduate admission applications and checklists may be found at cedarville.edu/myapplication.

Nursing, pharmacy, and engineering have minimum academic credentials for admission. Music and worship majors must audition to pursue a degree. Please review the appropriate sections of this catalog for further information.

Note: Applicants who do not meet the stated academic criteria may still be successful in the admission process. Other factors are considered that might indicate the potential for success.

All degree-seeking students must give evidence of high school completion by the time they enroll at the University. Cedarville University does not discriminate on the basis of race, color, sex, disability, or national origin.

Deadlines and Notifications

Cedarville University follows a rolling admissions process. An application is reviewed by the admissions committee as soon as the file is complete. Applicants are officially notified by letter within two weeks after the admissions committee acts upon the completed file. Applicants may also monitor their application status online.

However, if an applicant's credentials do not meet rolling admission standards, the file will be held for full committee review. This process occurs monthly and involves a thorough review of the applicant's academic credentials as well as a variety of personal factors. Applicants who are held for full committee review will be notified by letter. Application files may also be held for additional information if deemed necessary.

Students who have been offered admission for a particular semester may request to defer their enrollment to a subsequent semester by notifying the admissions office in writing at least one month before the semester begins.

Homeschooled Students

The University welcomes applications from students with nontraditional high school experiences. Scores from standardized tests such as the ACT or SAT are used to help assess readiness for college-level academic work.

Freshman Admission

Applicants with the best prospect for freshman admission possess the following:

1. Evidence of a personal relationship with Jesus Christ
2. A consistent Christian lifestyle as confirmed by a church leader
3. A 3.0 unweighted, cumulative grade point average in college-preparatory course work
4. ACT or SAT test scores at or above the national average (22 ACT; 1030 SAT)

Transfer Admission

Applicants with the best prospect for transfer admission possess the following:

1. Evidence of a personal relationship with Jesus Christ
2. A consistent Christian lifestyle as confirmed by a church leader

3. A 3.0 cumulative college grade point average in non-developmental course work

College-level credits earned at accredited colleges are usually transferable. Courses in which less than a "C-" is earned are not granted transfer credit. Grades for courses taken at other colleges and transferred to Cedarville are not included in the Cedarville cumulative GPA. Only work completed at Cedarville is included. Information concerning the transfer of credits is available from the office of the registrar. Specific course equivalencies can be determined upon receipt of official transcripts.

International Admission

International applicants with the best prospect for undergraduate admission possess the following:

1. Evidence of a personal relationship with Jesus Christ
2. A consistent Christian lifestyle as confirmed by a church leader
3. Secondary school transcripts which indicate satisfactory progress in college-preparatory course work
4. SAT test scores at or above the national average (1030 SAT) or TOEFL iBT scores of 80 or higher
5. College transcripts for all previous college course work (if applicable)
6. An affidavit of financial support, which indicates the ability to finance your college education expenses

Cedarville University welcomes applications for admission from students of all nations. The University was approved for the acceptance of nonimmigrant enrollment by the United States Citizenship and Immigration Services in 1959.

International students should follow the University admissions procedures carefully, submitting their applications well in advance of deadlines so that sufficient time is available for processing and communication. Those coming from countries in which English is not the native language may need to demonstrate their proficiency in English by taking the Test of English as a Foreign Language (TOEFL) examination and earning a paper-based score of 550 (or better) or an Internet-based score of 80 (or better). All international applicants are required to submit one of the following: TOEFL, ACT, or SAT scores. Cedarville's institution code for the TOEFL / SAT is 1151 and for the ACT is 3245.

To satisfy United States Citizenship and Immigration Services requirements, Cedarville University is required by law to verify the financial resources of each international applicant prior to issuing the Certificate of Eligibility (Form I-20 for F-1 visa applicants or Form DS-2019 for J-1 visa applicants). In addition to completing application for admission materials to Cedarville University, applicants must also submit the Affidavit of Financial Support form (with supporting documents). Prior to final enrollment, international students must deposit funds to cover one semester's worth of expenses at the University in United States currency. University expenses include tuition, room, board, and variable costs.

Questions concerning immigration issues should be directed to the international student advisor.

International students may qualify for some academic institutional scholarships by submitting either SAT or ACT scores along with their transcripts. Campus employment is also available during the school year and summer.

Postbaccalaureate Admission

Students who successfully complete a baccalaureate degree prior to enrollment at Cedarville University should complete the Postbaccalaureate application process. Applicants with the best prospect for postbaccalaureate admission possess the following:

1. Evidence of a personal relationship with Jesus Christ
2. A consistent Christian lifestyle as confirmed by the church leader

- Successful completion of a baccalaureate program at an accredited university prior to enrollment at Cedarville

Readmission

Cedarville students who miss the course registration deadline or sit out for one semester or more must apply for readmission. Students wanting to re-enroll should submit an application for readmission at least one month before the start of the semester.

Applicants with the best prospect for readmission possess the following:

- Continued evidence of a personal relationship with Jesus Christ
- A consistent Christian lifestyle as confirmed by the church leader (note: Only required if the student has left Cedarville for more than one term)
- Satisfactory academic progress in your program of study
- Satisfactory student life record

A student who has been readmitted after one year away from Cedarville University must complete the graduation requirements as outlined in the catalog in use at the time of reenrollment.

Nondegree Admission

Students who intend to take a course at the University for transfer to another university or others who plan to take a course for personal enrichment/audit, should complete the undergraduate nondegree application process. Applicants with the best prospect for nondegree admission possess the following:

- Evidence of a personal relationship with Jesus Christ
- A consistent Christian lifestyle as confirmed by the church leader
- Satisfactory academic progress at most recent academic institution

Early College/Dual Enrollment Admission

Cedarville's dual enrollment program is open to highly qualified juniors and seniors in high school who present a clear testimony of personal faith in Jesus Christ and evidence a consistent Christian lifestyle. The admissions committee will consider the following academic credentials and character references in its competitive selection process:

- Unweighted high school GPA (minimum 3.50 GPA)
- Rigorous high school curriculum (preference given to those who have successfully completed advanced college-preparatory courses)
- Standardized test scores (ACT, SAT, PLAN, or PSAT) in the top 25th percentile)
- Acceptable church leader recommendation

For more information concerning dual enrollment, see "Special Academic Programs" on page 22.

Admissions Policies

High School Preparation

Although the University does not prescribe actual high school course requirements, it recommends that students follow a college-preparatory curriculum that includes the following:

- 4 units of English (grammar, composition, and literature)
- 3–4 units of mathematics (algebra I and II, geometry, and trigonometry)
- 3 units of natural science (physical science, biology, and chemistry)
- 3 units of social studies (history and government)
- 2–3 units of a single foreign language

Students planning to study pharmacy, engineering, science, mathematics, or nursing should take as many mathematics and science courses as possible in their secondary school curricula.

It is common for applicants to present transcripts with advanced placement and honors-level courses. Applicants are encouraged to challenge themselves intellectually throughout high school.

GPA Policy

Any high school cumulative grade point average indicated as "weighted" is recalculated using the high school's grading scale. All cumulative GPAs reported in numeric averages are converted to letter grades using the school's grading scale. Grade point averages are recalculated based on an unweighted 4.0 scale. All grades earned for high school credit are considered.

Unweighted high school cumulative grade point averages are considered, along with SAT and ACT scores, for evaluation of admission to the University as well as in the awarding of academic scholarships and need-based grants. The cumulative GPA at the time of acceptance is used for awarding academic scholarships and need-based grants.

Standardized Test Policy

Cedarville University always considers your highest ACT composite score or SAT combined score (critical reading and math) from a single test date. We do not recombine or "superscore" SAT or ACT scores from multiple test dates. Cedarville's SAT code is 1151 and our ACT code is 3245.

Accepted students may increase the amount of their financial aid awards with improved test scores if received by February 15. Cedarville scholar applicants must submit test scores by January 15. Additionally, there are GPA requirements for all awards. Either SAT or TOEFL scores are required of all international applicants. Only SAT scores are used to award scholarships. Non-native English speakers must take TOEFL.

Cedarville does accept test scores submitted from the Advanced Placement program, the International Baccalaureate program, and the College Level Examination Program (CLEP). For further information on these programs and Cedarville's transfer credit policies, contact the office of the registrar.

Reservation Deposit

A \$250 reservation deposit must be submitted by new and readmitted students to indicate their intention to enroll. This money is credited to the student's account and used to cover tuition expenses. A student must submit a reservation deposit to register for courses.

The reservation deposit is fully refundable if the request for refund is received before the reservation deposit deadline. All refund requests must be made in writing by the student. No refunds are available after the deposit deadline.

Reservation deposit deadlines are as follows:

| Term | Deadline |
|--------------------|----------|
| Fall Semester | May 1 |
| Spring Semester | Nov. 1 |
| Summer Session I | Apr. 15 |
| Summer Session II | May 15 |
| Summer Session III | May 15 |
| Summer Session IV | May 15 |
| Summer Session V | May 15 |

Students admitted after the reservation deposit deadlines must submit their reservation deposits within two weeks of notification of admission.

New Student Orientation

All new degree-seeking students are required to attend the orientation program for their term of enrollment (fall or spring).

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Graduate and Professional Education

In 2000 Cedarville University launched its first graduate degree program to meet the professional and advanced education needs of Christian teachers. That first Master of Education program was designed to extend Cedarville University's undergraduate reputation for quality academics and biblical integration while offering convenient delivery and affordable pricing for working professionals.

During the last decade, the University has expanded its graduate and first-professional degree programs, serving students from the local region and around the world. Equipping Christian professionals for lifelong leadership and service, Cedarville provides an education that is marked by excellence and grounded in biblical truth.

Every Cedarville University graduate or first-professional degree program is built on four distinctives: biblical integration, practical application, collaborative engagement, and technological innovation. Graduate faculty challenge students to think critically, communicate effectively, excel professionally, and engage their world with the heart and mind of Jesus Christ.

Courses are delivered both online and in a traditional on-campus format. Class schedules are convenient for graduate students. To ensure access, costs are very competitive with comparable universities and financial aid options are available.

Current graduate and first-professional degree programs:

- The 34-semester hour Master of Education (M.Ed.) Teacher-Leader program, offered fully online, prepares educators interested in enhancing their classroom effectiveness and becoming instructional leaders in their schools.
- The 42- or 43-semester hour Master of Science in Nursing (M.S.N.) program prepares nurses for advanced nursing practice with two areas of focus: global health ministries and family nurse practitioner.
- The Doctor of Pharmacy (Pharm. D.) program is a seven-year curriculum consisting of three years of prepharmacy studies followed by a four-year advanced professional-level segment. The final year of the pharmacy program involves advanced clinical rotations in a variety of inpatient and outpatient settings around the region and nation. Students may gain preferred admission to the program as an undergraduate freshman or transfer student. Admission to the final, four-year advanced professional segment is also available to candidates who have earned a bachelor's degree with prepharmacy coursework from another institution.

For information about available graduate opportunities, contact University Admissions at 1-888-CEDARVILLE (233-2784), email gradadmissions@cedarville.edu, or visit cedarville.edu/graduate.

Undergraduate Study

The Cedarville University undergraduate academic program is designed to meet the educational, moral, physical, social, and spiritual needs of young people who desire to honor God with their lives. The total program represents a balance between the knowledge gained through the courses studied, the cocurricular activities, and worship in the regular chapel and church services. In such a setting, truth from Scripture is integrated with the knowledge taught in each course to provide effective learning and enduring life values. The knowledge and skills learned from the courses give students an excellent background for professional competence in their chosen fields.

Calendar and Credits

The regular college year consists of two semesters of 15 weeks each plus final exam days, extending from August to May. Credits are earned in terms of semester hours; a semester hour equals one 50-minute period each week for one term. As an illustration, a student completing a course that meets 50 minutes a day, three days a week, for 15 weeks receives three semester hours credit. Laboratory sessions, applied music courses, physical education courses, compressed courses, and internships are exceptions to this pattern.

Classification of Students

Regular students are those who have met the requirements for admission, are enrolled in a degree program, and are carrying at least 12 semester hours of credit from Cedarville University in that academic semester. **Nondegree students** are those taking courses but not enrolled in degree programs. **Part-time students** are those who have met all admission requirements, are seeking a degree, and are taking fewer than 12 semester hours. **Transfer students** are those who have studied full time for at least one term at another accredited college or university after graduation from high school. **High school students** are those who have not completed high school graduation requirements.

Assignment to Classes

Official class membership is determined according to the following schedule:

| Class | Hours Completed |
|-----------|-----------------|
| Freshman | 0–30.99 |
| Sophomore | 31–60.99 |
| Junior | 61–90.99 |
| Senior | 91+ |
| Nondegree | Assigned |

Class Attendance

In general, regular attendance is necessary for the student to receive full benefit from the college experience. Since there are several different ways in which ideal class attendance may be achieved, official faculty policy allows each faculty member to determine and develop attendance standards that will meet the particular needs of the course.



Degree Requirements

Cedarville University offers eight baccalaureate degrees: Bachelor of Arts (B.A.), Bachelor of Music (B.M.), Bachelor of Music Education (B.M.E.), Bachelor of Science (B.S.), Bachelor of Science in Computer Engineering (B.S.Cp.E.), Bachelor of Science in Electrical Engineering (B.S.E.E.), Bachelor of Science in Mechanical Engineering (B.S.M.E.), and Bachelor of Science in Nursing (B.S.N.).

A degree candidate should carefully study the requirements for that degree as well as the special requirements for graduation found in this catalog. Careful attention to these requirements will enable the student to avoid doing unnecessary work.

Students are responsible to see that graduation requirements are met. Bachelor's degree requirements are listed below.

1. Meet all admission and proficiency requirements.
2. Complete at least 128 semester hours (not including proficiency), 32 hours of which must be of upper-division work (3000–4000 level courses).
3. Maintain an overall cumulative GPA of not less than 2.0.
4. Maintain a GPA in the major of not less than 2.0.
5. Establish minimum residency of one year (32 semester hours, normally the senior year).
6. Complete the general education requirements.
7. Complete the specific course and professional requirements for the desired major. At least one-third of the course requirements within a major must be taken from Cedarville University.
8. Pass ENG-1400 Composition.
9. Satisfy the appropriate global awareness requirement.
10. Participate in the University testing and assessment program when asked.
11. Complete an application for graduation.

Specific curricular requirements are outlined in each departmental section of the catalog.

Requirements for a Second Degree

If a student has a baccalaureate degree from Cedarville University and desires to earn a second degree, the student must:

1. Meet all the admission requirements.
2. Have fulfilled each of the general education courses in biblical education.
3. Earn a minimum of 160 credits (32 credits beyond the 128 minimum required for a first baccalaureate degree). At least 22 of the credits earned after 128 must be taken at Cedarville University.
4. Earn at least 43 credits in upper-division courses (3000–4000 level courses).
5. Fulfill the requirements of a designated major of the second baccalaureate degree. Any appropriate coursework from the first degree may be applied toward the second degree.
6. Earn at least a 2.0 GPA in the major.
7. Participate in the University testing and assessment program when asked.
8. Complete an application for graduation.

If a student has a baccalaureate degree from another institution and desires to earn a second degree, the student must:

1. Have earned the first baccalaureate degree from a regionally accredited institution of higher education or from an institution specifically approved by Cedarville University.
2. Meet all the admission and proficiency requirements.
3. Earn at least 32 credits from Cedarville University, including at least 22 credits of upper-division courses (3000–4000 level courses).
4. Fulfill the equivalent of the Cedarville University general education requirements.
5. Fulfill the requirements of a designated major for the second baccalaureate degree.
6. Earn at least a 2.0 GPA in the major.
7. Participate in the University testing and assessment program when asked.
8. Complete an application for graduation.

Graduation

All students must realize that it is their responsibility to check on their progress toward meeting all requirements for graduation. They are urged to plan the class schedule for both semesters of the senior year at early registration time at the end of the junior year. This plan should be approved by the faculty advisor and checked to see that when it is completed all degree requirements will have been met.

To participate in the May commencement ceremony, students must submit applications for graduation by February 1 of the year they plan to graduate. This includes May, August, and December graduates.

IMPORTANT

The catalog in use when a student first enrolls governs that student's graduation requirements, unless that catalog is over 10 years old or that student has left and then re-enrolled more than one year later. Consequently, that catalog should be retained and used as a guide in case changes are made in the course or graduation requirements during the time the student is enrolled. A student may select a subsequent catalog if the student wishes; however, all requirements from that catalog must be completed.

Early Commencement

Students who cannot complete their graduation requirements before the end of the spring semester of their senior year, but who can complete them during the following summer or fall semesters, must apply to participate in commencement before degree requirements are met. Students who have more than 18 semester hours to complete after the spring semester must obtain approval from the office of the registrar to participate in commencement. Information concerning eligibility for August or December graduation and early commencement is available in the office of the registrar.

Academic Programs and Majors

Admission to Academic Programs

Some academic programs have unique requirements. For example, music students must audition for entry to that department; engineering candidates must meet a minimum test score requirement; students in education, social work, and nursing apply for admission to their respective programs during their sophomore year after the program prerequisites have been satisfied; admission into the athletic training program is competitive and limited to the top 10 eligible students. Therefore, students should review the specific entrance requirements outlined in the respective departmental sections of the catalog. Admission to the University does not guarantee admission to an academic program.

Selecting a Major

Many students have not chosen a major field of study by the time they enroll at Cedarville. Others change their major at some time during their collegiate studies. The University offers special advising and other services to help students make these important decisions through the academic enrichment center.

Students uncertain of a major begin as “undeclared” majors. They work with academic advisors who specialize in helping students who have not yet chosen a field of study. Until they choose a particular major, undeclared students typically take courses specified as meeting the general education requirements. They are also encouraged to utilize the resources of the career services office. This office offers career profiles, interest inventories, and counselors so that students in the midst of making career decisions have good information.

Most undeclared students select a major by the middle of the sophomore year. In many instances, delaying the choice of major does not extend the time needed to graduate from Cedarville. However, in programs of study with extensive specific course requirements, delaying the choice of that major even one semester can cause students to take longer to complete degree requirements. The suggested four-year curricula listed with each major outlines the recommended course sequences.

Requirements of a Major

The amount of work for a typical major field approximates 36 semester hours and must include the requirements of the department. Comprehensive majors are typically from 48 to 60 hours. Specific requirements are listed at the beginning of department course offerings.

In order to graduate, a student must satisfy the requirements for at least one major field of study. With proper scheduling, he or she may concurrently complete the requirements for more than one major. Majors involving fewer than 42 semester hours of coursework lend themselves to this approach.

Major courses in which “D” grades are received may count as meeting the requirements of the major field if permitted by departmental policy. If “D” grades are not permitted, the department chair may approve a course substitution as an alternative to repeating a course.

To qualify for graduation, students must maintain at least a 2.0 GPA for their major.

Major Fields of Undergraduate Study

The University offers 85 major fields of undergraduate study. Some of the majors represent combinations of two or more areas of study; these are denoted with an asterisk (*). Course requirements for each of the majors are outlined in the respective departmental sections of the catalog. Major fields of study include:

- Accounting
- Allied Health
- Applied Communication
- Athletic Training
- Bible Teacher Education*
- Biology
- Broadcasting and Digital Media
- Chemistry
- Chemistry Education
- Christian Education
- Comprehensive Bible
- Computer Engineering
- Computer Science
- Criminal Justice
- Early Childhood Education
- Electrical Engineering
- English
- Environmental Science
- Exercise Science
- Finance
- Forensic Science
- Geology
- Geoscience
- Graphic Design
- History
- History — Political Science*
- Industrial and Innovative Design
- Information Systems
- International Studies* — Global Economics and International Business
- International Studies* — Missiology/World Missions
- International Studies* — Social Science
- Journalism
- Keyboard Pedagogy
- Language Arts Education — Integrated
- Liberal Arts
- Life Science Education
- Management
- Marketing
- Mathematics
- Mathematics Education — Integrated
- Mechanical Engineering
- Middle Childhood Education
- Molecular and Cellular Biology
- Music
- Music Composition
- Music Education — Multi-Age
- Music Performance
- Nursing
- Pastoral Studies
- Pharmaceutical Sciences
- Philosophy
- Physical Education — Multi-Age
- Physical Science Education
- Physics
- Physics Education
- Political Science
- Prelaw*
- Prepharmacy
- Preseminary Bible
- Psychology
- Public Administration*
- Science Comprehensive Education — Integrated
- Social Studies Education — Integrated
- Social Work
- Sociology
- Spanish
- Spanish Education — Multi-Age
- Special Education-Intervention Specialist
- Sport and Exercise Studies
- Sport Management
- Studio Art
- Technical and Professional Communication
- Theatre
- Worship
- Youth Ministries

Minor Fields of Undergraduate Study

Fifteen credits in a particular field of study usually constitute a minor. Cedarville graduates complete a minor in Bible as part of the general education requirements. Other minor fields are optional. One-third of the minor must be completed at Cedarville. Available minors include:

- Actuarial Science
- Asian Studies
- Bible
- Bioethics
- Biology
- Biomedical Engineering
- Business Administration
- Chemistry
- Christian Education
- Christian Ministries Management
- Church History
- Coaching
- Comprehensive Communication
- Computer Science
- Creative Writing
- Creative Web Design
- Criminal Justice
- Cross-Cultural Nursing
- Digital Film
- Digital Photography
- Earth Science
- Economics
- Editing and Publishing
- Electronic Media
- French
- German
- Geology
- Graphic Design
- Greek
- Health Education – Multi-Age
- Health Promotion
- History
- Information Systems
- Intercultural Communication
- International Business
- International Studies
- Latin American Studies
- Literature
- Mathematics
- Marketing
- Middle Eastern Studies
- Mission
- Motion Graphics
- Music
- Organizational Communication
- Philosophy and Religion
- Physics
- Political Science
- Preseminary Bible
- Psychology
- Public Administration
- Public Policy
- Sociology
- Spanish
- Spanish for Professionals
- Sport Ministry
- Studio Art
- Teaching English to Speakers of Other Languages (TESOL)
- Theatre
- Western European Studies
- Women's Ministry
- Writing for the Professions
- Youth Ministry

Electives

The provision of elective choice is based upon the premise that students should have an opportunity to strengthen their major field or minor field or broaden their background by selecting courses in areas of inadequacy or interest. Elective choice also provides students with some flexibility should they decide to change major fields.



Special Academic Programs

Cedarville offers several special programs designed to enhance the collegiate experience and/or to help prepare for a particular career.

One-Year Bible Program

The University offers a concentrated program for the student who desires a formal education in Bible before pursuing a vocation at home or engaging in a field of technical study not available in a Christian school. It is designed so that a student can function as a more knowledgeable layperson at church. This curriculum is outlined in the biblical and ministry studies section of this catalog.

Preprofessional Programs

Many students seek specialized training in professions after attending Cedarville University. A number of preprofessional programs are available. The preseminary curriculum, which prepares students for seminary studies and the Gospel ministry, is outlined in the biblical and ministry studies section of this catalog. The prelaw curriculum prepares students for law school and is explained in the history and government section of this catalog. Preprofessional curricula in dentistry, medical technology, medicine, optometry, osteopathy, physical therapy, and veterinary medicine are described in the science and mathematics section of this catalog.

Other Programs

- Honors
- Medical Technology
- ROTC – Army and Air Force
- TESOL – Teaching Endorsement (Teaching English to Speakers of Other Languages)

Descriptions of these programs are located in the academic departments sponsoring the programs.

Dual Enrollment Program

High school juniors and seniors may enroll in dual enrollment and take online or on-campus courses at deeply discounted tuition rates. Designed for learners with the flexibility to take college courses as part of a high school curriculum, students may earn up to 27 semester hours of credit before arriving on campus as freshmen. On-campus housing is not available to dual enrollment students except for the summer studies program.

Students may also apply for summer dual enrollment online programs (May–August) or the two-week residential summer studies program held in June. Designed to provide the full Cedarville experience, students enroll in one course and enjoy chapel, residence life, student activities, and ministry opportunities. Visit cedarville.edu/dualenrollment.

Continuing Education

Cedarville University offers a variety of non-credit courses for lifelong learning through continuing education. Courses are open to students, faculty, staff, and adults from surrounding communities. Some courses and seminars are offered to fulfill CEU requirements for various professions.

Non-credit courses do not accumulate toward a degree or certificate, but are the same high-quality programs that you expect from Cedarville University. They can be useful for career enhancement, personal improvement, or taken just for fun.

Typical courses include Reading Rate and Comprehension, EMT, and Advanced EMT. Visit cedarville.edu/continuing for current course and CEU offerings.



International Study Opportunities

Students are encouraged to take advantage of a semester-long or year-long program at one of Cedarville's satellite campuses or to participate in one of our own special summer programs. Participants remain enrolled at Cedarville, continue to receive financial aid, and take courses for Cedarville credit. Semester/Year programs are open to all students who meet the specific program requirements. The Cedarville summer study programs are open to all students. Advanced planning is highly recommended. For additional information and help with planning, contact the office of international programs (OIP) at cedarville.edu/internationalprograms.

Preapproval from OIP must be received before students can participate in any of the programs.

Programs Through the Office of International Programs (OIP) *Cedarville University in Spain*

cedarville.edu/semesterinspain

Cedarville students are encouraged to study with Cedarville in Spain. Cedarville's own learning center is located in sunny Valencia, Spain. In addition to taking courses with a prestigious language institute, students can participate in internships and service learning opportunities depending on their level of Spanish.

Cedarville University D.C. Semester

cedarville.edu/dcsemester

During fall semesters, students can participate in our own program in Washington, D.C. Students take 16 credits, 10 of which are an internship in their chosen major. Students are housed at the Heritage Foundation and courses are taught by a Cedarville professor who lives in D.C. for the semester. The program is directed by Dr. Mark Smith and the Center for Political Studies.

Summer Geology of National Parks

Cedarville professor Dr. John Whitmore teaches a hands-on geology course in one of the national parks. The course fulfills Cedarville's general education physical science course requirement. Dr. Whitmore serves on the board of Creation Research Science Education Foundation (Columbus, Ohio). He is also a member of the Creation Research Society and the Geological Society of America.

Summer International Business / International Management

The school of business administration offers two courses (BUS-3910 International Business and MGMT-3570 International Management) in a study abroad setting from mid May to early June. Students gain experience within international companies while taking one or both of these courses. Previous locations have been China, Ireland, Spain, and Japan.

EMT Courses and Special Credit

The Cedarville University Emergency Medical Services Education program was developed by the Center for Lifelong Learning to meet the needs of the Cedarville University EMS squad, local fire departments, and local EMS departments who are providing skilled emergency medical care to the communities they serve. Courses are offered on campus each semester. After students complete and obtain state EMT certification, they will be qualified to provide emergent care in a pre-hospital setting to their level of certification. The program is based upon the National Standard Curriculum, prepared by the U.S. Department of Transportation.

Cedarville University will grant credit for EMT and paramedic training. Upon receipt of bona fide copies of National Registry certificates of completion, the University will grant three semester hours of elective credit for EMT training, three additional semester hours for Advanced EMT training, and five semester hours for paramedic training.

Since 2004, the University has been accredited by the State Board of Emergency Medical Services (Accreditation #387) to conduct EMS training. Reaccreditation was granted in 2010 for another five years with the addition of Advanced EMT and paramedic training.

Summer Terms

The University offers many courses online in the summer in addition to the session on campus.

The summer sessions appeal to a variety of students. Some wish to accelerate their college program. Students from other institutions may desire Bible courses that are not available at their institutions. Teachers find the summer terms a convenient means by which to update themselves in their disciplines. Others enjoy the advantages of smaller summer classes. Incoming international students recognize summer attendance as an excellent opportunity to become acclimated to academic pursuits before campus activities begin in the fall.

Continuing students interested in attending summer school should contact the summer school office. New students should contact the admissions office. Visit cedarville.edu/summerschool.

Cedarville Summer Abroad Programs

The office of international programs is continually working with professors who desire to teach a specialized course abroad. Each summer there are opportunities for students to take general education and upper-level courses abroad with our own professors. These courses are ideal for students whose majors do not have the flexibility of a semester abroad. Locations vary each summer but usually are in one or two of the following locations:

- China
- Germany
- Ireland
- Oxford
- France
- Greece
- Israel
- Spain

Cedarville has cooperating agreements with the following groups/programs. Opportunities to study abroad or in the U.S. are available in more than 40 countries and 118 locations through these agreements. Restrictions apply to some of the programs.

- ARRIBA: faith.edu/academics/arriba
- Brethren Colleges Abroad (BCA): bcanet.org
- CEA Global Education: gowithcea.com
- Central College Abroad (CCA): central.edu/abroad
- Council of Christian College and Universities (CCCU): bestsemester.com
- Council of International Educational Exchange (CIEE): ciee.org
- Creation Care Study Program (CCSP): creationcsp.org
- Dublin Business School and School of Humanities (DBS): dbstudyabroad.org
- Focus Leadership Institute: focusleadership.org
- Handong Global University: handong.edu/n_english/default.asp
- IBEX (The Master's College in Israel): ibexsemester.com
- International Business Institute (IBI): messiah.edu/departments/business/ibi
- Jerusalem University College (JUC): juc.edu
- Oxford Study Abroad Program (OSAP): osapabroad.com
- Romanian Studies Program (RSP) for social work majors: veritas.ro/veritas.php

CCTECC Student Teaching Abroad Program

CCTECC is the Christian Coalition Teacher Education Coordinating Council, which is made up of Christian colleges from around the U.S. Since the late 1980s, this organization has been helping its member institutions place quality student teachers in quality schools on every continent except Antarctica. Cedarville students have taught in over 20 different countries. Literally speaking, the sun never sets on Cedarville student teachers.

Students apply for this program early in their junior year. Only those with a good academic record, strong character, and spiritual and professional performance references are allowed to go overseas. Only schools and cooperating teachers who meet Cedarville's standards and the requirements of the Ohio Department of Education participate with us. CCTECC helps ensure that students are placed in environments that are safe and nurturing both personally and spiritually. Students interested in this program should contact Dr. Brenda MacKay.

Au Sable Institute of Environmental Studies

Cedarville University is a "sustaining partner" with Au Sable Institute. Students enrolled at Cedarville University (and who meet prerequisites) may take advantage of courses offered by the Au Sable Institute, including field botany, land resources, limnology, marine biology, animal ecology, and restoration ecology. Students may choose to attend any of four Au Sable Institute locations: Au Sable Great Lakes (Mancelona, Michigan), Au Sable Pacific Rim (Whidbey Island, Washington), Au Sable Costa Rica (Vara Blanca, Costa Rica), and Au Sable India (Tamil Nadu, South India). Au Sable courses provide academic content, field experience, and practical tools for stewardship of creational resources. The Institute grants vocational certificates for environmental analysts, land resource analysts, water resource analysts, and naturalists. Academically qualified students are awarded the Au Sable Fellowship (\$1,000). One or more Institute Grants-in-Aid of at least \$500 are also available each year. Honors scholarships of \$250–400 are granted to returning students. As a "sustaining partner" Cedarville students are also granted a tuition discount (\$300 per course). Interested students should contact Dr. Mark Gathany, Cedarville University's Au Sable Institute representative.

Academic Enrichment Center — The Cove

The Academic Enrichment Center, known as The Cove, exists to cultivate academic scholarship among all Cedarville students — whether you're a B student striving to be an A student, or a C student striving to be a B student. More than simply accurate note taking and successful test taking, scholarship is the spirit of learning. It's not about having a 4.0 but about students doing their personal best — having goals for their futures, discovering their academic learning styles, and taking advantage of the services.

For you to excel in your studies, you need the proper resources. The Cove offers many such resources — including tutoring, academic workshops, stress relievers, one-on-one consultations, and much more. We will connect you with services that will help you discover your academic learning style and create goals for your Cedarville experience.

Programs

- Kappa Mu Alpha (freshman program)
- Making the Grade (learning strategy seminars)
- Doors (academic coaching)
- ESL (English as a second language)

Courses

- Foundations (to equip and assist students to be successful through their first year of college)
- MAP (managing academic probation)
- Intermediate Algebra



Services

- Disability Services
- Tutoring
- LASSI (study strategy inventory)
- One-on-one consultations
- Meetings with learning specialists
- Presentations and seminars
- Supplemental instruction
- Support for exploratory/undeclared majors

See cedarville.edu/TheCove for more information on the programs, courses and services.

Foundations is open to all freshmen. However, this one-credit-hour course may be required for some students whose academic backgrounds do not reflect their collegiate potential. Admission to the required course is determined by the admissions committee. There is a \$150 course fee for Foundations, which is limited to 12 students per class. This opportunity reflects our desire for each student to establish a strong academic foundation and maintain academic momentum.

Additional Academic Support

Each student is assigned to an academic advisor who offers counsel concerning course scheduling. A student who has not declared a major will be assigned to a special advisor equipped to offer assistance in selecting a field of study. Students are encouraged to consult their academic advisor prior to registration, whenever an academic problem is encountered, or when considering any changes in their educational program. A student with low grades in a major or minor field may be advised to select another field of study.

Credit by Examination

Advanced Placement

High school students may receive advanced collegiate standing by participating in the advanced placement program. Up to 40 semester credits may be earned through this program or by other test-out procedures. Hours earned through the advanced placement program do not count as hours in residence toward graduation with honors.

To earn credit through advanced placement, students must enroll in specific advanced placement courses offered by their respective high schools. Upon completing these courses, students take individual advanced placement examinations in each advanced placement course. Students may earn college credit for advanced placement scores of three, four, or five.

Students should request that scores from these examinations be sent directly to Cedarville University by entering code number 1151 on their registration forms. Upon receipt of an official score report, the University awards the appropriate amount and type of credit for each examination as determined by each academic department. No fees, other than the fees accompanying the examinations, must be paid in order to receive the University credit. In some cases, sophomore standing in particular subject areas may be earned through these examinations. Students should contact their local high schools to obtain advanced placement course and registration information.

College Level Examination Program (CLEP)

Students earn credit through CLEP by taking nationally standardized examinations in a variety of subject areas. These tests may be taken at local colleges before enrolling at Cedarville or at Cedarville after enrolling. To have CLEP scores sent directly to Cedarville University, students should enter code number 1151 on their CLEP registration forms. An official copy of the score report must be received before CLEP credit will be evaluated

and recorded. By earning scores above specified levels, students receive college credit in specific course areas. Up to 40 semester credits may be earned through this program or by other test-out procedures. A complete list of the appropriate tests and respective Cedarville courses, as well as registration information, is available from the admissions office, the office of the registrar, or the University website. No fee, other than those accompanying the examinations, must be paid in order to receive college credit through CLEP.

Students who wish to use CLEP examinations to satisfy general education requirements in foreign language, literature, mathematics, natural sciences, and social sciences must earn credit-satisfying scores on the respective CLEP examinations by the time they earn 61 semester credits. Students may not pursue CLEP credit for courses in which they were enrolled previously, nor may they pursue CLEP credit for a course if they have taken a more advanced-level course in that discipline.

Transfer students transferring more than 61 credits must earn credit-satisfying scores on respective CLEP examinations by the end of their first semester of full-time attendance at Cedarville. Hours earned through CLEP do not count as hours in residence toward graduation with honors.

Institutional Test-Out

Qualified students may earn credit toward graduation by passing the appropriate examinations with a grade of "B" or better. A student interested in testing out should obtain a test-out request form from the office of the registrar, obtain approval for the test-out from the chair of the department in which the course is offered, and pay the test-out fee in the cashiers office. Upon completion of the approval process, the student is responsible to contact the instructor of the course to schedule the test. At the conclusion of the testing process, the test-out form will be forwarded to the office of the registrar, denoting whether or not the student met the minimum criteria for credit. If applicable, credit for the course and a designation of test-out will be added to the student's transcript with a grade of CE (credit by examination). This grade is not computed into the cumulative GPA. No fee, other than the initial test-out fee, must be paid to receive institutional test-out credit.

A student may not test out of a course previously audited. Tests must be taken during registration week or during the first two full calendar weeks of the semester. Credits earned by test-out during a semester do not count toward the 12 semester hours required for full-time status. No student may earn more than 40 semester hours of test-out credit through tests administered at the University, CLEP, AP, IB, or any other recognized testing agency. Hours earned by test-out do not count as hours in residence toward graduation with honors.

International Baccalaureate

The International Baccalaureate (IB) is an internationally recognized program that enables students to follow a special curriculum and take specific examinations to fulfill secondary school graduation requirements. Students can earn up to 18 semester hours for IB Higher Level examinations on which they earn scores of five, six, or seven. A maximum of six credits is permitted in any one group. To receive credit, students should submit IB transcripts to the admissions office.

General Education Requirements

The University requires a pattern of proficiencies and courses to help achieve institutional objectives. These objectives are designed to provide an educational experience that broadens the student's outlook and knowledge.

The general education pattern is:

I. English and Mathematics Proficiency 0–5 hrs

Each student upon initial enrollment at the University must demonstrate proficiency in English and mathematics.

A. English..... (0–3)

Students may satisfy the English proficiency requirement through any one of the following methods:

1. Score 21* or higher on the English section of the ACT; or
2. Score 500* or higher on the critical reading section of the recentered SAT; or
3. Score 59 or higher on the CLEP College Composition Examination; or
4. Complete a course equivalent to Cedarville University ENG-1000 Basic English with a grade of "C-" or higher (A = 4.0 system) at another approved institution of higher learning prior to matriculation at Cedarville. The credits will not be transferred, but proficiency will be established and enrollment in ENG-1400 Composition will be permitted; or
5. Complete a college-level composition course with a grade of "C-" or higher (A = 4.0 system) at another approved institution of higher learning. Proficiency will be satisfied and transfer credit will be awarded; or
6. Complete the preliminary assessment for ENG-1000 Basic English with a score of 80 percent or higher; or
7. If proficiency is not verified by any of the means listed above, the required proficiency must be achieved through a successful completion of the course ENG-1000 Basic English (three semester hours), **which is to be taken during the first semester of matriculation. These three credits do not apply toward the 128 credits needed for graduation.**

B. Mathematics..... (0–2)

Students may satisfy the mathematics proficiency requirement through any one of the following methods:

1. Score 19* or higher on the mathematics section of the ACT; or
2. Score 500* or higher on the quantitative section of the recentered SAT; or
3. Score 53 or higher on the CLEP College Algebra exam; or
4. Complete a course equivalent to DEV-0900 Intermediate Algebra with at least a grade of "C-" or higher (A = 4.0 system) at another approved institution of higher learning. The credits will not be transferred, but proficiency will be established and enrollment in college-level quantitative courses will be permitted; or
5. Complete a course equivalent to the Cedarville University GMTH-1020 College Algebra with a grade of "C-" or higher (A = 4.0 system) at another approved institution of higher learning. Proficiency will be satisfied and transfer credit will be awarded; or
6. Complete the ALEKS assessment with a score of 100 on the mathematics section and a score of 80 or higher on the algebra section; or

7. If proficiency is not verified by any of the means listed above, the required proficiency must be achieved through successful completion of the course DEV-0900 Intermediate Algebra (two semester hours), which should be completed during the first semester of matriculation at Cedarville University and **must be completed no later than the last term of the sophomore year. These two credits do not apply toward the 128 credits needed for graduation.**

II. Biblical Education 16 hrs

- A. BEGE-1710 Christian Life and Thought..... 3
- B. BEGE-1720 Spiritual Formation 3
- C. BEGE-2730 Old Testament Literature 3
- D. BEGE-2740 New Testament Literature 3
- E. BEGE-3750 Christian Worldview Development..... 2
- F. BEGE-3760 Christian Worldview Integration..... 2

III. Communication 6 hrs

- A. ENG-1400 Composition..... 3
- B. COM-1100 Fundamentals of Speech..... 3

IV. Humanities 9 hrs

- A. HUM-1400 Introduction to the Humanities 3
- B. Any 2000-level literature course 3
- C. At least three semester hours from the following:..... **3
 - **ANTH-1800 Cultural Anthropology 3
 - ART-1100 Introduction to Art..... 3
 - BEPH-2200 Introduction to Philosophy 3
 - BEPH-2250 Ethics..... 3
 - BEPH-2260 Religion and Culture 3
 - COM-2300 Voices of Diversity 3
 - COM-2140 Intercultural Communication 3
 - COM-4110 History of Public Address..... 3
 - EDUC-2400 Children's Literature 2
 - EDUC-3100 Philosophical Foundations of Education 3
 - EGGN-3110 Professional Ethics 3
 - FILM-2350 Christian Motifs in Film..... 3
 - HLMU-2310 Introduction to Music Literature 3
 - HUM-2430 Enjoyment of Music..... 3
 - NSG-3050 Behavioral and Mental Health Care..... 6
 - PYCH-3720 Psychology of Personality 3
 - THTR-1410 Introduction to Theatre 3
 - Any second year foreign language course 4
 - Any other 3-hour literature course 3

*Standardized test scores (ACT, SAT) earned more than three years before matriculation will not be accepted to meet the proficiency requirement.

**ANTH-1800 Cultural Anthropology may satisfy either the Humanities elective or the social science elective, but not both.

**In satisfying requirements B and C, students may not take more than one course from their major field of study.



V. Global Awareness

Students pursuing a **Bachelor of Arts (B.A.), Bachelor of Music (B.M.), or Bachelor of Music Education (B.M.E.)** degree must meet one of the following requirements:

- A. Pass three years of the same foreign language* in high school or one term of an intermediate college-level foreign language*; or
- B. Live in a non-U.S. cultural immersion experience for at least one school year after the age of 12; or
- C. Pass two years of the same high school foreign language* or pass the second semester of a college-level foreign language* and one of the following:
 - 1. A global awareness course selected from the list under letter D below.
 - 2. An approved intercultural experience of at least four weeks.

Students pursuing a **Bachelor of Science (B.S., B.S.Cp.E., B.S.N., B.S.E.E., and B.S.M.E.)** degree must complete one of the following:

- A. Pass two years of the same foreign language* in high school; or
- B. Pass the second semester of a college-level foreign language*; or
- C. Live in a non-U.S. cultural immersion experience for at least one school year after the age of 12; or
- D. Complete a global awareness course from the following:
 - ANTH-1800 Cultural Anthropology
 - ARBC-1400 Introduction to Arabic Language and Culture
 - BEPH-2260 Religion and Culture
 - BUS-3910 International Business
 - COM-2140 Intercultural Communication
 - COM-2300 Voices of Diversity
 - ECON-3380 Economic Development and Political Economy
 - GEO-3520 World Regional Geography – Eastern
 - GER-3820 Germanic History and Culture
 - HIST-3080 History of Russia and the Soviet Union
 - HIST-3200 History and Politics of Latin America
 - HIST-3210 History and Politics of Asia
 - HIST-3220 History and Politics of the Middle East
 - HIST-3230 History and Politics of Western Europe
 - HIST-3750 Social Movements
 - HLMU-3400 Global Music
 - INTL-3190 Global Issues
 - INTL-3650 International Relations
 - MGMT-3570 International Management
 - MRKT-4620 International Marketing
 - NSG-4000 Care of Populations
 - NSG-4200 Culture and Health
 - PYCH-1800 Cross-Cultural Psychology
 - SPAN-3680 Understanding Hispanic Cultures; or
- E. Complete an approved intercultural experience of at least four weeks.

*American Sign Language courses do not satisfy the foreign language component of the global awareness requirement.

VI. Physical Education 2 hrs

- A. PEF-1990 Physical Activity and the Christian Life 2

VII. Science and Mathematics..... 10–16 hrs

- A. One laboratory course from the biological sciences..... 3.5
- B. One laboratory course from the physical sciences 3.5
Any course with a designator of GSCI, ESCI, CHEM, PHYS, or GEOL.
- C. At least three semester hours selected from the following quantitative courses:
 - BUS-2110, 2120 Statistics 4
 - EDUC-2800 Principles of Mathematics II 3
 - GMTH-1010 Introduction to Mathematics 3
 - GMTH-1020 College Algebra 3
 - GMTH-1030 Precalculus 4
 - GMTH-1040 Calculus for Business 4
 - GSS-3630 Data Analysis and Research Methodology 4
(or SWK-4610 Data Analysis..... 3)
 - PYCH-2610 Statistics 3
 - Any 3-credit MATH course 3
- D. Students pursuing Bachelor of Science degrees (B.S., B.S.N., B.S.Cp.E., B.S.E.E., and B.S.M.E.) must complete an additional six semester hours. These hours must be selected from courses with BIO, CHEM, ESCI, GBIO, GSCI, GMTH, MATH, and PHYS designators; decision sciences; statistics; or computer application courses selected from the following:
 - EGCP-1010 Digital Logic Design 3
 - ITM-2300 Introduction to Programming 3

VIII. Social Sciences and History 9 hrs

- A. GSS-1100 Politics and American Culture 3
- B. One course in history 3
- C. One course selected from the following:..... 3
A second HIST course or
Any course with a designator of ANTH**, CRJU, GEO, INTL, POLS, PUAD, SOC, and SWK or PSYCH-1600 General Psychology

**ANTH-1800 Cultural Anthropology may satisfy either the humanities elective or the social science elective, but not both.

Total General Education Requirements.....52–63

Many of these courses also satisfy the requirements for major fields of study.



General Education Course Sequence

Many of the general education requirements provide important background for advanced courses that are required as a part of a major field of study. Consequently, in most programs many of these requirements are taken in the first two years of the four-year curriculum. The sample four-year curriculum found by each major field of study in the catalog outlines this sequence.

Because of the importance of several of the requirements to all students, **the following six courses must be completed before the beginning of the junior year or before a student earns 61 semester hours:**

- BEGE-1710 Christian Life and Thought
- BEGE-1720 Spiritual Formation
- COM-1100 Fundamentals of Speech
- ENG-1400 Composition
- PEF-1990 Physical Activity and the Christian Life
- Quantitative Course Requirement (See the General Education Requirements for Science and Mathematics)

Course Load

Assuming that proficiency requirements have been satisfied, a minimum of 128 semester hours is required for graduation. A student should average at least 16 credit hours each semester to graduate upon completion of the eighth semester. A normal course load is 15–18.5 hours each semester. Students working more than 20 hours per week are advised not to carry a full course of studies.

A student's academic load is subject to reduction or limitation by an assistant or associate academic vice president or by the academic vice president for poor scholarship or excessive work outside of school hours. Students who wish to take more than 18.5 credit hours must obtain permission through the following procedure:

To request 19–21.5 credit hours

The following students require advisor approval:

- SENIORS with at least a 2.3 cumulative GPA
- SOPHOMORES and JUNIORS with at least a 2.5 cumulative GPA
- FRESHMEN with at least a 2.7 cumulative GPA
- All students without a Cedarville University GPA who scored at least a 25 or equivalent on the ACT

The following students require department chair approval:

- Any student not meeting the criteria above
- Any student whose advisor is not available

The following students require assistant or associate academic vice president approval:

- Any student whose department chair is not available

To request 22 or more credit hours

- All students require approval of advisor, department chair, and assistant or associate academic vice president

The following situation requires academic vice president approval:

- When assistant or associate academic vice president is not available

Distance Education

Cedarville University does not offer correspondence credits, and it does not accept correspondence credits from institutions that do not have accreditation from a recognized United States regional accrediting agency. In some unusual circumstances, the University may accept correspondence credits from regionally accredited institutions of higher learning, but a student may not utilize more than 10 semester hours of correspondence credits toward fulfilling degree requirements.

Cedarville University does offer several online learning courses, and it does accept this type of course from institutions that are accredited by a U.S. regional accrediting agency. Distance learning courses are subject to the same policies and restrictions as normal transfer courses.

The University reviews and processes credits received for distance learning and correspondence study in the same manner as transfer credits. For additional information, contact the office of the registrar.

Transient Study

Coursework to be completed at other institutions by a student enrolled at Cedarville University must be approved before the course is taken by securing the signatures of the transfer coordinator, the student's academic advisor, and the chair of the academic department governing the course requirement that the transferred course is to satisfy. Transient Study Applications are available in the office of the registrar. An official transcript must be received before transfer credit will be evaluated and recorded.

Registration for Courses

Continuing at the University

The University assumes that a student will continue taking courses from semester to semester unless the student graduates, is asked to leave for academic or disciplinary reasons, or withdraws voluntarily. To assist in planning each academic term, the University asks each student to register for the upcoming academic term during early registration. This secures courses for the student and enables the University to make enrollment decisions for that term. A student who owes money to the University may not register for future academic terms.

Enrolled students register for fall semester courses at the end of each spring semester. To retain these course selections and confirm the intention to enroll in the fall semester, each student must submit a reservation deposit of \$250 by May 1. This deposit also reserves a place in college housing for single students under 25 years of age. The deposit is credited to the student's account and may be used to help cover fall semester expenses. Should the student decide to withdraw from the University before July 1, \$150 of this deposit is refundable. After July 1, the \$250 deposit is nonrefundable.

A student who does not register and submit the continuing student reservation deposit by June 1 or make other special arrangements with the student life office will be considered withdrawn. Any student who withdraws voluntarily or is involuntarily withdrawn must apply and be approved for readmission to return as a student to the University. Readmission forms and information are available from the admissions office.

Course Registration

Registration dates for each session are listed in the annual academic calendar. Early registration periods may be designated for currently enrolled students. During early registration, the University allows students to register for courses for the upcoming academic term. Students register for courses by academic classification and are strongly encouraged to take advantage of this early registration opportunity, rather than registering after the start of an academic term. Students who register early for a term but do not return the following semester must notify the office of the registrar of their change in status.

Registration information, including registration instructions and course schedules for the semester, is prepared by the office of the registrar prior to each registration period. Information regarding course offerings and sections is available on the University website.

Prior to processing a registration, each student meets with an academic advisor to discuss career direction, course options,

and class schedules. While selecting courses, students and advisors should discuss alternative courses as a contingency for course closings and cancellations. Although each student has an academic advisor to help with scheduling, the student is ultimately responsible for the chosen class schedule and course of study. Students should become very familiar with the course requirements for their chosen major.

Class schedules are selected using the online registration process on the University website. The online registration process may be completed from the academic advisor's computer or from any other computer through which the student has internet access. Instructions for using the online registration program are available on the registrar's website or from the office of the registrar.

A registration access code is required to complete the online registration process. This code is assigned by the computer services office prior to each registration period and is given to the student's academic advisor. The registration access code may be utilized by the academic advisor to complete the student's registration during the advising process, or the advisor may give the code to the student to enable the student to complete the registration process from another computer. After the online registration process has been completed, the student's confirmed schedule becomes an active registration in the administrative computer system.

To finalize their registration, students must make financial arrangements for payment of the amount due listed on their billing invoice (see the financial section of the catalog for information concerning costs and payment plans).

Adding and Withdrawing from a Course

Students are responsible to verify the accuracy of their course registration at the beginning of each semester. All registrations must be finalized by the end of the second week of the semester. No courses may be added after this time unless approval is granted from the course instructor, chair of the department that offers the course, and the dean of the respective school. In the absence of the assistant or associate academic vice president, the academic vice president may approve a late registration. A late registration fee of \$50.00 will be charged to process a registration or add a course after the deadline.

Changes in a student's course schedule must be made through the drop/add process. This may be completed online within seven calendar days after courses begin. After this time, a drop/add form is required to complete a schedule change. Forms for course changes are available in the office of the registrar and must be signed by both the course instructor and the student's academic advisor. The student is required to make up any work missed due to late entrance. Changes in a schedule caused by cancellation of courses will not result in financial penalty.

When a course is dropped, the action is recorded as follows:

| Week Course Is Dropped | Action |
|--|--|
| Before the end of the first full calendar week | No record on transcript |
| During second full calendar week through ninth calendar week | W – Withdrawn |
| 10th and 11th calendar weeks or | WP – Withdrawn Passing WF – Withdrawn Failing |
| Week 12 through the end of the semester | Drops not permitted |

Course changes are complete when the office of the registrar receives the completed drop/add form. The effective date of the course change is the date the office of the registrar receives the completed form. Failure to properly drop a course will result in a grade of "Z," which counts the same as an "F"

Refund information is listed in the financial information section of the catalog. This information is also available on the registrar's webpage.

Auditing

Auditing involves attending and participating in a course without earning credit. A course may be changed from credit to audit before the end of the first week of the semester. Courses may be changed from audit to credit, with permission of the instructor, before the end of the first week of the semester. A student may not test out of a course already audited. Registration to audit a course will not be processed until the first day of the semester to accommodate students requiring regular registration status.

Independent Study

Independent study allows students to develop a high degree of independence in their ability to choose and investigate problems. The objectives of the program include providing opportunities to explore areas not covered in normal course structure, recognizing foreign travel experiences, rewarding self-motivated students, and encouraging joint study by faculty and students on specialized projects.

Individual students and faculty members develop the specific criteria that must be met for the successful completion of specific independent study projects. However, the following guidelines govern the independent study program:

1. Only one independent study project may be undertaken in an academic term, unless permission is granted from the department chair and assistant or associate academic vice president of the student's primary major.
2. The maximum credit that may be earned for an independent study project is three semester hours.
3. The faculty member supervising the independent study, the student's advisor, and the department chair must sign the student's independent study form. Registration for the independent study must occur at the beginning of the semester in which the work is to be completed.
4. No more than six semester hours in independent study may be counted toward the major field, no more than three semester hours toward a minor field, and no more than 12 semester hours toward graduation. Independent study taken outside major and/or minor fields must be approved by the department chair and the assistant or associate academic vice president of the supervising faculty member.
5. Supervising an independent study is a privilege a faculty member may extend to a student. It is not a right that a student has.
6. Supervising faculty members determine the grade (letter grade or credit/no credit) for the independent study.



Internships

Many of the major fields of study include opportunities to receive credit for supervised, on-the-job activities. Interested students should contact the respective department chair for details.

Out-of-Class Courses

In order for students with irreconcilable conflicts to be able to complete graduation requirements on schedule, it is sometimes necessary to allow instruction in an out-of-class setting. To take a course out of class:

1. The course must be 2000-, 3000-, or 4000-level.
2. Students must obtain approval from the department chair, the faculty member teaching the course, and the advisor.

Out-of-class course approval forms are available in the office of the registrar. Exceptions to the course level requirement listed above must be approved by the respective faculty member, advisor, and department chair.

Course Numbers and Designations

The course numbers are designed to help students select courses at the appropriate level. The University uses the following system:

1. The first number indicates the year in which the course is usually taken. Freshmen normally take 1000-level courses; sophomores, 1000-level or 2000-level courses; juniors, 2000-level or 3000-level courses; and seniors, 3000-level or 4000-level courses. Courses beyond the student's classification should be taken with the consent of the instructor and academic advisor.
2. The alphabetical prefixes in the course designations indicate content divisions within academic departments. For example, the prefix "BETH" indicates that the course is a theology course in the department of biblical and ministry studies.

The semester that the course is offered is shown following the course title as follows: Fa – fall; Sp – spring; and Su – summer. The number to the right of the course title indicates credit given in semester hours. The University reserves the right to offer or withhold any of the courses listed.

Alternate Year Courses

Some departments offer courses on alternate years. These are designated as "even years" or "odd years" based on the first school year number. Example: 2011–12 is an odd year.

Grading System

- A** Recognizes excellent achievement. It is indicative of superior quality work and reveals a thorough mastery of the subject matter. The student receiving this grade should demonstrate enough interest to do some independent investigation beyond the actual course requirements.
- B** Indicates work and achievement that are well above average. The student receiving this grade should be capable of doing advanced work in this field. The quality of the work should be considered better than that achieved by the average student.
- C** Indicates average achievement and a satisfactory meeting of requirements.
- D** Reveals inferior accomplishment and is generally unsatisfactory from the standpoint of course requirements. This is the lowest grade for which credit can be earned.
- F** Failing grade. It indicates very unsatisfactory work. No course credit is earned.
- AU** Given when a course is audited. To receive this notation, the student must attend and participate in the course. No credit is earned.

- CR** Given when credit has been granted. It also applies to the credit/no credit program in which credit is received for satisfactory ("C" average or higher) performance in the course. A course in which a CR has been earned counts toward the total graduation requirements but is not used in the computation of GPAs.
- CE** Credit for the course has been earned by an examination administered by the University or another recognized testing agency or program.
- I** Signifies an incomplete and is a temporary grade given when a student is unable to complete the coursework on time because of extraordinary circumstances, such as illness, emergency, or other reasonable cause. This temporary grade does not influence the student's GPA. To be considered for an incomplete, the student must be passing the course and have completed the majority of the coursework. The instructor giving the incomplete will establish an appropriate completion date with the student. This date may extend to the end of the semester following the one in which the course was taken. If the work is not completed by the designated date, the "I" will be changed to an "F" and will be calculated as such in the student's GPA.
- INC** Indicates a permanent incomplete, a grade assigned in special situations by the faculty member with the approval of the academic vice president. This permanent grade does not influence the student's GPA. To receive a permanent incomplete, the faculty member should submit the appropriate form to the registrar identifying the circumstances warranting this special grade. If a permanent incomplete is awarded, the grade may not be changed at a future date. To receive credit for the course, the student must again register for the course and complete the course requirements.
- K** Signifies credit and accompanies courses transferred from other colleges or universities. It has no effect upon cumulative GPA.
- NC** Indicates no credit has been earned. Credit hours for which an "NC" has been earned are not used in the computation of GPAs.
- NP** Indicates that the student did not pass a course where the credits do not count toward the graduation requirements. Basic English and Intermediate Algebra are examples of such courses.
- NR** Indicates that the faculty member did not submit the grade in time for it to appear on the grade card.
- P** Indicates that the student performed satisfactory work ("C-" average or better) in a course where the credits do not count toward graduation, such as Basic English or Intermediate Algebra.
- W** Indicates that the student withdrew from the course between the second and ninth weeks of the semester.
- WP** Indicates that the student is passing when a course is dropped during the 10th and 11th weeks of the semester.
- WF** Used during the 10th and 11th weeks of the semester if the student is failing at the time of withdrawal.
- Z** Indicates that the student did not complete the course but did not officially withdraw. A "Z" is treated in the same manner as an "F" grade when figuring the GPA.

Credit/No Credit Program

The grade designation "credit/no credit" may be assigned by faculty members in courses such as student teaching, laboratories, independent studies, electives, and one-hour courses in physical education and music. The opportunity to take elective courses on a credit/no credit (CR/NC) basis offers students the opportunity to develop background in new areas of study without threatening cumulative GPAs.

The following guidelines govern involvement in the program:

1. A student of any classification may choose to earn credit/no credit or a letter grade in one semester hour, non-major physical education courses. This choice may be made at the end of the semester.
2. To earn credit, a student must maintain an average of “C” or better in the course.
3. A student must be at least a junior in classification (have earned at least 61 semester hours) to take an elective course on a credit/no credit basis. An elective is a course that will not count toward the student’s general education, major, minor, or cognate requirements.
4. A student may take just one elective course per term under the credit/no credit designation.
5. The total number of courses (other than one-hour physical education courses) that may be taken under the credit/no credit designation is determined by the student’s cumulative GPA:
 - 2.0–2.49 one course
 - 2.5–2.99 two courses
 - 3.0–3.49 four courses
 - 3.5 and above six courses
6. A student taking an elective course who wishes to change from the credit/no credit designation to the regular grading designation must do so before the end of the fourth week of the semester.
7. A student who wishes to change an elective course to the credit/no credit designation must do so before the end of the first full calendar week of the semester.

Grade Points and Point Averages

Cedarville University uses the “four-point system” to determine academic averages. Grade points are awarded as follows:

| Grade | Grade Points |
|-------|--------------|
| A | 4.0 |
| A- | 3.7 |
| B+ | 3.3 |
| B | 3.0 |
| B- | 2.7 |
| C+ | 2.3 |
| C | 2.0 |
| C- | 1.7 |
| D+ | 1.3 |
| D | 1.0 |
| D- | 0.7 |
| F | 0.0 |

The GPA is computed by dividing the total grade points earned by the total hours attempted. Grades are issued at the end of each semester. The student is responsible for discussing their academic achievement with their instructor.

Academic Progress, Warning, and Suspension

To satisfy the minimum graduation requirements, a student must earn a cumulative GPA of 2.0. The minimum cumulative GPA needed to maintain good academic standing is also 2.0.

The University recognizes that some students may have difficulty earning and/or maintaining the minimum cumulative GPA required for good standing and for graduation. To assist them, the following academic progress chart outlines the minimum cumulative GPAs needed according to the credit hours earned.

Academic Progress Chart

| Credits Attempted | Minimum Cumulative GPA for Academic Probation | Minimum Cumulative GPA for Academic Warning |
|-------------------|---|---|
| 0–18.99 | 1.00 | 1.45 |
| 19–36.99 | 1.25 | 1.60 |
| 37–64.99 | 1.50 | 1.75 |
| 65–96.99 | 1.75 | 1.90 |
| 97–112.99 | 1.90 | – |
| 113–128.99 | 1.95 | – |

Some academic programs have stricter academic progress requirements than those listed above. Students should check academic department sections of the catalog for the specific grade point requirements of their majors.

Students who are not in good academic standing will be notified by the assistant or associate academic vice president of their college. First-semester freshmen who do not meet the 1.0 average will usually not be academically suspended in order to provide some additional time for them to make the adjustment to college life.

Any student who does not meet the minimum cumulative GPA required for academic probation will be suspended for at least one semester. Any student on academic probation for two successive semesters who is not making satisfactory academic progress is subject to academic suspension. Any student whose term GPA is not above 1.0 for two successive semesters and who is not making satisfactory academic progress is subject to suspension. The assistant or associate academic vice president of a college may make exceptions to the academic progress guidelines when appropriate.

A student receiving veterans benefits who is on academic probation for two successive semesters without making satisfactory progress will be reported to the Veterans Administration. The veterans benefits for such a student will be terminated unless the student is making progress toward meeting the minimum academic requirements for graduation.

Faculty members and other counselors are available to discuss student progress. The student experiencing academic difficulty should utilize these personnel, as well as resources available in the academic assistance center, to help find solutions to academic problems.

Students on academic warning or probation may be required to take a special study skills course as a condition for continuing at the University. Academic warning may preclude involvement in certain University activities. Students facing academic warning or probation should consult with the coaches, advisors, or directors of their activities to learn of academic requirements or restrictions that may apply to those activities.

A student must maintain satisfactory academic progress to receive financial aid. Students receiving aid should check the financial aid section of the catalog to obtain the academic progress requirements that pertain to particular aid programs.

A student suspended for academic reasons may apply for readmission during any semester in the regular academic year following the semester of suspension. A student who is subject to suspension for a second time may be permanently dismissed.

Repeating Courses

While adjusting to academic life at Cedarville, some new students earn grades they consider to be unsatisfactory. Consequently, any first year freshman students who earn an unsatisfactory grade in their first two regular semesters of enrollment may repeat the course at Cedarville University before the end of their fourth semester of enrollment. Under this freshman repeat policy, the cumulative GPA will be recalculated using the second grade instead of the first.

A similar policy applies to a transfer student. Under the transfer repeat policy, courses taken during the first semester of attendance may be repeated within the succeeding two regular semesters. The cumulative GPA will be recalculated using the second grade instead of the first.

Under these repeat policies, any course may be repeated. Although the first grade is no longer calculated into the cumulative GPA, the course and grade information does remain on the student's transcript. In all other cases when a student repeats a course, both grades are calculated into the cumulative GPA. However, credit hours for a repeated course may count only once toward the credits needed for graduation.

Academic Honors

Dean's Honor List

Until final awards are announced at commencement, the highest academic honor possible to attain at Cedarville University is to be included on the dean's honor list. This list of high-ranking students is published at the end of each regular semester. Lists are not published following the summer sessions.

The requirements for the dean's honor list are as follows:

1. A student must have a 3.75 GPA or higher for the semester.
2. A student must have no grade for the semester lower than a "B."
3. A student must carry a minimum of 12 semester hours, excluding CR hours. Exceptions are made for those enrolled in field experiences or internships granting credit/no credit, provided they take at least two regularly graded courses.
4. A student must complete every course being taken by the end of the semester when grades are turned in by the faculty.

Dean's List

Published at the end of each regular semester, the dean's list is issued with the following requirements:

1. A student must maintain a 3.50 average for the semester.
2. A student must be carrying at least 12 semester hours, excluding CR hours. Exceptions are made for those enrolled in field experiences or internships granting credit/no credit, provided they take at least two regularly graded courses.
3. A student must complete every course being taken by the end of the semester when grades are turned in by the faculty.

Graduation with Honors

Upon recommendation of the faculty, a student who earns a GPA of at least 3.5 will graduate "with honor"; one who earns a GPA of at least 3.75 will graduate "with high honor"; and one who earns a GPA of at least 3.9 will graduate "with highest honor." A student must be in residence at least two full years (61 semester hours) to qualify for graduation with honors. Hours earned by examination (test-out) do not count as hours in residence toward graduation with honors. The cumulative GPA at the end of the fall semester prior to spring commencement is used to determine recognition for graduation with honors at commencement. However, actual graduation with honors, as recorded on the final

transcript, includes grades from all subsequent academic terms required to complete degree requirements.

Additional Academic Awards

Two prestigious awards are given to selected graduates each year during commencement. These awards are listed below:

The Faculty Scholarship Trophy

This award is given to the graduating senior(s) with the highest cumulative grade point average. Eligibility must include 90 semester hours taken at Cedarville University completed within six regular semesters.

The President's Trophy

This award is given to a graduating senior on the basis of scholastic ability, character, leadership, and sportsmanship.

Withdrawing From the University

Proper withdrawal from the University begins in the office of the registrar, where the student completes an official withdrawal form. Refund requests should be submitted to the cashiers office after the official withdraw process has been completed, and all appropriate adjustments to the student's registration has been completed. A student's ID card and residence hall key must be returned to the office of the registrar on the last day the student is on campus. No student should leave Cedarville University without completing proper withdrawal through the office of the registrar.

Student transcripts will be marked with the appropriate grade once withdrawal is complete in accordance with the established University policy. (See Adding and Withdrawing From a Course.)

Withdrawal for Military Reasons

Students serving in reserve units of the armed forces may be called up to active duty during an academic term. Students who withdraw up to the end of the fourth week of the semester will receive refunds according to the following schedule:

Tuition: 100 percent

Room: prorated on a per diem basis

Board: prorated on a per diem basis

Fees: 0

Students who withdraw after the fourth week of the semester may file a request for "permanent incomplete." This classification provides students the opportunity to complete the coursework upon returning to the University without having to pay tuition again. Forms may be picked up in the office of the registrar.

Approval for the awarding and removal of the entry "permanent incomplete" resides with the academic vice president. Refunds for room, board, and fees will be disbursed according to the previously mentioned schedule.

To initiate the withdrawal procedure, students are to bring a copy of their orders to the office of the registrar and obtain the appropriate forms. Withdrawals will be processed according to the standard procedures listed in the University catalog.

Family Educational Rights and Privacy Act

Cedarville University complies with the Family Educational Rights and Privacy Act (the Buckley Amendment), which is designed to protect the privacy of educational records, to establish the right of students to inspect and review their records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. The University has adopted a policy that explains in detail the procedures followed for compliance with provisions of the act. Copies of the policy are available in the office of the registrar and the student life office.



College of Arts and Sciences

Associate Academic Vice President and Dean: **Steven Winteregg**, Professor of Music. *Education:* B.M.E., University of Cincinnati College-Conservatory of Music, 1974; M.M., Wright State University, 1979; D.M.A., The Ohio State University, 1987. At Cedarville since 2004.

Departments:

- Art, Design, and Theatre (Page 34)
- Biblical and Ministry Studies (Page 43)
- English, Literature, and Modern Languages (Page 86)
- History and Government (Page 96)
- Music and Worship (Page 137)
- Science and Mathematics (Page 166)

College of Extended Learning

Senior Associate Academic Vice President: **Andrew Runyan**, Associate Professor of Management. *Education:* B.M.E., University of Dayton, 1983; M.S.M.M., GMI Engineering and Management Institute, 1993; Ph.D., Nova Southeastern University, 2000. At Cedarville since 2006.

- Academic Enrichment Center
- Center for Teaching and Learning
- Continuing Education Programs
- Graduate Studies
- Summer School and Dual Enrollment

College of Health Professions

Assistant Academic Vice President and Dean: **Pamela Diehl Johnson**, Senior Professor of Kinesiology. *Education:* B.S., University of Dayton, 1970; M.A., The Ohio State University, 1971; Ph.D., The Ohio State University, 1974. At Cedarville since 1974.

School of Nursing (Page 152)

Departments:

- Kinesiology and Allied Health (Page 117)
- Psychology (Page 162)
- Social Work (Page 190)

School of Pharmacy

Dean: **Marc Sweeney**, Professor of Pharmacy Practice. *Education:* B.S. Pharm., Ohio Northern University, 1993; Pharm.D., The Ohio State University, 1997; M.Div., Southwest Bible College and Seminary, 2006. At Cedarville since 2008.

School of Pharmacy (Page 157)

College of Professions

Associate Academic Vice President and Dean: **Marc McClain**, Professor of Chemistry. *Education:* B.A., Cedarville University, 1989; Ph.D., University of Michigan, 1994; Postdoctoral Fellow, Sandia National Laboratories, 1994–96; Summer Faculty Research Fellow, Air Force Research Laboratory, 1997, 1999, 2000, 2001, 2002; National Research Council Senior Research Associate, 2003–2004. At Cedarville since 1996.

School of Business Administration (Page 56)

Departments:

- Education (Page 67)
- Engineering and Computer Science (Page 77)
- Media and Applied Communications (Page 127)

Department of

ART, DESIGN, AND THEATRE

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Majors

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Minors

- » Creative Web Design Minor (Page 42)
- » Digital Photography Minor (Page 42)
- » Graphic Design Minor (Page 42)
- » Studio Art Minor (Page 42)
- » Theatre Minor (Page 42)

Mission Statement

The Cedarville University Department of Art, Design, and Theatre is an essential part of a unique, creative, and academic Christ-centered learning community that values a broad study of disciplines in the liberal arts. As Christian artists, we are given the gift of creativity to imitate and honor God as Creator.

The department of art, design, and theatre believes that God has called us to excellence and whatever we do is to the glory and honor of the Creator. We believe that art is a gift and a calling, and that educational success in art, design, or theatre is not measured in income or job placement alone but in how lives are enabled, enriched, enlightened, and transformed.

The successful graduate of the art, design, and theatre department will:

- **Glorify God:** Demonstrate the appreciation of God's purpose and design in creation through artistic endeavor. The graduate will exercise the stewardship of God's gifts as evidenced in a work ethic centered in faith and characterized by diligence, excellence, and honesty.
- **Think broadly and deeply:** Use critical thinking to evaluate and apply historical and cultural knowledge to conceptualize, create, and communicate their art.
- **Communicate effectively:** Be effective with verbal and visual communication while articulating a biblical philosophy of art which reveals an understanding of the integration of faith and learning.
- **Develop academically and professionally:** Demonstrate the understanding and competence of technical skills and media necessary for individual creation of visual or performing art. Graduates will be prepared for graduate study and/or become practitioners in their discipline.
- **Engage for Christ:** Be effective as a spiritual witness to the greater culture simply by being the best artist they can be. The graduate is engaged and involved in creating a viable cultural contribution to the artistic cultures of the University and community. By their humility, intellect, and excellent verbal and visual abilities, they impact the world for Christ.

Personal Requirements

Scholarships

Academic scholarships and other types of financial assistance are available to qualified individuals through the Cedarville University Financial Aid Office.

Portfolio

Applicants who wish to major in studio art, industrial and innovative design, or graphic design should follow the standard procedure for admission. A portfolio submission for art majors is encouraged but is not a requisite for admission into the program. Portfolios should be submitted on a CD or at an arranged on-campus interview.

Department Requirements

To graduate with a major from the art and design program, students must earn at least a 2.0 cumulative average in all courses required for their major and at least a "C-" in all courses taken to meet specific requirements in their major.

Theatre Program

Students planning to pursue a major in theatre are best prepared by taking a college-preparatory curriculum in high school. Successful students in the major are individuals with abilities in creative expression, critical thinking, problem-solving, and interpersonal interaction.



Graphic Design, Industrial and Innovative Design, and Studio Art Requirements

Freshman Review

All entering freshmen are admitted into the graphic design, industrial and innovative design, and studio art majors on a conditional basis. After the second semester of study, freshmen are evaluated by the art and design faculty to determine whether they are making adequate progress to continue in their respective programs and/or exhibit the talent necessary to be successful in their chosen fields. Students who do not show satisfactory progress and/or talent will be advised to consider other majors unless they show significant improvement.

Sophomore Review

At the end of the second semester of the sophomore year, graphic design, industrial and innovative design, and studio art majors are required to apply to the department for upper-divisional standing. The sophomore review is an evaluation of classroom work and performance and intuitive abilities necessary to succeed in the student's chosen discipline. The art and design faculty will evaluate the student on the basis of academic progress, grade averages in major courses, and intuitive abilities necessary to succeed in the student's chosen discipline. If necessary, the student may be required to present a portfolio representing every area of his or her work in graphic design and/or studio art courses at the University. The portfolio should include original two-dimensional work and a CD of images of three-dimensional work. Students who do not pass their sophomore review will not be allowed to continue in the major.

Transfer Review

All students who wish to transfer from another college or university and enroll at Cedarville University as either a graphic design, industrial and innovative design, or studio art major on the junior or senior level must submit along with their application a CD or DVD with images of two- and three-dimensional work representing collegiate classroom work and art done outside the classroom. The art and design faculty will review this material before acceptance into the program is granted.



Art and Design Requirements

Art and Design Student Handbook

The *Art Student Handbook* is an overview of all department policy as it applies to the student. Each art and design student is responsible for following the policies and procedures contained in both the handbook and the University catalog.

Capstone Exhibition or Project

In addition to the expectation of participation in student and other exhibitions throughout the college experience, all art and design majors are required to exhibit a level of performance for graduation that meets the requirements and standards of the department. For all majors, the capstone requirement is a senior exhibition or project as approved by the department chair.

Fees

Lab classes that provide supplies and/or University-provided equipment require fees. These fees do not necessarily cover all the costs for student art materials or personal tools.

Theatre Requirements

Students complete courses in the history, theory, research, and ethics of theatre. Students are required to complete a senior capstone project in research, production, internship, or performance design or directing to graduate. The nature of the project is determined by the emphasis area of the student.



Programs of Study

The department of art, design, and theatre offers the following programs of study:

Bachelor of Arts (B.A.) in:

- Graphic Design
- Industrial and Innovative Design
- Studio Art
- Theatre

Minors

- Creative Web Design
- Digital Photography
- Graphic Design
- Studio Art
- Theatre

Technical Resources

Art and design students render and complete class assignments in fully equipped Macintosh computer labs using industry-standard programs.

A modern theatre and accompanying equipment and facilities are available to theatre majors.

The computer network provides tools for research and design.

Cocurricular Opportunities

All art and design students are invited to join one or several student art organizations including Photography Club, The Studio, and the University student chapter of AIGA.

Theatre Cocurricular Opportunities

Each semester the department of art, design, and theatre presents a major theatrical production. In recent years the department has produced *Arsenic and Old Lace*, *A Doll's House*, *Romeo and Juliet*, *Mousetrap*, *An Ideal Husband*, *Alice in Wonderland*, *The Imaginary Invalid*, and *Crossing Delancy*. Performances are often sold out and are always greatly appreciated by the University family as well as many community guests.

Career Opportunities

Graduate and professional schools welcome Cedarville graduates. Careers pursued by graduates of this department include:

- Actor
- Art preparator
- Art therapist
- Arts administrator
- College professor
- Community arts manager
- Consumer product designer
- Exterior space designer
- Graphic designer
- Illustrator
- Interior space designer
- Retail art salesperson
- School teacher (elementary and secondary Christian or public schools)
- Studio artist
- Studio teacher
- Theatre director
- Transportation designer
- Web Design

Faculty

Terry Chamberlain, *Chair*. Associate Professor of Fine Art. *Education*: B.S., Bob Jones University, 1970; M.A., Bob Jones University, 1972. At Cedarville since 1996.

Rebecca M. Baker, Associate Professor of Theatre. *Education*: B.A., Bob Jones University, 1973; M.A., Bob Jones University, 1975; M.A., University of Cincinnati, 1996. At Cedarville from 1977–79 and since 2001.

Robert L. Clements, Associate Professor of Theatre. *Education*: B.A., Bob Jones University, 1970; M.Ed., Wright State University, 1983; graduate study — The Ohio State University, 2002. At Cedarville since 2003.

Timothy Frame, Assistant Professor of Graphic Design. *Education*: B.A., Morehead State University. At Cedarville since 2003.

Aaron Gosser, Assistant Professor of Studio Art. *Education*: B.A., Goshen College, 2002; M.F.A., Art Institute of Boston at Lesley University, 2007. At Cedarville since 2005.

Aaron Huffman, Assistant Professor of Graphic Design. *Education*: B.A., Cedarville University, 2007; M.F.A., University of Notre Dame, 2011. At Cedarville since 2011.

Joseph Kucharski, Assistant Professor of Theatre. *Education*: B.A., Shenandoah University, 2009; M.F.A., University of California, Irvine, 2012. At Cedarville since 2012.

James Mellick, Associate Professor of Studio Art. *Education*: B.A., Greenville College, 1969; M.F.A., Southern Illinois University, 1973. At Cedarville since 2008.

Diane A. Merchant, Professor of Theatre. *Education*: B.A., Cedarville University, 1978; postgraduate work in theatre, Kent State University, 1983–84; M.A., The Ohio State University, 1989; Ph.D., The Ohio State University, 1996. At Cedarville since 1989.

Matthew M. Moore, Associate Professor of Theatre. *Education*: B.A., Cedarville University, 1992; M.A., Miami University, 1997; M.F.A., George Washington University, 2009. At Cedarville since 1998.

Daniel Sternsher, Assistant Professor of Graphic Design. *Education*: B.S., Bowling Green State University, 1989; M.Ed., Bowling Green State University–College of Technology, 1998. At Cedarville since 2001.

Technical Support Staff

Donald N.C. Jones, Associate Designer, Costume Shop, Makeup, and Prop Supervisor. *Education*: B.A., Bob Jones University, 1973; graduate studies: Tennessee Temple University, 1974–76; Oxford University (England), 1977; University of the South, 1983; Rhode Island School of Design, 2002. At Cedarville since 1984.

Timothy J. Phipps, Assistant Technical Director/Production Manager. *Education*: B.A., Cedarville University, 2002. At Cedarville since 2005.

Adjunct Faculty

- Bruce Grimes, ceramics, printmaking
- Dan Brown, drawing



A complete description of the general education requirements is found on page 26.

Graphic Design

The **Bachelor of Arts in graphic design** prepares students for a career in visual communication. The designer is generally identified as a graphic designer, design consultant, or communication designer. More specifically, career opportunities include the design of advertising, exhibitions, publications, corporate identity, packaging, books, signs, magazines, multimedia presentations, and webpages. Every industrial, social, educational, service, and governmental organization utilizes design services. Employment may be with an organization or business, a design firm, advertising agency, or in a freelance capacity.

Students may choose to combine the major with a specific minor that enhances their potential for a wide diversity of graphic design-related career options, including business management or broadcasting and digital media. Portfolio diversity can be achieved with a minor in studio art or web design, electronic media, or digital photography.

The following requirements involve 65-66 semester hours:

| | |
|---|--------------|
| Graphic Design Core | 60-61 |
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-1230 Design I..... | 3 |
| ART-2220 Design II..... | 3 |
| ART-2250 Creative Photography | 3 |
| ART-3310 Art History I | 3 |
| ART-3320 Art History II..... | 3 |
| ART-3330 Three-Dimensional Design | 3 |
| BUS-2100 Business Communication | 3 |
| GDES-1150 Digital Image/Illustration | 3 |
| GDES-1220 Digital Image/Photography | 3 |
| GDES-2100 Typography | 3 |
| GDES-2601 Interactive Interface Design | 3 |
| GDES-3110 Portfolio..... | 1 |
| GDES-3220 Graphic Design I | 3 |
| GDES-3230 Production Design I..... | 3 |
| GDES-3300 Web Design..... | 3 |
| GDES-4220 Graphic Design II | 3 |
| GDES-4230 Production Design II..... | 3 |
| GDES-4900 Graphic Design Internship..... | 2-3 |
| IDES-2000 History and Influences of Design | 3 |
| Electives selected from the following | 5 |
| ART-2120 Drawing II | 3 |
| ART-3210 Painting I..... | 3 |
| ART-3250 Studio Photography..... | 3 |
| ART-3410 Ceramics | 3 |
| ART-3510 Introduction to Printmaking..... | 3 |
| ART-3610 Sculpture | 3 |
| ART-4400 20th Century Art..... | 3 |
| EMTC-2606 Introduction to Computer Animation for Electronic Media..... | 2 |
| EMTC-3630 Principles of Computer Animation..... | 3 |
| GDES-4300 Advanced Web Design..... | 3 |

Graphic Design Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| Other General Education Requirements..... | 49-57 |
| Graphic Design Major Requirements..... | 65-66 |
| General Electives | 5-14 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Graphic Design

First year:

| | |
|--|-------------|
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-1230 Design I..... | 3 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GDES-1150 Digital Image/Illustration | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| Quantitative Elective | 3 |
| Total | 33.5 |

Second year:

| | |
|---|-----------|
| ART-2220 Design II..... | 3 |
| ART-2250 Creative Photography | 3 |
| ART-3330 Three-Dimensional Design | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GDES-1220 Digital Image/Photography | 3 |
| GDES-2100 Typography | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| IDES-2000 History and Influences of Design | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Social Science Elective | 3 |
| Total | 32 |

Third year:

| | |
|---|-----------|
| ART-3310 Art History I | 3 |
| ART-3320 Art History II..... | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BUS-2100 Business Communication..... | 3 |
| GDES-2601 Interactive Interface Design | 3 |
| GDES-3220 Graphic Design I | 3 |
| GDES-3230 Production Design I..... | 3 |
| GDES-3300 Web Design..... | 3 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Total | 31 |

Fourth year:

| | |
|--|-------------|
| GDES-3110 Portfolio..... | 1 |
| GDES-4220 Graphic Design II | 3 |
| GDES-4230 Production Design II..... | 3 |
| GDES-4900 Graphic Design Internship..... | 2-3 |
| Graphic Design Electives | 5 |
| Physical Science Elective | 3.5 |
| Electives | 5-14 |
| Total | 31.5 |



A complete description of the general education requirements is found on page 26.

Industrial and Innovative Design

The **Bachelor of Arts in industrial and innovative design** prepares students for careers in consumer product design, interior space design, architectural/exterior space design, and transportation design. The designer is generally identified as an industrial designer, visual designer, or design consultant. More specifically, career opportunities include such areas as landscape design, furniture design, exhibition design, and other design-related fields. Employment may be with a corporation, design studio, or a freelance capacity.

The following requirements involve 82-83 semester hours:

| | |
|--|--------------|
| Industrial and Innovative Design Core | 82-83 |
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-1230 Design I | 3 |
| ART-3330 Three-Dimensional Design | 3 |
| GDES-1150 Digital Image/Illustration | 3 |
| IDES-2000 History and Influences of Design | 3 |
| IDES-3110 Drawing in Dynamic Perspective I | 3 |
| IDES-3120 Drawing in Dynamic Perspective II | 3 |
| IDES-3210 Language of Line | 4 |
| IDES-3220 Innovative Media Systems | 5 |
| IDES-3310 Fundamentals of Surface Development I | 3 |
| IDES-3320 Fundamentals of Surface Development II | 4 |
| IDES-3410 Three-Dimensional Composition | 4 |
| IDES-3420 Three-Dimensional Presentation | 4 |
| IDES-4010 Consumer Product Design | 4 |
| IDES-4020 Interior Space Design | 3 |
| IDES-4030 Transportation Design | 4 |
| IDES-4040 Architectural/Exterior Space Design | 4 |
| IDES-4200 Professional and Ethical Practices in Design | 3 |
| IDES-4300 Design Project: Selection Statement, Research and Scope | 3 |
| IDES-4400 Design Project and Presentation | 11 |
| Electives selected from the following | 2-3 |
| ART-2220 Design II | 3 |
| ART-3230 Watercolor | 2 |
| BUS 2100 Business Communication | 3 |
| GDES 1220 Digital Image/Photography | 3 |

Industrial and Innovative Design Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| Other General Education Requirements | 49-57 |
| Industrial and Innovative Design Major Requirements | 82-83 |
| Total (minimum, not including proficiency) | 131 |

Suggested Four-Year Curriculum for a Major in Industrial and Innovative Design

First year:

| | |
|---|-------------|
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-1230 Design I | 3 |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture | 3 |
| IDES-2000 History and Influences of Design | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 32.5 |

Second year:

| | |
|--|------------------|
| ART-3330 Three-Dimensional Design | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GDES-1150 Digital Image/Illustration | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| History Elective | 3 |
| Industrial and Innovative Design Electives | 2-3 |
| Literature Elective | 3 |
| Quantitative Elective | 3 |
| Physical Science Elective | 3.5 |
| Social Science Elective | 3 |
| Total | 32.5-33.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| IDES-3110 Drawing in Dynamic Perspective I | 3 |
| IDES-3120 Drawing in Dynamic Perspective II | 3 |
| IDES-3210 Language of Line | 4 |
| IDES-3220 Innovative Media Systems | 5 |
| IDES-3310 Fundamentals of Surface Development I | 3 |
| IDES-3320 Fundamentals of Surface Development II | 4 |
| IDES-3410 Three-Dimensional Composition | 4 |
| IDES-3420 Three-Dimensional Presentation | 4 |
| Total | 34 |

Fourth year:

| | |
|--|-----------|
| IDES-4010 Consumer Product Design | 4 |
| IDES-4020 Interior Space Design | 3 |
| IDES-4030 Transportation Design | 4 |
| IDES-4040 Architectural/Exterior Space Design | 4 |
| IDES-4200 Professional and Ethical Practices in Design | 3 |
| IDES-4300 Design Project: Selection Statement, Research, Scope | 3 |
| IDES-4400 Design Project and Presentation | 11 |
| Total | 32 |



A complete description of the general education requirements is found on page 26.

Studio Art

The **Bachelor of Arts in studio art** is designed for students with a strong interest in a variety of traditional studio disciplines such as drawing, painting, printmaking, and sculpting. Studio art currently offers concentrations in drawing, painting, sculpture, and printmaking. The major is ideally suited for students who plan to complete graduate programs in art and arts-related fields. Examples include art education, museum studies, art preparation, art therapy, and illustration. Course requirements involve 62 semester hours, comprised of 54 studio art semester hours and eight art electives.

The following requirements involve 62 semester hours:

| | |
|--|-----------|
| Studio Art Core | 54 |
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-1230 Design I | 3 |
| ART-2120 Drawing II | 3 |
| ART-2220 Design II | 3 |
| ART-3210 Painting I | 3 |
| ART-3220 Painting II | 3 |
| ART-3310 Art History I | 3 |
| ART-3320 Art History II | 3 |
| ART-3330 Three-Dimensional Design | 3 |
| ART-3410 Ceramics | 3 |
| ART-3510 Introduction to Printmaking | 3 |
| ART-3610 Sculpture | 3 |
| ART-4010 Studio (3 x 3 credit) | 9 |
| *ART-4300 Art Exhibition | 3 |
| ART-4400 20th Century Art | 3 |
| Electives selected from the following | 8 |
| ART-2250 Creative Photography | 3 |
| ART-3230 Watercolor | 2 |
| ART-4440 Installation Art | 3 |
| BEPH-4260 Philosophy of Art | 2 |
| BUS-2100 Business Communication | 3 |
| GDES-1150 Digital Image/Illustration | 3 |
| GDES-1220 Digital Image/Photography | 3 |
| GDES-2100 Typography | 2 |
| GDES-3220 Graphic Design I | 3 |
| GDES-3300 Web Design | 3 |
| GDES-4220 Graphic Design II | 3 |

*Capstone Course

Studio Art Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 49–57 |
| Studio Art Major Requirements | 62 |
| General Electives | 9–17 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Studio Art

First year:

| | |
|---|-------------|
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-1230 Design I | 3 |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| HUM-1400 Introduction to the Humanities | 3 |
| Literature Elective | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 32.5 |

Second year:

| | |
|--|-----------|
| ART-2120 Drawing II | 3 |
| ART-2220 Design II | 3 |
| ART-3210 Painting I | 3 |
| ART-3310 Art History I | 3 |
| ART-3320 Art History II | 3 |
| ART-3330 Three-Dimensional Design | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GSS-1100 Politics and American Culture | 3 |
| Social Science/Global Awareness Elective | 3 |
| Quantitative Elective | 3 |
| Total | 33 |

Third year:

| | |
|---|-----------|
| ART-3220 Painting II | 3 |
| ART-3410 Ceramics | 3 |
| ART-3510 Introduction to Printmaking | 3 |
| ART-3610 Sculpture | 3 |
| ART-4010 Studio | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Art Elective | 3 |
| Electives | 8 |
| Total | 30 |

Fourth year:

| | |
|---------------------------------|-------------|
| ART-4010 Studio | 6 |
| ART-4300 Art Exhibition | 3 |
| ART-4400 20th Century Art | 3 |
| Art Electives | 5 |
| History Elective | 3 |
| Physical Science Elective | 3.5 |
| Electives | 9 |
| Total | 32.5 |



Theatre

The **theatre major** provides training in acting, directing, theatre design/technology, and theatre history/dramaturgy. The program allows the student to declare a concentration in either performance or design. A special emphasis is placed upon the challenges faced by the Christian in theatre and the use of drama in worship and Christian ministry.

In addition to studio and classroom instruction, students gain practical experience through working on department productions and serving on production teams. This practical experience work is supervised by the theatre technical staff and may include set construction, scenic painting, lighting, properties, costumes, and other projects.

While many theatre majors anticipate a career in theatre, other students may want to combine the theatre major with a specific minor to help prepare them for the diversity of theatre-related professions including Christian education, youth ministry, arts management, arts law, and arts education. The program culminates in a senior theatre project designed to feature the student's level of expertise and assist the student in preparation for graduate school or the selected area of employment or ministry.

Course requirements involve 56 semester hours including:

| | |
|--|-----------|
| Theatre core requirements | 33 |
| THTR-1410 Introduction to Theatre | 3 |
| THTR-1420 Introduction to Technical Theatre | 3 |
| THTR-1440 Stagecraft I..... | 1 |
| THTR-1450 Stagecraft II..... | 1 |
| THTR-1480 Play Production | 3 |
| THTR-2200 Introduction to Design | 3 |
| THTR-2350 Directing I..... | 3 |
| THTR-2430 Acting I | 3 |
| THTR-2470 Makeup Design..... | 2 |
| THTR-3420 Theatre History I | 2 |
| THTR-3430 Theatre History II | 2 |
| THTR-3470 Dramaturgy | 3 |
| THTR-4400 Professional Preparation Seminar..... | 2 |
| THTR-4630 The Christian in Theatre..... | 2 |
| Concentration selected from the following | 23 |
| Design Concentration | 23 |
| THTR-2440 Stagecraft III | 1 |
| THTR-4500 Scenic Design..... | 3 |
| THTR-2460 Costume Design | 3 |
| THTR-3440 Stage Costume History..... | 3 |
| THTR-3450 Stagecraft IV | 1 |
| THTR-3490 Stage Lighting Design | 3 |
| THTR-3520 Scenic Painting..... | 3 |
| *THTR-4840 Senior Theatre Project..... | 3 |
| Theatre elective | 3 |
| Performance Concentration | 23 |
| THTR-1230 Voice for the Performer | 3 |
| THTR-1430 Stage Movement..... | 3 |
| THTR-2410 Advanced Performance Techniques..... | 3 |
| THTR-3460 Acting II..... | 3 |
| THTR-3510 Directing II..... | 3 |
| THTR-3530 Techniques of American Musical Theatre ... | 2 |
| *THTR-4840 Senior Theatre Project..... | 3 |
| Theatre elective | 3 |

*Capstone Course

Theatre Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements..... | 49-57 |
| Theatre Major Requirements | 56 |
| Electives | 15-23 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Theatre

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| THTR-1410 Introduction to Theatre | 3 |
| THTR-1420 Introduction to Technical Theatre | 3 |
| THTR-1440 Stagecraft I..... | 1 |
| THTR-1450 Stagecraft II..... | 1 |
| THTR-1480 Play Production | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| Total | 31.5 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| LIT-2340 Western Literature..... | 3 |
| THTR-2200 Introduction to Design | 3 |
| THTR-2350 Directing I..... | 3 |
| THTR-2430 Acting I | 3 |
| THTR-2470 Makeup Design..... | 2 |
| Quantitative Elective | 3 |
| Theatre Concentration Courses | 7 |
| Total | 33 |

Third year:

| | |
|---|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| THTR-3420 Theatre History I | 2 |
| THTR-3430 Theatre History II | 2 |
| THTR-3470 Dramaturgy | 3 |
| History Elective | 3 |
| Physical Science Elective | 3.5 |
| Electives | 3 |
| Theatre Concentration Courses | 10 |
| Total | 30.5 |

Fourth year:

| | |
|---|-----------|
| THTR-4400 Professional Preparation Seminar..... | 2 |
| THTR-4630 The Christian in Theatre | 2 |
| Social Science/Global Awareness Elective..... | 3 |
| Theatre Concentration Courses | 6 |
| Electives | 20 |
| Total | 33 |



Minors

Creative Web Design Minor

The **creative web design minor** is a value-added program that provides students with web design skills to compliment their chosen majors or fields of study. Course requirements involve 19 semester hours.

| | |
|--|-----------|
| Creative Web Design Core | 16 |
| ART-2250 Creative Photography | 3 |
| *(or JOUR-4610 Photojournalism | 3) |
| GDES-1220 Digital Image/Photography | 3 |
| (or TPC-2000 Production Tools for Technical Communication | 3) |
| GDES/EMTC 2601 Interactive Interface Design | 3 |
| GDES-3300 Web Design..... | 3 |
| GDES-4300 Advanced Web Design | 3 |
| GDES-4310 Digital Portfolio | 1 |
| Elective selected from the following | 3 |
| GDES-1300 Graphic Design for Non-Majors | 3 |
| GDES-3220 Graphic Design I..... | 3 |

*This course requires prerequisites in the journalism major.

Digital Photography Minor

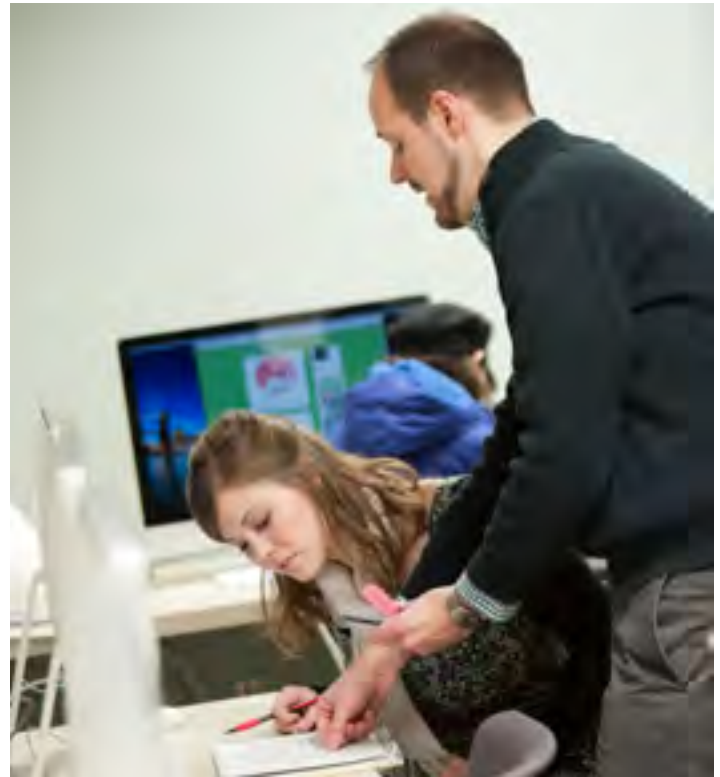
The **digital photography minor** is a value-added program designed to provide students with artistic and professional digital photography and image-editing skills to produce creative, quality photographs and images that complement personal and professional goals.

| | |
|---|-----------|
| Digital Photography Core | 17 |
| ART-2250 Creative Photography | 3 |
| ART-3250 Studio Photography | 3 |
| ART-4250 Advanced Creative Photography..... | 3 |
| ART-4260 Photography Portfolio and Exhibition | 2 |
| GDES- 1220 Digital Image/Photography | 3 |
| JOUR-4610 Photojournalism | 3 |

Graphic Design Minor

The **graphic design minor** gives students who have an interest in the advertising and marketing aspects of art a foundational understanding of this important profession. The program includes coursework in both manual and computer-assisted art. It is suggested that students who minor in graphic design begin the program no later than their sophomore year. Course requirements involve 21 semester hours.

| | |
|---|-----------|
| Graphic Design Core | 18 |
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-1230 Design I..... | 3 |
| GDES-1150 Digital Image/Illustration | 3 |
| GDES-2100 Typography | 3 |
| GDES-3220 Graphic Design I | 3 |
| Elective selected from the following | 3 |
| ART-2250 Creative Photography | 3 |
| GDES-2601 Interactive Interface Design | 3 |
| GDES-1220 Digital Image/Photography..... | 3 |
| GDES-3230 Production Design I | 3 |
| GDES-3300 Web Design | 3 |
| GDES-4220 Graphic Design II..... | 3 |
| EMTC-2610 Preproduction Planning..... | 3 |
| TPC-2000 Production Tools for Technical Communication.... | 3 |



Studio Art Minor

The **studio art minor** provides an opportunity for students with aptitude in the visual arts to receive formal instruction in art. In addition to skill-based instruction, special attention is given to building a philosophical and historical understanding of art from a scriptural perspective. It is suggested that students who minor in art begin the program no later than the sophomore year. Course requirements involve 17–18 semester hours, including 15 hours of art core and two–three hours of an art elective.

| | |
|---|------------|
| Art Core | 15 |
| ART-1100 Introduction to Art | 3 |
| ART-1210 Drawing I | 3 |
| ART-2210 Design I..... | 3 |
| ART-3210 Painting I | 3 |
| ART-3330 Three-Dimensional Design | 3 |
| Elective selected from the following | 2–3 |
| ART-2120 Drawing II | 3 |
| ART-2220 Design II..... | 3 |
| ART-2250 Creative Photography | 3 |
| ART-3220 Painting II | 3 |
| ART-3230 Watercolor | 2 |
| ART-3410 Ceramics | 3 |
| ART-3510 Introduction to Printmaking..... | 3 |
| ART-3610 Sculpture | 3 |

Theatre Minor

Course requirements for the minor in theatre involve 16 semester hours selected from the following courses:

| | |
|---|---|
| THTR-1410 Introduction to Theatre | 3 |
| THTR-1420 Introduction to Technical Theatre | 3 |
| THTR-1440 Stagecraft I..... | 1 |
| THTR-2430 Acting I | 3 |
| Theatre Electives | 6 |

Department of

BIBLICAL AND MINISTRY STUDIES

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Minors

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Mission Statement

Our Lord Jesus Christ commissioned His followers to “go and make disciples of all nations, baptizing them ... and teaching them to observe all that I commanded you ...” (Matt. 28:19). The apostle Paul is an example of how the early believers embraced this mission and carried it forward. “We proclaim him (Christ),” Paul declared, “admonishing every man and teaching every man with all wisdom, so that we may present every man complete in Christ” (Col. 1:28). Indeed, over the centuries there is an unbroken chain of men and women who have found life doing the same. So it is the mission of the department of biblical and ministry studies at Cedarville University to stand firmly in that line of those who have faithfully carried forward Christ’s commission. With Peter we are convinced that it is Christ alone who has “the words of eternal life” (John 6:68).

As a department, we are privileged to carry out this commission on two levels. First, we are engaged in training men and women professionally and academically. Professionally, we want to equip graduates for full-time ministry in the church by preparing men and women with a theologically informed philosophy of ministry accompanied by the skills and experience needed to actualize it in the church. Majors that particularly facilitate this are Christian education, youth ministries, pastoral studies, world missions, and international studies-missiology. Academically, we want to inspire men and women to use their minds for the glory of God. We want to raise up a generation of scholars whose desire is to bring every thought into submission to Christ for the glory of God. Majors geared toward this purpose are comprehensive Bible, pre-seminary Bible, and philosophy.

Second, we have the institution-wide opportunity of influencing each student through the required Bible minor. On this level we endeavor to aid students from all disciplines in developing a distinctively God-centered world and life view. We believe it to be crucially important that all those who will be appointing the pastors and missionaries of the future, doing the work of the ministry, and serving God through their vocations know how to handle the Word of truth accurately.

To this end, we commit ourselves to facilitating the development in every student of a biblically based, theologically sound, philosophically defensible, and life-transforming view of life under God.

Personal Requirements

Students planning to pursue careers in vocational ministries should possess a commitment to intense study of the Scriptures, a heart for ministering to the needs of others, and a reputation for Christlike character, which would provide a platform for authentic spiritual leadership. In addition to classroom expectations, students should seek to gain as much practical experience in ministries as possible. Biblical and ministry studies majors find the opportunities provided by the Christian ministries program to be excellent avenues for applying truths learned in the classroom and developing necessary skills for effective ministry.

Department Requirements

To graduate with a major from the department of biblical and ministry studies, students must earn a cumulative average of 2.0 or higher and a “C-” or higher in all courses included in the major with the exception of Greek.

Programs of Study

The department of biblical and ministry studies offers the following programs:

Majors

- Bible Teacher Education
- Christian Education
- Comprehensive Bible
- International Studies — Missiology
- Pastoral Studies
- Philosophy
- Preseminary Bible
- Youth Ministries

Minors

- Bible
- Christian Education
- Greek
- Missions
- Philosophy and Religion
- Preseminary
- Women’s Ministry
- Youth Ministries

Special Program

- One-Year Bible Certificate

Technical Resources

- Concordance and Bible study software (Logos Series-X Scholar’s Edition)
- Greek and Hebrew tutorial software
- 3-D interactive satellite atlas software of the land of Israel
- Textbook-specific software
- Course-specific software

Cocurricular Opportunities

Several organizations exist campus wide, which assist in the development of character and ministry skills. Many Bible faculty serve as advisors for these organizations, and our students are encouraged to take full advantage of them. For example:

Alpha Sigma

Alpha Sigma is an organization devoted to promoting critical thinking through philosophical and theological inquiry into issues central to the Christian worldview and our contemporary culture.

Career Opportunities

Graduate schools, professional schools, and seminaries welcome Cedarville University graduates. Careers pursued by graduates include:

- Bible teacher
- Camp director
- Christian education director
- Missionary
- Pastor
- Philosopher
- Writer
- Youth pastor



Faculty

Chris Miller, *Chair*. Senior Professor of Biblical Studies.

Education: B.A., Tennessee Temple University, 1976; Th.M., Grace Theological Seminary, 1981; Ph.D., Dallas Theological Seminary, 1993; graduate study, Institute of Holy Land Studies (Jerusalem, Israel), 1992. At Cedarville since 1991.

William Brown, President; Professor of Bible. *Education*: B.A., University of South Florida, 1975; Th.M., Dallas Theological Seminary, 1981; Ph.D., Dallas Theological Seminary, 1984. At Cedarville since 2003.

Jeffrey Cook, Associate Professor of Urban Ministry. *Education*: B.A., Cedarville University, 1981; M.A., Grace Theological Seminary, 1983; M.Div., Tyndale Theological Seminary (the Netherlands), 1991; D.Min., Trinity Evangelical Divinity School, 1997. At Cedarville since 1998.

Gregory Couser, Professor of New Testament and Greek. *Education*: B.S., Liberty University, 1981; M.Div., Liberty Baptist Theological Seminary, 1985; M.A., Liberty University, 1988; Ph.D., University of Aberdeen (Scotland), 1993. At Cedarville since 1994.

Paul Dixon, Chancellor; Professor of Bible. *Education*: B.A., Tennessee Temple University, 1961; M.Div., Temple Baptist Theological Seminary, 1964; D.D., Tennessee Temple University, 1978; LL.D., Liberty University, 1984; Ed.D., The University of Cincinnati, 1986. At Cedarville since 1978.

Scott Dixon, Associate Professor of Education Ministries. *Education*: B.A., Cedarville University, 1984; Th.M., Dallas Theological Seminary, 1989; Ph.D., Michigan State University, 2001. At Cedarville since 1997.

Daniel Ebert IV, Professor of Biblical Studies. *Education*: B.A., Clearwater Christian College; M.Div., Asian Theological Seminary; Th.M., Biblical Theological Seminary; Ph.D., Trinity Evangelical Divinity School. At Cedarville since 2008.

Daniel Estes, Director, Center for Biblical Integration; Distinguished Professor of Old Testament. *Education*: B.A., Cedarville University, 1974; Th.M., Dallas Theological Seminary, 1978; Ph.D., Cambridge University (England), 1988. At Cedarville since 1984.

Joy Fagan, Associate Professor of Education Ministries. *Education*: B.A., Cedarville College, 1989; M.R.E., Grand Rapids Baptist Seminary, 1999; Ed.D., Southern Seminary, 2005. At Cedarville since 1994.

Shawn Graves, Assistant Professor of Philosophy. *Education*: B.A., Cedarville University, 2000; M.A., Ohio University, 2002; M.A., University of Rochester, 2006; Ph.D., University of Rochester, 2010. At Cedarville since 2007.

Donald Grigorenko, Assistant Chair, Associate Professor of Intercultural Studies. *Education*: B.S., The Ohio State University, 1977; Grad Certificate, Multnomah School of the Bible; Th.M., Dallas Theological Seminary, 1986; Ph.D., Trinity Evangelical Divinity School, 2004. At Cedarville since 2001.

T.C. Ham, Assistant Professor of Old Testament. *Education*: B.A., Boston University, 1993; Th.M., Dallas Theological Seminary, 2001; Ph.D., Dallas Theological Seminary, 2007. At Cedarville since 2010.

Thomas Hutchison, Professor of Educational Ministries. *Education*: B.A., Cedarville University, 1980; M.Div., Grand Rapids Baptist Seminary, 1985; Ph.D., Marquette University, 1997. At Cedarville since 1995.

Aaron James, Assistant Professor of Theological Studies. *Education*: B.A., Oklahoma Baptist University, 1999; M.A., Southwestern Baptist Theological Seminary, 2001; M.A., University of Oklahoma, 2003; Ph.D., University of Dayton, 2010. At Cedarville since 2007.

Adam Johnson, Assistant Professor of Theological Studies. *Education*: B.A., Biola University, 2001; M.A., New Testament, Talbot Theological Seminary, 2006; M.Div., Princeton Theological Seminary, 2007; Ph.D., Theological Studies, Trinity Evangelical Divinity School, 2010.

Robert Milliman, Research Professor of New Testament. *Education*: B.S., Pillsbury Baptist Bible College, 1980; B.A., University of Minnesota, 1982; M.Div., Central Baptist Theological Seminary, 1984; Th.M., Central Baptist Theological Seminary, 1987; Ph.D., Trinity Evangelical Divinity School, 1997. At Cedarville since 2004.

David Mills, Professor of Philosophy and Director of Honors Program. *Education*: B.S., Cedarville University, 1992; Ph.D., The Pennsylvania State University, 2000. At Cedarville since 1994.

Michael Pahl, Associate Professor of Theological Studies. *Education*: A.Mus., Western Board of Music (Canada), 1987; B.R.E., Prairie Bible College (Canada), 1995; M.Div., Prairie Graduate School (Canada), 1998; Ph.D., University of Birmingham (U.K.), 2008. At Cedarville since 2011.

Michael Parrott, Assistant Professor of Educational Ministries. *Education*: B.S., California Polytechnic State University, 1974; M.Div., Western Conservative Baptist Seminary, 1981; D.Min., Gordon Conwell Theological Seminary, 2010. At Cedarville since 2004.

Ryan Peterson, Assistant Professor of Theological Studies. *Education*: B.A., Moody Bible Institute, 1998; M.A., Christian Apologetics, Biola University, 2001; M.Th., University of Edinburgh (Scotland), 2004; Ph.D., Wheaton College Graduate School, 2010. At Cedarville since 2007.

Carl Smith II, Professor of Church History. *Education*: B.A., Tennessee Temple University, 1979; M.Div., Temple Baptist Theological Seminary, 1983; M.A., Miami University, 1992; Ph.D., Miami University, 2001. At Cedarville since 2007.

Joel Williams, Professor of New Testament and Greek. *Education*: B.A., Moody Bible Institute, 1980; Th.M., Dallas Theological Seminary, 1984; Ph.D., Marquette University, 1992. At Cedarville since 2010.

Emeriti

Jack Riggs, Senior Professor Emeritus of Bible. *Education*: B.A., Taylor University, 1956; B.D., Grace Theological Seminary, 1959; Th.M., Grace Theological Seminary, 1963; Th.D., Dallas Theological Seminary, 1968; postdoctoral study, Institute of Holy Land Studies (Jerusalem, Israel), 1987. At Cedarville from 1967–2007.

Richard Durham, Professor Emeritus of Bible and Greek. *Education*: A.B., Wheaton College, 1950; B.D., Faith Theological Seminary, 1953; S.T.M., Faith Theological Seminary, 1960; Th.D., Grace Theological Seminary, 1981. At Cedarville from 1976–1991.

Jean Fisher, Associate Professor Emerita of Christian Education. *Education*: B.R.E., Baptist Bible Seminary, 1956; M.A., Wheaton College, 1961; graduate study, Southwestern Baptist Theological Seminary, summer 1965. At Cedarville from 1956–1991.

Robert Gromacki, Distinguished Professor Emeritus of Bible and Greek. *Education*: Th.B., Baptist Bible Seminary, 1956; Th.M., Dallas Theological Seminary, 1960; Th.D., Grace Theological Seminary, 1966; postdoctoral study, Institute of Holy Land Studies (Jerusalem, Israel), summer 1982. At Cedarville from 1960–2000.

A complete description of the general education requirements is found on page 26.

Bible Teacher Education

The **Bible teacher education major** is designed to prepare students who anticipate teaching Bible primarily in a Christian high school. It will also prepare students who pursue further graduate theological education to teach Bible at an undergraduate institution.

Course requirements involve 95–97 semester hours including:

General Education 16

| | |
|---|---|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |

Bible Teacher Education Core 40

| | |
|---|----|
| BECE-2400 Interpreting and Teaching the Bible | 6 |
| BECE-3700 Campus Ministries | 4 |
| BECE-4100 Leadership of Christian Education Ministries..... | 3 |
| BEDU-3110 Clinical Teaching in Bible | 1 |
| BENT-3110 Jesus and the Gospels | 3 |
| BENT-4110 Romans and Galatians | 3 |
| BEOT-3110 Pentateuch | 3 |
| BEOT-3150 Wisdom Literature..... | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPT-2400 Personal Evangelism | 3 |
| (or BEPT-3410 Discipleship | 3) |
| BEST-4310 Hermeneutics | 3 |
| BEST-4910 Seminar in Bible..... | 2 |
| BETH-XXXX Theology Elective | 3 |

Professional Education Requirements 39–41

| | |
|--|-------|
| EDSE-4100 Principles of Teaching: Adolescent Young Adult | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| EDUC-4000 Reading in the Content Area | 3 |
| (or ENG-3300 Developmental Reading | 3) |
| *EDUC-4880 Student Teaching (Nonlicensure) and Seminar..... | 10–12 |

*Capstone Course

Bible Education Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 33–41 |
| Bible Education Requirements | 56 |
| Education Requirements | 39–41 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Bible Teacher Education

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| ENG-1400 Composition | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| History/Global Awareness Elective | 3 |
| Literature Elective | 3 |
| Quantitative Elective | 3 |
| Total | 34.5 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPT-2400 Personal Evangelism | 3 |
| (or BEPT-3410 Discipleship | 3) |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| BETH-XXXX Theology Elective | 3 |
| Physical Science Elective..... | 3.5 |
| Total | 25.5 |

Third year:

| | |
|--|-----------|
| BECE-2400 Interpreting and Teaching the Bible | 6 |
| BECE-3700 Campus Ministries | 4 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BENT-3110 Jesus and the Gospels | 3 |
| BEOT-3110 Pentateuch | 3 |
| BEST-4310 Hermeneutics | 3 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| PYCH-1600 General Psychology..... | 3 |
| Total | 33 |

Fourth year:

| | |
|--|-----------|
| BECE-4100 Leadership of Christian Education Ministries | 3 |
| BEDU-3110 Clinical Teaching in Bible | 1 |
| BENT-4110 Romans and Galatians | 3 |
| BEOT-3150 Wisdom Literature..... | 3 |
| BEST-4910 Seminar in Bible..... | 2 |
| EDSE-4100 Principles of Teaching | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience | 3 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-4000 Reading Content Area | 3 |
| (ENG-3300 Developmental Reading | 3) |
| EDUC-4880 Student Teaching (Nonlicensure) and Seminar..... | 10 |
| Total | 35 |

A complete description of the general education requirements is found on page 26.

Comprehensive Bible

The **comprehensive Bible major** provides students with a broad knowledge of the Bible and basic skills for teaching the Bible.

Course requirements involve 60 semester hours including:

| | |
|--|-----------|
| General Education | 16 |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Comprehensive Bible Core | 44 |
| BECE-4100 Leadership in Christian Education Ministries | 3 |
| BECE-XXXX Christian Education Elective | 3 |
| BENT-XXXX New Testament Electives | 6 |
| BEOT-XXXX Old Testament Electives | 6 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPH-XXXX Philosophy Elective | 3 |
| BEPT-XXXX Practical Theology Electives | 6 |
| *BEST-4910 Seminar in Bible | 2 |
| *(or BEPT-4710 Ministry Internship | 2-3) |
| BEST-XXXX Special Topics Elective | 3 |
| BETH-XXXX Theology Electives | 6 |
| Bible Elective | 3 |
| *Capstone Course | |

Suggested Electives:

| | |
|---|---|
| BEPT-3410 Discipleship | 3 |
| CHMU-2060 Music and the Arts in Worship | 3 |
| COM-3240 Interpersonal Communication | 2 |
| FIN-2730 Church Business Administration | 3 |
| PYCH-1600 General Psychology | 3 |
| SOC-2400 Marriage and the Family | 3 |

Comprehensive Bible Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements | 33-41 |
| Comprehensive Bible Major Requirements | 60 |
| Electives | 27-35 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in Comprehensive Bible

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 English Composition | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| History/Global Awareness Elective | 3 |
| Literature Elective | 3 |
| Physical Science Elective | 3.5 |
| Total | 33 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| Bible Elective | 3 |
| New Testament Elective | 3 |
| Old Testament Elective | 3 |
| Quantitative Elective | 3 |
| Social Science Elective | 3 |
| Electives | 9 |
| Total | 30 |

Third year:

| | |
|--|-----------|
| BECE-4100 Leadership in Christian Education Ministries | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BEPH-2200 Introduction to Philosophy | 3 |
| Old Testament Elective | 3 |
| Philosophy Elective | 3 |
| Special Topics Elective | 3 |
| Theology Elective | 3 |
| Electives | 11 |
| Total | 33 |

Fourth year:

| | |
|---|-----------|
| BEST-4910 Seminar in Bible | 2 |
| (or BEPT-4710 Ministry Internship | 2) |
| Christian Education Elective | 3 |
| New Testament Elective | 3 |
| Practical Theology Elective | 6 |
| Theology Elective | 3 |
| Electives | 15 |
| Total | 32 |



Christian Education

The **Christian education major** prepares students to minister effectively and to encourage spiritual growth through meaningful relationships, compelling biblical teaching, effective program development, and influential leadership in a constantly changing culture. The required selection of a ministry concentration area and options in selection of a minor can be combined to equip for unique specialized areas of ministry to diverse age groups and ministry contexts (church, camp, college campus, parachurch organizations, cross-cultural contexts, etc.). This degree also provides a solid foundation for seminary or other related graduate programs.

Course requirements involve 75 semester hours including:

| | |
|---|--------------|
| General Education | 16 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Christian Education Core | 53–55 |
| BECE-1000 Orientation to Bible Ministries | 1 |
| BECE-2400 Interpreting and Teaching the Bible | 6 |
| BECE-3680 Children's Ministries..... | 4 |
| BECE-3700 Campus Ministries | 4 |
| BECE-3720 Adult Ministries | 4 |
| BECE-4100 Leadership of Christian Education Ministries..... | 3 |
| *BECE-4740 Internship in Christian Education..... | 3–12 |
| (or BECE-4750 Internship in Youth Ministry | 3–12) |
| BENT-XXXX New Testament Elective..... | 3 |
| BEOT-XXXX Old Testament Elective | 3 |
| BEPH-XXXX Philosophy Elective (BEPH-2200 recommended)3 | |
| BEPT-2400 Personal Evangelism | 3 |
| BEPT-3410 Discipleship | 3 |
| BETH-2350 Theological Foundations of Ministry | 3 |
| **BETH-XXXX Theology Elective (BETH-3330 recommended)3 | |
| BEXX-XXXX Bible Electives..... | 0–7 |



Select one of the following ministry concentrations6

| | |
|---|----------|
| Children's Ministries | 6 |
| EDEC-2100 Art and Music for Early Childhood..... | 2 |
| EDSP-2500 Survey of Intellectual and Developmental Disabilities | 1 |
| EDUC-2400 Children's Literature | 2 |
| EDUC-2500 Educational Psychology..... | 3 |
| ESED-2900 Health and Movement Education for the Young Child | 2 |
| PYCH-2725 Child Development | 2 |
| PYCH-2735 Child-Adolescent Development | 3 |
| Counseling** | 6 |
| PYCH-3680 Counseling Couples and Families..... | 3 |
| PYCH-3701 Counseling Adolescents | 3 |
| PYCH-4400 Counseling Skills..... | 3 |
| PYCH-4700 Counseling Children | 3 |
| Cross-Cultural Ministries*** | 6 |
| BEPT-2000 Introduction to Mission | 3 |
| BEPT-3450 Contemporary World Missions | 3 |
| BEPT-3470 Cross-Cultural Ministry | 3 |
| BEPT-3510 Introduction to Urban Ministry | 3 |
| Sports Ministries | 6 |
| BECE-2100 Wilderness Ministry | 3 |
| CCHG-3670 Fundamentals of Coaching | 3 |
| ESSE-1350 Foundations of Sports Ministries..... | 3 |
| ESSE-2810 Introduction to Camping | 2 |
| ESSE-2830 Recreational Leadership | 2 |
| SMGT-2500 Organizational Behavior in Sport | 3 |
| Worship*** | 6 |
| CHMU-2060 Music and the Arts in Worship..... | 3 |
| WSHP-1010 Introduction to Worship Ministry..... | 1 |
| WSHP-1020 Introduction to Worship Technology | 2 |
| Women's Ministries*** | 6 |
| BECE-3520 Counseling and Mentoring Women..... | 3 |
| BECE-3530 Contemporary Women's Ministry | 3 |
| BEPT-3480 Women's Communication for Ministry | 3 |

*Capstone Course

**PYCH-1600 General Psychology must be completed, and can satisfy the social science elective for general education.

***Students who select the cross-cultural ministries concentration should take BETH-4300 as the theology elective. Students with worship concentration should take BETH-3730 as the theology elective. Students with women's ministries concentration should take BEST/BETH-2920 Scriptural Interpretations of Gender Issues and Roles.

Christian Education Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements..... | 33–41 |
| Christian Education Major Requirements | 75 |
| Electives | 12–20 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Christian Education

First year:

| | |
|---|-----------|
| BECE-1000 Orientation to Bible Ministries | 1 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 English Composition | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| History/Global Awareness Elective | 3 |
| Physical Science Elective | 3.5 |
| Social Science Elective | 3 |
| Total | 34 |

Second year:

| | |
|---|-----------|
| BECE-2400 Interpreting and Teaching the Bible | 6 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BETH-2350 Theological Foundations of Ministry | 3 |
| Literature Elective | 3 |
| Ministry Concentration Electives | 6 |
| Philosophy Elective/Humanities Elective | 3 |
| Quantitative Elective..... | 3 |
| Total | 30 |

Third year:

| | |
|---|-----------|
| BECE-3680 Children's Ministries..... | 4 |
| BECE-3700 Campus Ministries..... | 4 |
| BECE-3720 Adult Ministries | 4 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BEPT-2400 Personal Evangelism | 3 |
| BEPT-3410 Discipleship | 3 |
| Electives | 6 |
| Total | 28 |

Summer:

| | |
|---|-------|
| BECE-4740 Internship in Christian Education | 3-12 |
| (or BECE-4750 Internship in Youth Ministry | 3-12) |

Fourth year:

| | |
|--|-----------|
| BECE-4100 Leadership of Christian Education Ministries | 3 |
| Bible Electives | 0-7 |
| New Testament Elective..... | 3 |
| Old Testament Elective | 3 |
| Theology Elective | 3 |
| Electives | 14 |
| Total | 26 |

A complete description of the general education requirements is found on page 26.

Pastoral Studies

The **pastoral studies major** is designed to prepare the person who aspires to serve as a general associate pastor or a staff pastor prior to graduate studies or prior to serving as a senior pastor.

Course requirements involve 61 semester hours including:

| | |
|---|--------------|
| General Education | 16 |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Pastoral Studies Core | 45–47 |
| BECE-4100 Leadership in Christian Education Ministries..... | 3 |
| BENT-XXXX New Testament Elective..... | 3 |
| BEOT-XXXX Old Testament Elective | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPT-2420 History of Mission | 3 |
| (or BEPT-3450 Contemporary World Missions.....) | (3) |
| BEPT-3420 Pastoral Ministry | 2 |
| BEPT-3430 Pastoral Counseling..... | 3 |
| BEPT-3500 Homiletics | 3 |
| BEPT-4560 Advanced Homiletics | 3 |
| *BEPT-4730 Pastoral Internship | 3–12 |
| BEST-XXXX Special Topics Elective..... | 3 |
| BETH-XXXX Theology Electives | 6 |
| BEXX-XXXX Bible Electives..... | 0–7 |

*Capstone Course

Suggested Electives:

| | |
|---|---|
| BEPT-3410 Discipleship | 3 |
| CHMU-2060 Music and the Arts in Worship | 3 |
| FIN-2730 Church Business Administration | 3 |
| PYCH-1600 General Psychology | 3 |
| PYCH-3660 Professional Counseling | 3 |
| PYCH-3670 Group Dynamics | 3 |
| SOC-2400 Marriage and the Family | 3 |

Pastoral Studies Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements..... | 33–41 |
| Pastoral Studies Major Requirements | 61 |
| Electives | 26–34 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Pastoral Studies

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Physical Science Elective | 3.5 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPT-2420 History of Mission | 3 |
| (or BEPT-3450 Contemporary World Missions | (3) |
| Quantitative Elective | 3 |
| Social Science Elective | 3 |
| Electives | 12 |
| Total | 30 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BEPT-3420 Pastoral Ministry | 2 |
| BEPT-3430 Pastoral Counseling | 3 |
| BEPT-3500 Homiletics | 3 |
| BEPT-4560 Advanced Homiletics | 3 |
| New Testament Elective..... | 3 |
| Old Testament Elective | 3 |
| Theology Elective | 3 |
| Electives | 7 |
| Total | 31 |

Fourth year:

| | |
|---|-----------|
| BECE-4100 Leadership in Christian Education Ministries..... | 3 |
| BEPT-4730 Pastoral Internship | 3–12 |
| Special Topics Elective | 3 |
| Theology Elective | 3 |
| Bible Electives | 0–7 |
| Electives | 13–15 |
| Total | 34 |



A complete description of the general education requirements is found on page 26.

Philosophy

The **philosophy major** provides students with the rich conceptual background and analytical skills instrumental in developing a philosophically defensible, biblically faithful, and theologically sound worldview. Students will cultivate a healthy intellectual curiosity as they gain knowledge of the history of Western philosophy and an awareness of the contemporary Western philosophical scene. Students will also acquire the ability to read, state, discuss, and evaluate clearly and charitably major philosophical theories found in the various branches of philosophy. Finally, students will develop the skills necessary to read carefully and listen graciously to alternative worldviews as they formulate precisely and defend rigorously their own Christian worldview.

Course requirements involve 43 semester hours including:

| | |
|---|-----------|
| Philosophy Core | 29 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPH-2240 Logic | 3 |
| BEPH-2250 Ethics | 3 |
| BEPH-2260 Religion and Culture | 3 |
| BEPH-3250 Philosophy of Religion | 3 |
| BEPH-3310 History of Ancient and Medieval Philosophy | 3 |
| BEPH-3320 History of Modern Philosophy | 3 |
| BEPH-3330 19th Century Philosophy | 3 |
| BEPH-3340 Current Philosophical Developments | 3 |
| *BEPH-4910 Seminar in Philosophy | 2 |
| Philosophy Electives selected from the following | 14 |
| BEPH-3240 Epistemology | 3 |
| BEPH-3260 Symbolic Logic | 3 |
| BEPH-3280 Metaphysics | 3 |
| BEPH-3400 Philosophy of Law and Economics | 3 |
| BEPH-4030 Philosophy and Literature | 2 |
| BEPH-4260 Philosophy of Art | 2 |
| BEPH-4290 Topics in Philosophy | 2 |
| BEPH-4900 Independent Study in Philosophy | 1–3 |
| BETH-3330 Christian Evidences and Apologetics | 3 |
| BETH-4320 Contemporary Theology | 3 |

*Capstone Course

Suggested Electives:

| | |
|--|---|
| COM-2050 Communication Theory | 3 |
| COM-3100 Advanced Public Speaking | 3 |
| COM-3150 Gender, Politics, and Communication | 3 |
| HIST-2010, 2020 History of Civilization I and II | 6 |
| HIST-3030 History of Christianity: Pre-Reformation | 3 |
| HIST-3050 Renaissance and Reformation Europe | 3 |
| LIT-3350 Shakespeare | 3 |
| LIT-3380 Contemporary British Literature | 3 |
| PYCH-1600 General Psychology | 3 |
| PYCH-3650 Learning and Memory | 3 |

Philosophy Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements | 49–57 |
| Philosophy Major Requirements | 43 |
| Electives | 28–36 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Philosophy

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 English Composition | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| Literature Elective | 3 |
| Physical Science Elective | 3.5 |
| Total | 33 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2240 Logic | 3 |
| BEPH-2250 Ethics | 3 |
| BEPH-2260 Religion and Culture | 3 |
| History Elective | 3 |
| Quantitative Elective | 3 |
| Social Science Elective | 3 |
| Electives | 8 |
| Total | 32 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BEPH-3250 Philosophy of Religion | 3 |
| BEPH-3310 History of Ancient and Medieval Philosophy | 3 |
| BEPH-3320 History of Modern Philosophy | 3 |
| BEPH-3330 19th Century Philosophy | 3 |
| Philosophy Electives | 9 |
| Electives | 6 |
| Total | 31 |

Fourth year:

| | |
|--|-----------|
| BEPH-3340 Current Philosophical Developments | 3 |
| BEPH-4910 Seminar in Philosophy | 2 |
| Philosophy Electives | 5 |
| Electives | 22 |
| Total | 32 |



A complete description of the general education requirements is found on page 26.

Preseminary Bible

The **preseminary Bible major** provides students with a broad, integrated foundation in the various disciplines central to a life of service in vocational ministry — philosophy, theology, ecclesial history, and biblical studies. Students will cultivate a deeper commitment to a God-centered vision of ministry by gaining knowledge of the issues, major voices, and methodologies necessary to responsibly engage past and contemporary discussion on the theory and practice of vocational ministry. Students will also acquire the skills of incisive and gracious critique, of employing methodologies and languages in a manner that furthers the discussion of the nature and practice of a life of service, and of translating theology into life and ministry.

Course requirements involve 44 semester hours including:

| | |
|--|-----------|
| General Education | 16 |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Preseminary Core | 23 |
| BECE-4100 Leadership in Christian Education Ministries | 3 |
| BENT-XXXX New Testament Elective | 3 |
| BEOT-XXXX Old Testament Elective | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPT-2400 Personal Evangelism | 3 |
| (or BEPT-3410 Discipleship | 3) |
| BEST-4310 Hermeneutics | 3 |
| *BEST-4910 Seminar in Bible | 2 |
| BETH-XXXX Theology Elective | 3 |

| | |
|---|----------|
| Preseminary Concentration | 5 |
| Concentration areas include biblical languages, Christian education, New Testament, Old Testament, philosophy, or practical theology. | |

| | |
|---|-----------|
| Required Minor in Biblical Greek | 16 |
| BEBL-2510, 2520 Elementary Greek I and II | 10 |
| BEBL-3510, 3520 Intermediate Greek I and II | 6 |
| *Capstone Course | |

Recommended Minor

Students are encouraged to select another minor from the following to add breadth to the program: business administration, Christian ministries management, church music, comprehensive communication arts, creative writing, writing for the professions, history, honors program, music, organizational communications, philosophy, psychology, sociology, TESOL, theatre, or another area of study (with permission from advisor and department of biblical and ministry studies chair).

Preseminary Bible Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements | 33–41 |
| Preseminary Bible Major Requirements | 44 |
| Required Minor | 16 |
| Electives | 27–35 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Preseminary Bible

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 English Composition | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| History/Global Awareness Elective | 3 |
| Literature Elective | 3 |
| Physical Science Elective | 3.5 |
| Total | 33 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPT-2400 Personal Evangelism | 3 |
| (or BEPT-3410 Discipleship | 3) |
| Old Testament Elective | 3 |
| Quantitative Elective | 3 |
| Social Science Elective | 3 |
| Electives | 9 |
| Total | 30 |

Third year:

| | |
|---|-----------|
| BEBL-2510,2520 Elementary Greek | 10 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| New Testament Elective | 3 |
| Electives | 15 |
| Total | 32 |

Fourth year:

| | |
|--|-----------|
| BEBL-3510,3520 Intermediate Greek | 6 |
| BECE-4100 Leadership in Christian Education Ministries | 3 |
| BEST-4310 Hermeneutics | 3 |
| BEST-4910 Seminar in Bible | 2 |
| Theology Elective | 3 |
| Preseminary Concentration Electives | 5 |
| Electives | 11 |
| Total | 33 |



A complete description of the general education requirements is found on page 26.

Youth Ministries

The **youth ministries major** prepares students to minister effectively to encourage spiritual growth through meaningful relationships, compelling biblical teaching, effective program development, and influential leadership in a constantly changing youth culture. The additional selection of a particular minor can be used to equip for unique specialized ministry contexts (camp, college campus, parachurch organizations, cross-cultural contexts, etc.). This degree also provides a solid foundation for seminary or other related graduate programs.

Course requirements involve 74 semester hours including:

| | |
|--|--------------|
| General Education | 16 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Youth Ministries Core | 58–60 |
| BECE-1000 Orientation to Bible Ministries | 1 |
| BECE-2200 Introduction to Youth Ministry..... | 2 |
| BECE-2400 Interpreting and Teaching the Bible | 6 |
| BECE-3680 Children’s Ministries..... | 4 |
| BECE-3700 Campus Ministries | 4 |
| BECE-3720 Adult Ministries | 4 |
| BECE-4100 Leadership of Christian Educational Ministries..... | 3 |
| *BECE-4750 Internship in Youth Ministry | 3–12 |
| BENT-XXXX New Testament Elective..... | 3 |
| BEOT-XXXX Old Testament Elective | 3 |
| BEPH-XXXX Philosophy Elective (BEPH-2200 recommended)..... | 3 |
| BEPT-2400 Personal Evangelism..... | 3 |
| BEPT-3410 Discipleship | 3 |
| BETH-2350 Theological Foundations of Ministry | 3 |
| BETH-XXXX Theology Elective (BETH-3330 recommended)..... | 3 |
| BEXX-XXXX Bible electives | 0–7 |
| Select one ministry elective from the following: | 3 |
| BECE-2100 Wilderness Ministry | 3 |
| BECE-3510 Small Group Ministry..... | 3 |
| BEPT-3480 Women’s Communication for Ministry | 3 |
| BEPT-3510 Introduction to Urban Ministry | 3 |
| BEST/BETH-2920 Scriptural Interpretations of Gender Issues and Roles..... | 3 |
| ESSE-2810 Introduction to Camping | 2 |

*Capstone Course

Youth Ministries Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 33–41 |
| Youth Ministries Major Requirements | 74 |
| Electives | 13–21 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Youth Ministries

First year:

| | |
|---|-----------|
| BECE-1000 Orientation to Bible Ministries | 1 |
| BECE-2200 Introduction to Youth Ministry..... | 2 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| Physical Science Elective | 3.5 |
| Quantitative Elective | 3 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| BECE-2400 Interpreting and Teaching the Bible | 6 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-XXXX Philosophy Elective/Humanities Elective | 3 |
| BEPT-2400 Personal Evangelism..... | 3 |
| BETH-2350 Theological Foundation of Ministry | 3 |
| History/Global Awareness Elective | 3 |
| Literature Elective | 3 |
| Social Science Elective | 3 |
| Total | 30 |

Third year:

| | |
|---|-----------|
| BECE-3680 Children’s Ministries..... | 4 |
| BECE-3700 Campus Ministries | 4 |
| BECE-3720 Adult Ministries | 4 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BEPT-3410 Discipleship | 3 |
| BEOT-XXXX Old Testament Elective | 3 |
| Electives | 10 |
| Total | 32 |

Summer:

| | |
|--|------|
| BECE-4750 Internship in Youth Ministry | 3–12 |
|--|------|

Fourth year:

| | |
|---|-----------|
| BECE-4100 Leadership of Christian Educational Ministries..... | 3 |
| BENT-XXXX New Testament Elective..... | 3 |
| BETH-XXXX Theology Elective | 3 |
| BEXX-XXXX Ministry Elective | 3 |
| Bible Electives | 0–7 |
| Electives | 11 |
| Total | 23 |



International Studies — Missiology

The **international studies majors** are interdisciplinary programs (page 112–114) that prepare students for a variety of internationally focused careers. The missiology concentration provides students with a missiological view of the international community. Students will cultivate a deeper commitment to the global mission task as they gain knowledge in contemporary global issues, past and present mission thinking and practice, as well as the opportunities and challenges to doing missions in today's world. Students will also develop skills in understanding other cultures and living competently in another culture for the purpose of ministry.

Course requirements involve 21 semester hours of core requirements and 42 hours of concentration requirements. See the major: "International Studies" (page 112) for details on other concentrations.

| | |
|---|-----------|
| International Studies Core Requirements | 21 |
| ^{1,2} ANTH-1800 Cultural Anthropology | 3 |
| ² BEPH-2260 Religion and Culture | 3 |
| BUS-3910 International Business | 3 |
| ² COM-2140 Intercultural Communication | 3 |
| (or PSYCH-1800 Cross-Cultural Psychology | 3) |
| GEO-3510 World Regional Geography — Western | 3 |
| (or GEO-3520 World Regional Geography — Eastern | 3) |
| ³ HIST-2010 History of Civilization I | 3 |
| (or HIST-2020 History of Civilization II | 3) |
| INTL-3190 Global Issues | 3 |

| | |
|---|-----------|
| Missiology Concentration Requirements | 33 |
| BECE-4100 Leadership of CE Ministries | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPT-2000 Introduction to Mission | 3 |
| BEPT-2400 Personal Evangelism | 3 |
| BEPT-2420 History of Mission | 3 |
| BEPT-3450 Contemporary World Mission | 3 |
| BEPT-3470 Cross-Cultural Ministry | 3 |
| BEPT-3510 Introduction to Urban Ministry | 3 |
| *BEPT-4720 Missionary Internship | 3 |
| BEST-4310 Hermeneutics | 3 |
| BETH-3330 Christian Evidences and Apologetics | 3 |
| One course in missiology | 3 |
| BEPT-4300 Missiology and Missiologists | 3 |
| BEPT-4510 Advanced Urban Ministry | 3 |
| Two courses in political science | 6 |
| POLS-3200 History and Politics of Latin America | 3 |
| POLS-3210 History and Politics of Asia | 3 |
| POLS-3220 History and Politics of the Middle East | 3 |
| POLS-3650 International Relations | 3 |
| POLS-4050 Issues in International Diplomacy | 3 |

¹ Satisfies social science general education requirement.

² Satisfies humanities general education requirement.

³ Satisfies history general education requirement.

*Capstone Course

International Studies Major-Missiology Concentration Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 43–51 |
| International Studies-Missiology Major Requirements | 63 |
| Electives | 14–22 |
| Total (minimum, not including proficiency) | 128 |

One-Year Bible Program

The **one-year Bible program** is a nondegree program designed to provide the student with greater Bible knowledge through intensive study of the Scriptures in a single academic year. This program provides personal enrichment through formal Bible study so that the student can participate more effectively in the church or a parachurch organization.

The course requirements for the one-year Bible program involve 34 semester hours including:

| | |
|---|-----------|
| General Education | 16 |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BENT-XXXX New Testament Electives | 6 |
| BEOT-XXXX Old Testament Electives | 3 |
| BEPH-XXXX Philosophy Elective | 3 |
| Other Bible Electives | 6 |

Minors

Bible Minor

The **Bible minor**, a part of the general education requirement, involves 16 semester hours of coursework including:

| | |
|---|---|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |

Christian Education Minor

The **Christian education minor** involves 16 semester hours of coursework for the student who wishes to become better equipped to serve in the educational function of the local church. These courses include:

| | |
|---|----------|
| BECE-2400 Interpreting and Teaching the Bible | 6 |
| Choose one from the following | 4 |
| BECE-3680 Children's Ministries | 4 |
| BECE-3700 Campus Ministries | 4 |
| BECE-3720 Adult Ministries | 4 |

Any courses with BECE or BEPT designators

Note: As a nondegree certificate program, the one-year Bible program is not eligible for federal Title IV financial aid funds — including the Federal Pell Grant and Federal Direct Loans.





Greek Minor

The **Greek minor** provides the student with two years of study in Koine Greek, the original language of the New Testament. Designed to prepare students for advanced Greek language study at the seminary level, this minor is required for preseminary majors. Course requirements include 16 semester hours of elementary and intermediate Greek. These courses include:
 BEBL-2510, 2520 Elementary Greek I and II..... 10
 BEBL-3510, 3520 Intermediate Greek I and II.....6

Mission Minor

The **mission minor** for the student interested in cross-cultural ministries involves 18 semester hours including:
 BEPT-2000 Introduction to Mission.....3
 BEPT-2420 History of Mission.....3
 BEPT-3450 Contemporary World Missions.....3
 BEPT-3470 Cross-Cultural Ministry.....3
At least 6 hours selected from6
 BEPH-2260 Religion and Culture..... 3
 BEPT-2400 Personal Evangelism..... 3
 BEPT-3410 Discipleship..... 3
 BEPT-3510 Introduction to Urban Ministry..... 3
 BEPT-4300 Missiology and Missiologists..... 3
 BETH-3400 Current Religious Movements..... 3

Philosophy and Religion Minor

The **philosophy and religion minor** involves 15 semester hours of coursework in philosophy and religion for the student who seeks a greater understanding of the nature and history of philosophical thinking and its impact on the religious life.

Preseminary Minor

The **preseminary minor** is designed to help the student prepare for graduate theological education and consists of 17–21 semester hours including:
Choose between Greek or Hebrew6–10
Greek 10
 BEBL-2510 Elementary Greek I.....5
 BEBL-2520 Elementary Greek II.....5
Hebrew..... 6
 BEBL-2610 Elementary Hebrew I.....3
 BEBL-2620 Elementary Hebrew II.....3
 BEPH-3250 Philosophy of Religion.....3
 BEST-2910 Theological Research.....2
At least two courses selected from6
 BEPH-2240 Logic..... 3
 BEST-4310 Hermeneutics..... 3
 BETH-3330 Christian Evidences and Apologetics..... 3
 BETH-4320 Contemporary Theology.....3

Women’s Ministry Minor

The **women’s ministry minor** involves 18–21 semester hours for students who desire to minister to women in a variety of contexts, through an understanding of the identity, role, and gender-specific needs of women, and through the attainment of the basic skills needed to address those needs and equip women most effectively. Course requirements are:

- BECE-3520 Counseling and Mentoring Women3
- BECE-3530 Contemporary Women’s Ministry.....3
- BEPT-3480 Women’s Communication for Ministry.....3
- BEST/BETH-2920 Scriptural Interpretations of Gender Issues/Roles3
- Select one from the following**.....3
- BECE-3540 Women in Church History..... 3
- BEST-4950 Men and Women in Leadership..... 3
- Select one from the following**.....3–6
- BECE-2400 Interpreting and Teaching the Bible..... 6
- BECE-3510 Small Group Ministry..... 3
- BEPT-2400 Personal Evangelism..... 3
- BEPT-3410 Discipleship..... 3
- BEPT-3430 Pastoral Counseling..... 3
- BEPT-3470 Cross-Cultural Ministry..... 3
- BEPT-3510 Introduction to Urban Ministry..... 3
- COM-3150 Gender, Politics, and Communication..... 3

Youth Ministry Minor

The **youth ministry minor** involves 15 semester hours of coursework for the student who wishes to become better equipped to serve in youth ministries. These courses include:
 BECE-2200 Introduction to Youth Ministry.....2
 BECE-2400 Interpreting and Teaching the Bible.....6
 BECE-3700 Campus Ministries.....4
Any courses with BECE or BEPT designators3

General Education Courses

Every student must take six Bible courses to meet the general education requirements. These 16 semester hours constitute a minor in Bible. They will also count toward the course requirements of any biblical and ministry studies major. **These courses may not be taken on an out-of-class basis or by correspondence study.**



School of

BUSINESS ADMINISTRATION

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Mission Statement

The mission of the Cedarville University School of Business Administration is to develop business professionals who will influence their organizations through excellence and a biblical worldview.

Given our vision as a school, our broader mission is to become the leader in biblical and innovative business education among Christian colleges and universities.

- To effectively foster academic achievement and personal character, we purpose to create an environment characterized by excellence in teaching, service, intellectual contribution, and collegiality.
- Essential to our mission is the creation of a learning environment that encourages, stimulates, and challenges students and faculty to maximize their personal potential in their chosen field of academic endeavor.
- To facilitate this learning environment, we will use a value-centered curriculum enhanced by an extensive information technology system and a series of personal and professional development seminars.
- In addition, across the curriculum, we have integrated ethical considerations, global awareness, and an emphasis on oral and written communication skills.
- The distinctive competency of our program is the integration of biblical truth within each of the business disciplines.

In light of our mission, the school has established the following goals:

1. We will create a learning environment that encourages, stimulates, and challenges students to maximize their personal potential in the chosen field of academic endeavor.
2. We will create a value-centered curriculum enhanced by an emphasis on topics critical to the student's competency in the world of work.
3. We will provide faculty with professional and academic opportunities to enhance both teaching competencies and intellectual contributions.
4. We will encourage the relationship between the school and significant constituencies that impact our mission and its implementation.

Accreditation

The school of business administration is accredited by the Association of Collegiate Business Schools and Programs (ACBSP).



Personal Requirements

A college-preparatory curriculum in high school provides the best preparation for the bachelor degree programs in the school of business administration. Three or four years of high school mathematics, including calculus, are recommended for students anticipating study in business. No previous coursework in business is necessary. Because of extensive computer utilization in the business curriculum, electives in computer programming or software packages may prove to be helpful.

School Requirements

Although students in the school of business administration are not required to apply for admission to the school, continuation is based upon performance in the core business requirements and satisfactory completion of course prerequisites.

Students entering their junior year will be reviewed for continuation by the school dean.

- Students majoring in business must earn at least a 2.0 GPA in all sophomore-level business courses required for their major in order to graduate with a degree in a business major.
- Students majoring in business must earn at least a "C-" in any prerequisite business course before being allowed to enter the subsequent course for which that course is a prerequisite. Waivers to this requirement are made only in exceptional circumstances, and such waivers require the approval of the dean of the school in consultation with the professor responsible for the subsequent course.
- In general, business majors should complete all 2000-level business core courses before beginning a 3000-level business course.
- Before taking a 4000-level business course, students must have satisfactorily completed all 2000-level business administration core courses required for their major. Waivers to this requirement are made only in exceptional circumstances, and such waivers require the approval of the school dean.
- To graduate with a major from the school of business administration, students must earn at least a 2.0 cumulative average in all courses required for their major and at least a "C-" in all courses taken to meet a specific requirement in their major (cognate courses not included).
- Every major and minor offered by the school of business administration requires that a minimum of 50 percent of the business courses in the business administration core and 50 percent of the specific business courses required for each major or minor be earned at Cedarville University. Any CLEP or advanced placement credits earned are not considered to be earned at Cedarville University.

Programs of Study

The school of business administration offers the following programs:

Majors

- Accounting
- Finance
- International Studies: Global Economics and International Business
- Information Technology Management
- Management
- Marketing
- Sport Business Management

Minors

- Business Administration
- Christian Ministries Management
- Economics
- Information Technology Management
- International Business
- Marketing
- Sport Management

Cocurricular Opportunities

The school of business administration provides several cocurricular opportunities for students to enhance their classroom experiences as they prepare for their professional careers.

Accounting Society

The Accounting Society promotes accounting awareness, establishes relationships with professionals in the accounting vocation, provides tutoring for students, and promotes fellowship among accounting students.

Association of Information Technology Professionals

The Association of Information Technology Professionals (AITP) provides management information systems and computer science majors with opportunities to network with business professionals while attending meetings, seminars, and activities.

Delta Mu Delta

Delta Mu Delta, an international honor society in business administration, recognizes junior and senior business majors who maintain excellent scholastic achievement. Delta Mu Delta membership provides recognition for a lifetime.

Financial Management Association

The Financial Management Association (FMA) provides students with opportunities to interact with senior financial executives from a variety of businesses. FMA also encourages members to get to know each other better as they begin developing a network of business contacts.

Human Resource Management

Students interested in human resources and labor relations attend the Society for Human Resource Management (SHRM) chapter meetings and interact with working professionals.

Students in Free Enterprise

Cedarville participates in the Students in Free Enterprise (SIFE) program with a number of other universities across the country. Students plan community events and enter a regional competition, developing leadership and teamwork skills.

Women in Business

Inspires female students of business to succeed professionally and personally by providing a forum for addressing issues relevant to women in business, connecting with modern female business leaders, impacting women in need, and establishing camaraderie among female business students.

Career Opportunities

Accounting Major

Accounting involves the preparation, analysis, and communication of relevant information for decision making. Financial accounting, managerial accounting, auditing, tax accounting, governmental and public sector accounting, accounting information systems, and management consulting services represent the major divisions of the accounting discipline. The accounting major prepares individuals for careers as:

- Auditor
- Budget analyst
- Chief financial officer
- Controller
- CPA
- FBI agent
- Internal audit
- IRS agent

Finance Major

Finance focuses on the financial decisions faced by business enterprises. This includes methods of raising money, debt management, investment and security analysis, real estate and insurance, and virtually all aspects of finance. The finance major prepares individuals for careers as:

- Bank branch manager
- Chief financial officer
- Financial analyst
- Financial planner
- Lending officer
- Portfolio manager
- Securities analyst
- Treasurer



Global Economics and International Business Major

Global Economics and International Business (GEIB) is an interdisciplinary program that prepares business students to operate in a multicultural and global marketplace. Careers in international business include working as business professionals in a(n):

- Foreign firm
- Multinational enterprise
- International division of a domestic company
- One of the many government organizations at the national, state, or local level concerned with global business development

Information Technology Management Major

Businesses and organizations have a strong need for individuals who understand the various business functions and can manage computer and communications technology and information systems within modern organizations. The information systems major prepares individuals for careers as:

- Business systems consultant
- E-business developer
- Information systems analyst
- Manager in information systems
- Manager/analyst
- Network administrator
- Programmer/analyst
- Web developer

Management Major

Management focuses on developing the leadership skills to make things happen for the business enterprise in a dynamic and competitive environment by organizing people, projects and processes. The management major prepares individuals for careers as:

- Benefits manager
- Branch manager
- Facility manager
- Human resource manager
- Materials manager
- Operations analyst
- Operations manager
- Plant manager
- Production manager
- Project manager
- Quality manager
- Risk manager

Marketing Major

A student with a major in marketing learns systematic ways for identifying, understanding, and satisfying consumer and organizational needs. The marketing major prepares individuals for careers as:

- Marketing manager
- Marketing researcher
- Promotion manager
- Retail manager
- Sales manager
- Sales representative

Faculty

Loren Reno, *Dean*. *Education*: B.A., Cedarville University, 1970; M.S., University of Southern California, 1981. At Cedarville since 2012.

Harry Anderson, Assistant Professor of Accounting. *Education*: B.A., Wheaton College, 1967; M.Acc., The Ohio State University, 1969; C.P.A., State of Ohio, 1979. At Cedarville since 2003.

Jon Austin, Associate Professor of Marketing. *Education*: B.A., University of Northern Iowa, 1982; M.S., Iowa State University, 1989; Ph.D., University of Wisconsin-Madison, 1997. At Cedarville since 2001.

John Delano, Assistant Professor of Information Systems. *Education*: B.S., Maranatha Baptist Bible College, 1996; M.S., University of Wisconsin-Whitewater, 2001; Ph.D., University of Wisconsin-Milwaukee, DBA. At Cedarville since 2008.

Jeffrey Guernsey, Assistant Professor of Finance. *Education*: B.S., Purdue University, 1979; M.Sc., Iowa State University, 1981. At Cedarville since 2003.

Charles Hartman, Associate Professor of Business Law and Accounting. *Education*: B.A., Michigan State University, 1984; M.B.A., Michigan State University, 1984; J.D., University of Dayton School of Law, 1997. At Cedarville since 1989.

Jeffrey Haymond, Associate Professor of Economics. *Education*: B.S., United States Air Force Academy, 1985; M.S., University of Tennessee, 1989; M.A., University of Denver, 1997; Ph.D., George Mason University, 2001. At Cedarville since 2010.

John LeBlanc, Associate Professor of Management. *Education*: B.S., Southern Illinois University, 1974; M.B.A., Southern Illinois University, 1976. At Cedarville since 1999.

William Ragle, Associate Professor of Finance. *Education*: B.S., Stephen F. Austin State University, 1976; M.B.A., University of North Texas, 1988; Ph.D., University of North Texas, 1996. At Cedarville since 1995.

Anne Rich, Associate Professor of Accounting. *Education*: B.A., Cedarville University, 1978; M.S., University of Central Florida, 1978; C.P.A., State of Florida, 1979. At Cedarville since 2000.

David Rotman, Associate Vice President for Technology/Chief Information Officer; Associate Professor of Management Information Systems. *Education*: B.S., Taylor University, 1968; M.A.T., Indiana University, 1972; C.D.P., Institute for Certification of Computer Professionals, 1980; Ph.D., Nova University, 1994. At Cedarville since 1984.

Andrew Runyan, Senior Associate Academic Vice President; Associate Professor of Management. *Education*: B.M.E., University of Dayton, 1983; M.S.M.M., GMI Engineering and Management Institute, 1993; Ph.D., Nova Southeastern University, 2000; registered professional engineer. At Cedarville since 2006.

Galen Smith, Professor of Economics. *Education*: B.A., Washburn University, 1966; M.S., Kansas State University, 1968; M.Div., Grace Theological Seminary, 1978; D.Min., Trinity Evangelical Divinity School, 1998. At Cedarville since 1981.

Sarah Smith, Associate Professor of Accounting. *Education*: B.A., Cedarville University, 1975; M.A., Virginia Polytechnic Institute and State University, 1976; Ph.D., Virginia Polytechnic Institute and State University, 1982. At Cedarville since 1980.

Daniel Sterkenburg, Associate Professor of Business Administration. *Education*: B.S., Calvin College, 1977; M.P.H., University of Michigan School of Public Health, 1999; M.B.A., Wright State University, 1990. At Cedarville since 2010.

Susan Terkelsen, Assistant Professor of Information Technology. *Education*: B.A., Cedarville University, 1988; M.A., Miami University, 1989. At Cedarville since 1999.

Bert Wheeler, Professor of Economics. *Education*: B.S., University of Tennessee, 1981; M.A., University of Tennessee, 1984; Ph.D., University of Tennessee, 1985. At Cedarville since 1992.

Integrated Business Core (IBC)

The Integrated Business Core (IBC) was initiated by the School of Business Administration of Cedarville University in 2002. The objective of the program is to break down the “silo mentality” present in traditional approaches to business education and help students develop a cross-disciplinary view of business.

Students in the IBC take Principles of Marketing, Principles of Management, as well as Principles of Finance along with a course called the IBC Practicum. The first three courses are taught in such a way that they prepare the students for the activities and requirements of the fourth course. As part of the practicum, students must form their own company, write a business plan, obtain a loan, implement their plan, make a profit, and close down operations. While running their company, they must choose a local nonprofit organization to provide a minimum of 10 hours of work per student and all of their profits at the end of the semester.

The IBC gives students more ownership of the learning process and provides practical, real-life experience of actually doing what they are learning about. In the years since its inception at Cedarville University, IBC students have donated 4,884 hours of service and \$37,900 to nonprofit organizations.

Business Advisory Board

The Business Advisory Board consists of entrepreneurs, business leaders, and educators representing diverse areas of business. Through annual meetings, these experts advise the University and evaluate its plans for strengthening Cedarville's position of leadership in undergraduate business education.

Board members include:

Mr. Harry Badanes, J.D. Cloud & Co. LLP
Mr. Ronald Baker, Ron Baker and Associates
Mr. Mike Crawford, College For Less, Inc.
Mr. Louie D'Amico, America Flavors
Mr. David Gneiser, Fond duLac Bumper Exchange
Mr. Michael D. Greenwood, Assurant Specialty Property
Mr. George Guritz, Guritz Investments, Ltd.
Mr. Gary Habegger, Goodrich Corporation
Mr. Ron Heineman, Horizons HRS, Ltd.
Mr. Mark Horne, Plymouth Venture Partners
Dr. Rajshekhar Javalgi, Cleveland State University
Dr. Scott MacKenzie, Indiana University Bloomington
Mr. Delmar Mohler, Faith Community Foundation
Mr. Jeffrey Montie, Kellogg Company
Mr. Jason Ramsey, Chick-fil-A
Mr. Lorne Scharnberg, KATECHO, Inc
Mr. Mark Scharnberg, KATECHO, Inc
Mr. Randy Wilcox, Otis Elevator Company

Accounting

The **accounting major** falls under the Bachelor of Arts degree and prepares students for careers in private, public, and corporate accounting as well as other business-related areas.

Course requirements involve 68 semester hours including:

| | |
|---|---|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II | 3 |
| ACCT-3110 Intermediate Financial Accounting I..... | 3 |
| ACCT-3120 Intermediate Financial Accounting II..... | 3 |
| ACCT-3150 Accounting Information Systems | 3 |
| ACCT-3170 Managerial Accounting..... | 3 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Accounting

First year:

| | |
|--|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| Biological Science Elective..... | 3.5 |
| Literature Elective | 3 |
| Total | 33.5 |

Second year:

| | |
|---|-------------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-2150 Statistics for Business | 3 |
| BUS-2180 Business Law..... | 3 |
| ECON-2330 Microeconomics | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Physical Science Elective..... | 3.5 |
| Social Science Elective | 3 |
| Total | 32.5 |

Third year:

| | |
|---|-----------|
| ACCT-3110 Intermediate Financial Accounting I..... | 3 |
| ACCT-3120 Intermediate Financial Accounting II | 3 |
| ACCT-3150 Accounting Information Systems | 3 |
| ACCT-3170 Managerial Accounting | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-3910 International Business..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MRKT-3600 Principles of Marketing | 3 |
| Accounting Electives | 3 |
| Total | 31 |

Fourth year:

| | |
|---|-----------|
| ACCT-4110 Federal Income Taxes..... | 3 |
| ACCT-4120 Auditing..... | 3 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| MGMT-4510 Strategic Management..... | 3 |
| History Elective..... | 3 |
| Humanities Elective | 3 |
| Accounting Electives | 6 |
| Electives | 8 |
| Total | 31 |

Master's Degree Options at Other Universities

Cedarville has developed a relationship with other university M.B.A. programs that allow qualified Cedarville University graduates to enter these programs to fulfill the CPA 150-hour requirement. Students are also encouraged to investigate other M.B.A. and Master of Science in Accounting programs that may be better suited to their specific career goals.

| | |
|---|----------|
| ACCT-4110 Federal Income Tax..... | 3 |
| ACCT-4120 Auditing..... | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience..... | 0 |
| BUS-2150 Statistics for Business | 3 |
| BUS-2180 Business Law | 3 |
| BUS-3910 International Business..... | 3 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| ECON-2330 Microeconomics | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| MGMT-3500 Principles of Organization and Management | 3 |
| *MGMT-4510 Strategic Management..... | 3 |
| MRKT-3600 Principles of Marketing | 3 |
| Accounting electives selected from the following | 9 |
| ACCT-4130 Advanced Financial Accounting | 3 |
| ACCT-4150 Government and Non Profit Accounting..... | 3 |
| ACCT-4170 Advanced Managerial Accounting..... | 3 |
| ACCT-4210 Taxation of Business Entities | 3 |
| ACCT-4220 International Accounting | 3 |
| BUS-3180 Business Law II | 3 |

*Capstone Course

Required Cognate.....3

| | |
|--------------------------------|---|
| GMTH-1020 College Algebra..... | 3 |
|--------------------------------|---|

(Satisfies quantitative requirement for general education core.)

Accounting Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 49–57 |
| Accounting Major Requirements..... | 68 |
| Required Cognate..... | 3 |
| Electives | 0–8 |
| Total (minimum, not including proficiency) | 128 |

The **CPA concentration** reflects the state of Ohio requirements of 150 semester hours of undergraduate or graduate education, including 30 hours of accounting courses combined with several specific business and elective courses. Students desiring to pursue a license in other states should investigate the requirements of those specific states. States with websites, and all addresses, can be found on the website of the National Association of State Board of Accountancy at nasba.org.

Students may qualify for the Ohio requirements by completing the 128 semester hours plus additional 22 semester hours including some additional accounting electives. The course plan includes the following:

| | |
|------------------------------------|------------------|
| Accounting Major Requirements..... | 128 hours |
| Other Elective Courses..... | 22 hours |
| Total | 150 hours |

Although not specifically required by the state of Ohio, the following courses include materials that are covered in the CPA exam and are recommended for all accounting majors preparing to take the CPA exam. Several of these courses are required by other states.

| | |
|--|---|
| ACCT-4150 Government and Nonprofit Accounting..... | 3 |
| ACCT-4210 Taxation of Business Entities | 3 |
| ACCT-4810 Seminar in Accounting | 1 |
| BUS-2100 Business Communication | 3 |
| BUS-3180 Business Law II | 3 |

A complete description of the general education requirements is found on page 26.

Finance

The **finance major** falls under the Bachelor of Arts degree and prepares students for careers as financial analysts, security analysts, financial planners, or account executives within the banking, insurance, and securities industries and other commercial concerns.

Course requirements involve 62 semester hours including:

| | |
|---|----------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience..... | 0 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law..... | 3 |
| BUS-3150 Operations Analysis..... | 3 |
| BUS-3910 International Business..... | 3 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| FIN-3310 Money and Financial Markets..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| FIN-3730 Investments..... | 3 |
| FIN-4770 Advanced Financial Management..... | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| *MGMT-4510 Strategic Management..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| MRKT-3600 Principles of Marketing..... | 3 |
| Finance Electives selected from..... | 9 |
| ACCT-3110 Intermediate Financial Accounting I..... | 3 |
| FIN-3750 International Finance..... | 3 |
| FIN-3760 Financial Planning..... | 3 |
| FIN-3770 Security Analysis..... | 3 |
| FIN-4710 Advanced Security Analysis and Portfolio Management Practicum..... | 3 |
| FIN-4750 Financial Institution Management..... | 3 |

*Capstone Course

| | |
|--|----------|
| Required Cognate..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| (Satisfies quantitative requirement for general education core.) | |

Finance Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 49–57 |
| Finance Major Requirements..... | 62 |
| Required Cognate..... | 3 |
| Electives..... | 6–14 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in Finance

First year:

| | |
|--|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| Biological Science Elective..... | 3.5 |
| History Elective..... | 3 |
| Total..... | 33.5 |

Second year:

| | |
|--|-------------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II..... | 3 |
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law..... | 3 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Physical Science Elective..... | 3.5 |
| Social Science Elective..... | 3 |
| Total..... | 32.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-3150 Operations Analysis..... | 3 |
| BUS-3910 International Business..... | 3 |
| FIN-3310 Money and Financial Markets..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| FIN-3730 Investments..... | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |
| Humanities Elective..... | 3 |
| Finance Electives..... | 3 |
| Total..... | 31 |

Fourth year:

| | |
|---|-----------|
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| FIN-4770 Advanced Financial Management..... | 3 |
| MGMT-4510 Strategic Management..... | 3 |
| Literature Elective..... | 3 |
| Finance Electives..... | 6 |
| Electives..... | 14 |
| Total..... | 31 |

International Studies — Global Economics and International Business

The **international studies — global economics and international business major** prepares students for careers in international business. Offered as a part of the University's international studies program, the major is described in detail in the interdisciplinary studies section on pages 112–113.

Information Technology Management

The **information technology management major** falls under the Bachelor of Arts degree and prepares students for careers such as application developers, business analysts, database administrators, network administrators, IT project managers, or IT consultants. The curriculum follows recent guidelines established by the Association for Information Systems (AIS) and the Association for Computing Machinery (ACM) for the training of IT professionals in a business context.

Course requirements involve 68 semester hours including:

| | |
|---|---|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience..... | 0 |
| BUS-2150 Statistics for Business | 3 |
| BUS-2180 Business Law | 3 |
| BUS-3910 International Business..... | 3 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| ECON-2330 Microeconomics | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| ITM-1900 Fundamentals of IT Management..... | 3 |
| ITM-2100 Database Management | 3 |
| ITM-2300 Introduction to Programming | 3 |
| ITM-3400 Data Communications and Networking..... | 3 |
| ITM-3550 Enterprise Architecture | 3 |
| ITM-4400 System Analysis and Design | 3 |
| *ITM-4900 IT Strategy | 3 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MRKT-3600 Principles of Marketing | 3 |

Information Technology Management Track (choose one of the following tracks)..... 12

Application Developer Track..... 12

| | |
|---|---|
| ITM-3300 Advanced Topics in Programming Languages ... | 3 |
| ITM-3450 IT Security and Risk Management | 3 |
| ITM-3500 Web Development | 3 |
| ITM-4500 System Development..... | 3 |

Business Analyst Track..... 12

| | |
|--|---|
| ITM-3600 Business Process Management | 3 |
| ITM-3650 Enterprise Systems..... | 3 |
| ITM-4100 Advanced Database Design..... | 3 |
| ITM-4450 IT Audit and Controls | 3 |

Database Administrator Track..... 12

| | |
|--|---|
| ITM-3450 IT Security and Risk Management | 3 |
| ITM-3650 Enterprise Systems..... | 3 |
| ITM-4100 Advanced Database Design..... | 3 |
| ITM-4450 IT Audit and Controls | 3 |

Network Administrator Track 12 |

| | |
|--|---|
| ITM-3450 IT Security and Risk Management | 3 |
| ITM-4450 IT Audit and Controls | 3 |
| ITM-3XXX or higher electives | 6 |

IT/Project Management Track..... 12

| | |
|--|---|
| ITM-3600 Business Process Management | 3 |
| ITM-4450 IT Audit and Controls | 3 |
| ITM-3XXX or higher electives | 6 |

IT Consultant Track..... 12

| | |
|--|---|
| ITM-3600 Business Process Management | 3 |
| ITM-3XXX or higher electives | 9 |

*Capstone Course

Required Cognate..... 3

| | |
|--|---|
| GMTH-1020 College Algebra..... | 3 |
| (Satisfies quantitative requirement for general education core.) | |

Information Technology Management Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements..... | 49–57 |
| Information Systems Major Requirements..... | 68 |
| Required Cognate..... | 3 |
| Electives | 0–8 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Information Technology Management

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| ITM-1900 Fundamentals of IT Management..... | 3 |
| Humanities Elective | 3 |
| Total | 33 |

Second year:

| | |
|---|-------------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-2150 Statistics for Business | 3 |
| BUS-2180 Business Law | 3 |
| ITM-2100 Database Management | 3 |
| ITM-2300 Introduction to Programming | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Science Elective..... | 3.5 |
| Social Science Elective | 3 |
| Total | 32.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-3910 International Business..... | 3 |
| ECON-2330 Microeconomics | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| ITM-3400 Data Communications and Networking..... | 3 |
| ITM-3550 Enterprise Architecture | 3 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MRKT-3600 Principles of Marketing | 3 |
| ITM Track Electives..... | 6 |
| Total | 31 |

Fourth year:

| | |
|---|-------------|
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| ITM-4400 Systems Analysis and Design | 3 |
| ITM Track Electives..... | 6 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Physical Science Elective..... | 3.5 |
| Electives | 8 |
| Total | 31.5 |

Management

The **management major** falls under the Bachelor of Arts degree and provides a broad background for careers in financial, manufacturing, retailing, and service industries, as well as governmental agencies. Management majors focus on organizational dynamics and operations as well as international issues that affect various types of organizations. With the broad scope of the management major, students can select courses within their area of interests, whether it be human resources management, operations management, organizational leadership, or entrepreneurship and small business management.

Course requirements involve 62–65 semester hours including:

| | |
|--|---|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II..... | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience..... | 0 |
| BUS-2100 Business Communication..... | 3 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law..... | 3 |
| BUS-3150 Operations Analysis..... | 3 |
| BUS-3910 International Business..... | 3 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| MGMT-3520 Production and Operations Management..... | 3 |
| MGMT-3550 Organizational Behavior..... | 3 |
| *MGMT-4510 Strategic Management..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |

Management Electives

(choose one of the following tracks).....9-12

Entrepreneurship and Small Business Management

| | |
|---|-----------|
| Track..... | 12 |
| MGMT-3510 Entrepreneurship and Small Business Management..... | 3 |
| MGMT-3511 Entrepreneurship and Small Business Strategy..... | 3 |
| MGMT-3512 Entrepreneurship and Small Business Finance..... | 3 |
| MGMT-3513 Entrepreneurship and Small Business Practicum..... | 3 |

Human Resource Management Track.....

| | |
|---|---|
| MGMT-3530 Human Resource Management..... | 3 |
| MGMT-3580 Compensation and Benefits Management..... | 3 |
| MGMT-4530 Industrial Relations Management..... | 3 |

Operations Management Track.....

| | |
|--|---|
| MGMT-3560 Project Management..... | 3 |
| MGMT-4520 Supply Chain Management..... | 3 |
| MGMT-4540 Service Operations Management..... | 3 |
| MGMT-4570 Total Quality Management..... | 3 |

Organizational Management Track.....

| | |
|--|---|
| MGMT-3530 Human Resources Management..... | 3 |
| MGMT-4550 Advanced Organizational Behavior..... | 3 |
| MGMT-4560 Organizational Change and Development..... | 3 |

*Capstone Course

Required Cognate.....

| | |
|--------------------------------|---|
| GMTH-1020 College Algebra..... | 3 |
|--------------------------------|---|

(Satisfies quantitative requirement for general education core.)

Management Major Curriculum Summary

| | |
|--|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 49–57 |
| Management Major Requirements..... | 62 |
| Required Cognate..... | 3 |
| Electives..... | 6–14 |
| Total (minimum, not including proficiency)..... | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Management

First year:

| | |
|--|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| History Elective..... | 3 |
| Physical Science Elective..... | 3.5 |
| Total..... | 33.5 |

Second year:

| | |
|--|-------------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II..... | 3 |
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-2100 Business Communication..... | 3 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law..... | 3 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Biological Science Elective..... | 3.5 |
| Total..... | 32.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-3150 Operations Analysis..... | 3 |
| BUS-3910 International Business..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| MGMT-3520 Production and Operations Management..... | 3 |
| MGMT-3550 Organizational Behavior..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |
| Humanities Elective..... | 3 |
| Literature Elective..... | 3 |
| Total..... | 31 |

Fourth year:

| | |
|---|-----------|
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| MGMT-4510 Strategic Management..... | 3 |
| Management Electives..... | 9-12 |
| Social Science Elective..... | 3 |
| Electives..... | 14 |
| Total..... | 31 |

A complete description of the general education requirements is found on page 26.

Marketing

The **marketing major** falls under the Bachelor of Arts degree and prepares students for career opportunities in advertising, marketing management, marketing research, and sales with retailers, manufacturers, financial institutions, and nonprofit organizations.

Course requirements involve 62 semester hours including:

| | |
|--|---|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II..... | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience..... | 0 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law..... | 3 |
| BUS-3910 International Business..... | 3 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| *MGMT-4510 Strategic Management..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |
| MRKT-3630 Marketing Research..... | 3 |
| MRKT-3650 Consumer Behavior..... | 3 |
| MRKT-4610 Marketing Strategy..... | 3 |
| 3000-4000-level Business Department elective:..... | 3 |
| Marketing electives selected from..... | 9 |
| MRKT-3610 Sales/Sales Management Systems..... | 3 |
| MRKT-3660 Integrated Marketing Communications..... | 3 |
| MRKT-3670 Business to Business Marketing..... | 3 |
| MRKT-3680 Nonprofit Marketing..... | 3 |
| MRKT-3690 Services Marketing..... | 3 |
| MRKT-4620 International Marketing..... | 3 |

*Capstone Course

| | |
|--|----------|
| Required Cognate..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| (Satisfies quantitative requirement for general education core.) | |

Marketing Major Curriculum Summary

| | |
|--|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 49–57 |
| Marketing Major Requirements..... | 62 |
| Required Cognate..... | 3 |
| Electives..... | 6–14 |
| Total (minimum, not including proficiency)..... | 128 |



Suggested Four-Year Curriculum for a Major in Marketing

First year:

| | |
|--|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| History Elective..... | 3 |
| Physical Science Elective..... | 3.5 |
| Total..... | 33.5 |

Second year:

| | |
|--|-------------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II..... | 3 |
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law..... | 3 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Biological Science Elective..... | 3.5 |
| Literature Elective..... | 3 |
| Total..... | 32.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-3910 International Business..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| MGMT-3500 Principles of Management..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |
| MRKT-3630 Marketing Research..... | 3 |
| MRKT-3650 Consumer Behavior..... | 3 |
| Marketing Elective..... | 3 |
| Social Science Elective..... | 3 |
| 3000/4000-level Business Department Elective..... | 3 |
| Total..... | 31 |

Fourth year:

| | |
|---|-----------|
| BUS-1040 The Business Experience (both semesters)..... | 0 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| MGMT-4510 Strategic Management..... | 3 |
| MRKT-4610 Marketing Strategy..... | 3 |
| Marketing Elective..... | 6 |
| Humanities Elective..... | 3 |
| Electives..... | 14 |
| Total..... | 31 |

A complete description of the general education requirements is found on page 26.

Sport Business Management

The **sport business management major** prepares graduates to pursue career opportunities across a wide spectrum of the sport industry from amateur, collegiate, professional, or corporate sport settings; and from roles in management, marketing, finance, compliance, journalism, or law. The curriculum follows guidelines established by the Association of Collegiate Business Schools and Profession and the Commission on Sport Management Accreditation.

Course requirements involve 68 semester hours including:

| | |
|--|---|
| ACCT-2110 Principles of Accounting I | 3 |
| BUS-1000 Business Profession | 2 |
| BUS-2100 Business Communication | 3 |
| BUS-2150 Statistics for Business | 3 |
| BUS-3910 International Business | 3 |
| BUS-4420 Business Ethics and Social Responsibility | 2 |
| BUS-XXXX Business Department Electives | 3 |
| ECON-2110 Essentials of Economics | 3 |
| ITM-1500 Information Technology for Business | 2 |
| ITM-1510 Software Tools for Business | 2 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MRKT-3600 Principles of Marketing | 3 |
| SMGT-1350 Introduction to Sport Management | 3 |
| SMGT-2100 Sport in Society | 3 |
| SMGT-2500 Organizational Behavior in Sport | 3 |
| SMGT-2910 Campus Sport Management Practicum | 1 |
| SMGT-2920 Recreation Management Practicum | 1 |
| SMGT-3180 Legal Issues in the Sport Industry | 3 |
| SMGT-3200 Facility Design and Management | 3 |
| SMGT-3300 Event Planning and Production | 3 |
| SMGT-4100 Marketing and Promotions in the Sport Industry | 3 |
| SMGT-4200 Financing Sport Operations | 3 |
| SMGT-4910 Athletic Administration Practicum | 1 |
| *SMGT-4990 Internship in Sport Management | 9 |

| | |
|--|----------|
| Required Cognate | 3 |
| GMTH-1020 College Algebra | 3 |
| (Satisfies quantitative requirement for general education core.) | |

*Capstone Course

Sport Business Management Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements | 49-57 |
| Sport Management Major Requirements | 68 |
| Required Cognate | 3 |
| Electives | 0-8 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in Sport Business Management

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BUS-1000 Business Profession | 2 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GMTH-1020 College Algebra | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| ITM-1500 Information Technology for Business | 2 |
| ITM-1510 Software Tools for Business | 2 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| SMGT-1350 Introduction to Sport Management | 3 |
| Total | 32.5 |

Second year:

| | |
|---|-------------|
| ACCT-2110 Principles of Accounting I | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BUS-2100 Business Communication | 3 |
| BUS-2150 Statistics for Business | 3 |
| ECON-2110 Essentials in Economics | 3 |
| SMGT-2100 Sport in Society | 3 |
| SMGT-2500 Organizational Behavior in Sport | 3 |
| SMGT-2910 Campus Sport Management Practicum | 1 |
| SMGT-2920 Recreation Management Practicum | 1 |
| Humanities Elective | 3 |
| Physical Science Elective | 3.5 |
| Total | 32.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BUS-3910 International Business | 3 |
| GSS-1100 Politics and American Culture | 3 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MRKT-3600 Principles of Marketing | 3 |
| SMGT-3180 Legal Issues in the Sport Industry | 3 |
| SMGT-3200 Facility Design and Management | 3 |
| SMGT-3300 Event Planning and Production | 3 |
| History Elective | 3 |
| Literature Elective | 3 |
| Total | 31 |

Fourth year:

| | |
|--|-----------|
| BUS-4420 Business Ethics and Social Responsibility | 2 |
| SMGT-4100 Marketing and Promotions in the Sport Industry | 3 |
| SMGT-4200 Financing Sport Operations | 3 |
| SMGT-4910 Athletic Administration Practicum | 1 |
| SMGT-4990 Internship in Sport Management | 9-12 |
| School of Business Electives | 3 |
| Social Science/Global Awareness Elective | 3 |
| Electives | 8 |
| Total | 32 |

Minors

The minors offered by the school of business administration are designed to provide a basic understanding of specific aspects of business.

Business Administration Minor

The minor in **business administration** for the non-business major involves 18 semester hours including:

| | |
|--|---|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ECON-2330 Microeconomics..... | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |

Business Administration electives selected from the

following 2000- or 3000-level courses.....6

| | |
|--|---|
| ACCT-2120 Principles of Accounting II..... | 3 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law..... | 3 |
| BUS-3150 Operations Analysis..... | 3 |
| BUS-3910 International Business..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |

Christian Ministries Management Minor

The minor in **Christian ministries management** for the non-business major involves 19 semester hours including:

| | |
|--|---|
| ACCT-2110 Principles of Accounting I..... | 3 |
| FIN-2730 Church Business Administration..... | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| MGMT-3530 Human Resources Management..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| MRKT-3680 Nonprofit Marketing..... | 3 |

Economics Minor

The minor in **economics** involves 18 semester hours including:

| | |
|--|---|
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| ECON-3310 International Money and Capital Markets..... | 3 |
| ECON-3350 Comparative Economic Systems..... | 3 |
| 3000- or 4000-Level Electives in Economics..... | 6 |

International Business Minor

The minor in **international business** for the business major involves 18 semester hours including:

| | |
|--------------------------------------|---|
| BUS-3910 International Business..... | 3 |
|--------------------------------------|---|

At least nine hours from the following.....9

| | |
|--|---|
| ECON-3350 Comparative Economic Systems..... | 3 |
| ECON-3360 International Trade and Economics..... | 3 |
| MGMT-3570 International Management..... | 3 |
| MRKT-4620 International Marketing..... | 3 |

At least three hours from the following.....3

| | |
|--|---|
| ANTH-1800 Cultural Anthropology..... | 3 |
| BEPH-2260 Religion and Culture..... | 3 |
| POLS-3650 International Relations..... | 3 |

Additional elective selected from courses listed above.....3

International Business for the Non-business Major Minor

The minor in **international business for the non-business major** involves 21 semester hours including:

| | |
|--------------------------------------|---|
| BUS-3910 International Business..... | 3 |
|--------------------------------------|---|

At least six hours from the following.....6

| | |
|--|---|
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |

At least six hours from the following.....6

| | |
|--|---|
| ECON-3350 Comparative Economic Systems..... | 3 |
| ECON-3360 International Trade and Economics..... | 3 |
| MGMT-3570 International Management..... | 3 |
| MRKT-4620 International Marketing..... | 3 |

Additional electives selected from courses listed above.....6

Information Technology Management Minor

The minor in **information systems** involves 22 semester hours including:

| | |
|--|---|
| ACCT-2110 Principles of Accounting I..... | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| ITM-1900 Fundamentals of IT Management..... | 3 |
| ITM-2300 Introduction to Programming..... | 3 |
| ITM-2100 Database Management..... | 3 |
| ITM-4400 System Analysis and Design..... | 3 |

Marketing Minor

The minor in **marketing** involves 15 semester hours including:

| | |
|--|---|
| MRKT-3600 Principles of Marketing..... | 3 |
| MRKT-3650 Consumer Behavior..... | 3 |

Electives selected from.....9

| | |
|--|---|
| *MRKT-3630 Marketing Research..... | 3 |
| MRKT-3660 Integrated Marketing Communications..... | 3 |
| MRKT-3680 Nonprofit Marketing..... | 3 |
| MRKT-3690 Services Marketing..... | 3 |
| MRKT-4620 International Marketing..... | 3 |

*BUS-2150 Statistics for Business and GMTH-1020 College Algebra are prerequisites.

Sport Management Minor

The purpose of the sport management minor is to allow students from other majors the opportunity to develop a foundation that will serve as the basis for a future career in sport such as high school athletic director or baseball announcer.

Course requirements for a minor in sport management involve 18 semester hours including:

| | |
|---|---|
| ESS-2100 Leadership and Ethics in Sport..... | 3 |
| SMGT-1350 Introduction to Sport Management..... | 3 |
| SMGT-3300 Event Planning and Production..... | 3 |
| SMGT-4100 Marketing and Promotions in the Sport Industry..... | 3 |

Two courses selected from the following.....6

| | |
|---|---|
| SMGT-2100 Sport in Society..... | 3 |
| SMGT-2500 Organizational Behavior in Sport..... | 3 |
| SMGT-3180 Legal Issues in the Sport Industry..... | 3 |
| SMGT-3200 Facility Design and Management..... | 3 |
| SMGT-4200 Financing Sport Operations..... | 3 |

Department of

EDUCATION

Mission Statement (Page 68)

Department Distinctives (Page 68)

Personal Requirements (Page 68)

Cocurricular Opportunities (Page 68)

Teacher Education Program Admission Requirements (Page 68)

Programs of Study (Page 69)

Career Opportunities (Page 69)

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General Education Requirements for Education Majors (Page 71)

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Majors

- » Early Childhood Education (Page 71)
- » Early Childhood Education Generalist Endorsement (Grades 4–5) (Page 72)
- » Middle Childhood Education (Page 72)
- » Special Education — Intervention Specialist (Page 74)
- » Adolescent/Young Adult and Multi-Age Licensure Programs (Page 76)

Mission Statement

The Cedarville University Department of Education seeks to prepare compassionate, professional educators who are committed to the integration of faith, learning, and life as demonstrated in teaching competence and Christlike character through leadership and service.

Department Distinctives

- **Accreditation:** Cedarville University is accredited by the North Central Association of Colleges and Schools and National Council for the Accreditation of Teacher Education Council. The University's teacher preparation programs are approved by the Ohio Department of Education.
- Each year approximately 10 percent of the senior education students pursue cross-cultural student teaching experiences. They teach under the supervision of experienced, certified teachers in approved, accredited, overseas institutions that use an American curriculum.
- The University's award-winning technology resources enable upper-level students to develop lessons and curriculum resource materials for K–12 partner technology schools. Because of training in the use of educational technology, graduates are sought by schools to help integrate technology into their curricula.
- Intensive clinical experiences accompany methods classes. As a result, many schools comment that Cedarville graduates possess experience and confidence uncommon in most first-year teachers.
- Cedarville's reputation for producing exceptional teachers generates significant demand from school systems. Each year Christian and public schools visit the campus to recruit teacher education graduates.

Licensure – Public Schools

The education licensure programs listed in the catalog are subject to revision at any time given changes in national and state requirements for the Teacher Education programs in Ohio, which may also result in adjustment to your graduation requirements.

All programs leading to licensure at Cedarville University are approved by the Ohio Department of Education. Ohio bases its requirements and approval processes on standards set by the National Council for Accreditation of Teacher Education (NCATE). Cedarville is a member of NCATE and thus programs are approved directly by NCATE. Ohio is a participant in the Interstate Agreement on Qualifications of Educational Personnel and has an implementation agreement (reciprocity) with 42 states. This agreement provides for recognition of Ohio Department of Education-approved programs by member states.

Although reciprocal licensure contracts exist with 42 states, in many cases, students must meet additional requirements to obtain extended or permanent licensure for those states. Also, because of the nature of Ohio's teacher licensing standards, graduates with an Ohio license will normally be granted a license of "best fit" with the state in which the graduate wishes to teach. State licensure requirements are changing in many states; therefore, students who wish to teach outside of Ohio should obtain a current description of certification requirements from the department of education for each state in which they would like to teach. Most states have their certification requirements posted electronically.

Individuals completing the program receive certification from the Association of Christian Schools International (ACSI). Christian schools around the world recognize this certification.

Demographic Profile

The number of Teacher Education Program completers for the 2010–11 reporting period was 80. The demographic profile of program completers for the 2010–11 reporting period is:

| | Number | Percent |
|------------------|--------|---------|
| White | 77 | 96.2 |
| African American | 1 | 1.1 |
| Hispanic | 0 | 0 |
| Asian | 2 | 2.2 |
| Other | 0 | 0.0 |
| Male | 15 | 18.75 |
| Female | 65 | 81.25 |

Personal Requirements

Students interested in the Teacher Education Program should enjoy the teaching and learning process and enjoy working with people. The best teachers are those who are lifelong learners and enjoy serving others; they are people who are motivated more by making a difference in others' lives than in making a lot of money. Cedarville University desires to work with students who are becoming professionals in their treatment of others, in their dress and demeanor, and in punctuality and responsibility for tasks. Because of the increasingly stringent standards for teachers nationwide, teacher candidates must be able to demonstrate their preparedness to teach by achieving good grades and passing state-mandated tests for teachers.

Cocurricular Opportunities

Numerous opportunities exist for tutoring in public schools, mentoring K–12 students, and becoming involved in local church ministries to children and adolescents. In addition students may choose to join Chi Delta Epsilon, a student organization for Christian educators.

Teacher Education Program Admission Requirements

Students admitted to Cedarville University must also make application for formal admission to the Teacher Education Program (TEP) usually early in the junior year. To be admitted, students must meet the following requirements at least one semester before enrolling in the first methods of teaching course for their particular program. These requirements apply to all students seeking a degree and/or license in either early childhood education, middle childhood education, special education, multi-age education, or adolescent/young adult education (i.e., secondary education). Students seeking a degree/licensure in a program offered by another department should review the requirements of that department as well.

1. Minimum cumulative GPA of 2.7 in all courses and 2.7 GPA in all TEP core curriculum courses. All TEP core courses must be completed with a grade of "C-" or higher.
2. Combined GPA of 2.65 and a grade of "C-" or higher in both general education communications courses: COM-1100 Fundamentals of Speech and ENG-1400 English Composition.
3. Minimum GPA of 2.5 in the teaching field content area(s), and content core for early childhood education.
4. No grade of less than "C-" in teaching field or concentration area courses. For early childhood, middle childhood, and special education, this includes general education courses in the content areas of humanities, science, mathematics, and social science.
5. Minimum passing scores on the Praxis I (Pre-Professional Skills Test): Reading, 175; Writing, 174; Mathematics, 175.

6. Satisfactory completion of all introductory field experiences: EDUC-1050 Preliminary Student Involvement, EDUC-2200 Multicultural Field Experience, and EDSP-2050 Field Experience: Exceptional Learning Needs.
7. Valid “No Record” background check for the state of Ohio and an additional FBI background check.

Teacher Education Program Retention and Completion Requirements

To maintain regular standing in the Teacher Education Program and/or to receive a degree, students must maintain and/or complete the following requirements:

- Maintain a GPA of 2.7 or higher in all courses.
 1. Obtain a “C-” or higher in all methods courses.
 2. Satisfactorily complete field and clinical experiences.
 3. Earn a passing score on state-required Praxis II exams.
 4. Satisfactorily complete the internship experience.

Programs of Study

The department of education offers instruction with the purpose of providing excellent Christian teachers for Christian, public, international, and missionary schools. The University is approved by the Ohio Department of Education for programs leading to a teaching license or endorsement in several areas.

- Multi-Age Special Education — Intervention Specialist (K–12)
- Early Childhood Education (pre–K to grade 3)
- Middle Childhood Education (grades 4–9)
 - Two concentrations chosen from:
 - Mathematics
 - Reading/Language Arts
 - Science
 - Social Studies

See appropriate department for a complete description of the following programs:

- Adolescent and Young Adult (grades 7–12)
 - Language Arts Education – Integrated (department of English, literature, and modern languages, page 91)
 - Life Science Education
 - Mathematics Education – Integrated
 - Physical Science Education
 - Physics Education
 - Science Comprehensive Education – Integrated (department of science and mathematics, page 187)
 - Social Studies Education – Integrated (department of history and government, page 107)
- Multi-Age Licensure (pre–K to grade 12)
 - Health Education
 - Physical Education (department of kinesiology and allied health, page 125)
 - Music Education (department of music and worship, page 148)
 - Spanish Education (department of English, literature, and modern languages, page 93)

Endorsements

Students interested in an endorsement must possess or be working toward the completion of a degree and licensure requirements in any of the current teaching licensure areas.

The **early childhood education generalist endorsement** prepare teachers to work with students in grades 4 and 5.

Early Childhood Education Generalist Endorsement courses.....9

EDMC-2800 Development Issues in Young Adolescents..... 2

EDMC-3550 Curriculum and Instruction for Grades 4 and 5.... 3

EDMC-3970 Middle Childhood Clinical (grades 4 and 5)..... 2

HIST-2100 Ohio History for Educators..... 2

Early childhood or special education majors who wish to qualify for prekindergarten special education endorsement may do so by adding the following courses to their early childhood licensure:

ECSP-2500 Young Children with Special Needs3

ECSP-3500 Assessing and Teaching Young Children3

ECSP-3550 Clinical: Young Children with Special Needs.....3

TESOL (Teaching English to Speakers of Other Languages)

Course requirements:

COM-2140 Intercultural Communication.....3

ENG-3060 History of the English Language.....3

ENG-3070 Advanced Grammar for Adolescent Teachers.....3

LING-3080 Linguistics for Language Learning3

LING-3090 Sociolinguistics3

LING-3600 Clinical Experience1

LING-3610 Practicum2

LING-3500 Methods of Teaching Foreign Language2

Praxis II TESOL exam

Career Opportunities

Christian and public schools actively recruit Cedarville education graduates. Graduate schools also welcome Cedarville students. Careers pursued by department of education graduates include:

- Christian school teacher
- Church education programs
- Elementary school teacher
- High school or middle school teacher
- International school teacher
- Library science
- Mission school teacher
- Music teacher K–12
- Physical education/health education teacher K–12
- Preschool director or teacher
- Special education (mild–moderate educational needs)
- Youth camps

Faculty

Stephen Gruber, *Chair*. Associate Professor of Education. *Education*: B.A., Cedarville University, 1974; M.Ed., Wright State University, 1977; Ed.S., Wright State University, 1984; Ed.D., Miami University, 1990. At Cedarville since 2000.

Merlin Ager, Professor of Education. *Education*: B.A., Cedarville University, 1960; M.S., University of Wisconsin, 1962; Ph.D., The Ohio State University, 1967. At Cedarville 1964–75 and since 1978.

Eddie Baumann, Professor of Education. *Education*: B.S., University of Wisconsin, 1983; M.S., University of Wisconsin, 1987; Ph.D., University of Wisconsin, 1995. At Cedarville since 1993.



Terry Comers, Assistant Professor of Education. *Education:* B.A., Cedarville University, 1977; M.Ed., Wright State University, 1995. At Cedarville since 2004.

Lori Ferguson, Instructor of Education. *Education:* B.A., Cedarville University, 1998; M.S., University of Dayton, 2002.

Margaret Grigorenko, Assistant Professor of Education. *Education:* B.S., Bowling Green State University, 1978; M.Ed., Cedarville University, 1995; Ph.D., The Ohio State University, 2010. At Cedarville since 2006.

Timothy Heaton, Professor of Education. *Education:* B.A., Wittenberg University, 1973; M.A., Grace Theological Seminary, 1986; Ph.D., University of Dayton, 1999. At Cedarville since 1987.

Jon Hess, Director of Student Teaching and Licensure and Assistant Professor of Education. *Education:* B.S., Cedarville University, 1967; M.Ed.Ad., University of Dayton, 1980; Postgraduate work, Wright State University and University of Dayton, 1990. At Cedarville since 2000.

Ruth Hess, Assistant Professor of Education. *Education:* B.A., Cedarville University, 1967; M.Ed., Cedarville University, 2009. At Cedarville since 2008.

David Leitch, Assistant Professor of Education. *Education:* B.S. Baptist Bible College of Pennsylvania, 1984; M.S., Central Michigan University, 1990; J.D., Cleveland State University, 1993; M.Ed., Cleveland State University, 2008. At Cedarville since 2012.

Kyle Mack, Assistant Professor of Education. *Education:* B.S., Wright State University, 2005; M.Ed., Wright State University, 2007. At Cedarville since 2012.

Brenda MacKay, Associate Professor of Education. *Education:* B.A., Oglethorpe University, 1965; M.A., University of Georgia, 1972; Ed.D., Bob Jones University, 1992. At Cedarville since 2000.

Lynn Roper, Assistant Professor of Special Education. *Education:* B.S., Asbury College, 1988; Certification in Special Education, University of Kentucky, 1990; M.S.W., University of Kentucky, 2000; Graduate study in special education, University of Kentucky, 2005–present. At Cedarville since 2010.

Thomas Sweigard, Associate Professor of Education. *Education:* B.S., Bowling Green State University, 1973; M.A., The Ohio State University, 1982; Ph.D., The Ohio State University, 1992. At Cedarville since 2003.

Emeriti

Sue Baker, Professor Emerita of Education. *Education:* B.S., Kent State University, 1968; M.Ed., Kent State University, 1972; Ed.D., University of Cincinnati, 1987. At Cedarville since 1978.

Omer Bonenberger, Associate Professor Emeritus of Education. *Education:* B.A., Bob Jones University, 1960; M.A., Arizona State University, 1968; D.Ed., University of Maine, 1981. At Cedarville since 1981.

Sally Castle, Professor Emerita of Education. *Education:* B.S., Syracuse University, 1964; M.S., The University of Dayton, 1983; Ed.S., Wright State University, 1992; Ed.D., Nova Southeastern University, 1996. At Cedarville since 1994.

Dwayne Frank, Professor Emeritus of Education. *Education:* B.A., Cedarville University, 1960; B.S., Central State University, 1960; M.A.T., Albertson College, 1965; Ed.D., University of Idaho, 1973. At Cedarville since 1968. PT/Adjunct since 2003.

Praxis II Pass Rate Data: Regular Teacher Preparation Program

Academic Year: 2009–10

Testing Period: 7/09–6/10

Number of Program Completers: 75

| Type of Assessment | # Taking Praxis II | Ave. Pass Rate (%) | OH Pass Score | OH Pass Rate (%) ¹ |
|--|--------------------|--------------------|---------------|-------------------------------|
| Professional Knowledge | | | | |
| Principles of Learning and Teaching: Early Child | 35 | 100 | 166 | 99% |
| Principles of Learning and Teaching: 5–9 | 17 | 100 | 168 | 95% |
| Principles of Learning and Teaching: 7–12 | 38 | 100 | 165 | 98% |

*No pass rate information is reported when fewer than 10 teacher candidates take a particular Praxis II test. Results are reported in Aggregate Assessment Pass Rate below. ¹The state passing rate is based on data collected from all Ohio students taking the Praxis II in 2007–08, regardless of their status in a Teacher Education Program.

Aggregate Assessment Pass Rate

| Group | # Taking Assessment ³ | # Passing Assessment ⁴ | Institutional Pass Rate | Statewide | | |
|---------------------------------|----------------------------------|-----------------------------------|-------------------------|----------------------------------|-----------------------------------|---------------------|
| | | | | # Taking Assessment ¹ | # Passing Assessment ² | Statewide Pass Rate |
| All program completers, 2010–11 | 73 | 70 | 96% | 5803 | 5576 | 96% |
| All program completers, 2009–10 | 90 | 90 | 100% | 5803 | 5576 | 96% |
| All program completers, 2008–09 | 56 | 56 | 100% | 6389 | 6257 | 98% |

²The national passing rate is calculated at Ohio's cut scores, which are among the highest in the nation.

³Number of completers taking one or more assessments within their area of specialization.

⁴Number who passed all assessments taken within their area of specialization.

Contextual Information for the 2009–10 Academic Year

| | |
|--|-------|
| Total number of students officially enrolled in teacher preparation, all specializations, in academic year 2009–10 | 152 |
| Number of students in supervised student teaching in academic year 2009–10 | 75 |
| Number of faculty members who supervised student teachers in 2009–10 | 7 |
| The average number of student teaching hours per week required | 35–40 |
| The total number of weeks of supervised student teaching required | 12 |
| Average total number of hours required | 360 |

General Education Requirements for Education Majors

Early Childhood Education (EC)

Middle Childhood Education (MC)

Special Education — Intervention Specialist (SpE)

Biblical and Theological Studies 16

| | |
|---|---|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |

Communications6

| | |
|--------------------------------------|---|
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 English Composition | 3 |

Humanities9–12

| | |
|--|-----|
| EDUC-2400 Children’s Literature (EC, SpE)..... | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| *HUM-1400 Introduction to the Humanities | 3 |
| *LIT-2300 Introduction to Literature..... | 3 |
| (or LIT-2340 Western Literature.....) | (3) |

Physical Education.....2

| | |
|---|---|
| PEF-1990 Physical Activity and the Christian Life | 2 |
|---|---|

Science and Mathematics..... 13–17

| | |
|--|---------|
| *GBIO-1000 Principles of Biology..... | 3.5 |
| EDUC-1800 Principles of Mathematics I | 3 |
| EDUC-2800 Principles of Mathematics II | 3 |
| *GSCI-1010 Principles of Earth Science (EC) | 3.5 |
| *GSCI-2010 Physical Science for Teachers (EC, SpE) | 4 |
| ¹ Physical Science elective selected from:..... | 3.5–4.0 |
| ESCI-2310 Introduction to Oceanography | 4 |
| ESCI-2410 General Meteorology | 4 |
| ESCI-2510 Introduction to Astronomy | 4 |
| GSCI-1010 Principles of Earth Science..... | 3.5 |
| GSCI-2010 Physical Science for Teachers | 4 |

Social Science9

| | |
|---|-----|
| *GSS-1100 Politics and American Culture | 3 |
| ² HIST-1110 United States History I..... | 3 |
| (or HIST-1120 United States History II.....) | (3) |

*Global Studies elective selected from..... 3

| | |
|--|---|
| ANTH-1800 Cultural Anthropology..... | 3 |
| GEO-3520 World Regional Geography – Eastern (SpE) ... | 3 |
| HIST-3220 History and Politics of the Middle East..... | 3 |

Foreign Language0–8

See the global awareness section of the general education requirements.

*Content core courses for early childhood and special education

¹Students pursuing science concentration for middle childhood must take GSCI-1010 Principles of Earth Science.

²Students pursuing social studies concentration for middle childhood must take HIST-1110 United States History I.

Teacher Education Core

Required of all Teacher Education majors

Teacher Education Core 12

| | |
|---|---|
| EDUC-1000 The Education Profession..... | 2 |
|---|---|

| | |
|---|---|
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDSP-2000 Teaching Children with Exceptionalities..... | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |

Early Childhood Education

The **early childhood education major** prepares students to teach preschool and early elementary school (pre-K to grade 3) in public and Christian schools.



Course requirements involve 67 semester hours including:

| | |
|--|--------------|
| Teacher Education Core (see page 71) | 12 |
| Early Childhood Foundations | 11 |
| EDEC-2100 Art and Music for Early Childhood | 2 |
| EDEC-2300 Phonics and the Reading Process..... | 4 |
| EDSP-2500 Survey of Intellectual and Developmental Disabilities | 1 |
| ESED-2900 Health and Movement Education..... | 2 |
| PYCH-2725 Child Development..... | 2 |
| Early Childhood Methods I | 17 |
| EDEC-3500 Early Childhood Education | 3 |
| EDEC-3600 Issues in Early Childhood Administration | 3 |
| EDEC-3800 Teaching Reading and Lang. Arts: EC | 4 |
| EDEC-3900 Field Experience in Early Childhood Education ... | 1 |
| EDEC-3950 Early Childhood Clinical I | 3 |
| EDSP-3100 Diagnostics and Intervention in Reading | 3 |
| Early Childhood Methods II | 17 |
| EDEC-4000 Reading in the Content Area: EC..... | 2 |
| EDEC-4100 Teaching Mathematics: EC | 3 |
| EDEC-4200 Teaching Science: EC..... | 3 |
| EDEC-4300 Teaching Social Studies: EC..... | 3 |
| EDEC-4450 Early Childhood Clinical II | 3 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| Student Teaching | 10–12 |
| *EDEC-4900 Student Teaching and Seminar: EC | 10–12 |

*Capstone Course

Early Childhood Education Major Curriculum Summary

| | |
|---|----------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements..... | 62–70 |
| Early Childhood Education Major Requirements..... | 67 |
| Total (minimum, not including proficiency) | 129–137 |

Early Childhood Education Generalist Endorsement (Grades 4–5)

The **early childhood education generalist endorsement** prepares teachers to work with students in grades 4 and 5.

Early Childhood Education Generalist Endorsement courses.....

| | |
|---|---|
| EDMC-2800 Development Issues in Young Adolescents..... | 2 |
| EDMC-3550 Curriculum and Instruction for Grades 4 and 5.... | 3 |
| EDMC-3970 Middle Childhood Clinical (grades 4 and 5) | 2 |
| HIST-2100 Ohio History for Educators | 2 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Early Childhood Education

First year:

| | |
|---|---|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |



| | |
|---|-----------|
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GEO-3520 World Regional Geography – Eastern | 3 |
| GSCI-1010 Principles of Earth Science | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PYCH-2725 Child Development..... | 2 |
| Literature Elective | 3 |
| Total | 34 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| EDEC-2100 Art and Music for Early Childhood | 2 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDSP-2500 Survey of Intellectual and Developmental Disabilities ... | 1 |
| EDUC-1800 Principles of Mathematics I | 3 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2400 Children’s Literature..... | 3 |
| ESED-2900 Health and Movement Education | 2 |
| GSCI-2010 Physical Science for Teachers..... | 4 |
| HIST-3750 Social Movements | 3 |
| Total | 33 |

Third year:

| | |
|---|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| EDEC-2300 Phonics and the Reading Process | 4 |
| EDEC-3500 Early Childhood Education | 3 |
| EDEC-3600 Issues in Early Childhood Administration | 3 |
| EDEC-3800 Teaching Reading and Language Arts: EC..... | 4 |
| EDEC-3900 Field Experience in Early Childhood Education | 1 |
| EDEC-3950 Early Childhood Clinical I | 3 |
| EDSP-3100 Diagnostics and Intervention in Reading | 3 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-2800 Principles of Mathematics II | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| Total | 35 |

Fourth year:

| | |
|--|-----------|
| EDEC-4000 Reading in the Content Area: EC..... | 2 |
| EDEC-4100 Teaching Mathematics: EC | 3 |
| EDEC-4200 Teaching Science: EC..... | 3 |
| EDEC-4300 Teaching Social Studies: EC..... | 3 |
| EDEC-4450 Early Childhood Clinical II | 3 |
| EDEC-4900 Student Teaching and Seminar: EC | 10 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| Total | 27 |

Middle Childhood Education

The **middle childhood education major** prepares students to teach upper elementary or middle school (grades fourth to ninth). Students will prepare to teach in two of the four major curriculum areas: reading and language arts, mathematics, science, or social studies.

Course requirements involve 43–45 education semester hours

plus 36–41 concentration area hours including:

| | |
|--|--------------|
| Teacher Education Core (see page 71) | 12 |
| Middle School Methods I | 13 |
| EDMC-3500 Principles of Teaching Middle School..... | 4 |
| EDMC-3600 Phonics/Structure Language | 3 |
| EDMC-3700 Teaching Reading / Middle Childhood Literature . | 4 |
| EDMC-3950 Middle School Clinical I..... | 2 |
| Middle School Methods II | 6 |
| EDMC-4000 Reading in Content Area: MC..... | 3 |
| EDMC-4440 Middle School Clinical II..... | 2 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| Student Teaching | 12–14 |
| *EDMC-4900 Student Teaching and Seminar | 10–12 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| *Capstone Course | |

Concentration Areas (must choose two)

| | |
|---|-----------|
| Mathematics | 21 |
| EDMC-3300 Topics in Middle School Mathematics | 3 |
| EDMC-4100 Teaching Mathematics: Middle Childhood..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| GMTH-1030 Precalculus..... | 4 |
| GMTH-3010 Proof and Mathematical Modeling | 3 |
| MATH-1710 Calculus I | 5 |
| Language Arts | 18 |
| COM-2320 Theories of Mass Media..... | 3 |
| EDMC-3800 Writing Process and Language | |
| Arts Methods for Middle School..... | 3 |
| ENG-2230 Advanced Composition | 3 |
| ENG-3060 The English Language..... | 3 |
| ENG-3070 Advanced Grammar for Adolescent Teachers..... | 3 |
| LIT-2390 Survey of American Literature to 1900..... | 3 |
| Science | 20 |
| CHEM-1000 Principles of Chemistry | 5 |
| EDMC-4200 Teaching Science: Middle Childhood | 3 |
| GSCI-2010 Physical Science for Teachers..... | 4 |
| GSCI-3010 Concepts in Middle School Science..... | 4 |
| GSCI-3060 Environmental Science for Middle School Educators | 4 |
| Social Studies | 18 |
| ECON-2110 Essentials of Economics..... | 3 |
| EDMC-4300 Teaching Social Studies: Middle Childhood | 3 |
| *GEO-3510 World Regional Geography — Western | 3 |
| HIST-1120 United States History II..... | 3 |
| HIST-2010 History of Civilization I..... | 3 |
| HIST-2020 History of Civilization II | 3 |

*Course also satisfies a general education requirement or a professional education requirement.

Middle Childhood Education Major Curriculum Summary

| | |
|---|------------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 55–63.5 |
| Middle Childhood Education Major Requirements..... | 43 |
| Concentration Requirements | 36–41 |
| Total (minimum, not including proficiency) | 134–147.5 |

*Total credits vary depending on concentrations chosen.

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Middle Childhood Education

First year:

| | |
|--|---|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |

| | |
|---|-------------|
| EDUC-1800 Principles of Mathematics I | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Concentration Electives..... | 8 |
| Total | 36.5 |

Second year:

| | |
|--|----------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multi-cultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-2800 Principles of Mathematics II | 3 |
| ESCI/GSCI-1XXX Physical Science Elective | 3.5–4 |
| Concentration Electives..... | 8 |
| Global Studies Elective..... | 3 |
| Literature Elective | 3 |
| Total | 36.5–37 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| EDMC-3500 Principles of Teaching Middle School | 4 |
| EDMC-3600 Phonics and Structure of Language | 3 |
| EDMC-3700 Teaching Reading Middle Childhood Literature | 4 |
| EDMC-3950 Middle School Clinical I..... | 2 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| HIST-XXXX History Elective | 3 |
| Concentration Electives..... | 12 |
| Total | 35 |

Fourth year:

| | |
|--|--------------|
| BEGE-3760 Christian Worldview Integration | 2 |
| EDMC-4000 Reading in the Content Area Middle Childhood | 3 |
| EDMC-4440 Middle School Clinical II..... | 2 |
| EDMC-4900 Student Teaching and Seminar..... | 10-12 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| Concentration Electives..... | 8–13 |
| Total | 26–33 |



Special Education — Intervention Specialist

The **special education — intervention specialist major** prepares teachers to work with students in grades K to 12 who have mild to moderate special education needs.

Course requirements involve 74-76 semester hours including:

| | |
|--|--------------|
| Teacher Education Core (see page 71) | 12 |
| Special Education Foundations | 11 |
| EDEC-2300 Phonics and the Reading Process..... | 4 |
| EDSP-2400 Language Development and Communication Disorders..... | 2 |
| EDSP-2500 Survey of Intellectual and Developmental Disabilities | 1 |
| EDSP-3500 Special Education Law | 1 |
| PYCH-2735 Child-Adolescent Development..... | 3 |
| Special Education Block | 16 |
| EDSP-2700 Teaching Children Mild to Moderate Disabilities ... | 2 |
| EDSP-4000 Principles of Inclusion | 1 |
| EDSP-4100 Adaptive Curriculum and Instruction | 2 |
| EDSP-4150 Career and Occupational Training..... | 2 |
| EDSP-4300 Behavior and Instructional Management | 3 |
| EDSP-4400 Assessment in Special Education..... | 3 |
| EDSP-4550 Special Education Clinical: AYA | 3 |
| Reading Methods | 10 |
| EDEC-3800 Teaching Reading and Lang. Arts: EC | 4 |
| EDSP-3150 Intervention and Diagnosis in Reading for Special Educators | 3 |
| EDSP-3950 Special Education Clinical: EC..... | 3 |
| Early Childhood Methods II | 15 |
| EDEC-4000 Reading in the Content Area | 2 |
| EDEC-4100 Teaching Mathematics: EC | 3 |
| EDEC-4200 Teaching Science: EC..... | 3 |
| EDEC-4300 Teaching Social Studies: EC..... | 3 |
| EDSP-4450 Special Ed. Clinical: MC..... | 3 |
| EDUC 3200 Faith and Learning Alignment..... | 1 |
| Student Teaching | 10-12 |
| *EDSP-4900 Student Teaching and Seminar: SpE..... | 10-12 |

*Capstone Course

Special Education Major Curriculum Summary

| | |
|---|--------------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements..... | 58.5-66.5 |
| Special Education Major Requirements..... | 74-76 |
| Total (minimum, not including proficiency) | 132.5-142.5 |

Special Education/Early Childhood Education Dual Licensure Option

Special education majors who wish to qualify for early childhood education licensure (pre-K to grade 3, all subjects) may do so by adding the following courses. A combined special education/early childhood education student teaching (EDUC-4950) must be substituted for EDSP-4900 Student Teaching and Seminar: Special Education. The early childhood and special education student teaching experiences will be combined in a single semester-long experience.

| | |
|--|----------------|
| Additional courses for dual licensure | 15.5-16 |
| EDEC-2100 Art and Music for Early Childhood | 2 |
| EDEC-3500 Early Childhood Education | 3 |
| EDEC-3600 Issues in Early Childhood Administration | 3 |
| EDEC-3900 Field Experience in Early Childhood Education ... | 1 |
| EDSP-2500 Survey of Intellectual and Developmental Disabilities | 1 |
| ESED-2900 Health and Movement Education..... | 2 |
| GSCI-1010 Principles of Earth Science | 3.5 |

Pre-kindergarten special education endorsement

Early childhood or special education majors who wish to qualify for pre-kindergarten special education endorsement may do so by adding the following courses to their early childhood licensure:

| | |
|--|---|
| ECSP-2500 Young Children with Special Needs | 3 |
| ECSP-3500 Assessing and Teaching Young Children | 3 |
| ECSP-3550 Clinical: Young Children with Special Needs..... | 3 |

Reading endorsement

Early childhood or special education majors who wish to qualify for reading endorsement may do so by adding the following courses to their education licensure:

Early Childhood Education Majors:

| | |
|---|---|
| EDSP-2400 Language Development and Communication Disorders..... | 2 |
| EDSP-3100 Diagnostic and Intervention in Reading | 3 |
| EDSP-3400 Advanced Study in the Teaching of Developmental Reading..... | 2 |
| EDUC-3570 Supervised Field Experience in Reading | 2 |
| Reading Tutoring (1 hour within the following clinical) | 1 |
| EDEC-3950 Early Childhood Clinical I..... | 1 |

Intervention Specialist Majors:

| | |
|--|---|
| EDSP-2400 Language Development and Communication Disorders..... | 2 |
| EDSP-3150 Intervention and Diagnosis in Reading for Special Educators | 3 |
| EDSP-3400 Advanced Study in the Teaching of Developmental Reading..... | 2 |
| Reading Tutoring (1 hour within each of the following clinicals).... | 3 |
| EDSP-3950 Special Education Clinical: Early Childhood..... | 1 |
| EDSP-4450 Special Education Clinical: Middle Childhood ... | 1 |
| EDSP-4550 Special Education Clinical: AYA..... | 1 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Special Education — Intervention Specialist

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-1800 Principles of Mathematics I | 3 |
| EDUC-2400 Children’s Literature..... | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PYCH-2735 Child-Adolescent Development..... | 3 |
| Literature Elective | 3 |
| Total | 37.5 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| EDEC-2300 Phonics and the Reading Process | 4 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDSP-2400 Language Development and Communication Disorders | 2 |
| EDSP-2500 Survey of Intellectual and Developmental Disabilities ... | 1 |
| EDSP-3500 Special Education Law | 1 |
| EDSP-3100 Diagnostics and Intervention in Reading | 3 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology..... | 3 |
| EDUC-2800 Principles of Mathematics II..... | 3 |
| GSCI-2010 Physical Science for Teachers..... | 4 |
| Total | 36 |

Third year:

| | |
|--|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| EDEC-3800 Teaching Reading and Language Arts: EC..... | 4 |
| EDEC-4000 Reading in the Content Area: EC..... | 2 |
| EDEC-4100 Teaching Mathematics: EC | 3 |
| EDEC-4200 Teaching Science: EC..... | 3 |
| EDEC-4300 Teaching Social Studies: EC..... | 3 |
| EDSP-3950 Special Education Clinical: EC..... | 3 |
| EDSP-4450 Special Education Clinical: MC..... | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| History (US) elective..... | 3 |
| Total | 29 |

Fourth year:

| | |
|---|--------------|
| EDSP-2700 Teaching Children Mild to Moderate Disabilities | 2 |
| EDSP-4000 Principles of Inclusion | 1 |
| EDSP-4100 Adaptive Curriculum and Instruction..... | 2 |
| EDSP-4150 Career Education and Occupation Training | 2 |
| EDSP-4300 Behavior and Instructional Management | 3 |
| EDSP-4400 Assessment in Special Education..... | 3 |
| EDSP-4550 Special Education Clinical: AYA | 3 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| EDSP-4900 Student Teaching and Seminar: SpE..... | 12 |
| GEO-3520 World Regional Geography – Eastern..... | 3 |
| Total | 30-32 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for Dual Licensure for Majors in Special Education — Intervention and Early Childhood Education

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-1800 Principles of Mathematics I | 3 |
| EDUC-2400 Children’s Literature..... | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSCI-1010 Principles of Earth Science | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PYCH-2735 Child-Adolescent Development..... | 3 |
| Literature Elective | 3 |
| Total | 41 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| EDEC-2100 Art and Music for Early Childhood | 2 |
| EDEC-2300 Phonics and the Reading Process | 4 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2400 Language Development and Communication Disorders | 2 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDSP-2500 Survey of Intellectual and Developmental Disabilities ... | 1 |
| EDSP-3500 Special Education Law | 1 |
| EDSP-3100 Diagnostics and Intervention in Reading | 3 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology..... | 3 |
| EDUC-2800 Principles of Mathematics II..... | 3 |
| GSCI-2010 Physical Science for Teachers..... | 4 |
| Total | 38 |

Third year:

| | |
|---|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| EDEC-3500 Early Childhood Education | 3 |
| EDEC-3600 Issues in Early Childhood Administration | 3 |
| EDEC-3800 Teaching Reading and Language Arts: EC..... | 4 |
| EDEC-3900 Field Experience in Early Childhood Education | 1 |
| EDEC-4000 Reading in the Content Area: EC..... | 2 |
| EDEC-4100 Teaching Mathematics: EC | 3 |
| EDEC-4200 Teaching Science: EC..... | 3 |
| EDEC-4300 Teaching Social Studies: EC..... | 3 |
| EDSP-3950 Special Education Clinical: EC..... | 3 |
| EDSP-4000 Principles of Inclusion | 1 |
| EDSP-4450 Special Education Clinical: MC..... | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| ESED-2900 Health and Movement Education for Young Child..... | 2 |
| Global Studies Elective..... | 3 |
| Total | 41 |

Fourth year:

| | |
|---|-----------|
| EDSP-2700 Teaching Children Mild to Moderate Disabilities | 2 |
| EDSP-4100 Adaptive Curriculum and Instruction..... | 2 |
| EDSP-4150 Career and Occupational Training..... | 2 |
| EDSP-4300 Behavior and Instructional Management | 3 |
| EDSP-4400 Assessment in Special Education..... | 3 |
| EDSP-4550 Special Education Clinical: AYA | 3 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| EDUC-4950 Student Teaching and Seminar: SpE/EC | 12 |
| HIST-1110, or 1120 United States History I or II | 3 |
| Total | 31 |

Adolescent/Young Adult and Multi-Age Licensure Programs

The **adolescent/young adult licensure programs** prepare teachers to work with students in grades seven to 12. The Ohio Department of Education has approved Cedarville University to issue adolescent/young adult licenses for teachers in the areas of integrated science (comprehensive), integrated life science, integrated physical science, integrated physics, integrated chemistry, integrated mathematics, integrated language arts, and integrated social studies. In addition to approving the previously listed programs, the Association of Christian Schools International has also approved Cedarville to offer ACSI certification in integrated Bible.

The **multi-age licensure education programs** prepare students to work with students in grades pre-K to 12. The Ohio Department of Education has approved Cedarville University to issue multi-age licenses in the areas of music education, Spanish education, physical education, and health education.

The course requirements for each licensure field are outlined in the catalog under the department that offers the major; however, the following courses are common to all adolescent/young adult and multi-age education majors and are prerequisites for admission to the Teacher Education Program and upper-level classes.



| | |
|---|-----------|
| Teacher Education Core | 15 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-1000 The Education Profession | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |

Upon completion of the Teacher Education Core and before enrolling in the Principles of Teaching block, students must make formal application to the Teacher Education Program (TEP). The requirements for admission to the TEP are outlined earlier in this section of the catalog. Most adolescent and young adult and multi-age teacher education majors apply for admission during their junior year. The education department's licensure and testing coordinator provides students with specific information on procedures for admission to the TEP.

Principles of Teaching Block (all AYA majors and MA Spanish)

The following courses are to be taken together just prior to the student teaching experience.

| | |
|---|---|
| EDSE-4100 Principles of Teaching: AYA | 5 |
| ¹ EDSE-3300 Developmental Reading | 3 |
| ² EDSE-4000 Reading in the Content Area: AYA | 3 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-3200 Faith and Learning Alignment | 1 |

Additional Requirements:

| | |
|--|-----|
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 12 |
| (or EDUC-4900 Student Teaching and Seminar: MA | 12) |

¹Adolescent and young adult integrated language arts majors only.

²Adolescent and young adult integrated language arts majors do not take this course. Adolescent and young adult math majors may take this course out of class in the summer.



Elmer W. Engstrom Department of

ENGINEERING AND COMPUTER SCIENCE

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Mission Statement

The Elmer W. Engstrom Department of Engineering and Computer Science offers accredited programs in computer, electrical, and mechanical engineering, as well as computer science. Our philosophy centers on a rigorous, back-to-basics education that is rich with hands-on opportunities to apply classroom theory. Our faculty share a common vision that states: "We, the Elmer W. Engstrom Department of Engineering and Computer Science, seek to honor the Lord Jesus Christ in every endeavor and earnestly desire to cultivate technical professionals who are committed to moral excellence and who are exemplary in character, conduct, and skill. Therefore, we strive to provide an excellent educational environment that will nurture our students to honor the Lord in all things and help them to grow in spiritual maturity, wisdom, knowledge, and expertise for purposeful lives of service."

Programs of Study

The department of engineering and computer science offers the following programs of study:

Majors

- Computer Science (B.S.)
- Computer Engineering (B.S.Cp.E.)
- Electrical Engineering (B.S.E.E.)
- Mechanical Engineering (B.S.M.E.)

Minors

- Biomedical Engineering
- Computer Science

Special Programs

- Cooperative Education Program
- Engineering Honors Program

Accreditation

The B.S.Cp.E., B.S.E.E., and B.S.M.E. degree programs are accredited by the Engineering Accreditation Commission of ABET, Inc. The B.S. in computer science degree program is accredited by the Computing Accreditation Commission of ABET, Inc.

Registration as a Professional Engineer

Senior engineering majors and graduate engineers are eligible to take the NCEES Fundamentals of Engineering (FE) Examination offered by the Ohio Society of Professional Engineers. This exam is the first of two required to become a registered professional engineer and is offered each spring at Cedarville University. Cedarville seniors have passed the FE exam at a rate that is consistently higher than the national pass rates.

Personal Requirements

Students interested in one of the programs housed within the department of engineering and computer science should possess a strong aptitude in mathematics and physical sciences. Those students who flourish in our programs typically enjoy applying their aptitude toward solving problems. Successful engineers and computer scientists are individuals who enjoy designing solutions to problems.

Department Requirements

New Students

Students who excel in science and mathematics, enjoy solving real-life problems, and wish to serve others have the highest potential for careers in engineering and computer science. Entering students are required to have an ACT composite score of at least 22 (or an SAT of at least 1030) in order to declare a major in the department. It is recommended that incoming engineering students have an ACT math sub-score greater than 24 or SAT math sub-score greater than 590.

To prepare for engineering or computer science, high school students should take a college-preparatory curriculum that includes:

- four units of mathematics (algebra, geometry, trigonometry, and advanced mathematics or precalculus)
- four units of science (physical science, biology, chemistry, and physics)
- two units of the same foreign language

Experience with spreadsheets and word processors is helpful, but not required for entry.

Retention Requirement

Engineering students must demonstrate proficiency in certain lower-level courses to advance into upper-level 3000- and 4000-level courses. Therefore, all students must earn an overall GPA of at least 2.0 by the end of their sophomore year. In addition, each engineering program has its own retention requirements as follows.

Computer Engineering (CpE)

To advance into the junior year, CpE majors must earn a combined GPA of at least 2.0 in the following engineering and computer science courses: CS-1210, 1220, and 2210, EGCP-1010, EGGN-1110, EGEE-2010, and EGME-1810 and 2510.

In addition, CpE majors must earn a combined GPA of at least 2.0 in the following cognate courses: MATH-1710, 1720, 2740 and MATH-3110, and PHYS-2110 and 2120.

Electrical Engineering (EE)

To advance into the junior year, EE majors must earn a combined GPA of at least 2.0 in the following engineering courses: EGCP-1010, EGGN-1110, EGEE-2010, and EGME-1810, 2510, and 2630.

In addition, EE majors must earn a combined GPA of at least 2.0 in the following cognate courses: CS-1210, MATH-1710, 1720, 2710, and 2740, and PHYS-2110 and 2120.

Mechanical Engineering (ME)

To advance into the junior year, ME majors must earn a combined GPA of at least 2.0 in the following engineering courses: EGCP-1010, EGGN-1110, EGEE-2050, and EGME-1810, 2050, 2530, and 2630.

In addition, ME majors must earn a combined GPA of at least 2.0 in the following cognate courses: MATH-1710, 1720, 2710, and 2740, and PHYS-2110 and 2120.

Graduation Requirements

1. Earn a cumulative GPA of at least 2.0 in all major and cognate courses.
2. All engineering majors must take an assessment exam similar to the NCEES FE exam.
3. CS majors must achieve a grade of at least a "C-" in the following courses: CS-1210, 1220, 2210, 3410, 4810, and MATH-1710 and 2510.

Technical Resources

Our modern laboratories include the following: fluids lab with an 18-inch cross-section wind tunnel, heat transfer, refrigeration, mechanics, materials testing, internal combustion engines, and dynamometers, CNC manufacturing, vibrations, dynamics of machines, electrical machines, feedback controls, circuits, electronics, communications, digital logic design, microprocessors, surface-mount soldering, and a parallel computing cluster. We also have extensive PC-based laboratories in which students use computer-based circuit design, 3-D solid modeling, FEA, CFD, CNC, and industry-standard IDE software.

Cocurricular Opportunities

Engineering freshmen participate in an annual Cardboard Canoe Challenge. Other course-based competitions include statics and dynamics design competitions for sophomores, an Advanced Digital Logic Design competition, and an annual programming contest. The department provides students with opportunities to participate in national and international design competitions organized by professional engineering societies such as ACM, ASME, IEEE, SAE, ASEE, and SWE. Our students participate in Aero Design®, Formula SAE®, international programming, Mini Baja®, robotics, Solar Splash®, and Supermileage® competitions.

Career Opportunities

Engineering and computer science both involve the application of scientific and mathematical principles, experience, judgment, and common sense to develop devices which help people. Engineers redesign products to work more efficiently, more quickly, and less expensively. They design EKG and ultrasound machines that help doctors diagnose medical problems, electrical engineering plants to power our cities, and more fuel-efficient cars and airplanes. Computer programmers develop the software solutions that are used to pilot spacecraft, combat terrorism, prevent collisions at airports, and keep our cars running.

Computer scientists and engineers spend a great deal of time interacting and communicating with others, often working on a team. Because of their strong background in science, mathematics, and technology, they often rise to leadership positions in organizations, managing programs in research, development, design, construction, production, operations, marketing, and sales.

In this era of rapid technological change, an engineering or computer science education serves our society well. In the decades ahead, society's needs and problems will call for technical contributions on a scale not previously experienced.



Engineering Educational Objectives

The Elmer W. Engstrom Department of Engineering and Computer Science educational objectives define God-honoring characteristics of our students three to five years after graduation from Cedarville University.

1. They are successful in professions related to their fields of study.
2. They are prepared for graduate-level education programs.
3. They continue to develop professionally and remain current in their fields.
4. They make sound professional and ethical decisions based upon biblical truths.
5. They actively serve in and support Christian ministries, both in their communities and around the world.

Educational Philosophy for Engineering and Computer Science Programs

All of our programs are designed to give our graduates a solid background in their technical fields of choice. Our programs include a strong theoretical foundation as well as significant hands-on application. Each program also includes a senior capstone design experience. The three engineering programs share a common philosophy of program outcomes which are consistent with the ABET engineering criteria. Similarly, our computer science program philosophy is consistent with the ABET computer science criteria.



Faculty

Samuel SanGregory, *Chair*. Professor of Electrical Engineering. *Education*: B.S.E., Wright State University, 1988; M.S.C.E., Air Force Institute of Technology, 1992; Ph.D., Air Force Institute of Technology, 1999. At Cedarville since 1993.

Robert Chasnov, *Associate Chair*. Senior Professor of Engineering. *Education*: B.S., Rensselaer Polytechnic Institute, 1978; M.S., University of Illinois, 1980; Ph.D., University of Illinois, 1983; registered professional engineer. At Cedarville since 1991.

Gerald Brown, Associate Professor of Electrical Engineering. *Education*: B.Engr., McMaster University, 1982; M.Engr., McMaster University, 1984; Ph.D., McMaster University, 1989. At Cedarville since 2004.

Timothy Dewhurst, Professor of Mechanical Engineering. *Education*: B.S.M.E., Cornell University, 1980; M.Eng.M., Cornell University, 1981; Ph.D., Cornell University, 1985; registered professional engineer. At Cedarville since 1996.

Vicky Fang, Associate Professor of Computer Engineering. *Education*: B.S.E.E., Shanghai Jiao Tong University, 1992; M.S.E.T., Pittsburg State University, 1998; Ph.D., The University of Akron, 2004. At Cedarville since 2004.

David Gallagher, Professor of Computer Science. *Education*: B.S.E.E., United States Air Force Academy, 1978; M.S.E.E., Air Force Institute of Technology, 1987; Ph.D., University of Illinois, 1995. At Cedarville since 2000.

Seth Hamman, Assistant Professor of Computer Science. *Education*: B.A., Duke University, 2002; M.S. Yale University, 2011. At Cedarville since 2012.

Harwood Hegna, Professor of Mechanical Engineering. *Education*: B.S.A.E., University of Minnesota, 1969; M.S.A.E., University of Minnesota, 1971; M.S.M.E., University of Minnesota, 1973; Ph.D., Air Force Institute of Technology, 1981; registered professional engineer. At Cedarville since 1992.

Jay Kinsinger, Assistant Professor of Mechanical Engineering. *Education*: B.S., Mechanical Engineering Technology and B.S., Manufacturing Technology, University of Dayton, 1992; M.S., Biomedical Engineering, Wright State University, 2000. At Cedarville since 1999.

Clinton Kohl, Professor of Computer Engineering. *Education*: B.S.E.E., South Dakota State University, 1988; M.S.E.E., University of North Dakota, 1990; Ph.D., Iowa State University, 1992. At Cedarville since 1994.

Timothy Norman, Professor of Mechanical Engineering. *Education*: B.S.A.A.E., Purdue University, 1982; M.S.A.A.E. Purdue University, 1986; Ph.D., Purdue University, 1989; registered professional engineer. At Cedarville since 2003.

Zhaohui (George) Qin, Assistant Professor of Mechanical Engineering. *Education*: B.S., Shanghai Jiaotong University, 1996; M.S., Shanghai Jiaotong University, China, 1999; Ph.D., Iowa State University, 2007. At Cedarville since 2012.

Robert Schumacher, Assistant Professor of Mathematics and Computer Science. *Education*: B.S.Cp.S., United States Air Force Academy, 1970; M.S., Air Force Institute of Technology, 1979. At Cedarville since 1993.

Keith Shomper, Professor of Computer Science. *Education*: B.A., University of Northern Colorado, 1983; M.S., Air Force Institute of Technology, 1984; Ph.D., The Ohio State University, 1993. At Cedarville since 2003.

Jeffrey Shortt, Professor of Electrical Engineering. *Education*: B.S.E.E., Virginia Polytechnic Institute and State University, 1974; M.S.E.E., Virginia Polytechnic Institute and State University, 1979; Ph.D., Virginia Polytechnic Institute and State University, 1982. At Cedarville since 1996.

Thomas Thompson, Professor of Mechanical Engineering. *Education*: B.S.M.E., University of Nebraska-Lincoln, 1984; M.S.M.E., University of Nebraska-Lincoln, 1986; Ph.D., Iowa State University, 1995; registered professional engineer. At Cedarville since 1995.

Timothy Tuinstra, Associate Professor of Electrical Engineering. *Education*: B.S.E.E., Cedarville University, 1996; M.S.E.E., University of Dayton, 1998; Ph.D., University of Dayton, 2008. At Cedarville since 2002.

Tim Yao, Associate Professor of Electrical Engineering. *Education*: B.S.Cp.E., National Chiao-Tung University, 1987; M.S.E.E., National Taiwan University, 1989; M.S.E.E., University of Maryland at College Park, 1995; Ph.D., University of Maryland at College Park, 1997. At Cedarville since 2009.

Lawrence Zavodney, Senior Professor of Mechanical Engineering. *Education*: B.S.M.E., The University of Akron, 1974; M.S.M.E., The University of Akron, 1977; Ph.D., Virginia Polytechnic Institute and State University, 1987; registered professional engineer. At Cedarville since 1992.

Technical Support Staff

David Denlinger, Mechanical Engineering Technician. At Cedarville since 1993.

James Landers, Computer and Electrical Engineering Technician. *Education*: Gateway Electronics, Microsoft, FCC. At Cedarville since 2005.

Engineering and Computer Science Advisory Council

The Engineering and Computer Science Advisory Council consists of professionals and business leaders representing a variety of technology-related businesses. Through annual meetings, these experts advise the University and evaluate its programs and plans for building upon Cedarville's reputation for excellence in undergraduate engineering and computer science education.

Eugene Apple, General Electric Corporation, retired
Ronald Baker, Hi-Tech Aero Spares
Carl Bertsche, Jr., Production Engineering Company
Rob Bouwens, Rolls Royce Corporation
Joe Buonodono, Johnson Controls, Inc.
Gary Clasby, Duriron Company, Inc.
Tom Curran, WPAFB, Aero Propulsion and Power, retired
William Engstrom, Engstrom Foundation
Stephen Harris, Rixan Associates, Inc.
John Harshbarger, Video Instruments
Richard Holmes, Holmes and Mays
Skip Holmes, Procter and Gamble
Dan Kerr, GM Specialty Cars Division
Frank Klatt, Rockwell International, retired
Ed Krupka, Burris Logistics
Joe Mays, Holmes and Mays
Walker Mitchell, Mitchell Consulting
Bob Porter, Xetron (Northrop Grumman)
Dan Rogers, Duotech Services
Greg Smith, Northrop Grumman Space Technology
Terry Smith, Rittal Corporation
Jay Tieber, Ohio Department of Development
Don Wilkinson, ODL, Inc.

Computer Science — Bachelor of Science

Course requirements for the **B.S. degree in computer science** are comprised of the following and may be modified by the department chair.

Course requirements involve 54 semester hours including:

| | |
|--|-------------|
| Computer Science Core Requirements | 48 |
| CS-1210 C++ Programming | 2 |
| CS-1220 Object-Oriented Design Using C++ | 3 |
| CS-2210 Data Structures Using Java | 3 |
| CS-3210 Programming Language Survey | 3 |
| CS-3310 Operating Systems | 3 |
| CS-3410 Algorithms | 3 |
| CS-3510 Compiler Theory and Practice | 3 |
| CS-3610 Database Organization and Design | 3 |
| CS-4220 Web Applications | 3 |
| *CS-4810,4820 Software Engineering I and II | 7 |
| EGCP-1010 Digital Logic Design | 3 |
| EGCP-3210 Computer Architecture | 3 |
| EGGN-3110 Professional Ethics | 3 |
| EGGN-4010 Senior Seminar | 0 |
| MATH-2510 Discrete Mathematics for Computer Science | 3 |
| MATH-3110 Probability and Statistics I | 3 |
| Technical electives chosen from the following | 6 |
| Any 3000- or 4000-level computer science course | 3 |
| EGCP-3010 Advanced Digital Logic Design | 3 |
| EGCP-4210 Advanced Computer Architecture | 3 |
| EGCP-4310 Computer Networks | 3 |
| MATH-3500 Number Theory | 3 |
| MATH-3610 Linear Algebra | 3 |
| MATH-3760 Numerical Analysis | 3 |
| Other courses with pre-approval of department chair | |
| *Capstone Course | |
| Required Cognates | 21.5 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| (or CHEM-1110 General Chemistry I | 4) |
| MATH-1710,1720 Calculus I and II | 10 |
| PHYS-2110, 2120 General Physics I and II | 8 |
| Optional Computer Science Tracks** | 9 |
| Replace 6 hours of technical electives with 9 hours from one of the following computer science track | |
| Computer Graphic Track | |
| CS-4710 Computer Graphics | 3 |
| Choose one of the following groups: | |
| Group 1 | |
| EMTC-2110 Video Technical Training | 3 |
| EMTC-3310 Advanced Video Production | 3 |
| Group 2 | |
| EMTC-2601 Interactive Interface Design | 3 |
| EMTC-3630 Principles of Computer Animation | 3 |
| EMTC-3765 Animation Practicum | 1 |
| Distributed Computing Track | |
| CS-4320 Network Security | 3 |
| CS-4410 Parallel Computing | 3 |
| EGCP-4310 Computer Networks | 3 |
| Hardware Track | |
| EGCP-3010 Advanced Digital Logic Design | 3 |
| EGCP-4210 Advanced Computer Architecture | 3 |
| EGCP-4310 Computer Networks | 3 |
| Operations Research Track | |
| MATH-3240 Introduction to Operations Research | 3 |
| MATH-3610 Linear Algebra | 3 |
| MATH-4110 Probability and Statistics II | 3 |

Computer Science Major (B.S.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements | 42.5 |
| Computer Science Major Requirements | 54–57 |
| Required Cognates | 21.5 |
| Electives | 7–10 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Computer Science — B.S.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CS-1210 C++ Programming | 2 |
| CS-1220 Object Oriented Design Using C++ | 3 |
| EGCP-1010 Digital Logic Design | 3 |
| ENG-1400 Composition | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS 2110 General Physics I | 4 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| CS-2210 Data Structures Using Java | 3 |
| CS-3210 Programming Language Survey | 3 |
| EGCP-3210 Computer Architecture | 3 |
| GSS-1100 Politics and American Culture | 3 |
| MATH-2510 Discrete Mathematics for Computer Science | 3 |
| MATH-3110 Probability and Statistics I | 3 |
| PHYS 2120 General Physics II | 4 |
| Total | 31 |

Third year:

| | |
|---|-------------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CS-3310 Operating Systems | 3 |
| CS-3410 Algorithms | 3 |
| CS-3510 Compiler Theory and Practice | 3 |
| CS-3610 Database Organization and Design | 3 |
| CS-4220 Web Applications | 3 |
| CS Technical Electives | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| HUM-1400 Introduction to the Humanities | 3 |
| History Elective | 3 |
| Total | 31.5 |

Fourth year:

| | |
|---|-------------|
| CHEM-1050 Chemistry for Engineers | 3.5 |
| CS-4810, 4820 Software Engineering I and II | 7 |
| CS Technical Electives | 3 |
| EGGN-3110 Professional Ethics | 3 |
| EGGN-4010 Senior Seminar | 0 |
| Literature Elective | 3 |
| Social Science/Global Awareness Elective | 3 |
| Electives** | 10 |
| Total | 32.5 |

**The optional computer science tracks allow specialization within the degree by focusing the technical elective hours into a designated area and shifting three general education elective hours into the technical electives.

A complete description of the general education requirements is found on page 26.

Computer Engineering

Course requirements for the **Bachelor of Science in Computer Engineering (B.S.Cp.E.) degree** are comprised of the following and may be modified by the department chair.

Course requirements involve 70 semester hours including:

| | |
|--|---|
| CS-1210 C++ Programming..... | 2 |
| CS-1220 Object Oriented Design with C++ | 3 |
| CS-2210 Data Structures Using Java | 3 |
| CS-3310 Operating Systems | 3 |
| CS-3410 Algorithms..... | 3 |
| EGCP-1010 Digital Logic Design | 3 |
| EGCP-2120 Microcontrollers | 3 |
| EGCP-3010 Advanced Digital Logic Design..... | 3 |
| EGCP-3210 Computer Architecture | 3 |
| EGCP-4210 Advanced Computer Architecture..... | 3 |
| *EGCP-4810 Computer Engineering Senior Design I..... | 4 |
| *EGCP-4820 Computer Engineering Senior Design II..... | 4 |
| EGEE-2010 Circuits | 5 |
| EGEE-3110 Linear Systems | 3 |
| EGEE-3210 Electronics I | 3 |
| EGGN-1110 The Engineering Profession..... | 1 |
| ¹ EGGN-3110 Professional Ethics | 3 |
| EGGN-4010 Senior Seminar..... | 0 |
| EGME-1810 Engineering Graphics..... | 1 |
| EGME-2510 Statics | 3 |
| EGME-3170 Thermal Systems | 2 |
| MATH-2510 Discrete Math: Computer Science | 3 |
| **Three Technical Electives (must include a 4000-level course).... | 9 |

Required Cognates 27.5

| | |
|--|-----|
| ² CHEM-1050 Chemistry for Engineers | 3.5 |
| ³ MATH-1710 Calculus I | 5 |
| MATH-1720 Calculus II | 5 |
| MATH-2740 Differential Equations | 3 |
| MATH-3110 Probability and Statistics I | 3 |
| PHYS-2110 General Physics I | 4 |
| PHYS-2120 General Physics II | 4 |

¹Satisfies humanities general education requirements

²Satisfies physical science general education requirements

³Satisfies mathematics general education requirements

*Capstone Course

**Technical electives must be selected from EGCP or CS courses of 3000-level or higher that are not already prescribed in the program. At least one technical elective must be a 4000-level course.

Computer Engineering Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 42.5 |
| Comprehensive Computer Engineering Requirements | 70 |
| Required Cognates | 27.5 |
| Total (minimum, not including proficiency) | 140 |



Suggested Four-Year Curriculum for a Major in Computer Engineering

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| CS-1210 C++ Programming..... | 2 |
| CS-1220 Object Oriented Design with C++ | 3 |
| EGCP-1010 Digital Logic Design | 3 |
| EGGN-1110 The Engineering Profession..... | 1 |
| EGME-1810 Engineering Graphics..... | 1 |
| MATH-1710 Calculus I | 5 |
| MATH-1720 Calculus II..... | 5 |
| PHYS-2110 General Physics I | 4 |
| Total | 33.5 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| CS-2210 Data Structures Using Java | 3 |
| EGEE-2010 Circuits | 5 |
| EGME-2510 Statics | 3 |
| ENG-1400 Composition..... | 3 |
| MATH-2510 Discrete Math: Computer Science | 3 |
| MATH-2740 Differential Equations | 3 |
| MATH-3110 Probability and Statistics I | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2120 General Physics II..... | 4 |
| Total | 35 |

Third year:

| | |
|---|-----------|
| BEGE-2740 New Testament Literature | 3 |
| CS-3310 Operating Systems | 3 |
| CS-3410 Algorithms..... | 3 |
| EGCP-2120 Microcontrollers | 3 |
| EGCP-3010 Advanced Digital Logic Design | 3 |
| EGCP-3210 Computer Architecture | 3 |
| EGEE-3110 Linear Systems | 3 |
| EGEE-3210 Electronics I | 3 |
| EGGN-3110 Professional Ethics | 3 |
| HUM-1400 Introduction to Humanities..... | 3 |
| Literature Elective | 3 |
| Technical Electives | 3 |
| Total | 36 |

Fourth year:

| | |
|--|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| EGCP-4210 Advanced Computer Architecture | 3 |
| EGCP-4810 Computer Engineering Senior Design I | 4 |
| EGCP-4820 Computer Engineering Senior Design II..... | 4 |
| EGGN-4010 Senior Seminar | 0 |
| EGME-3170 Thermal Systems | 2 |
| GSS-1100 Politics and American Culture..... | 3 |
| Biology Elective | 3.5 |
| Technical Electives | 6 |
| History Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 35.5 |

A complete description of the general education requirements is found on page 26.

Electrical Engineering

Course requirements for the **Bachelor of Science in Electrical Engineering (B.S.E.E.) degree** are comprised of the following and may be modified by the department chair.

Course requirements involve 67 semester hours including:

| | |
|---|---|
| CS-1210 C++ Programming | 2 |
| EGCP-1010 Digital Logic Design | 3 |
| EGCP-2120 Microcontrollers | 3 |
| EGEE-2010 Circuits | 5 |
| EGEE-3110 Linear Systems | 3 |
| EGEE-3210 Electronics I | 3 |
| EGEE-3220 Electronics II | 5 |
| EGEE-3310 Electromagnetics | 3 |
| EGEE-3330 Communications Theory..... | 4 |
| EGEE-4110 Digital Signal Processing..... | 2 |
| EGEE-4410 Feedback Control Systems | 4 |
| *EGEE-4810 Electrical Engineering Senior Design I..... | 4 |
| *EGEE-4820 Electrical Engineering Senior Design II..... | 4 |
| EGGN-1110 The Engineering Profession..... | 1 |
| ¹ EGGN-3110 Professional Ethics | 3 |
| EGGN-4010 Senior Seminar..... | 0 |
| EGME-1810 Engineering Graphics..... | 1 |
| EGME-2510 Statics | 3 |
| EGME-2630 Dynamics | 3 |
| EGME-3170 Thermal Systems | 2 |
| ² Three Technical Electives (must include one 4000-level course)..... | 9 |

Required Cognates.....30.5

| | |
|---|-----|
| ³ CHEM-1050 Chemistry for Engineers..... | 3.5 |
| ⁴ MATH-1710 Calculus I | 5 |
| MATH-1720 Calculus II | 5 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations | 3 |
| PHYS-2110 General Physics I | 4 |
| PHYS-2120 General Physics II..... | 4 |

Select one mathematics elective from the following 3

| | |
|---|---|
| EGEE-3370 Probability and Random Processes for Engineers | 3 |
| MATH-3610 Linear Algebra | 3 |
| MATH-3740 Complex Variables..... | 3 |

¹Satisfies humanities general education requirements.
²Technical electives must have EGXX designation at 3000- or higher level.
³Satisfies physical science general education requirements.
⁴Satisfies mathematics general education requirements.
*Capstone Course

Electrical Engineering Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements..... | 42.5 |
| Comprehensive Electrical Engineering Requirements | 67 |
| Required Cognates..... | 30.5 |
| Total (minimum, not including proficiency) | 140 |

Suggested Four-Year Curriculum for a Major in Electrical Engineering

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| CS-1210 C++ Programming | 2 |
| EGCP-1010 Digital Logic Design | 3 |
| EGGN-1110 The Engineering Profession..... | 1 |
| EGME-1810 Engineering Graphics..... | 1 |
| ENG-1400 Composition..... | 3 |
| MATH-1710 Calculus I | 5 |
| MATH-1720 Calculus II..... | 5 |
| PHYS-2110 General Physics I | 4 |
| Total | 33.5 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EGCP-2120 Microcontrollers | 3 |
| EGEE-2010 Circuits | 5 |
| EGME-2510 Statics | 3 |
| EGME-2630 Dynamics | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2120 General Physics II..... | 4 |
| Total | 35 |

Third year:

| | |
|---|-----------|
| BEGE-2740 New Testament Literature | 3 |
| EGEE-3110 Linear Systems | 3 |
| EGEE-3210 Electronics I | 3 |
| EGEE-3220 Electronics II..... | 5 |
| EGEE-3310 Electromagnetics | 3 |
| EGEE-3330 Communications Theory..... | 4 |
| EGGN-3110 Professional Ethics | 3 |
| HUM-1400 Introduction to Humanities..... | 3 |
| Technical Elective | 3 |
| Mathematics Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 36 |

Fourth year:

| | |
|--|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| EGEE-4110 Digital Signal Processing..... | 2 |
| EGEE-4410 Feedback Control Systems | 4 |
| EGEE-4810 Electrical Engineering Senior Design I..... | 4 |
| EGEE-4820 Electrical Engineering Senior Design II..... | 4 |
| EGGN-4010 Senior Seminar | 0 |
| EGME-3170 Thermal Systems | 2 |
| Biology Elective | 3.5 |
| Technical Electives | 6 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Total | 35.5 |

A complete description of the general education requirements is found on page 26.

Mechanical Engineering

Course requirements for the **Bachelor of Science in Mechanical Engineering (B.S.M.E.) degree** are comprised of the following and may be modified by the department chair.

Course requirements involve 70 semester hours including:

| | |
|--|---|
| EGCP-1010 Digital Logic Design | 3 |
| EGEE-2050 Circuits and Instrumentation..... | 4 |
| EGEE-3530 Electrical Machines | 3 |
| EGGN-1110 The Engineering Profession | 1 |
| ¹ EGGN-3110 Professional Ethics | 3 |
| EGGN-4010 Senior Seminar..... | 0 |
| EGME-1810 Engineering Graphics..... | 1 |
| EGME-2050 Computational Methods..... | 4 |
| EGME-2310 Manufacturing and Finance | 3 |
| EGME-2410 Properties of Engineering Materials..... | 4 |
| EGME-2530 Statics and Mechanics of Materials | 5 |
| EGME-2630 Dynamics | 3 |
| EGME-3010 Mechanical Engineering Lab I..... | 2 |
| EGME-3020 Mechanical Engineering Lab II | 2 |
| EGME-3110 Thermodynamics..... | 5 |
| EGME-3150 Heat Transfer..... | 3 |
| EGME-3210 Fluid Mechanics..... | 3 |
| EGME-3610 Kinematics and Design of Machines..... | 3 |
| EGME-3850 Mechanical Design | 3 |
| EGME-4660 Automatic Controls | 3 |
| *EGME-4810 Mechanical Engineering Senior Design I | 3 |
| *EGME-4820 Mechanical Engineering Senior Design II | 3 |
| Engineering Electives (must include one 4000-level course) | 6 |

Required Cognates..... 27.5

| | |
|---|-----|
| ² CHEM-1050 Chemistry for Engineers..... | 3.5 |
| ³ MATH-1710 Calculus I..... | 5 |
| MATH-1720 Calculus II | 5 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations | 3 |
| PHYS-2110 General Physics I | 4 |
| PHYS-2120 General Physics II..... | 4 |

¹Satisfies humanities general education requirements.

²Satisfies physical science general education requirements.

³Satisfies mathematics general education requirements.

*Capstone Course

Mechanical Engineering Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0-5 |
| General Education Requirements..... | 42.5 |
| Comprehensive Mechanical Engineering Requirements..... | 70 |
| Required Cognates..... | 27.5 |
| Total (minimum, not including proficiency) | 140 |



Suggested Four-Year Curriculum for a Major in Mechanical Engineering

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| EGCP-1010 Digital Logic Design | 3 |
| EGGN-1110 The Engineering Profession | 1 |
| EGME-1810 Engineering Graphics..... | 1 |
| ENG-1400 Composition..... | 3 |
| MATH-1710 Calculus I | 5 |
| MATH-1720 Calculus II | 5 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2110 General Physics I | 4 |
| Total | 33.5 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EGEE-2050 Circuits and Instrumentation..... | 4 |
| EGME-2050 Computational Methods..... | 4 |
| EGME-2530 Statics and Mechanics of Materials | 5 |
| EGME-2630 Dynamics | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations..... | 3 |
| PHYS-2120 General Physics II..... | 4 |
| Total | 35 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| EGGN-3110 Professional Ethics | 3 |
| EGME-2410 Properties of Engineering Materials..... | 4 |
| EGME-3010 Mechanical Engineering Lab I..... | 2 |
| EGME-3020 Mechanical Engineering Lab II | 2 |
| EGME-3110 Thermodynamics..... | 5 |
| EGME-3150 Heat Transfer..... | 3 |
| EGME-3210 Fluid Mechanics..... | 3 |
| EGME-3610 Kinematics and Design of Machines..... | 3 |
| EGME-3850 Mechanical Design | 3 |
| HUM-1400 Introduction to Humanities..... | 3 |
| History Elective..... | 3 |
| Total | 36 |

Fourth year:

| | |
|---|-------------|
| BEGE-3760 Christian Worldview Integration | 2 |
| EGEE-3530 Electrical Machines | 3 |
| EGGN-4010 Senior Seminar | 0 |
| EGME-2310 Manufacturing and Finance | 3 |
| EGME-4660 Automatic Controls | 3 |
| EGME-4810 Mechanical Engineering Senior Design I | 3 |
| EGME-4820 Mechanical Engineering Senior Design II | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| Biology Elective | 3.5 |
| Engineering Elective..... | 6 |
| Literature Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 35.5 |

Minors

Biomedical Engineering Minor

The **biomedical engineering minor** will help prepare computer, electrical, and mechanical engineering students for careers in the biomedical engineering field, graduate study in biomedical engineering, or medical school. While not required for the emphasis in biomedical engineering, students intending to pursue medical school should have two semesters of general chemistry and organic chemistry, as well as a semester of zoology, cell biology, and junior level biochemistry.

Course requirements for the biomedical engineering minor involve 16.5–17 semester hours including:

| | |
|--|----------|
| GBIO-1000 Principles of Biology | 3.5 |
| (or BIO-1110 Introduction to Biology | 4) |
| GBIO-2010 Human Anatomy and Physiology I | 4 |
| EGGN-3610 Biomedical Engineering Systems..... | 3 |
| GBIO-2720 Bioethics and the Human Experience | 3 |
| Chose one elective from the following | 3 |
| EGEE-4610 Medical Imaging | 3 |
| EGME-4560 Biomechanics and Biomaterials | 3 |

Computer Science Minor

The **computer science minor** allows students to take a focused set of courses which will enable them to effectively employ programming within their own discipline. Proficiency in computer programming is a skill which can be a strong asset in virtually every discipline.

Course requirements for the computer science minor involve 27 semester hours including:

| | |
|--|----------|
| CS-1210 C++ Programming | 2 |
| CS-1220 Object-Oriented Design Using C++ | 3 |
| CS-2210 Data Structures Using JAVA | 3 |
| CS-3410 Algorithms | 3 |
| EGCP-1010 Digital Logic Design | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| Electives chosen from the following | 3 |
| EGEE-3370 Probability and Random Processes for | |
| Engineers | 3 |
| MATH-3110 Probability and Statistics I..... | 3 |

Special Programs

Cooperative Education Program

The **cooperative education program** option has been a traditional program option for engineering education for the last 100 years. The co-op program offers students who want to work an opportunity to gain industrial experience as part of their formal education. Co-op is the established program that the industry has developed with academic institutions to provide supervised work experiences for students. Engineering and computer science students who select this option will require an extra year to obtain their B.S. degree; they will receive a certificate stating that they have satisfactorily completed the co-op program option.

Course requirements for the cooperative education program include:

| | |
|----------------------------------|----|
| EGGN-3910 Co-Op I | 0 |
| (or EGGN-3911 Co-Op IA | 0) |
| (and EGGN- 3912 Co-Op IB | 0) |
| EGGN-3920 Co-Op II | 0 |
| (or EGGN-3921 Co-Op IIA..... | 0) |
| (and EGGN- 3922 Co-Op IIB | 0) |
| EGGN-3930 Co-Op III | 0 |
| (or EGGN-3931 Co-Op IIIA..... | 0) |
| (and EGGN- 3932 Co-Op IIIB | 0) |



Engineering Honors Program

The **engineering honors program** is designed to challenge exceptional students and encourage them to reach their highest possible potential. Because the program is integrated with the University's honors program, students who wish to participate must first be admitted into the honors program; the details are listed in the Interdisciplinary Studies section (page 111). Admission can occur in either the freshman or sophomore year. Admission to the engineering honors program occurs after the student completes the sophomore year. A cumulative GPA of 3.5 or higher is required for participation.

Engineering coursework involves taking the honors version of three courses and one additional engineering elective course. These engineering honors courses are the regularly scheduled courses and are taken with other students, but they have enrichment opportunities and exposure to advanced topics through special assignments and extra sessions with the professor.

Course requirements for the engineering honors program include:

| | |
|---|----|
| HON-1010 and 1020 Making of the Modern Mind | |
| (substitutes for HUM-1400 and HIST elective)..... | 10 |
| EGXX-4XXX Additional Engineering Elective | 3 |

Honors version of the following courses:

Requirements for computer engineering majors include:

| | |
|--|---|
| EGCP-3210 Computer Architecture | 3 |
| EGCP-3010 Advanced Digital Logic Design..... | 3 |
| EGEE-3210 Electronics I | 3 |

Requirements for electrical engineering majors include:

| | |
|--------------------------------------|---|
| EGEE-3210 Electronics I | 3 |
| EGEE-3330 Communications Theory..... | 4 |
| EGEE-4410 Feedback Controls..... | 4 |

Requirements for mechanical engineering majors include:

| | |
|------------------------------------|---|
| EGME-3110 Thermodynamics | 5 |
| EGME-3850 Mechanical Design | 3 |
| EGME-4660 Automatic Controls | 3 |

Students who earn a "B" or higher in HON-1010 and 1020, earn a "B" or higher in all engineering honors courses, and graduate with a cumulative GPA of 3.5 or higher will earn the "engineering honors graduate" designation.

Department of

ENGLISH, LITERATURE, AND MODERN LANGUAGES

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Majors

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Minors

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Mission Statement

The Cedarville University Department of English, Literature, and Modern Languages seeks to:

- Instruct students to write effectively.
- Encourage students to read and appreciate literature.
- Teach students to evaluate literature intelligently.
- Provide a general knowledge of the chronology and the social and intellectual background of English, American, and Spanish literature.
- Prepare students for graduate work in the fields of English, and Spanish.
- Prepare teachers of English and Spanish.

Personal Requirements

Students who choose English as a major are expected to acquire a high level of competency in the discipline of the English language. Those who wish to study foreign language will benefit from taking foreign language in high school. No previous foreign language experience is required to take elementary-level foreign language.

Department Requirements

To graduate with a major from the department of English, literature, and modern languages, students must earn at least a 2.0 cumulative average in all courses required for their major and a "C-" or higher in all courses taken to meet specific requirements in their major.

Programs of Study

The department of English, literature, and modern languages offers the following programs:

Majors

- English
- Language Arts Education — Integrated
- Spanish Education — Multi-Age
- Spanish

Minors

- Asian Studies
- Creative Writing
- Editing and Publishing
- French
- German
- Latin American Studies
- Literature
- Middle Eastern Studies
- Spanish
- Spanish for Professionals
- TESOL (Teaching English to Speakers of Other Languages)
- Western European Studies



Cocurricular Opportunities

German Club

Provides opportunities to practice language skills and learn about cultures through extracurricular activities.

Miracle

Students with writing, photography, editorial, and layout and design talent have the opportunity to compile and edit the University's yearbook.

Spanish Club

Provides opportunities to practice language skills and learn about cultures through extracurricular activities.

The Cedarville Review

Students submit and publish fiction, photography, creative nonfiction, and poetry, as well as select, prepare, and format manuscripts for publication in this annual literary journal.

Sigma Tau Delta

The International English Honor Society seeks to confer distinction for high achievement in English, language, and literature studies, promote interest in literature and the English language, and foster the discipline of English in all its aspects, including creative and critical writing.

International Study Opportunities

Students are encouraged to take advantage of a semester-long or year-long program at one of Cedarville's satellite campuses or to participate in one of Cedarville's special summer programs. Participants remain enrolled at Cedarville, continue to receive financial aid, and take classes for Cedarville credit. Semester and year programs are mainly open to juniors and seniors. The Cedarville summer study programs are open to all students. Advanced planning is highly recommended. For additional information and help with planning, contact the office of international programs (OIP) at cedarville.edu/internationalprograms. Preapproval from OIP must be received before students can participate in any of the programs.

Two of the most popular programs for English, literature, and modern languages majors are Cedarville University in Spain and the Summer Study Abroad program in Oxford.

Cedarville University in Spain

cedarville.edu/academics/internationalprograms/spainsemester

In cooperation with the International Study in Seville (ISIS) program and the University of Seville, Cedarville students have the opportunity to study in a customized program during spring semesters in Seville, Spain. In addition to taking courses at the University of Seville, students will take courses with Cedarville professor Dr. Andrew Wiseman.

Cedarville Summer Abroad Programs

The office of international programs is continually working with professors who desire to teach a specialized course abroad. Each summer there are opportunities for students to take general education and upper-level courses abroad with Cedarville professors. These courses are ideal for students whose majors do not have the flexibility of a semester abroad. Locations vary each summer, but usually are in one or two of the following locations: China, France, Germany, Greece, Ireland, Israel, Oxford, and Spain.

Technical Resources

Cedarville's **Writing Center** serves the University community as a place to build skills for better writing across the disciplines. It also functions as a training ground for students who tutor there, assist in administration, or aid faculty with research projects related to writing centers.

Students also have industry-standard software available to strengthen their professional skills, including:

- Language tutorials
- Publication design
- Reading and writing skill builders

Career Opportunities

Graduate and professional schools welcome Cedarville graduates. Careers pursued by graduates of this department include:

- Creative writing
- International business
- Journalism
- Law
- Missions
- Publishing
- Teaching

Faculty

Kevin Heath, *Chair*. Professor of English. *Education*: B.A., Truman State University, 1986; M.A., Michigan State University, 1988; graduate study, Grand Rapids Baptist Seminary, 1989; Ph.D., University of Cincinnati, 1999. At Cedarville since 1990.

Gregory Belliveau, Assistant Professor of English. *Education*: B.A., Kent State University, 1990; M.A., Kent State University, 1995; M.F.A., Pacific University, 2011. At Cedarville since 1996.

Scott Calhoun, Associate Professor of Literature. *Education*: B.A., Cedarville University, 1995; M.A., Bowling Green State University, 1997; Ph.D., Bowling Green State University, 1999. At Cedarville since 1999.

Daniel Clark, Assistant Professor of English. *Education*: B.A., Tennessee Temple University, 1988; M.A., University of Tennessee at Chattanooga, 1993. At Cedarville since 1999.

Donald Deardorff II, Professor of Literature. *Education*: B.A., Gettysburg College, 1989; M.A., University of Maryland, 1990; Ph.D., University of Rhode Island, 1995. At Cedarville since 1996.

Melissa Faulkner, Assistant Professor of English. *Education*: B.A. English and Political Science, Wright State University, 2001; M.A. English, Composition and Rhetoric, Wright State University, 2003; Ph.D. English, Miami University of Ohio, 2007. At Cedarville since 2007.

Ryan Futrell, Associate Professor of English. *Education*: B.A., Cedarville University, 1997; M.F.A., University of North Carolina at Greensboro, 2000. At Cedarville since 2003.

Louise Grandouiller, Assistant Professor of French. *Education*: B.A., Indiana University, 1975; M.A., University of Texas at Arlington, 1980. At Cedarville since 2009.

Heather Hill, Assistant Professor of English. *Education*: B.A., Western Washington University, 2007; M.A., University of Washington; ABD, University of Washington. At Cedarville since 2012.

Barbara Loach, Professor of Spanish. *Education*: B.A., Cedarville University, 1977; M.A., Bowling Green University, 1978; M.A., Wright State University, 1995; Ph.D., The Ohio State University, 1990. At Cedarville since 1978.

Cynthia Messer, Assistant Professor of English. *Education*: B.A., Cedarville University, 1994; M.A., Wright State University, 1998. At Cedarville since 1998.

Julie Moore, Associate Professor of Literature. *Education*: B.A., Cedarville University, 1987; M.A., University of Dayton, 1989; The Ohio Writing Project, Miami University, 1993. At Cedarville since 1999.

Annis Shaver, Assistant Professor of German. *Education*: B.A., B.S., Tennessee Technological University, 1978; M.A., Louisiana University, 1980; Ph.D., University of Miami, 2004. At Cedarville since 2005.

Nellie Sullivan, Assistant Professor of English. *Education*: B.S., Central Michigan University, 2002; M.A., Central Michigan, 2004; M.F.A., University of Iowa, 2006. At Cedarville since 2006.

Peggy Wilfong, Professor of Literature. *Education*: B.A., Tennessee Temple University, 1976; M.A., University of Alabama in Huntsville, 1990; Ph.D., Indiana University of Pennsylvania, 2000. At Cedarville since 2000.

Andrew S. Wiseman, Associate Professor of Spanish; Director of International Programs. *Education*: B.A., University of Massachusetts at Amherst, 1992; Undergraduate Studies, Universidad de Sevilla, Spain, 1990–1991; Undergraduate Studies, Universidad Internacional SEK, Santiago, Chile, 1992–1993; M.A., Florida State University, 1995; Ph.D., Universidad de San Jose, San Jose, Costa Rica, 2002. At Cedarville since 2000.

Chimi Woo, Assistant Professor of English. *Education*: B.A., Yonsei University, 1994; M.A., Yonsei University, 1997; Ph.D., The Ohio State University, 2008. At Cedarville since 2008.

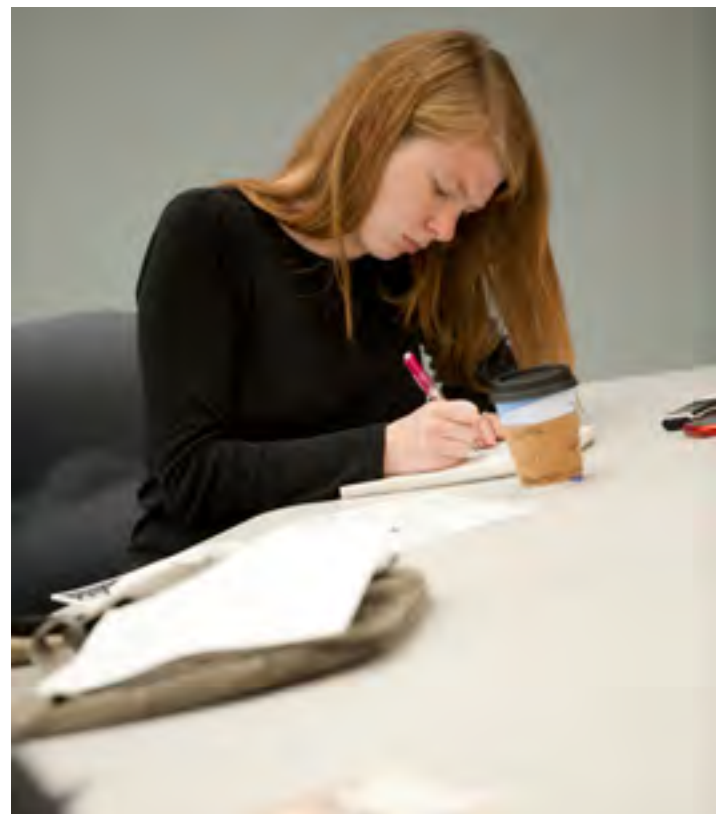
Michelle Wood, Associate Professor of English. *Education*: B.A., Cedarville University, 1992; M.A., Wright State University, 1997. At Cedarville since 1995.

Emeriti

Harmon Bergen, Associate Professor Emeritus of Foreign Languages. *Education*: Graduate, American Seminary of the Bible, 1946; B.A., Wheaton College, 1958; M.A., Indiana University, 1966. At Cedarville from 1958 to 1990.

Pat Landers Dixon, Associate Professor Emerita of English. *Education*: B.A., Tennessee Temple University, 1963; M.Ed., University of Tennessee, 1970; TESL, Wright State University, 1985. At Cedarville since 1971.

Edward Greenwood, Professor Emeritus of English. *Education*: Baptist Bible Institute, 1946–47; B.A., Bryan College, 1951; M.Div., Conservative Baptist Theological Seminary, 1955; graduate study, Marshall University, 1958; M.A., University of Dayton, 1966; D.A., Middle Tennessee State University, 1976. At Cedarville from 1963 to 1989.



A complete description of the general education requirements is found on page 26.

English

Course requirements for the **English major** involve 52 semester hours including:

| | |
|--|-----------|
| English Core | 24 |
| ENG-2230 Advanced Composition | 3 |
| LIT-1990 First-Year Seminar | 3 |
| LIT-2090 Literary Analysis..... | 3 |
| LIT-2390 Survey of American Literature to 1900..... | 3 |
| LIT-2430 Survey of British Literature to 1800..... | 3 |
| LIT-2440 Survey of British Literature from 1800 to Present | 3 |
| LIT-3350 Shakespeare..... | 3 |
| *LIT-4220 English Seminar | 3 |
| Studies in Modern Literature: Two Courses | 6 |
| LIT-3380 Contemporary British Literature | 3 |
| LIT-3400 Contemporary Studies in World Literature | 3 |
| LIT-3510 Modern American Literature | 3 |
| LIT-4510 Recent American Literature | 3 |
| Historical Studies in English: Two Courses | 6 |
| ENG-3060 The English Language | 3 |
| LIT-3170 American Literature: 1820–1865..... | 3 |
| LIT-3180 American Literature: 1865–1914..... | 3 |
| LIT-3320 Renaissance Literature | 3 |
| LIT-3330 18th Century British Literature..... | 3 |
| LIT-3340 British Romantic and Victorian Literature | 3 |
| LIT-4450 Milton: Poetry and Selected Prose | 3 |
| Genre Studies: Two Courses | 6 |
| LIT 2120 History of Literary Criticism..... | 3 |
| LIT-2130 Dramatic Literature..... | 3 |
| LIT-3310 English Novel | 3 |
| LIT-3420 American Novel | 3 |
| LIT-4310 Literary Theory | 3 |
| LIT-4420 European Novel..... | 3 |
| Electives in English/Literature | 10 |

*Capstone Course

English Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 49–57 |
| English Major Requirements..... | 52 |
| Electives | 19–27 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in English

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| LIT-1990 First-Year Seminar | 3 |
| LIT-2090 Literary Analysis..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| History Elective..... | 3 |
| Total | 32.5 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| ENG-2230 Advanced Composition | 3 |
| LIT-2390 Survey of American Literature to 1900..... | 3 |
| LIT-2430 Survey of British Literature to 1800..... | 3 |
| LIT-2440 Survey of British Literature from 1800 to Present | 3 |
| Physical Science Elective..... | 3.5 |
| Quantitative Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Electives | 6 |
| Total | 33.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| LIT-3350 Shakespeare..... | 3 |
| Literature Electives: Historical Studies in English | 6 |
| Literature Electives: Studies in Modern Literature | 6 |
| Electives | 12 |
| Total | 31 |

Fourth year:

| | |
|---|-----------|
| LIT-4220 English Seminar | 3 |
| Literature Electives: Genre Studies | 6 |
| English Electives | 10 |
| Humanities Elective | 3 |
| Electives | 9 |
| Total | 31 |



A complete description of the general education requirements is found on page 26.

Foreign Language

As students become acquainted with the language, lifestyles, and belief systems of another culture, they can develop greater insight into that culture. Knowledge of a second language can become a valuable support skill for careers in business, Christian ministry, education, government, and social services. The department provides a variety of language courses that allow students to develop basic communication skills and cultural awareness.

Guidelines for satisfying the general education requirement for foreign language are found on page 27. Students with previous language study may be eligible for test-out credit for first- and/or second-year language courses and should contact the department or the office of the registrar for details. Language students are also encouraged to consider the study abroad options listed under International Study Opportunities on page 23.

Spanish

The **Spanish major** enables students to develop skills in reading, writing, speaking, and comprehending spoken Spanish to gain cultural understanding that will enable them to interact appropriately in a variety of social contexts. Studying the language, history, and literature of the Hispanic peoples provides students with opportunities to practice their language skills and gain appreciation for the contributions and values of the Hispanic culture. Students are encouraged to enhance their program by participating in an approved cross-cultural experience such as a study abroad program or missions outreach.

Course requirements involve 34 semester hours including:

| | |
|--|---|
| SPAN-2710 Intermediate Spanish I | 4 |
| SPAN-2720 Intermediate Spanish II | 3 |
| SPAN-3610 Spanish Composition | 3 |
| SPAN-3620 Spanish Conversation | 3 |
| SPAN-3640 Introduction to Hispanic Literature..... | 3 |
| SPAN-4610 Advanced Spanish Grammar | 3 |
| *SPAN-4640 Topics in Hispanic Culture | 3 |

| | |
|--|----------|
| Two courses selected from the following..... | 6 |
| SPAN-4650 Civilization and Literature of Latin America I | 3 |
| SPAN-4670 Civilization and Literature of Latin America II | 3 |
| SPAN-4740 Civilization and Literature of Spain I | 3 |
| SPAN-4750 Civilization and Literature of Spain II | 3 |

| | |
|----------------------------------|----------|
| Electives in Spanish..... | 6 |
|----------------------------------|----------|

*Capstone Course

Spanish Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 49 |
| Spanish Major Requirements | 34 |
| Electives | 45 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Spanish

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| SPAN-1710 Elementary Spanish I* | 4 |
| SPAN-1720 Elementary Spanish II* | 4 |
| History Elective..... | 3 |
| Elective | 3 |
| Total | 34.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| SPAN-2710 Intermediate Spanish I | 4 |
| SPAN-2720 Intermediate Spanish II | 3 |
| Literature Elective | 3 |
| Physical Science Elective..... | 3.5 |
| Quantitative Elective..... | 3 |
| Electives | 6 |
| Total | 31.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| SPAN-3610 Spanish Composition | 3 |
| SPAN-3620 Spanish Conversation | 3 |
| SPAN-3640 Introduction to Hispanic Literature | 3 |
| Social Science Elective | 3 |
| Electives | 18 |
| Total | 34 |

Fourth year:

| | |
|---|-----------|
| SPAN-4610 Advanced Spanish Grammar | 3 |
| SPAN-4640 Topics in Hispanic Culture | 3 |
| Spanish Civilization and Literature Electives | 6 |
| Spanish Electives | 6 |
| Electives | 10 |
| Total | 28 |

* Elementary Spanish does not count toward the major.



Teacher Education Licensure Program Language Arts Education — Integrated

The **integrated language arts major** prepares students to teach language arts in public and Christian schools in grades seven–12. Students who complete this curriculum will be licensed by the state of Ohio and the Association of Christian Schools International. The Ohio teaching license, through reciprocal agreements, is automatically recognized in 42 states. For additional information about teaching in other states, see the department of education section of this catalog (page 68).

Course requirements involve 59 hours in integrated language arts and 36-38 hours in professional education requirements.

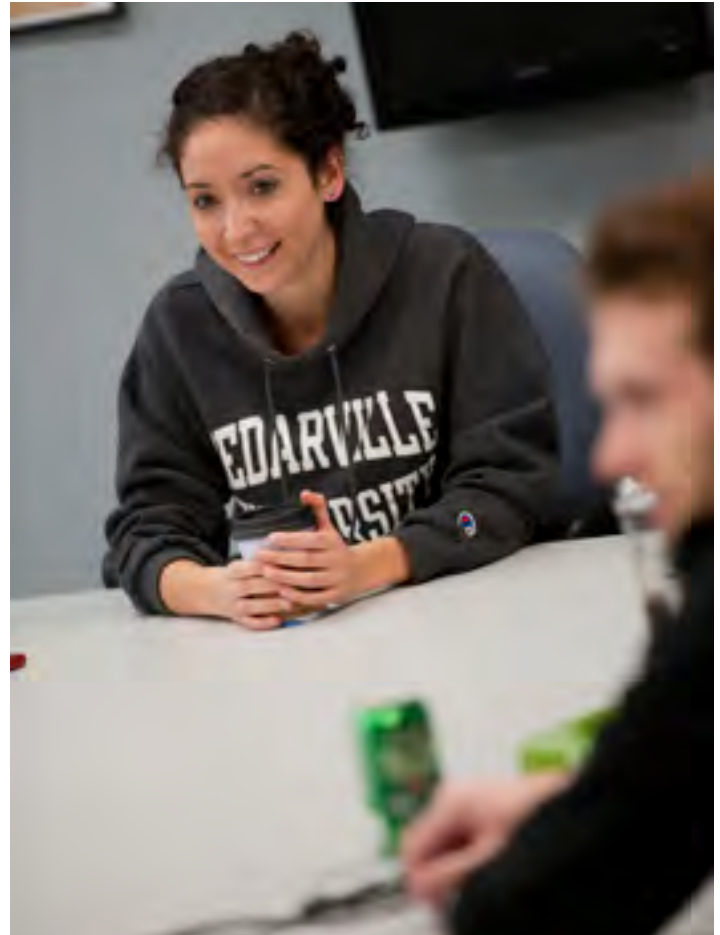
| | |
|--|-----------|
| Language Arts Education Core | 50 |
| EDSE-3100 Contemporary Young Adult Literature | 3 |
| ENG-2070 Fundamentals of English Grammar | 3 |
| ENG-2230 Advanced Composition | 3 |
| ENG-3010 Style and Mechanics for Writers..... | 3 |
| ENG-3060 The English Language..... | 3 |
| ENG-3070 Advanced Grammar for Adolescent Teachers..... | 3 |
| ENG-3300 Developmental Reading | 3 |
| ENG-4200 Methods of Teaching Writing..... | 2 |
| LIT-1990 First-Year Seminar | 3 |
| LIT-2090 Literary Analysis..... | 3 |
| LIT-2340 Western Literature..... | 3 |
| LIT-2390 Survey of American Literature to 1900..... | 3 |
| LIT-2430 Survey of British Literature to 1800..... | 3 |
| LIT-2440 Survey of British Literature from 1800 to Present | 3 |
| LIT-3200 Methods of Teaching Integrated Language Arts | 3 |
| LIT-3350 Shakespeare..... | 3 |
| LIT-3440 Multiethnic American Literature | 3 |
| One course from each of the following selections | 9 |
| Studies in Modern Literature | 3 |
| LIT-3380 Contemporary British Literature | 3 |
| LIT-3400 Contemporary Studies in World Literature | 3 |
| LIT-3510 Modern American Literature | 3 |
| LIT-4510 Recent American Literature | 3 |
| Genre Studies | 3 |
| FILM-2350 Christian Motifs in Film | 3 |
| LIT-2120 History of Literary Criticism | 3 |
| LIT-2330 World Mythology..... | 3 |
| LIT-3310 English Novel | 3 |
| LIT-3420 American Novel | 3 |
| LIT-4310 Literary Theory | 3 |
| LIT-4420 European Novel..... | 3 |
| Writing Studies | 3 |
| ENG-2220 Introduction to Creative Writing | 3 |
| ENG-3020 Creative Writing: Short Forms | 3 |

| | |
|---|--------------|
| Professional Education Requirements | 36–38 |
| EDSE-4100 Principles of Teaching: AYA | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| *EDSE-4900 Student Teaching and Seminar: AYA | 10–12 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC 3200 Faith and Learning Alignment..... | 1 |

*Capstone Course

Integrated Language Arts Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 46–54 |
| Language Arts Integrated Major Requirements | 59 |
| Education Requirements | 36–38 |
| Total (minimum, not including proficiency) | 141 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Language Arts Education — Integrated

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| ENG-1400 Composition..... | 3 |
| ENG-2070 Fundamentals of English Grammar | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| LIT-1990 First-Year Seminar | 3 |
| LIT-2340 Western Literature..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Social Science Elective/Global Awareness..... | 3 |
| Total | 37.5 |

Second year:

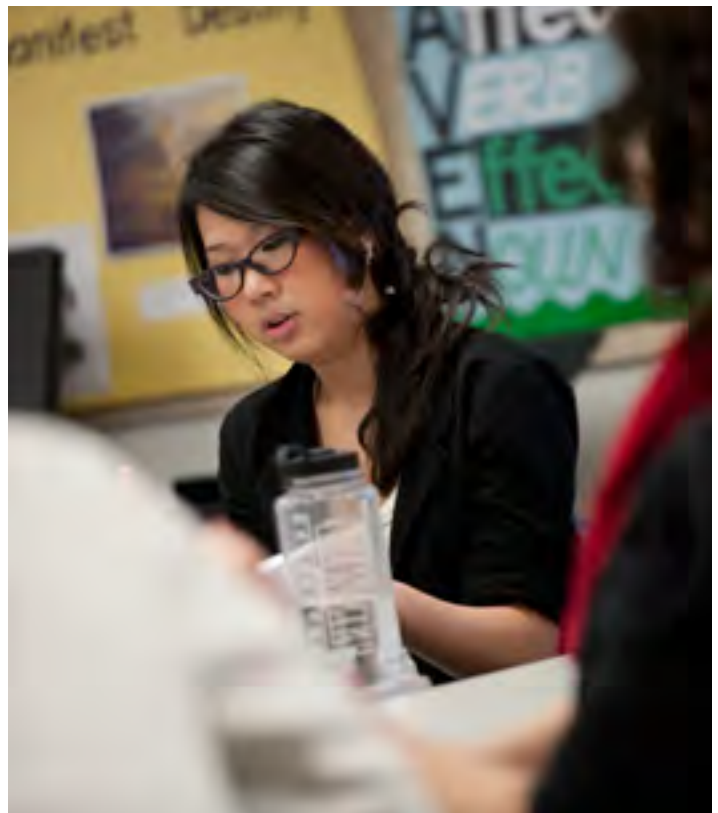
| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multi-Cultural Field Experience | 1 |
| EDUC-2500 Education Psychology..... | 3 |
| ENG-3010 Style and Mechanics for Writers..... | 3 |
| ENG-3070 Advanced Grammar for Adolescent Teachers..... | 3 |
| GMTH-1010 Introduction to Mathematics | 3 |
| LIT-2090 Literary Analysis..... | 3 |
| LIT-2390 Survey of American Literature to 1900..... | 3 |
| LIT-2430 Survey of British Literature to 1800..... | 3 |
| Total | 34 |

Third year:

| | |
|--|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| EDSE-3100 Contemporary Young Adult Literature | 3 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| ENG-2230 Advanced Composition..... | 3 |
| ENG-3060 The English Language..... | 3 |
| ENG-3300 Developmental Reading | 3 |
| LIT-2440 Survey of British Literature from 1800 to Present | 3 |
| LIT-3200 Methods of Teaching Integrated Language Arts | 3 |
| LIT-3350 Shakespeare..... | 3 |
| LIT-3440 Multiethnic American Literature | 3 |
| Physical Science Elective..... | 3.5 |
| Writing Studies Elective..... | 3 |
| History Elective..... | 3 |
| Total | 36.5 |

Fourth year:

| | |
|--|--------------|
| BEGE-3760 Christian Worldview Integration | 2 |
| EDSE-4100 Principles of Teaching: AYA | 5 |
| EDSE-4450 Clinical Experience: AYA..... | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10-12 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| ENG-4200 Methods of Teaching Writing..... | 2 |
| Genre Studies Elective | 3 |
| Modern Literature Elective..... | 3 |
| Total | 33-35 |



A complete description of the general education requirements is found on page 26.

Spanish Education — Multi-Age

The **Spanish education major** provides students with the cultural background and language skills necessary to function in the Spanish classroom and in the Spanish-speaking world. This major prepares students to teach in grades K–12 in public and Christian schools. For information about teaching in other states, see the department of education section in this catalog.

Course requirements involve 53 credit hours in Spanish and 45–47 credit hours in professional education requirements including:

Spanish Education major core courses: 41

| | |
|--|---|
| LING-3080 Linguistics for Language Learning..... | 3 |
| SPAN-1720 Elementary Spanish II..... | 4 |
| SPAN-2710 Intermediate Spanish I..... | 4 |
| SPAN-2720 Intermediate Spanish II..... | 3 |
| SPAN-3610 Spanish Composition..... | 3 |
| SPAN-3620 Spanish Conversation..... | 3 |
| SPAN-3640 Introduction to Hispanic Literature..... | 3 |
| SPAN-3660 Spanish for Professionals..... | 3 |
| SPAN-3680 Understanding Hispanic Cultures..... | 3 |
| SPAN-4610 Advanced Spanish Grammar..... | 3 |
| SPAN-4640 Topics in Hispanic Culture..... | 3 |
| SPAN-4670 Civilization and Literature of Latin America II..... | 3 |
| SPAN-4750 Civilization and Literature of Spain II..... | 3 |

Spanish Electives selected from the following..... 12

| | |
|---|-----|
| SPAN-3670 Introduction to Translation..... | 2 |
| SPAN-3690 Hispanic Film..... | 3 |
| SPAN-4650 Civilization and Literature of Latin America I..... | 3 |
| SPAN-4680 Advanced Conversation and Composition..... | 2 |
| SPAN-4700 Independent Study in Spanish..... | 1–3 |
| SPAN-4740 Civilization and Literature of Spain I..... | 3 |
| SPAN-4790 Twentieth Century Spanish Theatre..... | 3 |

Professional Education Requirements..... 45–47

| | |
|---|-------|
| EDSE-4000 Reading in the Content Area: AYA..... | 3 |
| EDSE-4100 Principles of Teaching: AYA..... | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| EDSP-2000 Teaching Children with Exceptionalities..... | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs..... | 1 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-2000 Introduction to Diverse Learners..... | 2 |
| EDUC-2100 Technology in the Classroom..... | 2 |
| EDUC-2200 Multicultural Field Experience..... | 1 |
| EDUC-2500 Educational Psychology..... | 3 |
| EDUC-3100 Philosophical Foundations of Education..... | 3 |
| EDUC-3200 Faith and Learning Alignment..... | 1 |
| *EDUC-4900 Student Teaching and Seminar—Multi-Age..... | 10–12 |
| SPAN-3350 Elementary Education for Foreign Language Teachers..... | 2 |
| SPAN-3500 Methods of Teaching Foreign Language..... | 2 |
| SPAN-3600 Clinical Teaching in Spanish..... | 2 |

*Capstone Course

Spanish Education Multi-Age Major Curriculum Summary

| | |
|--|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 46 |
| Spanish Education Multi-Age Major Requirements..... | 53 |
| Education Requirements..... | 45–47 |
| Total (minimum, not including proficiency)..... | 147 |

Suggested Four-Year Curriculum for a Major in Spanish Education — Multi-Age

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology..... | 3.5 |
| GMTH-1010 Introduction to Mathematics..... | 3 |
| GSCI-1020 Principles of Physical Science..... | 3.5 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| SPAN-1720 Elementary Spanish II..... | 4 |
| History Elective..... | 3 |
| Literature Elective..... | 3 |
| Total..... | 39 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature..... | 3 |
| EDSP-2000 Teaching Children with Exceptionalities..... | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs..... | 1 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-2000 Introduction to Diverse Learners..... | 2 |
| EDUC-2100 Technology in the Classroom..... | 2 |
| EDUC-2200 Multi-Cultural Field Experience..... | 1 |
| LING-3080 Linguistics for Language Learning..... | 3 |
| SPAN-2710 Intermediate Spanish I..... | 4 |
| SPAN-2720 Intermediate Spanish II..... | 3 |
| SPAN-3610 Spanish Composition..... | 3 |
| SPAN-3620 Spanish Conversation..... | 3 |
| SPAN-3640 Introduction to Hispanic Literature..... | 3 |
| SPAN-3660 Spanish for Professionals..... | 3 |
| SPAN-3680 Understanding Hispanic Cultures..... | 3 |
| Total..... | 35 |

Third year:

| | |
|---|-----------|
| BEGE-2740 New Testament Literature..... | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| EDUC-2500 Educational Psychology..... | 3 |
| EDUC-3200 Faith and Learning Alignment..... | 1 |
| EDSE-4000 Reading in the Content Area—Multi-Age..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| SPAN-4670 Civilization and Literature of Latin America II..... | 3 |
| SPAN-3350 Elementary Education for Foreign Language Teachers..... | 2 |
| SPAN-3600 Clinical Teaching in Spanish..... | 2 |
| Social Science Elective..... | 3 |
| Spanish Elective..... | 12 |
| Total..... | 37 |

Fourth year:

| | |
|--|--------------|
| BEGE-3760 Christian Worldview Integration..... | 2 |
| EDSE-4100 Principles of Teaching: AYA..... | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education..... | 3 |
| EDUC-4900 Student Teaching and Seminar — Multi-Age..... | 10–12 |
| SPAN-3500 Methods of Teaching Foreign Language..... | 2 |
| SPAN-4610 Advanced Spanish Grammar..... | 3 |
| SPAN-4640 Topics in Hispanic Culture..... | 3 |
| SPAN-4750 Civilization and Literature of Spain II..... | 3 |
| Total..... | 36–38 |

Minors

Asian Studies Minor

The **Asian studies minor** provides students with language skills and cultural background knowledge focused on developing a greater understanding of events, ideas, and beliefs from that region of the world. Course requirements for the Asian studies minor involve 20 credit hours including:

CHN-1100, 1200 Elementary Chinese I and II8
 HIST-3210 History and Politics of Asia.....3
 LIT-3460 Contemporary East Asian Literature3
Electives selected from the following.....6
 ANTH-1800 Cultural Anthropology 3
 BEPH-2260 Religion and Culture..... 3
 BEPT-3470 Cross-Cultural Ministry 3
 BUS-3910 International Business 3
 COM-2140 Intercultural Communication 3
 GEO-3520 World Regional Geography — Eastern..... 3
 LIT-2330 World Mythology..... 3
 PSYCH-1800 Cross-Cultural Psychology 3

Creative Writing Minor

The **creative writing minor** is designed to enhance the student's abilities in various modes of writing. Course requirements involve 17 credit hours including:

ENG-2220 Introduction to Creative Writing3
 ENG-3030 Creative Writing: Fiction3
 ENG-3040 Creative Writing: Poetry3
 ENG-3050 Creative Writing: Nonfiction.....3
Advanced Workshops (choose two from the following)4
 ENG-4030 Advanced Workshop: Fiction 2
 ENG-4040 Advanced Workshop: Poetry 2
 ENG-4050 Advanced Workshop: Nonfiction 2
 ENG-4345 Portfolio and Performance 1

Editing and Publishing Minor

The **editing and publishing minor** is designed to prepare students for careers in the publishing field. Course requirements involve 19 credit hours including:

ENG-2230 Advanced Composition3
 ENG-3070 Advanced Grammar for Adolescent Teachers.....3
 ENG-3010 Style and Mechanics for Writers.....3
 (or TPC-3010 Style and Mechanics for Writers 3)
 GDES-1300 Graphic Design for Non-Majors3
 TPC-2000 Production Tools for Technical Communication3
 TPC-3210 Technical Editing.....2
 TPC-3290 Proofreading.....2

French Minor

The **French minor** is designed to enhance the student's understanding and skill in foreign language. Course requirements involve 17 credit hours including:

FREN-1920 Elementary French II4
 FREN-2910 Intermediate French I.....4
 FREN-2920 Intermediate French II.....3
 Two courses selected from the following:.....6
 FREN-3910 French Conversation 3
 FREN-3920 Contemporary French Culture 3
 FREN-3930 Survey of French Literature..... 3

German Minor

The **German minor** is designed to enhance the student's understanding and skill in foreign language. Course requirements involve 17 credit hours including:

GER-1820 Elementary German II4
 GER-2810 Intermediate German I.....4
 GER-2820 Intermediate German II.....3
 GER-3830 Survey of German Literature3
 3000-level German Electives3

Latin American Studies Minor

The **Latin American studies minor** provides students with language skills and cultural background knowledge focused on developing a greater understanding of events, ideas, and beliefs from that region of the world. Course requirements for the Latin American studies minor involve 22 credit hours including:

ANTH-1800 Cultural Anthropology3
 INTL-3200 History and Politics of Latin America3
 SPAN-2710 Intermediate Spanish I4
 SPAN-2720 Intermediate Spanish II3
 SPAN-3XXX or 4XXX Electives3
Electives selected from the following.....6

BEPH-2260 Religion and Culture..... 3
 BEPT-3450 Contemporary World Mission..... 3
 BEPT-3470 Cross-Cultural Ministry 3
 BUS-3910 International Business 3
 COM-2140 Intercultural Communication 3
 GEO-3510 World Geography — West..... 3
 SPAN-3620 Conversation Spanish 3
 SPAN-3640 Introduction to Hispanic Literature..... 3
 SPAN-4670 Civilization and Literature of Latin America II 3
 SPAN-3XXX or 4XXX electives not taken in core 3



Literature Minor

The **literature minor** is designed to enhance the student's knowledge and appreciation of literature and the English language. Course requirements involve 15 credit hours including:

- LIT-2340 Western Literature.....3
- American Literature: One course.....3
- British Literature: One course.....3
- Literature Electives: 3000- 4000-level.....6

Middle Eastern Studies Minor

The **Middle Eastern studies minor** provides students with language skills and cultural background knowledge focused on developing a greater understanding of events, ideas, and beliefs from that region of the world. Course requirements involve 22 credit hours including:

- One year of Elementary Middle Eastern language.....6–8
(or ARBC-1400 Introduction to Arabic Language and Culture..... 3
*and one semester of HEB-1XXX Hebrew 3–4)
(or ARBC-1410, 1420 Elementary Arabic I and II 8)
- ANTH-1800 Cultural Anthropology3
- INTL-3220 History and Politics of Middle East.....3

Electives selected from the following.....8–10

- ARBC-2410, 2420 Intermediate Arabic I and II 7
- ARBC-3500 Independent Study in Arabic Language and Culture..... 1–3
- BEPH-2260 Religion and Culture..... 3
- BEPT-2000 Introduction to Mission..... 3
- BEPT-3450 Contemporary World Mission..... 3
- BEPT-3470 Cross-Cultural Ministry 3
- COM-2140 Intercultural Communication 3
- GEO-3520 World Regional Geography — Eastern..... 3
- LIT-2330 World Mythology..... 3
- PYCH-1800 Cross-Cultural Psychology 3

*Hebrew is through online or study abroad programs.

Spanish Minor

The **Spanish minor** is designed to enhance the student's understanding and skill in foreign language. Course requirements for the Spanish minor involve 17 hours including:

- SPAN-1720 Elementary Spanish II4
- SPAN-2710 Intermediate Spanish I4
- SPAN-2720 Intermediate Spanish II3
- SPAN-3640 Introduction to Hispanic Literature3
- Spanish Elective: 3000- or 4000-level3

Spanish for Professionals Minor

The **Spanish for professionals minor** is designed for careers linked to public service (social work, criminal justice, health care, and other related fields). Course requirements for the Spanish for professionals minor involve 16 credit hours including:

- SPAN-2710 Intermediate Spanish I4
- SPAN-2720 Intermediate Spanish II3
- SPAN-3620 Spanish Conversation.....3
- SPAN-3660 Spanish for Professionals.....3
- SPAN-3680 Understanding Hispanic Cultures.....3

Western European Studies Minor

The **Western European studies minor** provides students with language skills and cultural background knowledge focused on developing a greater understanding of events, ideas, and beliefs from that region of the world. Course requirements for the Western European studies minor involve 22 credit hours including:

- ANTH-1800 Cultural Anthropology3
- FREN-2910, 2920 Intermediate French I and II7
(or GER-2810, 2820 Intermediate German I and II..... 7)
(or SPAN-2710, 2720 Intermediate Spanish I and II 7)

- FREN/GER/SPAN-3XXX or 4XXX Electives3
- INTL-3230 History and Politics of Western Europe.....3
- Electives selected from the following.....6**
- ART-4400 20th Century Art..... 3
- BEPT-3450 Contemporary World Mission..... 3
- BEPT-3470 Cross-Cultural Ministry 3
- BUS-3910 International Business 3
- COM-2140 Intercultural Communication 3
- GEO-3510 World Geography — West..... 3
- HIST-2020 History of Civilization II..... 3
- HIST-3070 Europe in the 18th and 19th Century 3
- LIT-2330 World Mythology..... 3
- LIT-4420 The European Novel..... 3
- FREN/GER/SPAN 3XXX or 4XXX elect. not used in core 3–6

TESOL Endorsement and Minor (Teaching English to Speakers of Other Languages)

The **TESOL endorsement** prepares teachers to teach English to speakers of other languages in multi-age classrooms in the United States and overseas. Students interested in the TESOL endorsement must possess or be working toward the completion of degree and licensure requirements. Students who complete the TESOL endorsement program will automatically receive the minor and are eligible to receive an institution-endorsed certificate. To receive the certificate, a student must earn a 3.0 or higher for the courses of the minor. Non-native speakers of English must achieve a TOEFL score of 600 or higher on the paper exam or 250 on the computer exam and a score of 55 or higher on the Test of Spoken English or have department approval to qualify for admission. Course requirements for the TESOL endorsement involve 20 hours including:

- COM-2140 Intercultural Communication.....3
- ENG-3060 History of the English Language.....3
- ENG-3070 Advanced Grammar for Adolescent Teachers.....3
- LING-3080 Linguistics for Language Learning3
- LING-3090 Sociolinguistics3
- LING-3600 Clinical Teaching English as a Second Language1
- LING-3610 Practicum2
- LING-3500 Methods of Teaching Foreign Language2
- Passing score on Praxis II TESOL exam

The **TESOL minor** prepares students to teach English to speakers of other languages in multi-age classrooms without obtaining state teacher licensure. Students who complete the TESOL minor are eligible to receive an institution-endorsed certificate. To receive the certificate, a student must earn a 3.0 or higher for the courses of the minor. Non-native speakers of English must achieve a TOEFL score of 600 or higher on the paper exam or 250 on the computer exam and a score of 55 or higher on the Test of Spoken English or have department approval to be admitted to the minor. Course requirements for the TESOL minor involve 16 hours including:

- COM-2140 Intercultural Communication.....3
- ENG-3070 Advanced Grammar for Adolescent Teachers.....3
- LING-3080 Linguistics for Language Learning3
- LING-3090 Sociolinguistics3
- LING-3500 Methods of Teaching Foreign Language2
- *LING-3710 TESOL Practicum for Non-Education Majors.....2

*May be satisfied by satisfactory completion of LING-3600 and LING-3610.

Department of

HISTORY AND GOVERNMENT

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Mission Statement

The goal of the Cedarville University Department of History and Government is to develop ethical, intellectually prepared, and articulate graduates who can refine and integrate an evangelical Christian worldview in their specific disciplines from a reasoned political, economic, and historical perspective, and who can then serve effectively in a diverse global community.

Department Objectives

Upon completion of courses in the history and government department, students will:

- Evidence knowledge of the basic components of their respective academic disciplines.
- Participate in graduate study and/or practice as professionals in public and private professions.
- Demonstrate competence in the methods and tools of original quantitative and qualitative research and the ability to formulate and express the results.
- Exhibit critical analysis in evaluating historical and/or contemporary issues.
- Display the ability to integrate biblical truth with their academic disciplines through the investigation and study of society.

Personal Requirements

A solid high school college-preparatory program provides an excellent background for students entering the various majors in the department.

Department Requirements

To graduate with a degree from the department of history and government, students must earn a cumulative average of 2.0 or higher and a “C-” or higher in all courses required by their selected major. In addition, **all** majors must complete the following:

1. A senior research project under the direction of a faculty advisor. This research project will also be directed by a three-member committee that shall be selected with the advice of their research director and will include at least one professional member outside the department of history and government.
2. A presentation of selective senior research projects presented to invited faculty, students, and guests.
3. A major field content assessment exam in their area at the scheduled time during the spring semester of their senior year (as required).

Technical Resources

A large number of computer software programs are available to students, including:

- A variety of presentation programs
- Database programs
- JStor Research Database
- Spreadsheet programs
- Statistical analysis programs
- Various search engines
- Word processing programs
- Web and HTML programs

Several of the department programs prepare students for careers directly following graduation. Through a variety of modalities (including field work and class presentation by practitioners), students are able to network with actual career representatives and on occasion be exposed to the technologies being utilized by a career area.

Programs of Study

The department of history and government offers the following programs of study:

Bachelor of Arts (B.A.) in:

- Criminal Justice
- History
- History and Political Science
- International Studies — Social Science
- Political Science
- Prelaw
- Public Administration
- Social Studies Education — Integrated
- Sociology

Bachelor of Science (B.S.) in:

- Forensic Science*

*In cooperation with the department of science and mathematics; see page 174.

Minors

- Church History
- Criminal Justice
- History
- International Studies — Social Science
- Political Science
- Public Administration
- Public Policy
- Sociology

Cocurricular Opportunities

Each major has several professional organizations in which students may participate. Students can also broaden their understanding and knowledge through a variety of travel opportunities, internships, and student organizations.

Alpha Delta Nu

Alpha Delta Nu provides criminal justice students with the opportunity to enhance their professional development. Members are students who believe that a career in criminal justice is a ministry in a God-ordained institution, which is government. This organization promotes Christian character, leadership, and service through training, information, and networking to supplement academic studies. The society assists students to prepare for a transition to their professional field as practitioners.

College Democrats

College Democrats is an organization dedicated to the development of Christian leaders in the political arena.

College Republicans

College Republicans is an organization dedicated to the development of Christian leaders in the political arena.

History and Government Association

History and Government Association is a student organization that provides opportunities for students to grow in their appreciation of the fields of history and government and provide an outlet for pursuing knowledge, obtaining academic support, gaining fellowship, and providing service.

Model United Nations Team

Model United Nations Team is a simulation of the United Nations system. Students assume the roles of ambassadors to the United Nations and negotiate current global issues. The Cedarville University Model UN Team participates in an intercollegiate competition in which participants seek to deal with complex global concerns such as the environment, economic development, refugees, AIDS, disarmament, and human rights. As representatives of UN member nations, team members must master a great deal of detailed information about national policies while remaining in character—responding to debates and negotiations in the same manner as a UN delegate from that nation.

Omega Mu

Omega Mu is the Cedarville University chapter of Pi Sigma Alpha – the National Political Science Honor Society. The goal of this honor society is to promote the scholarly investigation of politics and to assist its members in developing their leadership potential in their sphere of influence.

Renaissance Guild

Renaissance Guild increases learning and awareness of the medieval and Renaissance eras and provides fellowship with like-minded individuals.

Center for Political Studies

The Center for Political Studies at Cedarville University was founded to articulate a biblical view of government through the study of politics, law, history, and public policy; to educate Cedarville University faculty, staff, students, and constituents; and to engage and influence American political culture. The Center sponsors, among other programs, regular lecture series and an annual roundtable discussion of contemporary political issues.

Career Opportunities

Graduates of the department have attended some of the nation's outstanding graduate and professional schools. Careers pursued by graduates include:

- Administrator
- Archaeologist
- Archivist
- Attorney
- Campaign Manager
- City Manager
- College Professor
- Community developer
- Diplomat
- Federal law enforcer
- Forensic scientist
- Government worker
- High school teacher
- Historical researcher
- Librarian
- Parole agent
- Politician
- Police officer
- Prison caseworker
- Prison manager (warden)
- Probation officer
- Public administrator

Faculty

Thomas Mach, *Chair*, Professor of History. *Education*: B.A., Cedarville University, 1988; M.A., Cleveland State University, 1989; Ph.D., University of Akron, 1996. At Cedarville since 2000.

Marc Clauson, Professor of History. *Education*: B.S., Marshall University, 1978; M.A., Marshall University, 1979; J.D., West Virginia University, 1982; M.Th., Liberty University, 1993; M.A., Liberty University, 1993; Ph.D., University of the Orange Free State, South Africa, 2001. At Cedarville since 2002.

Glen Duerr, Assistant Professor of International Studies. *Education*: B.A., University of Western Ontario, 2003; M.A., University of Windsor, 2005; Ph.D., Kent State, 2012. At Cedarville since 2012.

Frank Jenista, Professor of International Studies. *Education*: B.A., Cedarville University, 1968; M.A., University of Dayton, 1970; Ph.D., University of Michigan, 1978. At Cedarville since 2000.

Jewel Maxwell, Assistant Professor of Political Science. *Education*: B.A., Muskingum College, 2003; M.S., Miami University, 2004; Ph.D., Miami University, 2008. At Cedarville since 2009.

Murray Murdoch, Senior Professor of History. *Education*: B.Th., Baptist Bible Seminary, 1960; M.A., Northwestern University, 1962; History Faculty Fellow, Northwestern University, 1963; Ph.D., Northwestern University, 1971. At Cedarville since 1965.

Patrick Oliver, Assistant Professor of Criminal Justice. *Education*: A.A., University of Cincinnati, 1977; B.A., Baldwin Wallace College, 1981; M.B.A., Baldwin Wallace College, 1991; Penn State University Police Executive School, 1989; FBI Law Enforcement Executive Development School, 1993; Ohio Association Chiefs of Police Executive Leadership College, 1994; Executive Management Institute, 1997. At Cedarville since 2005.

Robert Parr, Professor of Sociology. *Education*: B.R.E., Grand Rapids Baptist College, 1967; M.R.E., Grand Rapids Baptist Seminary, 1970; M.A., Michigan State University, 1982; M.S.W., The Ohio State University, 1990; Ph.D., The Ohio State University, 1987. At Cedarville since 1980.

David Rich, Professor of Public Administration and Political Science. *Education*: B.A., Cedarville University, 1983; M.P.A., University of Dayton, 1988; D.P.A., Western Michigan University, 2006. At Cedarville since 2000.

Kevin Sims, Professor of Political Science. *Education*: B.A., Cedarville University, 1974; M.A., University of Northern Iowa, 1978; Ph.D., The Claremont Graduate School, 1991. At Cedarville since 1990.

Mark Smith, Associate Professor of Political Science; Director, Center for Political Studies. *Education*: B.A., Bryan College, 1992; M.A., Trinity International University, 1995; M.A., University of Georgia, 1997; Ph.D., University of Georgia, 2001. At Cedarville since 2004.

Richard Tison, Assistant Professor of History and AYASS Coordinator. *Education*: B.A., Oakland University, 1994; M.A., Baylor University, 1999; Ph.D., University of Oklahoma, 2008. At Cedarville since 2011.

Robert Vaughn, Assistant Professor of Criminal Justice. *Education*: B.A., The Ohio State University, 1993; J.D., Capital University Law School, 1998. At Cedarville since 2009.

Emeriti

Joseph Halsey, Professor Emeritus of Political Science. *Education*: B.A., Morehead State University, 1965; M.Ed., Xavier University, 1969; Ph.D., University of Cincinnati, 1990. At Cedarville from 1970 to 2000.

James McGoldrick, Professor Emeritus of History. *Education*: B.S., Temple University, 1961; M.A., Temple University, 1964; graduate study, Dropsie University, 1962; St. Joseph's College, 1968; University of Arkansas, 1969; Ph.D., West Virginia University, 1974; postdoctoral study, University of Scranton, 1977; Pennsylvania State University, summer, 1981; St. Joseph's University, summer 1982; University of Houston, summer 1984. At Cedarville from 1973 to 2001.

Allen Monroe, Professor Emeritus of Social Science. *Education*: B.A., Shelton College, 1957; graduate study, University of Florida, 1958; M.A., Montclair State College, 1965; Ph.D., The Ohio State University, 1970; postdoctoral study, Westminster Theological Seminary, 1978. At Cedarville from 1965 to 2002.



Criminal Justice

The **criminal justice major** prepares students for careers in the criminal justice system. Such careers include law enforcement and correctional activities at all levels of government that have the potential to progress to positions of leadership. The curriculum for the criminal justice major follows criteria proposed by the Academy of Criminal Justice Sciences.

Mission Statement

The mission of Cedarville University's Criminal Justice Program is to prepare students for graduate studies or entry-level positions in a variety of criminal justice fields and to prepare leaders who serve with integrity from a biblical worldview.

Program Objectives

Students will:

- Practice a biblical worldview for lifelong leadership and service in the criminal justice profession.
- Apply critical thinking skills within the context of the criminal justice profession.
- Demonstrate effective oral and written communication skills for use in the criminal justice profession.
- Conduct research effectively within the criminal justice profession.
- Be prepared to become entry-level practitioners in criminal justice or pursue graduate studies.
- Practice interacting effectively with persons of diverse populations.

Core Values

Students must be able to practice the following core values that are key to the criminal justice profession:

- Integrity — Demonstrates high moral character and ethical standards in all matters public and private.
- Service Orientation — Demonstrates lifelong leadership and service to all mankind.
- Human Relations Skills — Demonstrates the ability to effectively interact with other people.
- Team Compatibility — Demonstrates the ability to work with others in a cooperative, caring, and supportive manner to achieve goals of the group.
- Performance Driven — Demonstrates the ability to set and achieve performance goals and standards.

Course requirements involve 65 semester hours including:

| | |
|--|-----------|
| Criminal Justice Core | 65 |
| BEPT-3510 Introduction to Urban Ministries | 3 |
| CRJU-1310 Introduction to Criminal Justice | 3 |
| CRJU-1350 Career Planning for Criminal Justice Personnel.... | 1 |
| CRJU-2200 Criminology..... | 3 |
| CRJU-2310 Juvenile Delinquency | 3 |
| CRJU-2840 Concepts of Chemical Dependency | 3 |
| CRJU-3300 Corrections | 3 |
| CRJU-3350 Criminal Law | 3 |
| CRJU-3360 American Judicial System | 3 |
| CRJU-3400 Criminal Procedure | 3 |
| CRJU-3410 Ethics and Civil Liability/Criminal Justice Personnel | 3 |
| CRJU-3700 Financial Management | 3 |
| CRJU-3990 Criminal Justice Internship..... | 3 |
| CRJU-4150 Homeland Security | 3 |
| CRJU-4200 Police Administration..... | 3 |
| CRJU-4320 Criminal Investigation..... | 3 |
| CRJU-4330 Contemporary Issues in Criminal Justice | 3 |
| CRJU-4630 American Constitutional Law | 3 |
| *CRJU-4900 Research Issues in Criminal Justice..... | 3 |
| ECON-2110 Essentials of Economics..... | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| POLS-2620 American State and Local Government | 3 |

Recommended Electives

| | |
|---|-----|
| CRJU-3310 Corrections Administration | 3 |
| CRJU-3390 Criminal Evidence..... | 3 |
| CRJU-4440 Criminal Justice Special Topics..... | 1–3 |
| CRJU-4960 Independent Study in Criminal Justice | 1–3 |
| PYCH-2640 Abnormal Psychology | 3 |
| PYCH-3000 Addictions | 3 |

*Capstone Course

Criminal Justice Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 46–54 |
| Criminal Justice Major Requirements..... | 65 |
| General Electives | 9–17 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Criminal Justice

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| CRJU-1310 Introduction to Criminal Justice | 3 |
| CRJU-1350 Career Planning for Criminal Justice Personnel..... | 1 |
| ENG-1400 Composition | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Science Elective | 3.5 |
| History Elective | 3 |
| Literature Elective | 3 |
| Total | 33.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CRJU-2200 Criminology..... | 3 |
| CRJU-2310 Juvenile Delinquency | 3 |
| ECON-2110 Essentials of Economics..... | 3 |
| POLS-2620 American State and Local Government | 3 |
| Humanities Elective | 3 |
| Physical Science Elective..... | 3.5 |
| Electives | 6 |
| Total | 30.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| CRJU-2840 Concepts of Chemical Dependency | 3 |
| CRJU-3300 Corrections | 3 |
| CRJU-3350 Criminal Law | 3 |
| CRJU-3360 American Judicial System..... | 3 |
| CRJU-3400 Criminal Procedure | 3 |
| CRJU-3410 Ethics and Civil Liability/Criminal Justice Personnel | 3 |
| CRJU-3700 Financial Management | 3 |
| CRJU-3990 Criminal Justice Internship..... | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| Electives | 3 |
| Total | 33 |

Fourth year:

| | |
|---|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| BEPT-3510 Introduction to Urban Ministries | 3 |
| CRJU-4150 Homeland Security | 3 |
| CRJU-4200 Police Administration..... | 3 |
| CRJU-4320 Criminal Investigation..... | 3 |
| CRJU-4330 Contemporary Issues in Criminal Justice | 3 |
| CRJU-4630 American Constitutional Law | 3 |
| CRJU-4900 Research Issues in Criminal Justice | 3 |
| Electives | 8 |
| Total | 31 |

A complete description of the general education requirements is found on page 26.

History

The **history major** prepares students for graduate work or for careers in a variety of fields including government, law, business, education, public history, and the Gospel ministry. Traditionally a key component of the classical liberal arts education, history and the skills demanded by the historical process provide a necessary foundation for learning. Coursework encourages students to evaluate the historical narrative based on biblical principles, resulting in an integrative understanding.

Course requirements involve 36 hours including:

| | |
|---|----------|
| HIST-1110 United States History I | 3 |
| HIST-1120 United States History II | 3 |
| HIST-2000 Introduction to History | 3 |
| HIST-2010 History of Civilization I | 3 |
| HIST-2020 History of Civilization II | 3 |
| HIST-3000 Introduction to Historiography | 3 |
| *HIST-4700 Research in American History | 3 |
| (or HIST-4710 Research in European History | 3) |
| (or HIST-4720 Research in Asian History | 3) |
| Elective hours in history (3000- or 4000-level) | 12 |
| Non-Western History elective selected from..... | 3 |
| HIST-3080 Russia and the Soviet Union | 3 |
| HIST-3200 History and Politics of Latin America | 3 |
| HIST-3210 History and Politics of Asia | 3 |
| HIST-3220 History and Politics of the Middle East | 3 |

*Capstone Course

History Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 46–54 |
| History Major Requirements | 36 |
| Electives | 38–46 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in History

| | |
|--|-----------|
| <i>First year:</i> | |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HIST-1110 United States History I | 3 |
| HIST-1120 United States History II | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Electives | 6 |
| Total | 32 |
| <i>Second year:</i> | |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| HIST-2000 Introduction to History | 3 |
| HIST-2010 History of Civilization I | 3 |
| HIST-2020 History of Civilization II | 3 |
| Biology Elective | 3.5 |
| Literature Elective | 3 |
| Physical Science Elective | 3.5 |
| Quantitative Elective | 3 |
| Electives | 4 |
| Total | 32 |
| <i>Third year:</i> | |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| HIST-3000 Introduction to Historiography | 3 |
| History Elective (major requirement) | 3 |
| Humanities Elective | 3 |
| Non-Western History Elective (major requirement) | 3 |
| Electives | 16 |
| Total | 32 |
| <i>Fourth year:</i> | |
| HIST-4700, 4710, or 4720 Research in American, European, or Asian History | 3 |
| History Electives (major requirement) | 9 |
| Electives | 20 |
| Total | 32 |

Forensic Science

Interested students may consider a Bachelor of Science degree with a major in **forensic science**. This is an undergraduate interdisciplinary degree program with an emphasis on advanced (upper-level) coursework and substantial laboratory work in the sciences. Students completing this program will also earn a minor in criminal justice and participate in an internship in a state crime laboratory their junior and senior years. This program is provided in partnership with the department of science and mathematics department. Program requirements can be found on page 174.

A complete description of the general education requirements is found on page 26.

History and Political Science

The **history and political science major** offers a broad background of world history, particularly as it relates to the study of political systems. In these disciplines, biblical interpretations of history and biblical bases for civil government are emphasized.

Course requirement involve 45–46 semester hours including:

| | |
|--|--------------|
| History and Political Science Core | 33 |
| HIST-1110 United States History I | 3 |
| HIST-1120 United States History II | 3 |
| HIST-2010 History of Civilization I | 3 |
| HIST-2020 History of Civilization II | 3 |
| HIST-3110 Early American History | 3 |
| (or HIST-3120 Recent and Contemporary America | 3) |
| HIST-3710 History of Political Thought I: Ancient/Medieval | 3 |
| (or HIST-3720 History of Political Thought II: Modern/Cont. .. | 3) |
| POLS-2000 Introduction to Political Science | 3 |
| POLS-3600 Public Administration | 3 |
| POLS-3610 Presidency | 3 |
| (or POLS-3630 Congress | 3) |
| POLS-3650 International Relations | 3 |
| Non-Western History Elective | 3 |
| Choose one from the following concentrations | 12–13 |
| History Concentration | 12 |
| HIST-2000 Introduction to History | 3 |
| HIST-3000 Introduction to Historiography | 3 |
| *HIST-4700 Research in American History | 3 |
| (or HIST-4710 Research in European History | 3) |
| (or HIST-4720 Research in Asian History | 3) |
| Elective hours in history (3000- or 4000-level) | 3 |
| Political Science Concentration | 13 |
| **GSS-3630 Data Analysis and Research Methodology ... | 4 |
| *POLS-4900 Research in Political Science | 3 |
| Political Science elective hours selected from | 6 |
| POLS-3400 History of American Foreign Policy | 3 |
| POLS-3610 Presidency — if not chosen above | 3 |
| (or POLS-3630 Congress — if not chosen above ...) | 3) |
| POLS-3640 Campaigns and Elections | 3 |
| POLS-4620 Church and State in America | 3 |
| POLS-4630 American Constitutional Law: | |
| Civil Liberties and Rights | 3 |
| POLS-4640 American Constitutional Law: | |
| Powers and Federalism | 3 |

*Capstone Course

**Meets general education quantitative requirement.

History/Political Science Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 46–54 |
| History/Political Science Major Requirements | 45–46 |
| Electives | 28–37 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in History and Political Science

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HIST-1110 United States History I | 3 |
| HIST-1120 United States History II | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Science Elective | 3.5 |
| Quantitative Elective | 3 |
| Total | 32.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| HIST-2010 History of Civilization I | 3 |
| HIST-2020 History of Civilization II | 3 |
| POLS-2000 Introduction to Political Science | 3 |
| POLS-3610 Presidency | 3 |
| (or POLS-3630 Congress | 3) |
| Concentration Requirements | 3 |
| Literature Elective | 3 |
| Physical Science Elective | 3.5 |
| Electives | 6 |
| Total | 33.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| POLS-3600 Public Administration | 3 |
| POLS-3650 International Relations | 3 |
| Concentration Requirements | 3 |
| Humanities Elective | 3 |
| Non-Western History Elective | 3 |
| Electives | 12 |
| Total | 31 |

Fourth year:

| | |
|---|-----------|
| HIST-3110 Early American History | 3 |
| (or HIST-3120 History of Recent/Contemporary America | 3) |
| HIST-3710 History of Political Thought I: Ancient Through Medieval .. | 3 |
| (or HIST-3720 History of Political Thought II: | |
| Modern/Contemporary | 3) |
| Concentration Requirements | 6–7 |
| Electives | 18–19 |
| Total | 31 |



International Studies — Social Science

The **social science concentration** provides students with a political view of the international community. Utilizing courses in economics, geography, history, literature, and political science, this program prepares students for careers in areas such as diplomacy, intelligence, international media, humanitarian assistance, international relations, and missions.

Course requirements involve 51 hours, including:

| | |
|---|-----------|
| International Studies Core | 21 |
| ANTH-1800 Cultural Anthropology | 3 |
| BEPH-2260 Religion and Culture | 3 |
| BUS-3910 International Business..... | 3 |
| COM-2140 Intercultural Communication..... | 3 |
| (or PSYCH-1800 Cross-Cultural Psychology.....) | 3 |
| GEO-3510 World Regional Geography — Western | 3 |
| (or GEO-3520 World Regional Geography — Eastern | 3 |
| HIST-2010 History of Civilization I..... | 3 |
| (or HIST-2020 History of Civilization II | 3 |
| INTL-3190 Global Issues | 3 |

Course requirements involve 30 hours including:

| | |
|---|-----------|
| Social Science Requirements | 9 |
| ECON-3350 Comparative Economic Systems | 3 |
| INTL-3650 International Relations | 3 |
| *INTL-4850 Research in International Studies | 3 |
| Social science electives chosen from | 21 |
| Three or more courses selected from | 9 |
| ECON-3360 International Trade and Economics | 3 |
| ECON-3380 Economic Development and Political Economy | 3 |
| HIST-3080 History of Russia and the Soviet Union..... | 3 |
| INTL-3200 History and Politics of Latin America | 3 |
| INTL-3210 History and Politics of Asia | 3 |
| INTL-3220 History and Politics of the Middle East | 3 |
| INTL-3230 History and Politics of Western Europe | 3 |
| INTL-3790 Comparative Politics..... | 3 |
| INTL-4050 Issues in International Diplomacy | 3 |
| INTL-4160 International and Domestic Terrorism..... | 3 |
| INTL-4800 Seminar in International Studies | 3 |
| INTL-4980 Independent Study in International Studies | 1–3 |
| At least one course from philosophy and theology | 3 |
| BEPT-2000 Introduction to Mission | 3 |
| BEPT-3450 Contemporary World Missions | 3 |
| BEPT-3470 Cross-Cultural Ministry | 3 |
| At least one course in English, literature, and modern languages | 3 |
| LIT-2340 Western Literature | 3 |
| LIT-3400 Contemporary Studies in World Literature | 3 |
| LIT-XXXX Any Non-American Literature Course | 3 |
| LING-3080 Linguistics for Language Learning | 3 |

Additional required cognates

Certified proficiency in a foreign language at a level equivalent to four semesters of university study.

*Capstone course

Students are also expected to have an in-depth cross-cultural experience in a non-American culture (at least six weeks). Travel study must be approved by the department.

International Studies Major — Social Science Concentration Curriculum Summary:

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 40–43 |
| International Studies Core Requirements..... | 21 |
| Social Science Concentration Requirements | 30 |
| Required Cognates | 0–16 |
| Electives | 19–30 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in International Studies

First year:

| | |
|---|-------------|
| ANTH-1800 Cultural Anthropology | 3 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 English Composition | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Science Elective | 3.5 |
| Literature Elective | 3 |
| Quantitative Elective | 3 |
| Total | 32.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2260 Religion and Culture | 3 |
| COM-2140 Intercultural Communication..... | 3 |
| (PSYCH-1800 Cross-Cultural Psychology | 3 |
| GEO-3510 World Regional Geography — Western | 3 |
| (or GEO-3520 World Regional Geography — Eastern | 3 |
| HIST-2010 History of Civilization I..... | 3 |
| (or HIST-2020 History of Civilization II.....) | 3 |
| Foreign Language requirement | 0–8 |
| Physical Science Elective | 3.5 |
| Electives | 4–12 |
| Total | 33.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BUS-3910 International Business..... | 3 |
| ECON-3350 Comparative Economic Systems | 3 |
| INTL-3190 Global Issues | 3 |
| INTL-3650 International Relations | 3 |
| Foreign Language requirement | 0–8 |
| Social Science Electives..... | 6 |
| Electives | 5–13 |
| Total | 33 |

Fourth year:

| | |
|--|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| INTL-4850 Research in International Studies..... | 3 |
| Social Science Electives..... | 15 |
| Electives | 9 |
| Total | 29 |

A complete description of the general education requirements is found on page 26.

Political Science

The **political science major** is designed to prepare students for advanced graduate education in the areas of American politics, international relations, political philosophy, and law. It also prepares students for careers in public policy analysis, international affairs, various levels of government, campaign management, interest groups, journalism, and many others. Course requirements involve 46 semester hours including:

| | |
|---|-----------|
| Political Science Core | 19 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| POLS-2000 Introduction to Political Science | 3 |
| POLS/PUAD-3600 Public Administration | 3 |
| POLS-3650 International Relations | 3 |
| POLS-3790 Comparative Politics | 3 |
| *POLS-4900 Research in Political Science | 3 |
| Behavior electives selected from | 6 |
| POLS-2250 Politics and Popular Culture | 3 |
| POLS-3640 Campaigns and Elections..... | 3 |
| POLS-3690 Public Policy | 3 |
| POLS/HIST-4620 Church and State in America | 3 |
| International elective selected from | 3 |
| POLS-3190 Global Issues..... | 3 |
| POLS/HIST/GEO/INTL-3200 History and Politics of Latin America | 3 |
| POLS/HIST/GEO/INTL-3210 History and Politics of Asia .. | 3 |
| POLS/HIST/GEO/INTL-3220 History and Politics of the Middle East..... | 3 |
| POLS/HIST/INTL-3400 History of American Foreign Policy | 3 |
| POLS/INTL-4050 Issues in International Diplomacy | 3 |
| Law electives selected from | 6 |
| POLS-3760 Jurisprudence..... | 3 |
| POLS-4630 American Constitutional Law — Civil Liberties and Rights..... | 3 |
| POLS-4640 American Constitutional Law — Government and Federalism..... | 3 |
| Political thought electives selected from | 6 |
| POLS/HIST-3710 History of Political Thought I | 3 |
| POLS/HIST-3720 History of Political Thought II | 3 |
| POLS/HIST-3730 American Political Thought | 3 |
| Structures electives selected from | 6 |
| POLS-2620 American State and Local Government..... | 3 |
| POLS-3610 Presidency | 3 |
| POLS-3630 Congress | 3 |
| POLS/CRJU-3360 American Judicial System | 3 |

*Capstone Course

Political Science Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 49–57 |
| Political Science Major Requirements | 46 |
| Electives | 25–33 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Political Science

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Science Elective | 3.5 |
| Electives | 9 |
| Total | 32.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| POLS-2000 Introduction to Political Science | 3 |
| Humanities Elective | 3 |
| Literature Elective | 3 |
| Physical Science Elective..... | 3.5 |
| Structures Electives..... | 6 |
| Electives | 3 |
| Total | 31.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| POLS-3790 Comparative Politics | 3 |
| POLS-3650 International Relations | 3 |
| Behavior Electives | 6 |
| International Electives | 3 |
| Political Thought Electives | 6 |
| Electives | 9 |
| Total | 34 |

Fourth year:

| | |
|--|-----------|
| POLS-3600 Public Administration..... | 3 |
| POLS-4900 Research in Political Science..... | 3 |
| Law Electives..... | 6 |
| Electives | 18 |
| Total | 30 |



A complete description of the general education requirements is found on page 26.

Prelaw

The **prelaw major** is designed to prepare students for law school. The curriculum seeks to provide necessary course content and to develop thinking and analytic skills needed to perform well on the Law School Admissions Test (LSAT) and in law school.

Course requirements involve 58 semester hours including:

| | |
|---|-----------|
| Prelaw Core Requirements | 49 |
| ACCT-2110 Principles of Accounting I | 3 |
| ACCT-2120 Principles of Accounting II | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPH-2240 Logic | 3 |
| BEPH-2250 Ethics | 3 |
| ECON-2330 Microeconomics | 3 |
| ENG-3010 Style and Mechanics for Writers | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| HIST-1110 United States History I | 3 |
| HIST-1120 United States History II | 3 |
| HIST-2010 History of Civilization I | 3 |
| HIST-2020 History of Civilization II | 3 |
| HIST-3710 History of Political Thought I: Ancient Through Medieval | 3 |
| POLS-4630 American Constitutional Law: Civil Liberties and Rights | 3 |
| *POLS-4700 Prelaw Seminar | 3 |
| SOC-1300 Introduction to Sociology | 3 |
| Select one course from the following | 3 |
| COM-2000 Persuasive Theory | 3 |
| COM-3120 Argumentation | 3 |
| Select two prelaw electives from the following | 6 |
| HIST-3720 History of Political Thought II: Modern and Contemporary | 3 |
| POLS-3630 Congress | 3 |
| PUAD-3600 Public Administration | 3 |
| PSYCH-1600 General Psychology | 3 |

*Capstone Course

Prelaw Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–6 |
| Other General Education Requirements | 46–54 |
| Prelaw Major Requirements | 58 |
| Electives (consultation with advisor) | 16–24 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in Prelaw

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HIST-1110 United States History I | 3 |
| HIST-1120 United States History II | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Sciences Elective | 3.5 |
| Physical Science Elective | 3.5 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| ACCT-2110 Principles of Accounting I | 3 |
| ACCT-2120 Principles of Accounting II | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| BEPH-2240 Logic | 3 |
| BEPH-2250 Ethics | 3 |
| ECON-2330 Microeconomics | 3 |
| HIST-2010 History of Civilization I | 3 |
| HIST-2020 History of Civilization II | 3 |
| Global Awareness Elective | 3 |
| Total | 33 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| ENG-3010 Style and Mechanics for Writers | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| HIST-3710 History of Political Thought I: Ancient Through Medieval | 3 |
| SOC-1300 Introduction to Sociology | 3 |
| Literature Elective | 3 |
| PreLaw Electives | 6 |
| Electives | 6 |
| Total | 32 |

Fourth year:

| | |
|--|-----------|
| COM-2000 Persuasive Theory | 3 |
| (or COM-3120 Argumentation | 3) |
| POLS-4630 American Constitutional Law: Civil Liberties and Rights | 3 |
| POLS-4700 Prelaw Seminar | 3 |
| Electives | 21 |
| Total | 30 |

A complete description of the general education requirements is found on page 26.

Public Administration

The **public administration major** prepares students to serve others with a vision toward improving the quality of life in their local community, state, or the nation. Public administration is an academic discipline historically developed from the interrelationships between government administration, business administration, and law. The major prepares students for careers in government, nonprofit and business administration, as well as graduate and professional programs in public administration, the social sciences, management, public policy, social work, criminal justice, or law by utilizing courses in political science, business administration, economics, and law.

Course requirements involve 52 semester hours including:

| | |
|--|-------------|
| Public Administration Core Requirements | 43 |
| ACCT-2110 Principles of Accounting I..... | 3 |
| *BEPH-2250 Ethics | 3 |
| ECON-2330 Microeconomics | 3 |
| ECON-2340 Macroeconomics | 3 |
| ECON-3390 Public Finance..... | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MRKT-3600 Principles of Marketing | 3 |
| POLS-2620 American State and Local Government | 3 |
| POLS-4630 American Constitutional Law: | |
| Civil Liberties and Rights | 3 |
| PUAD-3100 Public Budgeting..... | 3 |
| PUAD-3600 Public Administration | 3 |
| PUAD-3690 Public Policy..... | 3 |
| **PUAD-4800 Applied Public Administration..... | 3 |
| Communication elective selected from | 3 |
| COM-2000 Persuasive Theory..... | 3 |
| COM-3120 Argumentation | 3 |
| COM-3230 Organizational Communication | 3 |
| COM-3250 Interviewing | 3 |
| Business electives selected from | 6 |
| ECON-3130 Government and Business | 3 |
| MGMT-3530 Human Resources Management..... | 3 |
| MGMT-3550 Organizational Behavior | 3 |
| Public administration electives selected from | 0-15 |
| GSS-4990 Social Science/History Internship..... | 3-12 |
| PUAD-4970 Independent Study in Public | |
| Administration..... | 1-3 |

*Satisfies humanities elective for general education requirements.

**Capstone course

Public Administration Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-6 |
| Other General Education Requirements..... | 46-54 |
| Public Administration Major Requirements | 52 |
| Electives (Consultation with Advisor)..... | 22-30 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Public Administration

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Sciences Elective | 3.5 |
| History Elective..... | 3 |
| Physical Science Elective..... | 3.5 |
| Total | 30 |

Second year:

| | |
|---|-----------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2250 Ethics..... | 3 |
| ECON-2330 Microeconomics | 3 |
| ECON-2340 Macroeconomics | 3 |
| POLS-2620 American State and Local Government | 3 |
| Global Awareness Elective | 3 |
| Literature Elective | 3 |
| Electives | 6 |
| Total | 33 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| ECON-3390 Public Finance..... | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MRKT-3600 Principles of Marketing | 3 |
| PUAD-3100 Public Budgeting..... | 3 |
| PUAD-3600 Public Administration | 3 |
| PUAD-3690 Public Policy | 3 |
| Communication Elective | 3 |
| Elective | 3 |
| Total | 32 |

Fourth year:

| | |
|---|-----------|
| POLS-4630 American Constitutional Law: Civil Liberties and Rights | 3 |
| PUAD-4800 Applied Public Administration..... | 3 |
| Business Electives..... | 6 |
| Public Administration Electives | 0-15 |
| Electives | 6-21 |
| Total | 33 |



A complete description of the general education requirements is found on page 26.

Sociology

The **sociology major** examines the social interaction of individuals in groups, organizations, and institutions. Particular attention is given to the cultural environment in which people live. Courses evaluate the influence of that environment and the relationships established in them, in light of scriptural norms and a biblical view of God, society, and the individual.

Course requirements involve 37 semester hours including:

| | |
|---|----------|
| ANTH-1800 Cultural Anthropology | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| PYCH-1600 General Psychology | 3 |
| PYCH-3690 Social Psychology | 3 |
| SOC-1300 Introduction to Sociology | 3 |
| SOC-3340 Sociology of Religion | 3 |
| SOC-3750 Social Movements | 3 |
| SOC-4720 Social Theory | 3 |
| *SOC-4800 Research in Sociology | 3 |
| Elective hours in sociology | 9 |

*Capstone Course

Sociology Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 43–51 |
| Sociology Major Requirements | 37 |
| Electives | 40–48 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in Sociology

First year:

| | |
|---|-------------|
| ANTH-1800 Cultural Anthropology | 3 |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PYCH-1600 General Psychology | 3 |
| SOC-1300 Introduction to Sociology | 3 |
| Biological Sciences Elective | 3.5 |
| Total | 32.5 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| History Elective | 3 |
| Literature Elective | 3 |
| Physical Science Elective | 3.5 |
| Electives | 15 |
| Total | 30.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| PYCH-3690 Social Psychology | 3 |
| SOC-3340 Sociology of Religion | 3 |
| SOC-3750 Social Movements | 3 |
| Electives | 15 |
| Total | 32 |

Fourth year:

| | |
|--------------------------------------|-----------|
| SOC-4720 Social Theory | 3 |
| SOC-4800 Research in Sociology | 3 |
| Sociology Electives | 9 |
| Electives | 18 |
| Total | 33 |



Teacher Education Licensure Program Social Studies Education — Integrated

The **integrated social studies major** prepares students to teach social studies in public and Christian schools in grades 7–12. Students who complete this curriculum will be licensed by the state of Ohio and the Association of Christian Schools International. The Ohio teaching license, through reciprocal agreements, is automatically recognized in 42 states. For additional information about teaching in other states, see the department of education section of this catalog.

Course requirements involve 40 semester hours including:

| | |
|---|-----------|
| Integrated Social Studies Core | 40 |
| ANTH-1800 Cultural Anthropology | 3 |
| ECON-2110 Essentials of Economics..... | 3 |
| EDSE-3800 Teaching Social Studies: AYA | 2 |
| GEO-3510 World Regional Geography — Western | 3 |
| GEO-3520 World Regional Geography — Eastern | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| GSS-3810 Clinical Teaching in Social Studies I..... | 1 |
| GSS-3820 Clinical Teaching in Social Studies II | 1 |
| HIST-1110 United States History I..... | 3 |
| HIST-1120 United States History II..... | 3 |
| HIST-2010 History of Civilization I..... | 3 |
| HIST-2020 History of Civilization II | 3 |
| HIST-3200 History and Politics of Latin America | 3 |
| (or HIST-3210 History and Politics of Asia.....) | 3 |
| (or HIST-3220 History and Politics of the Middle East.....) | 3 |
| HIST/SOC-3750 Social Movements | 3 |
| SOC-1300 Introduction to Sociology | 3 |

Teacher Education.....39–41

| | |
|---|-------|
| EDSE-4000 Reading in the Content Area: AYA..... | 3 |
| EDSE-4100 Principles of Teaching: AYA | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| *EDSE-4900 Student Teaching and Seminar: AYA | 10–12 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-3200 Faith and Learning Alignment | 1 |

*Capstone Course

Students must also select a concentration in economics, geography, history, political science, or sociology.

Economics Concentration.....16

| | |
|---|---|
| ECON-2340 Macroeconomics..... | 3 |
| ECON-3340 History of Economic Thought..... | 3 |
| GSS-3630 Data Analysis and Research Methodology | 4 |

Economics elective selected from6

| | |
|---|---|
| ECON-3310 International Money and Capital Markets | 3 |
| ECON-3350 Comparative Economic Systems..... | 3 |
| ECON-3360 International Trade Economics | 3 |
| ECON-3370 Labor Economics..... | 3 |
| ECON-3390 Public Finance | 3 |

Geography Concentration13

| | |
|---|---|
| GSS-3630 Data Analysis and Research Methodology | 4 |
|---|---|

Geography Electives selected from (must differ from core)9

| | |
|--|---|
| HIST-3200 History and Politics of Latin America..... | 3 |
| HIST-3210 History and Politics of Asia | 3 |
| HIST-3220 History and Politics of The Middle East..... | 3 |
| INTL-4850 Research in International Studies | 3 |

History Concentration.....12

Student must choose one of the following:3

| | |
|--|---|
| HIST-2000 Introduction to History | 3 |
| HIST-3000 Introduction to Historiography | 3 |

History electives selected from.....9

| | |
|--|-----|
| HIST-3030 History of Christianity: Pre-Reformation | 3 |
| HIST-3040 History of Modern Britain | 3 |
| HIST-3050 Renaissance and Reformation Europe | 3 |
| HIST-3070 Europe in the 18th and 19th Centuries..... | 3 |
| HIST-3080 History of Russia and the Soviet Union..... | 3 |
| HIST-3110 Early American History | 3 |
| HIST-3120 History of Recent Contemporary America..... | 3 |
| HIST-3130 Civil War and Reconstruction | 3 |
| HIST-3230 History and Politics of Western Europe..... | 3 |
| HIST-4050 Issues in International Diplomacy | 3 |
| HIST-4440 Special Topics in History | 1–3 |
| HIST-4900 Independent Study in History | 1–3 |

Political Science Concentration.....13

| | |
|---|---|
| GSS-3630 Data Analysis and Research Methodology | 4 |
| POLS-2620 American State and Local Government | 3 |

Political science elective selected from6

| | |
|---|---|
| POLS-2000 Introduction to Political Science..... | 3 |
| POLS-3360 American Judicial Systems..... | 3 |
| POLS-3650 International Relations | 3 |
| POLS-3710 History Political Thought I: | |
| Ancient Through Medieval | 3 |
| POLS-3720 History Political Thought II: | |
| Modern Through Contemporary | 3 |
| POLS-4050 Issues in International Diplomacy | 3 |
| POLS-4620 Church and State in America..... | 3 |
| POLS-4630 American Constitutional Law: | |
| Civil Liberties and Rights..... | 3 |

Sociology Concentration.....13

| | |
|---|---|
| GSS-3630 Data Analysis and Research Methodology | 4 |
| SOC-4720 Social Theory..... | 3 |

Sociology electives selected from.....6

| | |
|---|---|
| SOC-2200 Criminology..... | 3 |
| SOC-2310 Juvenile Delinquency | 3 |
| SOC-2400 Marriage and the Family | 3 |
| SOC-2840 Concepts of Chemical Dependency..... | 3 |
| SOC-2900 Ethics in the Helping Professions..... | 3 |
| SOC-3330 Social Stratification | 3 |
| SOC-3340 Sociology of Religion | 3 |
| SOC-3710 Family and Society..... | 3 |
| SOC-3730 Social Problems | 3 |

Social Studies Education — Integrated Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 40–48 |
| Integrated Social Studies Education Major Requirements..... | 52–56 |
| Teacher Education Requirements..... | 39–41 |
| Total (minimum, not including proficiency) | 131 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Social Studies Education — Integrated

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| ENG-1400 Composition..... | 3 |
| GSCI-1020 Principles of Physical Science | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| HIST-1110 United States History I..... | 3 |
| HIST-1120 United States History II..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 35 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| ECON-2110 Essentials of Economics..... | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| HIST-2010 History of Civilization I..... | 3 |
| HIST-2020 History of Civilization II | 3 |
| Concentration Requirement..... | 6 |
| Quantitative Requirement..... | 3 |
| Total | 34 |

Third year:

| | |
|--|-----------|
| ANTH-1800 Cultural Anthropology | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| EDSE-3800 Teaching Social Studies: AYA | 2 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| GEO-3510 World Regional Geography — Western..... | 3 |
| GEO-3520 World Regional Geography — Eastern | 3 |
| GSS-3810 Clinical Teaching in Social Studies I..... | 1 |
| GSS-3820 Clinical Teaching in Social Studies II | 1 |
| HIST-3200 History and Politics of Latin America | 3 |
| (or HIST-3210 History and Politics of Asia | 3) |
| (or HIST-3220 History and Politics of the Middle East..... | 3) |
| SOC-1300 Introduction to Sociology | 3 |
| Concentration Requirement..... | 6 |
| Total | 30 |

Fourth year:

| | |
|--|--------------|
| EDSE-4000 Reading in the Content Area: AYA | 3 |
| EDSE-4100 Principles of Teaching: AYA | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10–12 |
| EDSP-4250 Communication, Collaboration, and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| HIST-3750 Social Movements | 3 |
| Literature Elective | 3 |
| Total | 32–34 |



Minors

Church History Minor

Course requirements for a minor in **church history** involve 18 semester hours including:

| | |
|---|---|
| BEHI-2500 Church History | 3 |
| BETH-3500 Historical Theology | 3 |
| HIST-3030 History of Christianity: Pre-Reformation | 3 |
| HIST-3050 Renaissance and Reformation Europe | 3 |
| HIST-3300 Modern Church History: Reformation to the Present ... | 3 |
| Electives | 3 |
| BECE-3540 Women in Church History | 3 |
| BEPT-2420 History of Mission | 3 |
| HIST-3310 American Church History..... | 3 |
| HIST/POLS-4620 Church and State in America | 3 |

Criminal Justice Minor

Course requirements for a minor in criminal justice involve 18 semester hours including:

| | |
|--|----|
| CRJU-1310 Introduction to Criminal Justice | 3 |
| CRJU-XXXX Criminal Justice Electives | 15 |

History Minor

Course requirements for a minor in **history** involve 17 semester hours including:

| | |
|---|---|
| HIST-1110, 1120 United States History | 6 |
| HIST-2010 History of Civilization I..... | 3 |
| HIST-2020 History of Civilization II | 3 |
| HIST-XXXX History Electives | 5 |

International Studies — Social Science Minor

Course requirements for a minor in **international studies — social science** involve 18 semester hours including:

| | |
|--|---|
| Courses selected from the international studies core requirements..... | 9 |
| *Courses selected from the international studies — social science curriculum | 9 |

*Three courses from the international studies social science, at least 2 of which — must be in the social sciences

Political Science Minor

Course requirements for a minor in **political science** involve 18 semester hours including:

| | |
|---|----|
| POLS-2000 Introduction to Political Science | 3 |
| PUAD-3600 Public Administration | 3 |
| POLS-XXXX Political Science Electives | 12 |



Public Administration Minor

Course requirements for a minor in **public administration** involve 18 semester hours including:

| | |
|---|---|
| MGMT-3500 Principles of Organization and Management | 3 |
| POLS-4630 Amer Constit. Law: Civil Liberties and Rights | 3 |
| PUAD-3600 Public Administration | 3 |
| PUAD-3690 Public Policy..... | 3 |
| PUAD-4640 Strategies for Public Administration | 3 |
| ECON, POLS, or PUAD Electives | 3 |

Public Policy Minor

Course requirements for a minor in **public policy** involve 22 semester hours including:

| | |
|------------------------------|----|
| POLS-3630 Congress..... | 3 |
| POLS-3690 Public Policy..... | 3 |
| DC Semester | 16 |

Sociology Minor

Course requirements for a minor in **sociology** involve 18 semester hours including:

| | |
|--|----|
| SOC-1300 Introduction to Sociology | 3 |
| SOC-XXXX Sociology Electives | 15 |



INTERDISCIPLINARY STUDIES

Mission Statement (Page 111)

Personal Requirements (Page 111)

Programs of Study (Page 111)

Cocurricular Opportunities (Page 111)

Career Opportunities (Page 111)

Honors Program (Page 111)

Individualized Studies (Page 112)

International Studies (Page 112)

- › Global Economics and International Business Concentration (Page 113)

- › Missiology Concentration (Page 113)

- › Social Science Concentration (Page 114)

Liberal Arts (Page 115)

Reserve Officer Training Corps (ROTC) (Page 116)

- › Air Force Aerospace Studies (Page 116)

- › Army (Page 116)

Mission Statement

Interdisciplinary programs at the University are designed to encourage the thinking, research, and applications that help students understand the interrelationships among disciplines that are characteristic of a true liberal arts education. Drawing from several academic disciplines, these programs promote learning that broadens and deepens the student's view of knowledge and the world as a whole.

Personal Requirements

Students who choose interdisciplinary programs typically possess a unique love for learning. They desire to know about many areas and enjoy discovering the relationships among the various academic disciplines that comprise the body of knowledge. Though most college-preparatory curricula provide a good measure of breadth through their coverage of the basic disciplines, students interested in interdisciplinary programs should choose electives that sharpen their thinking skills and expand their intellectual horizons. Advanced high school courses in writing, literature, mathematics, science, economics, world history, or social science are recommended.

Although background in foreign language is not required for admission to the programs, foreign language competency is necessary for effective international service. Consequently, two or more units of foreign language in high school are strongly recommended.

Programs of Study

The University offers the following interdisciplinary programs:

- Air Force
- Army
- Honors Program
- Individualized Studies
- International Studies, with the following concentrations:
 - Global Economics and International Business
 - Missiology
 - Social Science
- Reserve Officer Training Corps (ROTC)

Cocurricular Opportunities

Tau Delta Kappa (TDK) provides an opportunity for fellowship, ministry, exchange of ideas, and support of students involved in the honors program. TDK students also tutor school children in the Cedarville area.

Career Opportunities

Graduate and professional schools welcome Cedarville graduates. Careers pursued by graduates include:

- Diplomat
- Government worker
- International relations
- Military officer
- Missionary

Honors Program

The **honors program** is designed to challenge gifted students to reach their academic potential through a specially designed course of study. The courses designated as "honors courses" are rigorous and demanding, challenging students to aspire to greater heights in their academic progress.

Admission to the program for entering freshmen is based upon ACT/SAT scores, extracurricular and work experience, and a sample of expository writing. Prospective students must complete a separate application, which is available through the admissions office.

A limited number of students are admitted into the program each fall. Students enrolled in the honors program are required to complete four honors courses in addition to a senior seminar or project.

Two of these courses are taken in the freshman year in a sequence entitled "The Making of the Modern Mind," which traces the development of philosophic, cultural, and artistic traditions against the background of the history of western civilization. These two courses meet general education requirements in humanities, philosophy, and history.

In the sophomore and junior years, honors students take two integrative seminars. Typically, each honors seminar provides an interdisciplinary perspective on the topic of study. Enrollment in honors seminars is limited to 20 students.

In the senior year, each honors student participates in the honors colloquium during the two semesters of the academic year. This senior seminar stresses the development of a Christian worldview in the midst of the contemporary pluralistic society.

Through the honors program, Cedarville University encourages superior scholarship, allows a thorough integration of the various disciplines, and provides the student an opportunity to better understand how all knowledge relates to its source in God. The honors program offers an adventure in the world of ideas, coupled with practical incentives for transcribing faith and learning into the larger culture for the glory of God and the benefit of men and women in His image.

Course requirements for the honors program involve 16 semester hours including:

| | |
|--|-----------|
| I. Freshman Colloquia: The Making of the Modern Mind* | 10 |
| HON-1010 The Classical and Medieval Ages | 5 |
| HON-1020 Renaissance, Reformation, and Revolutions..... | 5 |
| II. Honors Integrative Seminars | 4 |
| Two seminars, typically two hours each, taken in the sophomore and junior years. | |
| III. Honors Research Project/Thesis..... | 2 |
| Participation in a one-hour interdisciplinary colloquium each semester (HON-4910, HON-4920) or an interdisciplinary research project (HON-4950). | |

*If taken together, these two courses replace the following general education requirements:

| | |
|---|---|
| HUM-1400 Introduction to the Humanities..... | 3 |
| Humanities Elective | 3 |
| (or 2000-level philosophy course if required for the major) | |
| History Elective | 3 |

If either of these two courses are taken individually, the course may be designated as five semester hours of credit toward either the humanities or history general education requirements.



Individualized Studies

The **individualized studies program** serves students with specialized career aspirations that may not fit with a particular major program offered at Cedarville University or those who desire a traditional, broad undergraduate program before proceeding to graduate school. The program leads to a Bachelor of Arts degree and includes the following provisions:

1. A student interested in an individualized studies program may submit a proposal after completing 20 semester hours at Cedarville University, exclusive of Advanced Placement, CLEP, and transfer credits, with GPA of 3.25 or higher.
2. The student must define the focus of the intended individualized program on the program approval form. In addition, the student must demonstrate that the proposed program objective cannot adequately be achieved through an existing major at Cedarville University. The program approval form must be signed by a faculty sponsor and by the department chair of one of the major components of the program.
3. Each program must be approved by the standing Individualized Studies Committee appointed by the academic vice president. Decisions of this committee may be appealed to the Deans Council.
4. When the Individualized Studies Committee approves a student's proposed program, it will assign an academic advisor for the student.
5. Changes to the approved program must be approved by the faculty advisor and the Individualized Studies Committee.
6. For transcript purposes, the program will typically be called a B.A. degree with an individualized program in liberal arts.
7. The individualized program must meet all of the Cedarville University bachelor's degree requirements as detailed in the University catalog. In particular, the following items must be satisfied:
 - A GPA in the program of 2.50 or higher.
 - At least one-third of the program courses must be taken at Cedarville University.
 - At least one-third of the program courses must be taken at the 3000-level or higher.
 - "D" grades will not count as meeting the requirements of the individualized program.
 - A capstone course or experience appropriate to the individualized program and approved by the Individualized Studies Committee.

International Studies

The **international studies major** utilizes courses from several academic disciplines to prepare students for a variety of internationally focused careers. A distinct international studies core provides the foundation for all the concentrations available in this major. Courses in anthropology, business, communications, culture, geography, history, linguistics, and political science provide students with the basic understanding they need to appreciate the diverse international community. Concentration options enable students to focus upon a particular area of interest within the international context. Three concentrations are available.

Course requirements involve 21 semester hours of core requirements and 33–60 hours of concentration requirements, depending on the selected concentration.

| | |
|---|-----------|
| International Studies Core | 21 |
| ^{1,2} ANTH-1800 Cultural Anthropology | 3 |
| ² BEPH-2260 Religion and Culture | 3 |
| BUS-3910 International Business | 3 |
| ² COM-2140 Intercultural Communication | 3 |
| (or PSYCH-1800 Cross-Cultural Psychology | 3) |
| GEO-3510 World Regional Geography — Western | 3 |
| (or GEO-3520 World Regional Geography — Eastern | 3) |
| ³ HIST-2010 History of Civilization I | 3 |
| (or HIST-2020 History of Civilization II | 3) |
| INTL-3190 Global Issues | 3 |

^{1,2}Satisfies social science general education requirement.

²Satisfies humanities general education requirement.

³Satisfies history general education requirement.



Interdisciplinary Studies

Concentrations

- The following three concentrations are available:
- Global economics and international business
 - Missiology
 - Social science

Global Economics and International Business Concentration

The **global economics and international business concentration** provides students with an economic view of the international community. Utilizing courses in business, economics, and political science, this program prepares business-oriented students for careers in international management, marketing, finance, comparative economics, missions, and foreign service.

Course requirements involve 56 hours, including:

| | |
|---|----------|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ACCT-2120 Principles of Accounting II..... | 3 |
| BUS-1000 The Business Profession..... | 2 |
| BUS-1040 The Business Experience..... | 0 |
| BUS-2150 Statistics for Business..... | 3 |
| BUS-2180 Business Law I..... | 3 |
| BUS-4420 Business Ethics and Social Responsibility..... | 2 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| ECON-3350 Comparative Economic Systems..... | 3 |
| ECON-3360 International Trade and Economics..... | 3 |
| ECON-3380 Economic Development and Political Economy..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| ITM-1500 Information Technology for Business..... | 2 |
| ITM-1510 Software Tools for Business..... | 2 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| *MGMT-4510 Strategic Management..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |
| Electives selected from..... | 9 |
| FIN-3750 International Finance..... | 3 |
| HIST-4050 Issues in International Diplomacy..... | 3 |
| MGMT-3570 International Management..... | 3 |
| MRKT-4620 International Marketing..... | 3 |
| POLS-3650 International Relations..... | 3 |

| | |
|--------------------------------|----------|
| Required cognate..... | 3 |
| GMTH-1020 College Algebra..... | 3 |

*Capstone Course

In addition to these requirements, students must fulfill a foreign culture experience. Possible options include:

- Study abroad
- Foreign internships

Approval should be obtained from the business department chair. This requirement is generally not fulfilled by travel overseas or minimum Missions Involvement Services experience.

International Studies Major — Global Economics and International Business Concentration Curriculum Summary:

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| Other General Education Requirements..... | 40–48 |
| International Studies Core Requirements..... | 21 |
| Global Economics and International Business Requirements..... | 56 |
| Required Cognates..... | 3 |
| Electives..... | 0–8 |
| Total (minimum, not including proficiency)..... | 128 |

Missiology Concentration

The **missiology concentration** provides students with a missiological view of the international community. Students will cultivate a deeper commitment to the global mission task as they gain knowledge in contemporary global issues, past and present mission thinking and practice, as well as the opportunities and challenges to doing missions in today's world. Students will also develop skills in understanding other cultures and living competently in another culture for the purpose of ministry.

Course requirements involve 42 hours, including:

| | |
|--|-----------|
| Missiology Concentration..... | 33 |
| BECE-4100 Leadership of CE Ministries..... | 3 |
| BEPH-2200 Introduction to Philosophy..... | 3 |
| BEPT-2000 Introduction to Mission..... | 3 |
| BEPT-2400 Personal Evangelism..... | 3 |
| BEPT-2420 History of Mission..... | 3 |
| BEPT-3450 Contemporary World Mission..... | 3 |
| BEPT-3470 Cross-Cultural Ministry..... | 3 |
| BEPT-3510 Introduction to Urban Ministry..... | 3 |
| *BEPT-4720 Missionary Internship..... | 3 |
| BEST-4310 Hermeneutics..... | 3 |
| BETH-3330 Christian Evidences and Apologetics..... | 3 |
| One course in missiology..... | 3 |
| BEPT-4300 Missiology and Missiologists..... | 3 |
| BEPT-4510 Advanced Urban Ministry..... | 3 |
| Two courses in political science..... | 6 |
| POLS-3200 History and Politics of Latin America..... | 3 |
| POLS-3210 History and Politics of Asia..... | 3 |
| POLS-3220 History and Politics of the Middle East..... | 3 |
| POLS-3650 International Relations..... | 3 |
| POLS-4050 Issues in International Diplomacy..... | 3 |

*Capstone Course

International Studies Major — Missiology Concentration Curriculum Summary

| | |
|--|------------|
| Proficiency Requirements..... | 0–5 |
| Other General Education Requirements..... | 43–51 |
| International Studies Core Requirements..... | 21 |
| International Studies — Missiology Major Requirements..... | 42 |
| Electives..... | 14–22 |
| Total (minimum, not including proficiency)..... | 128 |



Interdisciplinary Studies

Social Science Concentration

The **social science concentration** provides students with a political view of the international community. Utilizing courses in economics, geography, history, literature, and political science, this program prepares students for careers in areas such as foreign service, international media, international relations, and missions.

Course requirements involve 30 hours, including:

| | |
|--|-------------|
| Social Science | 9 |
| ECON-3350 Comparative Economic Systems | 3 |
| INTL-3650 International Relations | 3 |
| *INTL-4850 Research in International Studies | 3 |
| Social science electives selected from | 21 |
| Three or more courses from the following | 9–15 |
| ECON-3360 International Trade and Economics | 3 |
| ECON-3380 Economic Development and Political Economy | 3 |
| HIST-3080 History of Russia and the Soviet Union..... | 3 |
| INTL-3200 History and Politics of Latin America | 3 |
| INTL-3210 History and Politics of Asia | 3 |
| INTL-3220 History and Politics of the Middle East..... | 3 |
| INTL-3230 History and Politics of Western Europe | 3 |
| INTL-3790 Comparative Politics..... | 3 |
| INTL-4050 Issues in International Diplomacy | 3 |
| INTL-4160 International and Domestic Terrorism..... | 3 |
| INTL-4800 Seminar in International Studies | 3 |
| INTL-4980 Independent Study in International Studies .1–3 (Travel study must be approved by the department) | 3 |
| At least one course from philosophy and theology | 3 |
| BEPT-2000 Introduction to Mission | 3 |
| BEPT-3450 Contemporary World Missions | 3 |
| BEPT-3470 Cross-Cultural Ministry | 3 |
| At least one course from English, literature, and modern languages | 3 |
| LIT-2340 Western Literature | 3 |
| LIT-3400 Contemporary Studies in World Literature | 3 |
| LIT-XXXX Any Non-American Literature Course | 3 |
| LING-3080 Linguistics for Language Learning | 3 |

*Capstone Course

Additional required cognate

Certified proficiency in a foreign language at a level equivalent to four semesters of university study. Students are also expected to have an in-depth cross-cultural experience in a non-American culture (at least six weeks).

International Studies Major — Social Science Concentration Curriculum Summary:

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 40 |
| International Studies Core Requirements..... | 21 |
| Social Sciences and History Requirements..... | 30 |
| Required Cognates | 0–15 |
| Electives | 22–30 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in International Studies

| | |
|---|-------------|
| <i>First year:</i> | |
| ANTH-1800 Cultural Anthropology | 3 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| LIT-2340 Western Literature..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| Quantitative Elective | 3 |
| Total | 32.5 |
| <i>Second year:</i> | |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2260 Religion and Culture | 3 |
| COM-2140 Intercultural Communication..... | 3 |
| (or PSYCH-1800 Cross-Cultural Psychology | 3) |
| GEO-3510 World Regional Geography — Western..... | 3 |
| (or GEO-3520 World Regional Geography — Eastern..... | 3) |
| HIST-2010 History of Civilization I | 3 |
| (or HIST-2020 History of Civilization II | 3) |
| Concentration Requirement..... | 3–12 |
| Physical Science Elective | 3.5 |
| Total | 33.5 |
| <i>Third year:</i> | |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BUS-3910 International Business..... | 3 |
| INTL-3190 Global Issues | 3 |
| Concentration Requirements | 12–24 |
| Intermediate Foreign Language..... | 0–7 |
| Total | 32 |
| <i>Fourth year:</i> | |
| BEGE-3760 Christian Worldview Integration | 2 |
| Concentration Requirements | 15–24 |
| Electives | 4–13 |
| Total | 30 |



A complete description of the general education requirements is found on page 26.

Liberal Arts

The **Bachelor of Arts degree with a major in liberal arts**, having the breadth and depth of a traditional liberal arts degree, allows some student flexibility in choosing courses. It is expected that students completing this degree will go on to graduate school, medical school, law school, or a school of theology.

Students must apply to the program to gain entrance. Students can apply at the end of the second semester of the freshman year for entry into the sophomore year. To be considered for this program, a student must meet the following requirements:

1. Maintain a 3.25 GPA or higher
2. Supply two faculty recommendations.

Freshmen may enter Cedarville University as a liberal arts major with provisional approval if they have either a 27 ACT or 1210 SAT and a 3.5 high school GPA; however, they must meet the requirements at the end of their freshman year in order to stay in the program.

A liberal arts committee made up of one faculty member from each area of the core will decide if a student will be granted entry into the program. The appropriate faculty member in each area of the core will serve as the academic advisor. The chair of the liberal arts committee will sign as department chair on all forms.

The liberal arts committee will approve all programs decided on by the student and the advisor. Proposed programs and capstone projects must be approved by the end of the sophomore year.

Students must include a study abroad component within their four years of study. A summer travel study experience would satisfy this requirement.

Course requirements involve 70 hours, including:

| | |
|--|-----------|
| LART-1000 Introduction to Liberal Arts | 1 |
| *LART-4950 Capstone Project in the Liberal Arts | 3 |
| Foreign Language through Second Year | 15 |
| Core requirements | 30 |
| Humanities requirements (English, Literature) | 6 |
| Fine Arts requirements (Art, Music, Theatre) | 6 |
| Social Science and History requirements (History, Political Science, Sociology)..... | 6 |
| Science and Mathematics..... | 6 |
| Theology and Philosophy (at least one course in Philosophy)..... | 6 |
| Concentration requirements..... | 21 |
| 3000- and 4000-level courses chosen within one the five core requirement divisions | |

*Capstone Course

Liberal Arts Major Curriculum Summary:

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements..... | 52 |
| Liberal Arts major Requirements | 70 |
| Electives | 6 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Liberal Arts

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| LART-1000 Introduction to Liberal Arts | 1 |
| Literature Elective | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biology Elective | 3.5 |
| Humanities Elective | 3 |
| Quantitative Elective | 3 |
| Total | 30.5 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| Elementary Foreign Language | 8 |
| Core Requirement | 15 |
| Physical Science Elective..... | 3.5 |
| Total | 32.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| GSS-1100 Politics and American Culture..... | 3 |
| Core Requirements..... | 15 |
| History Elective | 3 |
| Intermediate Foreign Language..... | 7 |
| Social Science Elective | 3 |
| Total | 33 |

Fourth year:

| | |
|---|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| LART-4950 Capstone Project in the Liberal Arts..... | 3 |
| Concentration Requirements..... | 21 |
| Electives | 6 |
| Total | 32 |

Reserve Officer Training Corps (ROTC)

Air Force Aerospace Studies

As a Cedarville University student, you have the opportunity to become an Air Force officer while the Air Force helps pay for your education. We offer the ROTC program to full-time Cedarville University students pursuing a baccalaureate or master's degree and who meet other criteria as specified by HQ/AFROTC. While all courses are taken through Cedarville University, leadership laboratories and classes for junior and senior years are taught at Wright State University, the host site of the area Air Force ROTC detachment. Cedarville University provides transportation.

The Air Force ROTC program is designed to produce Air Force officers who will be successful leaders and managers. All officers will be placed in positions of responsibility, facing challenging and rewarding career opportunities while using the most advanced technology in the world.

The Air Force ROTC program is organized in two portions: the General Military Course (GMC), typically taken during freshman and sophomore years, and the Professional Officer Course (POC), usually taken during junior and senior years or during the last two years prior to graduation. At a minimum, officers will need to complete one year of the GMC portion and both years of the POC portion of the program.

- The GMC is a **no obligation** introduction to the Air Force. The course covers the development and history of air power and the organization of the contemporary United States Air Force.
- The POC curriculum covers communicative skills, Air Force management and leadership, American defense policy, and regional world studies.

Air Force ROTC students have additional opportunities to participate in challenging and rewarding activities that include skydiving, piloting a sailplane, trips to Air Force bases, orientation flights, official military functions and ceremonies, and one-on-one mentoring with an active-duty Air Force officer.

This program is open to **all majors**. All Air Force ROTC students have the opportunity to apply for **scholarships** that pay partial or full tuition, books, and fees, in addition to a \$300–\$500 monthly stipend depending on your progress in the program. These scholarships are available on a competitive basis to students who demonstrate academic and leadership potential. Scholarships with the greatest availability are in the areas of engineering, mathematics, computer science, physics, and nursing.

High school students should apply for a scholarship no later than December 1 of their senior year. Apply at **afrotc.com**. Scholarships for in-college students may also be available based on the needs of the Air Force. Information regarding these scholarships is available through the student's ROTC instructor.

Army

Reserve Officer Training Corps (ROTC) instruction leading to a commission as a second lieutenant in the United States Army is available to Cedarville University students. Freshman- through junior-level classes, as well as drills, are conducted at Central State University, located four miles west of Cedarville. Senior-level classes are taught at Cedarville University. All Army ROTC courses are taken through Cedarville University. Cedarville University provides transportation.

The objectives of the Army ROTC program are:

1. To prepare students to serve as commissioned officers in the Regular Army, the Army National Guard, or the United States Army Reserve.
2. To provide an understanding of the fundamental concepts of military art and science.
3. To provide students with leadership and managerial training, a basic understanding of military professional knowledge, a strong sense of personal integrity, honor, individual responsibility, and an appreciation of the requirements for national security.

The standard four-year ROTC program involves two phases: the basic course during the first two years and the advanced course during the final two years. One can qualify for advanced placement by being a veteran, a member of the United States Army Reserve or National Guard, or by attending four weeks of paid summer training following the sophomore year of college.

Two- and three-year merit scholarships, which pay for tuition, fees, textbooks, and supplies, are available. Recipients of these scholarships also receive \$300–\$500 per month, based on their progress in the program, for 10 months of the school year while the scholarship is in effect.

Students interested in pursuing a dual civilian and military career should request information about the Guaranteed Reserve Forces Duty Scholarships and Reserve Duty options.

High school students should apply for a scholarship no later than January 7 of their senior year. Apply at **goarmy.com/rotc**. College students will apply for scholarships through their ROTC instructor.

Interested individuals should visit the Cedarville ROTC website **cedarville.edu/rotc** or contact the Cedarville University Admissions Office at 1-800-CEDARVILLE (233-2784).

Army ROTC course requirements count as elective credits in the 128 semester hours required for graduation.



Department of

KINESIOLOGY AND ALLIED HEALTH

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Mission Statement

The Cedarville University Department of Kinesiology and Allied Health seeks to:

1. Equip students for careers in sport- and exercise-related and the allied health professions.
2. Enable students to view knowledge in light of scriptural truth.
3. Help students apply and model knowledge to the vocation and world in which they work and live.
4. Encourage growth in Christian character.

Preparation

Students planning to pursue a major within the department of kinesiology and allied health are best prepared in high school by taking a college-preparatory curriculum. Students planning to pursue a multi-age physical education or sport and exercise studies major should take as many physical education courses as possible. Those considering majors in allied health, exercise science, and athletic training should take biology, chemistry, physics, and mathematics courses at least through algebra II.

Department Requirements

Once students declare a major within the department of kinesiology and allied health, they are expected to maintain a level of personal physical fitness which demonstrates a commitment to professionalism and biblical stewardship. A mandatory semi-annual cardiovascular fitness assessment is used to evaluate the status of the student's fitness.

Multi-age physical education and sport and exercise studies majors have courses in their respective curricula that have motor skill performance proficiencies. While meeting the proficiency standards is not required to receive a passing grade in all classes, satisfactory completion of all of the proficiencies is a degree requirement. See pages 75–76 for the department of education admission and retention requirements for multi-age physical education and multi-age health education.

Programs of Study

The department of kinesiology and allied health offers the following programs of study:

Bachelor of Arts (B.A.) in:

- Athletic Training
- Physical Education – Multi-Age (certification for teaching pre-K to 12)
- Sport and Exercise Studies

Bachelor of Science (B.S.) in:

- Allied Health
- Exercise Science

Minors

- Coaching
- Health Promotion
- Health Education – Multi-Age (certification for teaching pre-K to 12)
- Sport Ministry



Cocurricular Opportunities

The department of kinesiology and allied health has several opportunities for students to increase their professional skills and awareness by being involved in the following Cedarville University approved organizations:

- Athletic training majors — Athletic Training Organization
- Exercise science majors — Health and Fitness Association
- Multi-age physical education and sport and exercise studies majors — Pi Epsilon Omega (Physical Education Organization)

Career Opportunities

Graduate and professional schools welcome Cedarville graduates. Careers pursued by graduates include:

- Administrator of youth activities and youth organizations
- Athletic director
- Athletic trainer
- Cardiac rehab
- Clinical exercise physiologist
- Coach
- Corporate wellness director
- Exercise specialist
- Fitness and recreation management
- Health teacher (pre-K to 12)
- Personal trainer
- Physical education teacher (pre-K to 12)
- Physical therapist
- Physician assistant
- Professional athletic team management
- Sport marketing and promotion
- Sport ministry organization management

Faculty

Evan Hellwig, *Chair*. Professor of Athletic Training; Certified Athletic Trainer (BOC); licensed physical therapist. *Education*: B.S., Mankato State University, 1984; Physical Therapy Certificate, University of Iowa School of Medicine, 1986; Ph.D., University of Virginia, 1992. At Cedarville 1986–89 and since 1992.

Teresa Clark, Associate Professor of Kinesiology. *Education*: B.A., Cedarville University, 1975; M.S., Indiana University, 1986. At Cedarville since 1996.

April Crommett, Associate Professor of Exercise Science. *Education*: B.S., Mississippi State University, 1991; M.S., Memphis State University, 1993; Ph.D., The University of Mississippi, 2000. ACSM Certified Health Fitness Instructor. At Cedarville since 2003.

Christopher Cross, Assistant Professor of Athletic Training; Head athletic trainer (BOC). *Education*: B.S., Alderson-Broaddus, 1996; M.S., West Virginia University, 2002. At Cedarville since 2004.

Kathleen Freese, Associate Professor of Kinesiology. *Education*: B.S., Bowling Green State University, 1971; M.Ed., Bowling Green State University, 1981. At Cedarville since 1991.

Lori Huckaby, Assistant Professor of Kinesiology. *Education*: B.A., Baptist Bible College, 1987; M.Ed., Lynchburg College, 2001. At Cedarville since 2005.

Pamela Diehl Johnson, *Assistant Academic Vice President*: College of Health Professions. Senior Professor of Kinesiology. *Education*: B.S., University of Dayton, 1970; M.A., The Ohio State University, 1971; Ph.D., The Ohio State University, 1974. At Cedarville since 1974.

John McGillivray, Associate Professor of Kinesiology; Coach, women's soccer; NAIA Hall of Fame, 1993. *Education*: B.S., Cedarville University, 1970; graduate study, Wright State University, 1972–74; M.S., University of Dayton, 1976. At Cedarville since 1974.

L. Delyte Morris, Professor of Kinesiology; Licensed Physician Assistant; Coach, women's tennis. *Education*: B.S., Geneva College, 1959; M.S., Indiana University, 1960; P.E.D., Indiana University, 1966; A.S., Kettering College of Medical Arts, 1979. At Cedarville since 1998.

Elizabeth Shearer, Instructor of Kinesiology. *Education*: B.A., Cedarville University, 1980. At Cedarville since 2002.

Elizabeth Sled, Assistant Professor of Kinesiology. *Education*: B.S.c.P.T., Queens University, 1990; M.S.C., Ohio State University, 1996; Ph.D., Queens University, 2008. At Cedarville since 2012.

Hannah Stedje, Instructor of Athletic Training; Certified Athletic Trainer (BOC); ATEP Clinical Education Coordinator. *Education*: B.A., Cedarville University, 2008; M.S., University of Indiana, 2010. At Cedarville since 2010.

Michael Weller, Assistant Professor of Athletic Training; Certified Athletic Trainer (BOC); ATEP Program Director. *Education*: B.A., Capital University, 1995; M.S., Ohio University, 1997. At Cedarville since 2010.

Emeriti

Donald Callan, Professor Emeritus of Kinesiology; Founder, Missions Involvement Services (MIS); NAIA Hall of Fame, 1990. *Education*: B.S., Taylor University, 1955; M.A., Ball State Teachers College, 1960; Ph.D., The Ohio State University, 1968. At Cedarville since 1960.

Teaching Staff

Kari Flunker, Teaching staff in Kinesiology and Allied Health. *Education*: B.A., Cedarville University, 2005. At Cedarville since 2010.

Brent Newman, Teaching Staff in Kinesiology and Allied Health. *Education*: B.S., Bryson University, 2010. At Cedarville since 2011.

Staff Clinical Instructor

Leyna Hebert, ATC *Education*: B.S., Ohio State University, 2007; M.S., University of Kentucky, 2009. At Cedarville since 2009.



Athletic Training Mission Statement

The mission of the Cedarville University Athletic Training Education Program (ATEP) is to advance the Kingdom of Christ by preparing entry-level athletic trainers, through diverse learning experiences, to practice competently and professionally throughout the world.

This is to be accomplished through an educational program that practices the skills associated with the prevention, diagnosis, and intervention of emergency, acute, and chronic medical conditions involving impairment, functional limitations, and disabilities.

Students will be able to:

- Provide quality health care including prevention, diagnosis, and intervention to patients and clients who participate in physical activity.
- Utilize therapeutic techniques and equipment safely, appropriately, and effectively.
- Instruct patients and clients in areas of prevention, stewardship, and convalescence.
- Implement organizational skills to manage an athletic training facility.
- Locate, interpret, and implement athletic training research.
- Conduct themselves professionally with Christlike characteristics.

The athletic training major prepares students for a career as a Certified Athletic Trainer (or ATC), which is the official credential awarded when students successfully pass the certification exam administered by the BOC. Cedarville's athletic training program meets the requirements set forth by the National Athletic Trainers' Association (NATA) and the Commission on Accreditation of Athletic Training Education (CAATE).

Personal Requirements

Athletic training requires a significant level of scientific and clinical preparation. Prospective athletic training students are encouraged to take college-preparatory courses in high school, including biology, chemistry, physics, and advanced math. An ACT composite score of 24 (or SAT composite of 1100) or higher is highly recommended.

Typically, the student who is interested in athletic training as a potential career has a history of being involved in athletics personally and may even wish to pursue participating in athletics at the collegiate level. Students need to be aware that the (ATEP) depends on the varsity athletic program at Cedarville as well as high schools, colleges, and clinics in the community to provide the primary "laboratory" experiences for the clinical education component of the program. Therefore, attempting to participate in varsity athletics while simultaneously pursuing the athletic training major may prove to be a significant conflict of interest.



Students are, however, expected to model appropriate stewardship of their physical bodies by being involved in a consistent program of regular exercise and activity. A biannual one and a half-mile run is used to evaluate the status of the student's fitness.

Program Requirements

Admission and Retention

Athletic training clinical education is a labor-intensive product to deliver. Because there is a finite number of quality sports medicine opportunities available on campus, the ATEP limits each academic class to no more than 12 students each (i.e., 12 seniors, 12 juniors, and 12 sophomores). There is currently no limit to how many freshmen may declare athletic training as their major, but if more than 12 students desire to continue as athletic training majors beyond the freshman year, the competitive admission process is enforced. Transfer students are considered on an individual basis but are only eligible to be admitted directly into the ATEP if: 1) there is space available in their graduating class and 2) they have met all the admission criteria. Anyone thinking about transferring to Cedarville for the purpose of being an athletic training major should contact the program director as early in the process as possible. Admission criteria include:

1. Cumulative GPA of 2.5 or higher
2. Completion of college-level biology courses with a grade of "C-" or higher
3. Completion of college-level first aid and basic athletic training courses with a grade of "B-" or higher
4. Completion of at least 150 clinical hours in the Cedarville University Athletic Training Facility
5. Satisfactory physical exam
6. Hepatitis B vaccine or signed declination
7. Signed acceptance of technical standards, available at cedarville.edu/athletictraining
8. Current certification in cardiopulmonary resuscitation (CPR) including AED

Retention criteria include:

1. Earning a grade of "C-" or higher in all athletic training courses
2. Maintaining a cumulative GPA of 2.50 or higher
3. Maintaining current CPR/AED certification
4. Successfully completing clinical proficiencies established for each term
5. Positive recommendation by the faculty/clinical instructors of the ATEP

Graduation requirements include:

1. Earning a grade of "C-" or higher in all athletic training courses
2. Member of the NATA
3. Successful completion of all clinical proficiencies
4. Meeting University requirements for graduation

Students are encouraged to combine the athletic training major with another program of study depending upon their career objectives. Possible options include a business minor for those planning to be employed in the sports medicine clinic setting, or a teaching certificate for those planning to be employed in the high school setting, and exercise science or biology electives for those pursuing graduate education or employment in higher education. Students need to be aware that preparing to be a marketable athletic trainer may require more than the traditional four years of college.

A complete description of the general education requirements is found on page 26.

Athletic Training Clinical Requirements

The clinical experience is an integral part of the ATEP. Accreditation standards require that the clinical education component of the curriculum be at least two full years in duration. Athletic training majors need to be routinely available during typical practice and game times in order to fulfill the clinical education requirements. Freshmen will need to accumulate at least 150 hours of observational time in the athletic training facility in order to be eligible for admission into the ATEP. Sophomores will be scheduled to work (approximately eight–10 hours per week) with one of the on-campus Certified Athletic Trainers to expose them to collegiate athletic training services. The junior and senior years are devoted to completing extensive clinical assignments, including working under the supervision of a certified athletic trainer with a lower extremity sport, an upper extremity sport, an equipment intensive sport such as football, and a general medical clinical education rotation. Upperclassmen can anticipate working 12–20 hours per week. Students majoring in athletic training are not encouraged to participate in intercollegiate athletics.

Course requirements involve 71.5 semester hours including:

| | |
|---|-----|
| ATRN-1500 Introduction to Athletic Training..... | 1 |
| ATRN-1550 Basic Athletic Training | 3 |
| ATRN-2560 Lower Body Injury Management | 3 |
| ATRN-2570 Upper Body Injury Management | 3 |
| ATRN-2650 Therapeutic Exercise..... | 3 |
| ATRN-2901 Clinical I..... | 2 |
| ATRN-2902 Clinical II | 2 |
| ATRN-3550 Organization and Administration in Athletic Training | 3 |
| ATRN-3660 Therapeutic Modalities | 3 |
| ATRN-3903 Clinical III | 2 |
| ATRN-3904 Clinical IV | 2 |
| ATRN-4560 General Medical Issues | 3 |
| ATRN-4905 Clinical V | 2 |
| *ATRN-4906 Clinical VI..... | 2 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESS-3800 Sport Psychology | 3 |
| ESS-3900 Physiology of Exercise | 3 |
| ESS-3940 Structural Kinesiology | 3 |
| ESSE-3100 Strength and Conditioning | 3 |
| EXSC-4600 Research in Exercise Science | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GBIO-2010 Human Anatomy and Physiology I | 4 |
| GBIO-2015 Human Anatomy and Physiology II | 4 |
| MAHE-3030 Nutrition..... | 3 |
| MAHE-3100 Drug Education | 3 |
| PYCH-1600 General Psychology..... | 3 |

*Capstone Course

Athletic Training Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 45.5–53.5 |
| Athletic Training Major Requirements | 71.5 |
| Electives | 3–11 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Athletic Training

First year:

| | |
|---|-------------|
| ATRN-1500 Introduction to Athletic Training | 1 |
| ATRN-1550 Basic Athletic Training | 3 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| ENG-1400 Composition..... | 3 |
| ESS-1400 First Aid and Safety Education | 2 |
| GBIO-1000 Principles of Biology | 3.5 |
| GBIO-2010 Human Anatomy and Physiology I | 4 |
| GMTH-1020 College Algebra..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PYCH-1600 General Psychology..... | 3 |
| Total | 30.5 |

Second year:

| | |
|---|-----------|
| ATRN-2560 Lower Body Injury Management | 3 |
| ATRN-2570 Upper Body Injury Management | 3 |
| ATRN-2650 Therapeutic Exercise..... | 3 |
| ATRN-2901 Clinical I..... | 2 |
| ATRN-2902 Clinical II | 2 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ESS-3800 Sport Psychology | 3 |
| ESS-3900 Physiology of Exercise | 3 |
| ESS-3940 Structural Kinesiology | 3 |
| GBIO-2015 Human Anatomy and Physiology II | 4 |
| Total | 35 |

Third year:

| | |
|--|-----------|
| ATRN-3550 Organization and Administration in Athletic Training | 3 |
| ATRN-3660 Therapeutic Modalities | 3 |
| ATRN-3903 Clinical III | 2 |
| ATRN-3904 Clinical IV..... | 2 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| EXCS-4600 Research in Exercise Science | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| MAHE-3100 Drug Education | 3 |
| MAHE-3030 Nutrition | 3 |
| Literature Elective | 3 |
| Total | 32 |

Fourth year:

| | |
|--|-------------|
| ATRN-4560 General Medical Issues | 3 |
| ATRN-4905 Clinical V | 2 |
| ATRN-4906 Clinical VI | 2 |
| ESSE-3100 Strength and Conditioning | 3 |
| History Elective..... | 3 |
| Humanities/Global Awareness Elective | 3 |
| Physical Science Elective | 3.5 |
| Electives | 11 |
| Total | 30.5 |

A complete description of the general education requirements is found on page 26.

Allied Health

The **Bachelor of Science degree with a major in allied health** is an interdisciplinary program designed to prepare students for admission into graduate-level allied health care provider programs including physical therapy, physician assistant, and occupational therapy. The allied health major is not necessarily designed to prepare students for the medical profession. Students seeking admission to medical school should consider majoring in the premed program offered in the department of science and mathematics. An ACT composite score of 25 (or SAT composite of 1150) or higher is highly recommended.

Course Requirements involve 78-83 semester hours:

| | |
|---|-------------|
| ALHL-1000 Introduction to the Allied Health Professions..... | 1 |
| ALHL-2000 Medical Terminology..... | 0 |
| ALHL-3940 Professional Development..... | 1 |
| ALHL-4950 Allied Health Seminar I..... | 1 |
| *ALHL-4960 Allied Health Seminar II..... | 1 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-2210 Microbiology..... | 4 |
| BIO-2250 Cell Biology..... | 4 |
| CHEM-1110 General Chemistry I..... | 4 |
| CHEM-1120 General Chemistry II..... | 4 |
| ESS-3900 Physiology of Exercise..... | 3 |
| ESS-3920 Biomechanics..... | 3 |
| ESS-3940 Structural Kinesiology..... | 3 |
| EXSC-4600 Research in Exercise Science..... | 3 |
| GBIO-2010 Human Anatomy and Physiology I..... | 4 |
| GBIO-2020 Human Anatomy, Physiology, and Pathophysiology..... | 4 |
| GMATH-1030 Precalculus..... | 4 |
| MAHE-3030 Nutrition..... | 3 |
| MAHE-3070 Current Issues in Health..... | 1 |
| PYCH-1600 General Psychology..... | 3 |
| PYCH-2600 Human Development and Lifespan..... | 3 |
| PYCH-2610 Statistics..... | 3 |
| PYCH-2640 Abnormal Psychology..... | 3 |
| PYCH-3380 Health Psychology..... | 3 |
| PYCH-3720 Psychology of Personality..... | 3 |
| One of the following sets..... | 8-13 |
| (Set A) | |
| ATRN-3660 Therapeutic Modalities..... | 3 |
| PHYS-1010 College Physics I..... | 5 |
| PHYS-1020 College Physics II..... | 5 |
| or (Set B) | |
| CHEM-3510 Organic Chemistry I..... | 4 |
| CHEM-3710 Biochemistry..... | 4 |

*Capstone Course

Allied Health Major Curriculum Summary

| | |
|--|------------|
| Proficiency Requirements..... | 0-5 |
| General Education Requirements..... | 36 |
| Allied Health Major Requirements..... | 78-83 |
| Electives..... | 9-14 |
| Total (minimum, not including proficiency)..... | 128 |

Suggested Four-Year Curriculum for a Major in Allied Health

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-2250 Cell Biology..... | 4 |
| ENG-1400 Composition..... | 3 |
| GMTH-1030 Precalculus..... | 4 |
| ALHL-1000 Introduction to the Allied Health Professions..... | 1 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| PYCH-1600 General Psychology..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| Literature Elective..... | 3 |
| Total..... | 33 |

Second year:

| | |
|---|-----------|
| ALHL-2000 Medical Terminology..... | 0 |
| BEGE-2730 Old Testament Literature..... | 3 |
| BIO-2210 Microbiology..... | 4 |
| COM-1100 Fundamentals of Speech..... | 3 |
| CHEM-1110 General Chemistry I..... | 4 |
| CHEM-1120 General Chemistry II..... | 4 |
| GBIO-2010 Human Anatomy and Physiology I..... | 4 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PYCH-2600 Human Development and Lifespan..... | 3 |
| History Elective..... | 3 |
| Total..... | 31 |

Third year:

| | |
|---|-----------|
| ALHL-3940 Professional Development..... | 1 |
| BEGE-2740 New Testament Literature..... | 3 |
| ESS-3900 Physiology of Exercise..... | 3 |
| ESS-3920 Biomechanics..... | 3 |
| ESS-3940 Structural Kinesiology..... | 3 |
| EXSC-4600 Research in Exercise Science..... | 3 |
| GBIO-2020 Human Anatomy, Physiology, and Pathophysiology..... | 4 |
| MAHE-3030 Nutrition..... | 3 |
| MAHE-3070 Current Issues in Health..... | 1 |
| PYCH-3380 Health Psychology..... | 3 |
| PYCH-2610 Statistics..... | 3 |
| PYCH-2640 Abnormal Psychology..... | 3 |
| Total..... | 33 |

Fourth year:

| | |
|--|-----------|
| ALHL-4950 Allied Health Seminar I..... | 1 |
| ALHL-4960 Allied Health Seminar II..... | 1 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| PYCH-3720 Psychology of Personality..... | 3 |
| Global Awareness Elective..... | 0-3 |
| Set A or Set B Allied Health..... | 8-13 |
| Electives..... | 9-14 |
| Total..... | 31 |



A complete description of the general education requirements is found on page 26.

Exercise Science — Bachelor of Science

The **Bachelor of Science degree with a major in exercise science** prepares students for careers in exercise physiology, cardiac rehabilitation, biomechanics, personal fitness services, or as an exercise specialist in corporate or private fitness centers and sports medicine clinics. This program is excellent preparation for graduate or professional schools.

Course requirements involve 69-72 semester hours including:

| | |
|---|------|
| CHEM-1000 Principles of Chemistry | 5 |
| ESS-1350 Foundations of Exercise and Sport Science | 2 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESS-2380 Motor Learning and Development | 3 |
| ESS-3800 Sport Psychology | 3 |
| ESS-3900 Physiology of Exercise | 3 |
| ESS-3920 Biomechanics | 3 |
| ESS-3940 Structural Kinesiology | 3 |
| EXSC-2000 Worksite Observation | 0 |
| EXSC-3010 Campus Exercise Science Practicum | 1 |
| EXSC-3020 Community Exercise Science Practicum | 1 |
| EXSC-3810 Organization and Administration of Exercise Science | 3 |
| EXSC-3860 Basic Exercise Testing | 4 |
| EXSC-3870 Basic Exercise Prescription | 4 |
| EXSC-4600 Research in Exercise Science | 3 |
| EXSC-4700 Senior Research | 3 |
| EXSC-4880 Exercise Testing and Prescription for Special Populations | 3 |
| *EXSC-4990 Internship in Exercise Science | 9-12 |
| ² GBIO-2010 Human Anatomy and Physiology I | 4 |
| ³ GBIO-2015 Human Anatomy and Physiology II | 4 |
| MAHE-3030 Nutrition | 3 |
| MAHE-3100 Drug Education | 3 |

¹Satisfies physical science general education requirements
²Satisfies biological science general education requirements
³Counts toward the 16 semester hours of science and mathematics courses required for bachelor of science degree
 *Capstone Course

Exercise Science Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements | 45 |
| Exercise Science B.S. Major Requirements | 69-72 |
| Electives | 11-14 |
| Total (minimum, not including proficiency) | 128 |

Students preparing for physical therapy school should select the following course options, substitutions, and additions to the Bachelor of Science in exercise science curriculum.

| | |
|---|------|
| GBIO-2010 Human Anatomy and Physiology I | 4 |
| (or BIO-3460 Human Structure and Function | 4) |
| GMTH 1030 Precalculus | 4 |
| (instead of GMTH 1020 College Algebra | 3) |
| CHEM 1110 General Chemistry I | 4 |
| and CHEM 1120 General Chemistry II | 4 |
| (instead of CHEM 1010 Principles of Chemistry | 5) |
| BIO 1110 Introduction to Biology | 4 |
| (instead of GBIO 1000 Principles of Biology | 3.5) |
| GBIO 2020 Advanced Clinical Physiology | 4 |
| BIO 1120 General Zoology | 4 |
| PHYS 1010 College Physics I | 5 |
| and PHYS 1020 College Physics II | 5 |
| PYCH 1600 General Psychology | 3 |
| PYCH 2600 Human Development: Life Span | 3 |
| PYCH 2610 Statistics | 3 |
| PYCH 2640 Abnormal Psychology | 3 |

Suggested Four-Year Curriculum for a Major in Exercise Science — B.S.

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| ESS-1350 Foundations of Exercise and Sport Science | 2 |
| ESS-1400 First Aid and Safety Education | 2 |
| GBIO-2010 Human Anatomy and Physiology I | 4 |
| GSS-1100 Politics and American Culture | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Humanities Elective | 3 |
| Quantitative Requirement | 3 |
| Total | 31 |

Summer:

| | |
|--------------------------------------|---|
| EXSC-2000 Worksite Observation | 0 |
|--------------------------------------|---|

Second year:

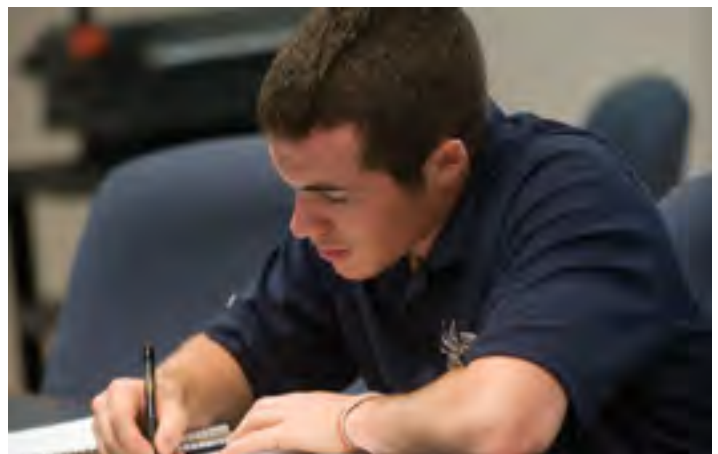
| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| ESS-2380 Motor Learning and Development | 3 |
| ESS-3800 Sport Psychology | 3 |
| ESS-3900 Physiology of Exercise | 3 |
| ESS-3920 Biomechanics | 3 |
| GBIO-2015 Human Anatomy and Physiology II | 4 |
| HUM-1400 Introduction to the Humanities | 3 |
| Literature Elective | 3 |
| Social Science/Global Awareness Elective | 3 |
| Total | 31 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CHEM-1000 Principles of Chemistry | 5 |
| ESS-3940 Structural Kinesiology | 3 |
| EXSC-3010 Campus Exercise Science Practicum | 1 |
| EXSC-3860 Basic Exercise Testing | 4 |
| EXSC-3870 Basic Exercise Prescription | 4 |
| EXSC-4600 Research in Exercise Science | 3 |
| MAHE-3030 Nutrition | 3 |
| MAHE-3100 Drug Education | 3 |
| Total | 30 |

Fourth year:

| | |
|---|-----------|
| EXSC-3020 Community Exercise Science Practicum | 1 |
| EXSC-3810 Organization and Administration of Exercise Science | 3 |
| EXSC-4700 Senior Research | 3 |
| EXSC-4880 Exercise Testing and Prescription for Special Populations | 3 |
| EXSC-4990 Internship in Exercise Science | 9-12 |
| History Elective | 3 |
| ***Electives | 7-10 |
| Total | 32 |



A complete description of the general education requirements is found on page 26.

Sport and Exercise Studies

The **sport and exercise studies major** prepares students for a career in entry-level positions in YMCAs, sport ministry organizations, social service agencies, recreation centers, college and university intramural or athletic departments, or other possibilities within the sport industry. This program can be used as preparation for graduate school in such areas as sport psychology, recreational therapy, ergonomics, motor learning and development, etc. A minor selected with department chair approval is also part of the requirements for this major.

Course requirements involve 55-62 semester hours including:

Sport and Exercise Studies Core Requirements27

| | |
|--|----------|
| ESS-1350 Foundations of Exercise and Sport Science | 2 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESS-2100 Leadership and Ethics in Sport | 3 |
| ESS-2380 Motor Learning and Development..... | 3 |
| ESS-3890 Human Anatomy and Physiology for the Physical Educator | 5 |
| MAPE-1210 Team Sports | 2 |
| MAPE-2200 Individual and Dual Sports I..... | 2 |
| MAPE-2210 Individual and Dual Sports II | 2 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| SMGT-2100 Sport in Society | 3 |
| One physical education course selected from | 1 |
| PEAE-XXXX Activity Elective..... | 1 |
| PEAL-XXXX Leisure Elective | 1 |
| PEAR-XXXX Rhythmics Elective | 1 |
| PEAS-XXXX Tumbling or Swimming..... | 1 |

3000- or 4000-Level Exercise and Sport Science Electives; a minimum of four courses, excluding independent study or internship courses selected from..... 10-14

| | |
|---|---|
| CCHG-3670 Fundamentals of Coaching | 3 |
| CCHG-3680 Scientific Basis of Coaching..... | 2 |
| CCHG-3700 Coaching Course..... | 2 |
| ESS-3800 Sport Psychology..... | 3 |
| ESS-3900 Exercise Physiology..... | 3 |
| ESS-3920 Biomechanics | 3 |
| EXSC-3860 Basic Exercise Testing | 4 |
| EXSC-3870 Basic Exercise Prescription..... | 4 |
| MAHE-3030 Nutrition..... | 3 |
| MAHE-3070 Current Issues in Health..... | 1 |
| MAHE-3100 Drug Education..... | 3 |
| MAHE-3500 Community Health Concepts..... | 2 |
| SMGT-3180 Legal Issues in the Sport Industry | 3 |
| SMGT-3200 Facility Design and Management..... | 3 |
| SMGT-3300 Event Planning and Production..... | 3 |
| SMGT-4100 Marketing and Promotions in the Sport Industry3 | |
| SMGT-4200 Financing Sport Operations | 3 |

*SES-4990 Internship in Sport and Exercise Studies (or SES-4995 Senior Research Project in Sport and Exercise Studies3-6

Minor requirements (approval of department chair) 15

*Capstone Course

Sport and Exercise Studies Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements..... | 50-55 |
| Sport and Exercise Studies Requirements | 55-62 |
| Electives | 16-23 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Sport and Exercise Studies

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| ESS-1350 Foundations of Exercise and Sport Science | 2 |
| ESS-1400 First Aid and Safety Education | 2 |
| HUM-1400 Introduction to the Humanities | 3 |
| MAPE-1210 Team Sports | 2 |
| PEAE, PEAL, PEAR, or PEAS Elective..... | 1 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Quantitative Elective..... | 3 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| ESS-2380 Motor Learning and Development..... | 3 |
| MAPE-2200 Individual and Dual Sports I..... | 2 |
| MAPE-2210 Individual and Dual Sports II | 2 |
| Minor Electives | 10 |
| Biology Elective | 3.5 |
| Physical Science Elective..... | 3.5 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 33 |

Third year:

| | |
|---|--------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| ESS-2100 Leadership and Ethics in Sport..... | 3 |
| ESS-3890 Human Anatomy & Physiology for the Physical Educator...5 | |
| GSS-1100 Politics and American Culture | 3 |
| SMGT-2100 Sport in Society | 3 |
| 3000/4000-Level ESS courses | 10-14 |
| Total | 28-32 |

Fourth year:

| | |
|---|--------------|
| SES-4990 Internship or SES-4995 Internship..... | 3-6 |
| Minor Electives | 5 |
| Humanities Elective | 3 |
| Electives | 16-23 |
| Total | 30-34 |



A complete description of the general education requirements is found on page 26.

Teacher Education Licensure Program — Physical Education — Multi-Age

The **multi-age physical education major** prepares students to teach physical education in grades pre-K to 12 in public and Christian schools. Students who complete this curriculum will be licensed by the state of Ohio and the Association of Christian Schools International. The Ohio teaching license, through reciprocal agreements, is automatically recognized in 42 states. For additional information about teaching in other states, see the department of education section (page 68).

Course requirements involve 82 semester hours including:

| | |
|--|-----------|
| Physical Education | 40 |
| ESS-1350 Foundations of Exercise and Sport Science | 2 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESS-2380 Motor Learning and Development..... | 3 |
| ESS-3890 Human Anatomy and Physiology for the Physical Educator | 5 |
| ESS-3900 Physiology of Exercise | 3 |
| ESS-3920 Biomechanics..... | 3 |
| GMTH-1020 College Algebra..... | 3 |
| MAHE-3130 School Health Program | 3 |
| MAPE-1210 Team Sports | 2 |
| MAPE-2200 Individual and Dual Sports I..... | 2 |
| MAPE-2210 Individual and Dual Sports II | 2 |
| MAPE-4500 Curriculum Development in Physical Education... | 3 |
| PEAL-XXXX Outdoor Leisure Elective..... | 1 |
| PEAR-2100 Rhythmics | 1 |
| PEAS-1120 Tumbling | 1 |
| PEAS-17XX Swimming Elective | 1 |
| Exercise and Sport Science Electives | 3 |
| Professional Education | 42 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs ... | 1 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-4000 Reading in the Content Area: Multi-Age | 3 |
| *EDUC-4900 Student Teaching and Seminar: Multi-Age..... | 10 |
| MAPE-3600 Physical Education in the Elementary School..... | 5 |
| MAPE-4950 Methods of Teaching Secondary Physical Education | 3 |
| MAPE-4960 Field Experience | 4 |
| MAPE-4970 Field Experience (Special Populations)..... | 2 |

*Capstone Course

Physical Education Multi-Age Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements..... | 46–54 |
| Physical Education Multi-Age Major Requirements | 82 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Physical Education — Multi-Age

First year:

| | |
|--|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| ENG-1400 Composition..... | 3 |
| ESS-1350 Foundations of Exercise and Sport Science | 2 |
| ESS-1400 First Aid and Safety Education | 2 |
| GBIO-1000 Principles of Biology | 3.5 |
| GMTH-1020 College Algebra..... | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| MAPE-1210 Team Sports | 2 |
| PEAS-1120 Tumbling | 1 |
| PEAS-17XX Swimming Elective | 1 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 33.5 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| ESS-2380 Motor Learning and Development..... | 3 |
| MAPE-2200 Individual and Dual Sports I..... | 2 |
| MAPE-2210 Individual and Dual Sports II | 2 |
| PEAR-2100 Rhythmics | 1 |
| Physical Science Elective..... | 3.5 |
| Literature Elective | 3 |
| Social Science/ Global Awareness Elective..... | 3 |
| Total | 33.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| ESS-3890 Human Anatomy and Physiology for the Physical Educator..... | 5 |
| ESS-3900 Physiology of Exercise | 3 |
| ESS-3920 Biomechanics..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| MAHE-3130 School Health Program | 3 |
| MAPE-3600 Physical Education in Elementary School..... | 5 |
| PEAL-XXXX Outdoor Leisure Activity..... | 1 |
| Exercise and Sport Science Elective | 3 |
| History Elective..... | 3 |
| Total | 31 |

Summer:

| | |
|--|---|
| EDUC-4000 Reading in the Content Area: Multi-Age | 3 |
|--|---|

Fourth year:

| | |
|---|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-4900 Student Teaching and Seminar: Multi-Age | 10 |
| MAPE-4500 Curriculum Development in Physical Education..... | 3 |
| MAPE-4950 Methods of Teaching Secondary Physical Education... | 3 |
| MAPE-4960 Field Experience | 4 |
| MAPE-4970 Field Experience (Special Populations)..... | 2 |
| Total | 27 |

Minors

Coaching Minor

The **coaching minor** prepares students to work as coaches in organized athletic programs at any level. Although formal education is not currently required of coaches, this particular program combines theoretical, scientific, and practical components to provide students with the knowledge and the skills they will need to succeed in this competitive yet rewarding area of service. The course requirements of the coaching minor make it a suitable complement to any major field of study offered by the University.

Course requirements for a minor in coaching involve 17 semester hours including:

| | |
|---|----------|
| CCHG-3670 Fundamentals of Coaching | 3 |
| CCHG-3680 Scientific Basis of Coaching | 2 |
| One course selected from the following | 2 |
| CCHG-3700 Coaching Volleyball | 2 |
| CCHG-3720 Coaching Basketball | 2 |
| CCHG-3730 Coaching Track and Field and Cross Country .. | 2 |
| CCHG-3740 Coaching Softball and Baseball..... | 2 |
| CCHG-3760 Coaching Soccer..... | 2 |
| CCHG-4950 Internship in Coaching..... | 3 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESS-1550 Athletic Training Essentials..... | 2 |
| ESS-3800 Sport Psychology | 3 |

Health Promotion Minor

The **health promotion minor** is a noncertificate area for those students not seeking K–12 teaching certification in health education. It is designed to prepare students for health promotion employment opportunities in educational, community, health agency, sport, and leisure settings. It complements the coursework in physical education, athletic training, business, exercise science, sport and exercise studies, or psychology.

Course requirements for a minor in health promotion involve 21 semester hours including:

| | |
|--|----------|
| ALHL-1000 Introduction to the Allied Health Professions..... | 1 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESS-3890 Human Anatomy and Physiology for the Physical Educator..... | 5 |
| MAHE-1350 Foundations of Health Education | 2 |
| MAHE-2100 Personal Health Issues | 3 |
| MAHE-3030 Nutrition..... | 3 |
| MAHE-3500 Community Health Concepts | 2 |
| One course selected from the following | 3 |
| MAHE-4990 Health Promotion Internship..... | 3 |
| PYCH-1600 General Psychology | 3 |
| SOC-3710 Family and Society..... | 3 |

Multi-Age Health Education Minor

The **multi-age health education minor** prepares students to teach health in Christian or public schools in grades pre-K to 12. The Ohio teaching license, through reciprocal agreements, is automatically recognized in 42 states. For additional information about teaching in other states, see the department of education section (page 68). Because this program of study is not a major, students interested in health education must select an additional subject area as a major.

Course requirements involve 60 semester hours including:

| | |
|---|-----------|
| Health Education | 23 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESS-3890 Human Anatomy and Physiology for the Physical Educator | 5 |
| MAHE-1350 Foundations of Health Education | 2 |
| MAHE-2100 Personal Health Issues | 3 |
| MAHE-3030 Nutrition..... | 3 |
| MAHE-3100 Drug Education | 3 |
| MAHE-3130 School Health Program | 3 |
| MAHE-3500 Community Health Concepts | 2 |
| Professional Education..... | 37 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-4000 Reading in the Content Area: Multi-Age | 3 |
| EDUC-4900 Student Teaching and Seminar: Multi-Age | 10 |
| MAHE-4610 Teaching Health..... | 5 |
| MAHE-4960 Field Experience in Health | 4 |

Sport Ministry Minor

The purpose of the **sport ministry minor** is to assist the student who is preparing for a variety of ministries through the medium of sport. This minor is a good complement to many majors including sport and exercise studies, sport management, world missions, and youth ministries.

Course requirements for a minor in sport ministry involve 20–22 semester hours including:

| | |
|---|------------|
| BEPT-2400 Personal Evangelism | 3 |
| BEPT-3410 Discipleship | 3 |
| CCHG-3670 Fundamentals of Coaching | 3 |
| ESS-1400 First Aid and Safety Education | 2 |
| ESSE-1350 Foundations of Sport Ministries | 3 |
| ESSE-2830 Recreational Leadership..... | 2 |
| Two courses selected from the following..... | 4–6 |
| ESSE-2100 Wilderness Ministry | 3 |
| ESSE-2810 Introduction to Camping | 2 |
| MAPE-1210 Team Sports..... | 2 |
| MAPE-2200 Individual and Dual Sports I | 2 |
| (BEPH-2260 Religion and Culture recommended general education humanities/global awareness elective) | |

Department of

MEDIA AND APPLIED COMMUNICATIONS

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Majors

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Mission Statement

The Cedarville University Department of Media and Applied Communications is a diverse community of communication professionals committed to educating students to change the world as they biblically engage their culture with the heart and mind of Christ. The department recognizes the importance of balancing the professional side of our discipline with a rigorous academic grounding. Contemporary issues and theories are evaluated and discussed in the perspective of Scripture. To achieve these goals, the department has set the following objectives. We seek to:

- Achieve excellence in communication skills and critical thinking.
- Foster a desire for knowledge and an enthusiasm for creative expression.
- Aid students in formulating problem-solving techniques in applied contexts.
- Encourage the evaluation of performance-based communication as a reflection of culture.
- Develop innovative leaders for positions in media, politics, business, and entertainment.

Personal Requirements

Students planning to pursue a major in media and applied communications are best prepared by taking a college-preparatory curriculum in high school. Successful students in the major are individuals with abilities in creative expression, critical thinking, problem-solving, and interpersonal interaction.

Department Requirements

All students in the department take Introduction to Communication Arts as the entry course in the major. Within each specific program of study, students complete courses in the history, theory, research, and ethics of their particular fields of communication. Students are required to complete a senior capstone project in research, production or an internship to graduate. The nature of the project is determined by the emphasis area of the student.

Technical Resources

The department provides state-of-the-art audio and video equipment with which students learn the skills of the broadcasting and digital media.

The computer network provides tools and resources for public speaking, debate, and forensics.

Journalism students learn news writing and design in a newly developed media lab. This facility also features print, broadcasting, and online media resources for classroom instruction and research.



Programs of Study

The department of media and applied communications offers the following programs of study:

Majors

- Applied Communication
- Broadcasting and Digital Media
- Journalism
- Technical and Professional Communication

Minors

- Comprehensive Communication Arts
- Digital Film
- Editing and Publishing
- Electronic Media
- Intercultural Communication
- Motion Graphics
- Organizational Communication
- Writing for the Professions

Cocurricular Opportunities

Debate

Cedarville University has had a successful debate program for two decades, earning the national championship title in 1999, 2000, and 2003 within the National Education Debate Association. In 2003, Cedarville joined the National Parliamentary Debate Association (NPDA), the largest debate organization in the U.S., and is currently ranked #13 in the nation (the top 5 percent) for the 2010–11 season, surpassing other nationally recognized teams such as UCLA and University of Oregon. Cedarville debaters are also the 2011 National Champions among Christian colleges and universities Small Schools Division. Contact the director of debate, Mark Bentley, for audition and scholarship information.

Forensics

Forensics is intercollegiate speech competition, including events in public speaking, oral interpretation, limited preparation, and Lincoln-Douglas debate. In recent years, Cedarville has been state champions in Ohio and national champions among Christian colleges and universities. Contact professor Derrick Green, assistant professor of media and applied communications, for audition information. Scholarships are available.

Lamda Pi Eta

Lamda Pi Eta is the National Communication Honor Society for undergraduate students. It recognizes, fosters, and rewards outstanding scholastic achievement. In addition, Lamda Pi Eta promotes and encourages professional development among majors, while providing an opportunity to discuss and exchange ideas in the field of communication.

Miriam Maddox Forum

The Miriam Maddox Forum is an honorary alumni society of the department of media and applied communications for alumni and graduating seniors with a continuing interest in communication within the public sphere.

Society for Human Resource Management

Media and applied communications majors interested in organizational communications and human resources are encouraged to join the Cedarville University chapter of the Society for Human Resource Management (SHRM). SHRM members investigate the field of human resources by developing their own human resource management programming and activities and by attending other professional human resource meetings and conferences.

Society for Technical Communication

Serves students in the technical and professional communication major. It promotes communication in technical fields. Benefits of membership include job referral services, networking with professionals, and numerous social activities among faculty and students.

Resound Radio

Students of all majors interested in developing their skills in broadcasting and digital media are encouraged to join the staff of Resound Radio, the University's award-winning, online, professional, student radio station. Students are involved in planning, programming, and managing the station. Students enjoy a fun working environment and a large, responsive audience. Popular programs, music, and personalities have made this station an important part of the campus life at Cedarville. The station can be found at resoundradio.com.

Career Opportunities

Careers in communications are varied and vast. Graduates of this department excel in careers in public relations, personnel management, communication consulting, media communication, political communication, cross-cultural communication, and corporate education training.

Students who major in broadcasting and digital media receive excellent training for careers in audio and video production, station management, digital media production, journalism, interactive media design, and management.

These majors also equip students to pursue graduate studies in communication and other fields such as law, theology, and business.

Other career opportunities include:

- Actor
- Advertising executive
- Anchorperson
- Business manager
- Communication consultant
- Communication statistician
- Community relations director
- Customer service representative
- Public information officer
- Development officer
- Film director
- Fund raiser
- Health services manager
- Human rights officer
- Journalist
- Labor relations consultant
- Legal communication consultant
- Legislative correspondent
- Mediation specialist
- News director
- Nonprofit organization director
- Political campaign director
- Political analyst
- Politician
- Publications editor
- Publicist
- Radio talk-show host
- Recording company executive
- Sales/marketing rep.
- Seminar leader
- Sports announcer
- Technical communication
- Technical marketing communication
- Web design

Faculty

Charles Elliott, *Chair*. Professor of Communications. *Education*: B.A., Cedarville University, 1977; M.A., Temple University, 1984; Ph.D., Temple University, 1994. At Cedarville since 2003.

J. Wesley Baker, Distinguished Professor of Communications. *Education*: B.A., Bob Jones University, 1972; M.A., University of South Carolina, 1980; Ph.D., The Ohio State University, 1991. At Cedarville since 1977.

Mark Bentley, Instructor of Communications and Debate Director. *Education*: B.A., Cedarville University, 2009. At Cedarville since 2011.

Nicholas Carrington, Instructor of Technical Communication. *Education*: B.A., Cedarville University, 2010; M.A., Missouri State University, 2012. At Cedarville since 2012.

Jeffrey Gilbert, Assistant Professor of Journalism. *Education*: B.A., Cedarville University, 1987. At Cedarville since 2009.

Derrick Green, Assistant Professor of Communications; Director of Forensics. *Education*: B.A., Cedarville University, 1997; M.A., Miami University, 1999. At Cedarville since 2002.

Deborah Haffey, Senior Professor of Communications. *Education*: B.A., Cedarville University, 1968; M.A., The Ohio State University, 1969; Ph.D., The Ohio State University, 2002. At Cedarville since 1986.

Sandra Harner, Senior Professor of Technical Communication. *Education*: B.A., Cedarville University, 1964; M.A., University of Dayton, 1981. At Cedarville since 1981.

Heather Heritage, Instructor of Communications. *Education*: B.S., Youngstown State, 2002; M.A., University of Dayton, 2011. At Cedarville since 2011.

James Kragel, Associate Professor of Communications. *Education*: B.S., Mankato State University, 1977; M.A., Wheaton College, 1984. At Cedarville since 1994.

James Leightenheimer, Associate Professor of Communications. *Education*: B.A., Cedarville University, 1980; M.A., Ohio University, 1989. At Cedarville since 1982.

J. Michael López, Professor of Communications. *Education*: B.A., Bob Jones University, 1972; M.A., Bob Jones University, 1975; Ph.D., The Ohio State University, 1985. At Cedarville since 1984.

Mischelle McIntosh, Assistant Professor of Communications and Media Research. *Education*: B.A., Cedarville University, 1977; M.A., Pensacola Christian College, 1981; M.A., University of West Florida, 1992. At Cedarville since 1999.

Kurt Moreland, Associate Professor of Communications. *Education*: B.A., Cedarville University, 1976; M.A., West Virginia University, 1978; all work completed for Ph.D. except dissertation, Purdue University. At Cedarville since 1981.

James Phipps, Senior Professor of Communications. *Education*: B.A., Cedarville University, 1968; M.A., The Ohio State University, 1970; Ph.D., The Ohio State University, 1975. At Cedarville since 1968.

Jeffrey Simon, Instructor of Communications. *Education*: B.A., Cedarville University, 2006. At Cedarville since 2010.

Margaret Wheeler, Associate Professor of Communications. *Education*: B.A., Cedarville University, 1964; M.Ed., Central State University, 1998. At Cedarville since 1995.

Technical Support Staff

David Bastress, Electronic Media Technician. *Education*: Practical Bible Training School, 1970; John Brown University, 1980. At Cedarville since 2002.

Applied Communication

The **applied communication major** provides students with a solid foundation to meet the diverse requirements of communication professionals in a wide variety of contexts. This major prepares students for careers in public relations, personnel management, consultation programs, media communications, and corporate executive training. Because excellent communication skills are important in many professions, this major has also been chosen by those pursuing careers in marketing/sales and politics. It also serves as excellent preparation for those planning additional graduate professional training such as law, theology, and business.

Course requirements involve 48 semester hours, including 25 semester hours in the core requirements and 23 semester hours in the selected concentration.

Course requirements involve 48 semester hours including:

| | |
|--|-----------|
| Applied Communication requirements | 25 |
| COM-1150 Communication Seminar | 1 |
| COM-2050 Communication Theory | 3 |
| (or COM-2320 Theories of Mass Media.....) | 3) |
| COM-2200 Communication in Applied Contexts | 3 |
| (or COM-3120 Argumentation | 3) |
| COM-2220 Quantitative Research..... | 3 |
| (or COM-2225 Qualitative Research | 3) |
| COM-2330 Writing for Communication Professions..... | 3 |
| COM-3240 Interpersonal Communication | 2 |
| COM-3840 Media Analysis | 3 |
| (or EMTC-3611 Web Analytics | 3) |
| COM-4850 Senior Seminar | 1 |
| EMTC/JOUR-3650 Networked Audience | 3 |
| EMTC-4155 Image and Word in a Visual Culture | 3 |
| (or COM-3710 Narrative and Cultural Literacy.....) | 3) |
| Concentration selected from the following | 23 |
| Organizational Communication concentration | 23 |
| COM-3230 Organizational Communication | 3 |
| COM-3250 Interviewing | 3 |
| COM-3260 Organizational Negotiation | 3 |
| COM-3330 Organizational Training..... | 2 |
| COM-4060 Organizational Leadership..... | 3 |
| COM-4950 Applied Capstone | 3 |
| MGMT-3500 Principles of Organization and Management..... | 3 |
| MGMT-3530 Human Resources Management..... | 3 |
| (or COM-3350 Event Planning | 3) |
| (or COM-3550 Advocacy Communication | 3) |
| Public Communication concentration | 23 |
| COM-2000 Persuasive Theory..... | 3 |
| COM-3100 Advanced Public Speaking | 3 |
| COM-4110 History of Public Address | 3 |
| COM-4120 Contemporary Rhetoric | 3 |
| COM-4610 Communication Ethics..... | 2 |
| COM-4950 Applied Capstone | 3 |
| Electives..... | 6 |
| Strategic Communication Concentration | 23 |
| COM-2520 Virtual Communication | 3 |
| COM-3350 Event Planning | 3 |
| (or COM-3550 Advocacy Communication | 3) |
| COM-4060 Organizational Leadership..... | 3 |
| COM-4610 Communication Ethics..... | 2 |
| COM-4950 Applied Capstone | 3 |
| *Strategic Communication electives..... | 9 |

*Strategic Communication Electives are chosen by the student to meet his or her specific life goals and must be approved by the department chair and the student's advisor. The electives may be from department approved specialization templates or developed in consultation with the student's advisor. The electives may be from department approved specialization templates or developed in consultation with the student's advisor to meet particular goals. Additionally, the student must justify the exclusion of communication courses that appear to meet the life goal plan. No 1000-level courses may apply.

Applied Communication Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements..... | 52-60 |
| Applied Communication Major Requirements | 48 |
| Electives | 20-28 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Applied Communication

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1150 Communication Seminar | 1 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Biological Science Elective..... | 3.5 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Total | 30.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| COM-2050 Communication Theory | 3 |
| (or COM-2320 Theories of Mass Media | 3) |
| COM-2200 Communication in Applied Contexts | 3 |
| (or COM-3120 Argumentation.....) | 3) |
| COM-2220 Quantitative Research..... | 3 |
| (or COM-2225 Qualitative Research | 3) |
| COM-2330 Writing for Communication Professions..... | 3 |
| Physical Science Elective..... | 3.5 |
| Quantitative Elective | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Applied Communication Concentration | 6 |
| Total | 33.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| COM-3240 Interpersonal Communication | 2 |
| COM-3840 Media Analysis | 3 |
| (or EMTC-3611 Web Analytics.....) | 3) |
| EMTC-4155 Image and Word in a Visual Culture | 3 |
| (or COM-3710 Narrative and Cultural Literacy | 3) |
| Applied Communication Concentration | 11 |
| Electives | 9 |
| Total | 32 |

Fourth year:

| | |
|---|-----------|
| COM-4850 Senior Seminar | 1 |
| EMTC/JOUR-3650 Networked Audience | 3 |
| Humanities Elective | 3 |
| Applied Communication Concentration | 6 |
| Electives | 19 |
| Total | 32 |

Broadcasting and Digital Media

The **broadcasting and digital media major** prepares students for careers in a wide range of media — radio, television, non-broadcast audio/video production, and online and computer-based media. Because of the paraprofessional nature of this program and the balance of practical and theoretical aspects of media work, Cedarville graduates have excelled in careers across all of these media.

Through specifically designed courses, students have the opportunity to work in environments in which radio stations are streaming alternate music formats on the web, television is digital and interactive, and the Internet's broadband capacity provides video on demand. Students receive a broad perspective to prepare them to work in a rapidly changing media environment and will also select a concentration for specialization.

Course requirements involve 53 semester hours — 32 semester hours of core courses that provide the student with an overview of these media and develop skills in common with all of them and a 21-hour concentration. The concentrations provide specialized courses in audio production, video/film production, and a program of study designed by the student and faculty members to meet his or her specific life goal.

Internships are strongly recommended but are dependent upon availability and placement.

Course requirements involve 54 semester hours including:

Core Requirements.....33

| | |
|--|----|
| EMTC-1110 Introduction to Electronic Media | 3 |
| EMTC-1120 Audio Production..... | 3 |
| EMTC-2110 Video Technical Training..... | 3 |
| EMTC-2130 Writing for Electronic Media..... | 3 |
| (or EMTC-3330 Screenwriting | 3) |
| (or EMTC/JOUR 3605 Writing and Design | |
| Web/Mobile Media | 3) |
| EMTC-2810 Sophomore Seminar | 1 |
| EMTC-3111 Survey Research for Electronic Media | 3 |
| (or EMTC-3611 Web Analytics | 3) |
| EMTC/JOUR-3150 Media Ethics..... | 2 |
| EMTC-3151 Christian Approaches to Electronic Media..... | 2 |
| EMTC/JOUR-3650 Networked Audience | 3 |
| EMTC-4110 Electronic Media Law and Regulation..... | 3 |
| EMTC/JOUR-4650 Designing Solutions for New Audiences.... | 3 |
| EMTC-4810 Senior Seminar..... | 1 |

Select one of the following, with approval of faculty 3-12

*EMTC-4920 Senior Project.....3

*EMTC-4930 Electronic Media Internship..... 3-12

Concentration selected from the following21

Digital Film and Video concentration..... 21

| | |
|---|----|
| EMTC-2320 Preproduction and Planning for Video/Film.... | 3 |
| EMTC-3210 Digital Audio Post Production..... | 3 |
| (or EMTC-3216 Audio for Video and Film | 3) |
| (or THTR-2430 Acting I..... | 3) |
| EMTC-3310 Digital Film Production | 3 |
| EMTC-3355 SFX and Compositing for TV and Film | 3 |
| EMTC-3620 Digital Compression and Streaming | 3 |
| EMTC-4310 Advanced Cinematography and Lighting | 3 |

Practica – three hours selected from the following3

*EMTC-3731 Video Production Practicum
 1 |

*EMTC-3733 Sports Production Practicum.....
 1 |

*EMTC-3734 Film Practicum
 1 |

Digital Radio and Audio concentration 21

| | |
|--|----|
| EMTC-1210 Media Performance..... | 3 |
| EMTC-3210 Digital Audio Post-Production..... | 3 |
| EMTC-3215 Live Sound..... | 3 |
| Select one set of courses approved by advisor..... | 12 |
| Set one: | |
| EMTC-3410 Electronic Media Sales..... | 3 |
| THTR-1410 Introduction to Theatre | 3 |
| THTR-2410 Advanced Performance Techniques..... | 3 |
| THTR-2430 Acting I..... | 3 |

Set two:

| | |
|--|---|
| EMTC-2220 Sound Design | 3 |
| EMTC-3211 Digital Music Production | 3 |
| EMTC-3216 Audio for Video/Film | 3 |
| EMTC-3720 Audio Production Practicum (1 hour each; 3 hours required)..... | 3 |

Integrated Digital Media concentration 21

| | |
|---|-----------|
| EMTC-3210 Digital Audio Post Production | 3 |
| EMTC-3310 Digital Film Production | 3 |
| Digital Media Electives | 15 |

Electives are chosen by the student to meet his or her specific life goals and must be approved by the department chair and the student's advisor. Additionally, the student must justify the exclusion of communication courses that appear to meet the life goal plan. No 1000-level courses may apply.

*Capstone Course

+Repeatable



Broadcasting and Digital Media Major Curriculum Summary

Proficiency Requirements.....0–5
 General Education Requirements.....52–60
 Broadcasting and Digital Media Major Requirements..... 54
 Electives 14–22
Total (minimum, not including proficiency) 128

Electronic Media Advisory Board

The EMTC Advisory Board provides input on the development of the EMTC majors and an assessment of the program’s courses and facilities to ensure that students are being prepared for a career in the field. Current board members* include:

- Ben Barrett, Association of Baptists for World Evangelism*
- Jay Benson, WHIZ Media Group*
- Ruth Bliss, Mission Network News*
- R. Todd Carter, Ginghamburg Church*
- Dan Craig, WRFD, Salem Media*
- Bill DeWees, WONU*
- Bob Lepine, Family Life Today*
- Dusty Rhodes, WAY-FM Media Group*
- Dave Samuel, Focus on the Family*
- Josh Snyder, Media and Entertainment Entrepreneur*
- Shelly Stock, Freelance Television Producer*
- Paul Yuen, Gospelcom International*

*Organizational affiliation cited for identification only



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Broadcasting and Digital Media

First year:

BEGE-1710 Christian Life and Thought.....3
 BEGE-1720 Spiritual Formation3
 COM-1100 Fundamentals of Speech.....3
 EMTC-1110 Introduction to Electronic Media3
 EMTC-1120 Audio Production.....3
 ENG-1400 Composition.....3
 GSS-1100 Politics and American Culture.....3
 HUM-1400 Introduction to the Humanities.....3
 PEF-1990 Physical Activity and the Christian Life2
 Biological Science Elective.....3.5
 History Elective.....3
 Quantitative Elective3
Total 35.5

Second year:

BEGE-2730 Old Testament Literature3
 BEGE-2740 New Testament Literature3
 EMTC-2110 Video Technical Training.....3
 EMTC-2810 Sophomore Seminar1
 EMTC-XXXX Writing Option3
 EMTC-XXXX Concentration Requirements12
 Physical Science Elective.....3.5
 Literature Elective3
Total 31.5

Third year:

BEGE-3750 Christian Worldview Development.....2
 BEGE-3760 Christian Worldview Integration2
 EMTC-3150 Media Ethics.....2
 EMTC-3151 Christian Approaches to Electronic Media.....2
 EMTC-3650 Networked Audience3
 EMTC-XXXX Research Option.....3
 EMTC-XXXX Concentration Requirements6
 Social Science/Global Awareness Elective.....3
 Electives7
Total 30

Fourth year:

EMTC-4110 Electronic Media Law and Regulation.....3
 EMTC 4650 Designing Solutions for New Audiences.....3
 EMTC-4810 Senior Seminar.....1
 EMTC-4920 Senior Project.....3
 (or EMTC-4930 Electronic Media Internship3–12)
 Concentration Requirements3
 Humanities Elective3
 Electives15
Total 31

Journalism

The **journalism major** prepares students for careers in a wide range of media — convergent journalism and public relations.

The uniqueness of the major is based in Cedarville University's approach to integrating faith and learning. In this program of study, students will be educated to develop a Christ-centered approach to the collection and dissemination of information.

The scope of the major provides both breadth and depth. The convergent aspect of the program provides academic and professional development across media. There is depth in the progression through the core and concentration subjects.

Entrance into the journalism program is contingent on passing the GSP (Grammar/Spelling/Punctuation) Test. Also, students must have a minimum GPA of 2.5.

Retention requirement at the end of fall semester of the sophomore year is a minimum GPA of 2.30 to continue.

Course requirements involve 51 semester hours: 32 semester hours of core courses and 19 hours of concentration.

Course requirements involve 51 semester hours including:

| | |
|---|-----------|
| Core Requirements | 32 |
| COM-2320 Theories of Mass Media..... | 3 |
| COM-2510 Media History..... | 3 |
| JOUR-1000 Introduction to Media Writing..... | 3 |
| JOUR-2000 Introduction to Reporting..... | 3 |
| JOUR-3100 Media Law..... | 3 |
| JOUR-3150 Media Ethics..... | 2 |
| JOUR/EMTC-3605 Writing and Design for Web/Mobile Media..... | 3 |
| JOUR/EMTC-3650 Networked Audience..... | 3 |
| JOUR/EMTC-4650 Designing Solutions for New Audiences.... | 3 |
| *JOUR-4950 Internship..... | 6 |
| Concentration selected from the following | 19 |
| Convergent Journalism concentration | 19 |
| JOUR-3310 Adv Newswriting/Reporting for Broadcasting..... | 3 |
| JOUR-3320 Adv Newswriting and Reporting for Print..... | 3 |
| JOUR-3900 Journalism Practicum..... | 1 |
| Convergent courses selected from..... | 6 |
| JOUR-3350 Television News Production..... | 3 |
| JOUR-3420 Editing and Design..... | 3 |
| JOUR-3600 Computer Assisted Reporting..... | 3 |
| Electives selected from the following | 6 |
| EMTC-1120 Audio Production..... | 3 |
| EMTC-3350 Documentary Films..... | 3 |
| EMTC-3370 Documentary Film-style Production..... | 3 |
| EMTC-3610 Visual Design for Electronic Media..... | 3 |
| EMTC-3611 Web Analytics..... | 3 |
| JOUR-4420 Feature Writing..... | 3 |
| JOUR-4600 Magazine Writing..... | 3 |
| JOUR-4610 Photojournalism..... | 3 |
| JOUR-4620 Investigative Reporting..... | 3 |
| Public Relations concentration | 19 |
| JOUR-2500 Introduction to Public Relations..... | 3 |
| JOUR-3500 Public Relations Principles and Writing..... | 3 |
| JOUR-3550 Advanced Public Relations Writing..... | 3 |
| JOUR-4500 Public Relations Campaigns..... | 3 |
| JOUR-4550 Practicum in Public Relations..... | 1 |
| Electives selected from the following | 6 |
| COM-3230 Organizational Communication..... | 3 |
| COM-3810 Speechwriting for the Professional..... | 3 |
| COM-4060 Organizational Leadership..... | 3 |
| JOUR-4820 Special Topics in Public Relations..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |

*Capstone Course

Journalism Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 52–60 |
| Journalism Major Requirements..... | 51 |
| Minor or Support Field..... | 16–18 |
| Electives..... | 7–9 |
| Total (minimum, not including proficiency) | 128 |

With the advice and consent of their advisor, all journalism students must declare a minor or support field that relates to their career plans. If an appropriate minor does not already exist, students and their advisor will come to an agreement on what the support field is and develop a list of the courses to be taken to complete that requirement. The minor or support field is submitted to the department chair, who will approve and submit it to the office of the registrar to be part of the students' graduation audit.

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Journalism

First year:

| | |
|--|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| COM-2320 Theories of Mass Media..... | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| JOUR-1000 Introduction to Media Writing..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Biological Science Elective..... | 3.5 |
| History Elective..... | 3 |
| Total | 32.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| COM-2510 Media History..... | 3 |
| JOUR-2000 Introduction to Reporting..... | 3 |
| JOUR/EMTC 3605 Writing and Design for Web/Mobile Media..... | 3 |
| JOUR-XXXX Concentration Requirements..... | 3 |
| Literature Elective..... | 3 |
| Physical Science Elective..... | 3.5 |
| Quantitative Elective..... | 3 |
| Minor or Support Field..... | 3 |
| Total | 30.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| JOUR-3100 Media Law..... | 3 |
| JOUR-3150 Media Ethics..... | 2 |
| JOUR/EMTC-3650 Networked Audience..... | 3 |
| JOUR-XXXX Concentration Requirements..... | 3 |
| Humanities Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Minor or Support Field..... | 9 |
| Total | 30 |

Fourth year:

| | |
|---|-----------|
| JOUR/EMTC-4650 Designing Solutions for New Audiences..... | 3 |
| JOUR-4950 Internship..... | 6 |
| JOUR-XXXX Concentration Requirements..... | 13 |
| Electives..... | 7-9 |
| Minor or Support Field..... | 4-6 |
| Total | 35 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Technical and Professional Communication

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GDES-1300 Graphic Design for Non-Majors..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Literature Elective | 3 |
| Quantitative Elective | 3 |
| Total | 32.5 |

Second year:

| | |
|---|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| ENG-2230 Advanced Composition | 3 |
| ENG-3070 Advanced Grammar for Adolescent Teachers..... | 3 |
| TPC-2000 Production Tools for Technical Communication | 3 |
| Humanities Elective | 3 |
| Physical Science Elective..... | 3.5 |
| Electives | 11 |
| Total | 32.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| TPC-3010 Style and Mechanics for Writers | 3 |
| TPC-3020 Professional Portfolio Development..... | 1 |
| TPC-3130 Technical Communication..... | 3 |
| TPC-3170 The Technical Communicator in a Corporate Culture..... | 2 |
| TPC-3180 Visual Rhetoric | 2 |
| TPC-3210 Technical Editing..... | 2 |
| TPC-3250 Documentation Design..... | 3 |
| History Elective..... | 3 |
| Social Science | 3 |
| Electives | 3 |
| Total | 29 |

Summer:

| | |
|--|----------|
| TPC-3290 Proofreading..... | 2 |
| TPC-4160 Technical and Professional Communication Internship | 5 |
| Total | 7 |

Fourth year:

| | |
|---|-----------|
| TPC-3090 Technical Marketing Communication..... | 3 |
| TPC-4010 Designing Technical Reports | 3 |
| TPC-4020 Professional Portfolio Development II..... | 1 |
| TPC-4050 Designing Online Information I..... | 3 |
| TPC-4090 Designing Online Information II..... | 3 |
| TPC-4130 Instructional Design I..... | 3 |
| TPC-4140 Instructional Design II..... | 3 |
| TPC-4170 Special Topics | 3 |
| Electives | 5 |
| Total | 27 |

Technical and Professional Communication

The **technical and professional communication major** prepares students for positions as communication experts in a variety of industries. The major itself involves 57 semester hours in specific technical and professional communication courses.

| | |
|--|-----------|
| Technical and Professional Communication Core | 57 |
| ENG-2230 Advanced Composition | 3 |
| ENG-3070 Advanced Grammar for Adolescent Teachers..... | 3 |
| GDES-1300 Graphic Design for Non-Majors..... | 3 |
| TPC-2000 Production Tools for Technical Communication | 3 |
| TPC-3010 Style and Mechanics for Writers | 3 |
| TPC-3020 Professional Portfolio Development I..... | 1 |
| TPC-3090 Technical Marketing Communication..... | 3 |
| TPC-3130 Technical Communication..... | 3 |
| TPC-3170 The Technical Communicator in a Corporate Culture | 2 |
| TPC-3180 Visual Rhetoric | 2 |
| TPC-3210 Technical Editing..... | 2 |
| TPC-3250 Documentation Design..... | 3 |
| TPC-3290 Proofreading..... | 2 |
| TPC-4010 Designing Technical Reports | 3 |
| TPC-4020 Professional Portfolio Development II..... | 1 |
| TPC-4050 Designing Online Information I..... | 3 |
| TPC-4090 Designing Online Information II..... | 3 |
| TPC-4130 Instructional Design I..... | 3 |
| TPC-4140 Instructional Design II..... | 3 |
| TPC-4160 Technical and Professional Communication Internship | 5 |
| *TPC-4170 Special Topics | 3 |

*Capstone Course

Technical and Professional Communication Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 52–60 |
| Technical and Professional Communication Requirements | 57 |
| Electives | 6–19 |
| Total (minimum, not including proficiency) | 128 |

Technical and Professional Communication Industry Advisory Board

The Technical and Professional Communication (TPC) industry advisory board aims to enable the department to adequately position the TPC major and its graduates for the future.

- Dhana Banks, Cincom Document Solutions*
- Scott Bennett, Procter and Gamble*
- Jay Luis, Beta LaserMike, Inc.*
- Guy Margiotta, Chase Bank*
- Patti Massey, Myca Multimedia & Training Solutions*
- Sylvia Miller, Miltech Communications, LLC*
- Walt Staudenmaier, Bastion Consulting*
- Jim Visgaitis, HP Enterprise Services*
- Phil Wittmer, Lexis/Nexis*
- Tom Zimmerman, GE Medical Systems*

Minors

Comprehensive Communication Arts Minor

Course requirements for the minor in **comprehensive communication arts** involve 16 semester hours selected from the following courses:

| | |
|--|---|
| COM-2000 Persuasive Theory | 3 |
| COM-2050 Communication Theory | 3 |
| COM-2200 Communication in Applied Contexts | 2 |
| COM-3100 Advanced Public Speaking | 3 |
| COM-3240 Interpersonal Communication | 2 |
| COM-4110 History of Public Address | 3 |
| COM-4120 Contemporary Rhetoric | 2 |

Digital Film Minor

Course requirements for the minor in digital film involve 18 semester hours selected from the following courses:

| | |
|---|---|
| EMTC-2320 Preproduction and Planning for Film/Video | 3 |
| EMTC-2350 Introduction to Graphics for TV and Film | 3 |
| EMTC-3210 Digital Audio Post Production..... | 3 |
| EMTC-3310 Digital Film Production..... | 3 |
| EMTC-3355 SFX and Compositing for TV and Film..... | 3 |
| EMTC-4310 Advanced Cinematography and Lighting..... | 3 |



Editing and Publishing Minor

The **editing and publishing minor** is designed to prepare students for careers in the publishing field. Course requirements involve 19 credit hours including:

| | |
|---|----|
| ENG-2230 Advanced Composition | 3 |
| ENG-3070 Advanced Grammar for Adolescent Teachers..... | 3 |
| ENG-3010 Style and Mechanics for Writers..... | 3 |
| (or TPC-3010 Style and Mechanics for Writers | 3) |
| GDES-1300 Graphic Design for Non-Majors | 3 |
| TPC-2000 Production Tools for Technical Communication | 3 |
| TPC-3210 Technical Editing..... | 2 |
| TPC-3290 Proofreading..... | 2 |

Electronic Media Minor

Course requirements for the minor in **electronic media** involve 15 semester hours:

| | |
|--|---|
| EMTC-1110 Introduction to Electronic Media | 3 |
| EMTC-1120 Audio Production | 3 |
| EMTC-2110 Video Technical Training..... | 3 |
| EMTC-2130 Writing for Electronic Media..... | 3 |

Research (from the following)

| | |
|--|---|
| EMTC-3111 Survey Research for Electronic Media | 3 |
| EMTC-3150 Media Ethics | 2 |
| EMTC-3151 Christian Approaches to Electronic Media | 2 |

Intercultural Communication Minor

Course requirements for the minor in **intercultural communication** involve 17 semester hours selected from the following courses:

| | |
|--|---|
| COM-2140 Intercultural Communication..... | 3 |
| COM-2300 Voices Of Diversity | 3 |
| COM-3150 Gender, Politics, and Communication | 3 |
| COM-3240 Interpersonal Communication | 2 |
| COM-3710 Narrative and Cultural Literacy | 3 |

One of the following courses

| | |
|---|---|
| THTR-2510 Theatre for Social Change..... | 3 |
| A departmental approved study abroad course | 3 |

Motion Graphics Minor

Course requirements for the minor in **motion graphics** involve 17 semester hours selected from the following courses:

| | |
|---|----------|
| EMTC-2350 Introduction to Graphics for TV and Film | 3 |
| EMTC-2601 Interactive Interface Design | 3 |
| EMTC-2606 Introduction to Computer Animation for Electronic Media | 2 |
| EMTC-3630 Principles of Computer Animation | 3 |
| EMTC-3355 SFX and Compositing for TV and Film | 3 |
| Production Electives selected from | 3 |
| EMTC-1610 Digital Media Production | 3 |
| EMTC-2110 Video Technical Training | 3 |
| EMTC-3310 Digital Film Production | 3 |
| GDES-1300 Graphic Design for Non-Majors | 3 |

Organizational Communication Minor

Course requirements for the minor in **organizational communication** involve 16 semester hours selected from the following courses:

| | |
|---|---|
| COM-2000 Persuasive Theory | 3 |
| COM-2050 Communication Theory | 3 |
| COM-2200 Communication in Applied Contexts | 2 |
| COM-3100 Advanced Public Speaking | 3 |
| COM-3230 Organizational Communication | 3 |
| COM-3240 Interpersonal Communication | 2 |
| COM-3250 Interviewing | 3 |
| COM-3260 Organizational Negotiation | 3 |
| COM-3330 Organizational Training | 2 |
| COM-4060 Organizational Leadership | 3 |
| MGMT-3500 Principles of Organization and Management | 3 |
| MGMT-3530 Human Resource Management | 3 |



Writing for the Professions Minor

The **writing for the professions minor** is designed to prepare students from a variety of majors to be better writers and to acquire the professional skills required in a corporate setting.

Course requirements involve 18 credit hours including:

| | |
|---|----|
| ENG-3010 Style and Mechanics for Writers | 3 |
| (or TPC-3010 Style and Mechanics for Writers | 3) |
| GDES-1300 Graphic Design for Non-Majors | 3 |
| TPC-2000 Production Tools for Technical Communication | 3 |
| TPC-3090 Technical Marketing Communication | 3 |
| TPC-4010 Designing Technical Reports | 3 |
| One course selected from the following | 3 |
| TPC-3250 Documentation Design | 3 |
| TPC-4130 Instructional Design I | 3 |



Department of

MUSIC AND WORSHIP

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Purpose Statement

The Cedarville University Department of Music and Worship provides a high-quality Christ-centered undergraduate education in music and worship, building a strong artistic, intellectual, and practical foundation for professional careers and graduate studies. The department serves the University, church, and global community through outreach, performance, and educational activities. The faculty of teaching-artists is dedicated to the education of the whole person and committed to helping students realize their highest level of musicianship and development as human beings created in the image of God.

Music Student Objectives

Upon completion of the music curricula and courses, music majors will:

- Develop and demonstrate technical skills required for artistic self-expression in at least one major performance area.
- Demonstrate artistic mastery of assigned repertoire appropriate to their performance field, and perform from a diverse cross-section of that repertoire.
- Identify and describe a broad range of music literature in terms of cultural sources, principle stylistic eras, and typical genres.
- Sight-read, with fluency, while demonstrating general musicianship and relevant, professional skills in their major performance area.
- Acquire and demonstrate proficient keyboard skills.
- Develop and use appropriate conducting and rehearsal skills, as required.
- Visually and aurally identify the basic elements of music (rhythm, melody, harmony, and form) and use this knowledge in aural, verbal, and written analyses.
- Demonstrate the ability to take aural dictation of rhythms, melodies, and harmonic progressions.
- Formulate aesthetic judgments, orally and in writing, with regard to musical analysis, processes and structures, composition, performance, scholarship, and pedagogy.
- Develop the rudimentary ability to improvise original music or to create a derivation or variation of an established work both extemporaneously and in writing.
- Recognize and identify, visually and aurally, representative compositions from each era of musical history, styles of particular composers within each era, and apply correct historical information to appropriate teaching situations.
- Demonstrate a working knowledge of technological developments applicable to musicians.
- Develop creative approaches to musical problem-solving through multiple modalities of thinking.
- Create and articulate a Christ-centered philosophy of music.
- Serve and enrich the University, church, and global community.

Accreditation

Music degrees earned from the department of music and worship and all Bachelor of Music degree programs are accredited by the National Association of Schools of Music (NASM). Due to the breadth and scope of the Bachelor of Arts in worship program, this degree is not a NASM accredited degree.



Requirements for Music Admission

Auditions

Applicants who wish to major in music should follow the standard procedures for admission. Satisfactory completion of an audition is required for approval as a music major.

Students should visit the website at cedarville.edu/musicworship to obtain requirements and to schedule an audition.

Scholarships

Scholarship assistance is available to music majors who qualify on the basis of audition, academic record, and references. Additional academic scholarships and other types of financial assistance are available to qualified individuals through the Cedarville University Financial Aid Office.

Music Theory Exams

All incoming students are required to pass the Music Theory Competency Exam. This test assures that students have the minimum knowledge necessary for college-level music theory courses. The exam is scheduled during Getting Started Week activities.

Students who have had significant music theory training prior to attending Cedarville may take the Music Theory Test-Out Exam. Contact the department of music and worship for additional information regarding this test.

Department Requirements

To graduate with a major from the department of music and worship, students must earn at least a 2.0 cumulative average in all courses required for their major and a "C-" or higher in all courses taken to meet specific requirements in their major.

Music Requirements**Music Student Handbook**

The *Music Student Handbook* is the authoritative statement on all department policy as it applies to the student. Each music student is responsible for following the policies and procedures contained in both the handbook and the University catalog. The handbook can be found online at cedarville.edu/musicstudentresources

Private Lessons

Private lessons are open to all music majors and minors with curricular need. Students are expected to take private lessons on their major instrument for each semester they are enrolled. Exceptions to this include students who are student teaching and other circumstances as deemed appropriate by the chair. Private lessons are also open to non-majors. Inquiries about non-major lessons should be directed to the administrative assistant in the music and worship department.

Semester Performance Juries

All music majors perform a jury in their primary performing area every semester. The jury is a short performance for a committee of music faculty. The grade from the jury counts for 25 percent of the final grade in private lessons for the semester. For performance majors, the jury counts for 33 percent of the final grade in private lessons.

Freshman Review

After the second semester of study, freshmen are evaluated by a committee of music faculty to determine whether they are making adequate progress to continue in the music program. Students who do not show satisfactory progress may be asked to change majors.

Sophomore Check

While the primary screen for continuance in the music program occurs at the freshman review, student achievement is also checked at the end of the sophomore year to confirm adequate progress toward degree completion and admittance to upper-level music courses.

Piano Proficiency

All music majors are expected to meet the minimum proficiency requirements for piano as established by the department. Piano placement is done during Getting Started Week. Complete piano proficiency requirements are available in the music office.

Technology Proficiency

All music majors are expected to meet proficiency requirements for technology as established by the department. This requirement can be met by successfully passing a technology proficiency test or by passing THMU-1500 Introduction to Music Technology.

Ensemble Participation

Music majors are expected to participate in at least one ensemble every semester they are enrolled. Once the credit requirements for their major is fulfilled, they may enroll for 0 credit.

Recital and Program Attendance

Attendance is required of all music majors and minors. All students must complete recital and program attendance each semester they are enrolled as a music major. Minors must take two semesters.

Capstone Recital or Project

In addition to performance in general student recitals throughout the college experience, all music majors are required to exhibit a level of performance for graduation that meets the requirements and standards of the department. For all majors, the capstone requirement is a senior recital or project.

Fees

Instrumental rental fee per semester is \$50. Practice room fee per semester is \$100 (each hour of lesson credit). Private lesson fee is \$300 per semester. Classes that involve labs or University-provided student equipment may also have similar fees.



Worship Degree Objectives

The mission of the worship program is “Equipping Worshipers to Serve.” Core values of the B.A. in worship degree include:

Musical Emphasis

We value a core musical background for all worship students. We value contemporary music as the voice of our culture and will equip students to be musically and methodologically relevant in the “real world.”

Theological Foundation

We value a strong theological foundation, grounded in biblical truth for all worship students. The Bible minor and required classes will emphasize a biblical foundation for worship ministry.

Interdisciplinary Nature

We value interdisciplinary study in fields related to worship ministry. We value each student developing God-given talents and interests, resulting in an individualized degree tailored for each student.

Upon completion of the B.A. curriculum in worship, students will be able to:

- Recognize and recall music theory principles and contemporary music practices.
- Analyze musical compositions by applying sound music theory principles.
- Perform proficiently in voice and either piano or guitar in a worship setting.
- Formulate and articulate a theology of worship based on sound biblical principles and valid biblical interpretation.
- Evaluate and critique the content and appropriateness of any worship medium (music, drama, media, etc.) by employing one's theology of worship as a foundation for evaluation.
- Plan, implement, and lead effective rehearsals and worship team building exercises for church or parachurch organizations.
- Plan, produce, and lead theologically sound and edifying corporate worship experiences for the local church or parachurch organization.
- Value and support the role that worship plays in the larger overall ministry and discipleship practice of the local church or parachurch organization.

Worship Requirements

Admission

Program application is required for all prospective worship students before admission into the worship program. The purpose of the audition is to evaluate your potential success as a worship student and whether you will be admitted to the department to pursue a worship degree. Guidelines for the audition can be found at cedarville.edu/worship.

Private Lessons

All worship students are required to take private lessons. Students should study the instrument for which they are most proficient in order to improve their skills. Earnest practice is expected and mandatory for your success. Juries are required for each student taking private lessons.

Ensembles

All worship students are required to participate in an ensemble every semester that they are on campus.

Worship Forum

All worship students are required to participate in Worship Forum every semester that they are on campus. The Forum is designed to help address topics not easily addressed in class, to build community between worship students, and to allow students to work on projects and services together. The class is for zero credit and requirements will be given to you each semester.

First-Year Review

All entering students are admitted into the worship program on a conditional basis. At the end of the first year, students will be asked to complete and submit information that will be combined with their first year grades, recommendations, and private lesson reviews to determine the potential success of each student in upper-level coursework, field experience, internships, and as future worship leaders. The worship faculty members will meet during the week following graduation to evaluate each student's information and make final recommendations regarding the future of the student's ability to continue in the worship program.

Second-Year Review

The members of the worship faculty will evaluate students' progress since the first-year review to see that the students are adequately moving toward completion of their degree programs.

Worship Student Handbook

The *Worship Student Handbook* is the authoritative statement on all departmental policy as it applies to the student. Each worship student is responsible for following the policies and procedures contained in both the handbook and the University catalog. The handbook can be found online at cedarville.edu/worship.

Programs of Study

The department of music and worship offers the following programs of study:

Bachelor of Arts (B.A.) in:

- Music
- Worship

Bachelor of Music (B.M.) in:

- Composition
- Keyboard Pedagogy
- Performance

Bachelor of Music Education (B.M.E.) in:

- Choral
- Instrumental

Minors

- Music
- Worship



Technical Resources

The department of music and worship relies heavily on the use of technology to accomplish its educational objectives. Music students will spend time in a state-of-the-art music computer/synthesizer lab that allows them to practice ear training, produce printed musical scores, and complete fully orchestrated compositions.

Cocurricular Opportunities

All students are invited to audition for the numerous choral and instrumental ensembles that perform in many different venues throughout the academic year. Students may also participate in one of a growing number of small chamber music groups. Music education majors are required to participate in the collegiate chapter of the National Association for Music Education (NAfME). This award-winning chapter offers many professional and service opportunities to its members.

Career Opportunities

Graduate and professional schools welcome Cedarville graduates. Careers pursued by graduates of this department include:

- College professor
- Community arts manager
- Composer/arranger
- Instrument salesperson
- Minister of music
- Music editor
- Music librarian
- Music supervisor
- Music therapist
- Performer
- Recording studio technician
- Retail music salesperson
- School teacher (elementary and secondary Christian or public schools)
- Studio teacher
- Worship leader

Faculty

Beth Cram Porter, *Chair*. Associate Professor of Vocal Music. *Education*: B.M., Baylor University, 1984; M.A., Western Carolina University, 1996; voice student of Joyce Farwell. At Cedarville since 1997.

Connie Anderson, Assistant Professor of Piano Pedagogy. *Education*: B.A., Cedarville University, 1973; M.M., Wright State University, 1994. At Cedarville since 1999.

Lyle Anderson, Professor of Music. *Education*: B.M.E., Cedarville University, 1970; M.A., The Ohio State University, 1971; Ph.D., The Ohio State University, 1977. At Cedarville since 1970.

Patrick Anderson, Assistant Professor of Worship. *Education*: B.M., University of the Pacific, 2000; M.M., University of Southern California, 2004; D.M.A. (in progress), University of Southern California. At Cedarville since 2011.

Charles Clevenger, Senior Professor of Music. *Education*: B.A., Bob Jones University, 1974; piano student of Imogene Darling, Laurence Morton, Raymond Dudley, and Richard Morris; M.M., University of Cincinnati College-Conservatory of Music, 1976; D.M.A., University of Cincinnati College-Conservatory of Music, 1985. At Cedarville since 1982.

Bruce Curlette, Professor of Music. *Education*: B.S., Jacksonville State University, 1979; M.M., Eastman School of Music, 1981; clarinet student of D. Stanley Hasty; D.M.A., The Ohio State University, 1991; clarinet student of James M. Pyne. At Cedarville since 2001.

Michael DiCuirci, Senior Professor of Instrumental Music. *Education*: B.M., University of Michigan, 1971; euphonium/trombone student of Fred Snyder, Abe Torchinsky, and Glenn Smith; M.M., University of Michigan, 1977. At Cedarville since 1979.

Austin Jaquith, Assistant Professor of Music Theory and Composition. *Education*: B.M., Cleveland Institute of Music, 2003; M.M., University of Houston, 2005; D.M.A., Indiana University, 2009. At Cedarville since 2009.

John Mortensen, Professor of Piano. *Education*: B.M.A., University of Michigan, 1988; piano student of Anne Koscielny and Raymond Hanson; M.M., University of Maryland, 1990; D.M.A., University of Maryland, 1994. At Cedarville since 1995.

Roger O'Neel, Associate Professor of Church Music. *Education*: B.M., Ouachita Baptist University, 1985; M.M., Choral Conducting, Southern Methodist University, 1987; M.M., Music Theory, Southern Methodist University, 1988; Ph.D., University of Texas at Austin, 1996. At Cedarville since 2002.

Charles Pagnard, Professor of Instrumental Music. *Education*: B.M., Bowling Green State University, 1970; trumpet student of Sidney Mear, Richard Jones, Edwin Betts, and Ettore Chiudioni; M.M., Eastman School of Music, 1976; graduate study, University of Cincinnati College-Conservatory of Music, 1984. At Cedarville since 1977.

Mark Spencer, Associate Professor of Vocal Music. *Education*: B.A., Judson College, 1981; M.M., Southwestern Baptist Theological Seminary, 1984; D.M.A., Southwestern Baptist Theological Seminary, 1992; voice student of Jack Coldiron. At Cedarville since 1993.

Steven Winteregg, *Associate Academic Vice President*: *College of Arts and Sciences*. Professor of Music. *Education*: B.M.E., University of Cincinnati College-Conservatory of Music, 1974; M.M., Wright State University, 1979; D.M.A., The Ohio State University, 1987. At Cedarville since 2004.

Sandra Yang, Assistant Professor of Music History. *Education*: B.A., University of California, Los Angeles, 1971; M.A., U.C.L.A., 1992; Ph.D., U.C.L.A., 1997. At Cedarville since 2009.

Emeriti

David Matson, Professor Emeritus of Music History. *Education*: B.A., Cedarville University, 1960; graduate study, State College of Iowa, 1962–63; M.A., The Ohio State University, 1968; Ph.D., The Ohio State University, 1978. At Cedarville since 1965.

Adjunct Faculty

- Lori Akins, flute
- Judy Bede, piano pedagogy
- Jim Cato, worship
- Sheridan Currie, viola
- Jackie Davis, harp
- John Filbrun, guitar
- Lisa Grove, oboe
- Amy Hutchison, piano
- Chet Jenkins, saxophone
- Jan LaForge, piano pedagogy
- Michael LaMattina, percussion
- Andrew Millat, trombone
- Andrea Padgett, horn
- Andra Padrichelli, cello
- Lawrence Pitzer, guitar
- Crystal Stabenow, voice
- Kathleen Wilkins, music education



A complete description of the general education requirements is found on page 26.

Composition

Statement of Purpose

The **composition major** prepares the student for a career that involves composing, arranging, and editing music. This program also lays the foundation for graduate study in theory/composition.

Program Objectives

Upon completion of the B.M. degree in composition, students will be able to:

- Recognize and recall music theory principles and contemporary art music practices.
- Analyze musical compositions by applying sound music theory principles.
- Perform proficiently in his or her primary instrument.
- Compose in a variety of contemporary art music styles, and begin to develop their own compositional style.
- Recall and demonstrate an understanding of composing for various performing forces (i.e., different types of instrumental or vocal solos or ensembles).
- Write and produce a senior composition recital.
- Create a portfolio of original music and recordings.

Students pursuing this major must complete the general education core.

The following requirements involve 74 semester hours:

| | |
|---|------------|
| Proficiencies | 0-7 |
| Piano | 0-4 |
| CLMU-1810 Piano Class I | 0-2 |
| CLMU-1820 Piano Class II | 0-2 |
| THMU-1010 Introduction to Music Theory and Aural Skills ... | 0-2 |
| THMU-1500 Introduction to Music Technology | 0-1 |
| Music Foundation and Skills | 27 |
| CDMU-2600 Introduction to Conducting | 2 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music | 2) |
| THMU-1210, 1220, 2210, 2220 Music Theory I, II, III, and IV .. | 12 |
| THMU-1310, 1320, 2310, 2320 Aural Skills I, II, III, and IV | 8 |
| Select one of the following | 2 |
| CDMU-3610 Choral Conducting | 2 |
| CDMU-3620 Instrumental Conducting | 2 |
| Music Contexts | 9 |
| HLMU-2310 Introduction to Music Literature | 3 |
| HLMU-3310, 3320 Music History I and II | 6 |
| Music Performance | 12 |
| PFMU-3100-3980 Large Ensemble | 2 |
| PLMU-1000/4830 Private Lessons | 8 |
| PLMU-3900 Junior Recital | 1 |
| *PLMU-4900 Senior Recital | 1 |
| Music Composition | 26 |
| CLMU-2800 Introduction to Music Composition | 2 |
| CLMU-2850 Composition Seminar | 0 |
| CLMU-2860 Composition Portfolio | 0 |
| PLMU-1800, 2800, 3800, 4800 Music Composition | 11 |
| THMU-4100 Counterpoint | 3 |
| THMU-4110 Form and Analysis | 3 |
| THMU-4130 Orchestration | 2 |
| THMU-4140 Choral Arranging | 2 |
| TYMU-1251 Music Technology I | 3 |

*Capstone Course

Composition Major Curriculum Summary

| | |
|---|------------|
| General Education Requirements | 49-57 |
| Composition Major Requirements | 74-81 |
| Electives | 0-5 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Composition

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CLMU-2800 Introduction to Music Composition | 2 |
| CLMU-2850 Composition Seminar | 0 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition (both semesters) | 3 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance (both semesters) | 0 |
| PFMU-XXXX Large Ensemble Performance | 0 |
| PLMU-1800 Private Lesson in Composition | 1 |
| PLMU-XXXX Private Lessons | 2 |
| THMU-1210, 1220 Music Theory I and II | 6 |
| THMU-1310, 1320 Aural Skills I and II | 4 |
| TYMU-1251 Music Technology I | 3 |
| Quantitative Elective | 3 |
| Total | 34 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CDMU-2600 Introduction to Conducting | 2 |
| CLMU-2850 Composition Seminar (both semesters) | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters) | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music | 2) |
| HLMU-2310 Introduction to Music Literature | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PFMU-XXXX Large Ensemble Performance | 1 |
| PLMU-2800 Music Composition | 2 |
| PLMU-XXXX Private Lessons | 4 |
| THMU-2210, 2220 Music Theory III and IV | 6 |
| THMU-2310, 2320 Aural Skills III and IV | 4 |
| Total | 32 |

Third year:

| | |
|---|-------------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CDMU-3620 Instrumental Conducting | 2 |
| (or CDMU-3610 Choral Conducting | 2) |
| CLMU-2850 Composition Seminar (both semesters) | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters) | 0 |
| GSS-1100 Politics and American Culture | 3 |
| HLMU-3310, 3320 Music History I and II | 6 |
| PFMU-XXXX Large Ensemble Performance | 1 |
| PLMU-XXXX Private Lessons | 2 |
| PLMU-3800 Music Composition | 4 |
| PLMU-3900 Junior Recital | 1 |
| Biology Elective | 3.5 |
| History Elective | 3 |
| Literature Elective | 3 |
| Total | 32.5 |

Fourth year:

| | |
|---|-------------|
| CLMU-2850 Composition Seminar (both semesters) | 0 |
| CLMU-2860 Composition Portfolio | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters) | 0 |
| HUM-1400 Introduction to the Humanities | 3 |
| PFMU-XXXX Large Ensemble Performance | 0 |
| PLMU-4800 Music Composition | 4 |
| PLMU-4900 Senior Recital | 1 |
| THMU-4100 Counterpoint | 3 |
| THMU-4110 Form and Analysis | 3 |
| THMU-4130 Orchestration | 2 |
| THMU-4140 Choral Arranging | 2 |
| Physical Science Elective | 3.5 |
| Social Science/Global Awareness Elective | 3 |
| Elective | 5 |
| Total | 29.5 |

Keyboard Pedagogy

Statement of Purpose

The purpose of the **Bachelor of Music degree in keyboard pedagogy** is to thoroughly equip graduates to professionally teach students the art of piano playing. The program is designed to comprehensively address the needs of piano students of all ages and levels of proficiency.

Program Objectives

Through the keyboard pedagogy curriculum, students will be able to:

1. Identify criteria essential for professional piano teaching.
2. Identify the primary professional associations, periodicals, and industry partners which relate specifically to piano teaching.
3. Communicate effectively in one-on-one teaching.
4. Diagnose and correct technical problems of students.
5. Evaluate student progress through the establishment of educational goals and careful record keeping.
6. Sequence repertoire and auxiliary learning materials for beginning through advanced students
7. Apply practical criteria in the evaluation of methods books.
8. Incorporate current audio-visual, electronic keyboard, and computer technology in the piano studio setting.
9. Implement group instruction methods in their teaching.
10. Cope with performance anxiety and avoid physical injury.
11. Accurately and artistically perform all teaching repertoire for their students.
12. Demonstrate knowledge of business practices and organizational procedures necessary for the establishment of a professional piano studio.
13. Utilize effective teaching strategies appropriate for group instruction.
14. Demonstrate that they value and can perform the mentoring role of the piano teacher in the lives of their students.

Students pursuing this major must complete the general education core.

The following requirements involve 75 semester hours:

| | |
|--|------------|
| Proficiencies | 0-7 |
| Piano | 0-4 |
| CLMU-1810 Piano Class I..... | 0-2 |
| CLMU-1820 Piano Class II..... | 0-2 |
| THMU-1010 Introduction to Music Theory and Aural Skills... | 0-2 |
| THMU-1500 Introduction to Music Technology | 0-1 |
| Music Foundation and Skills | 25 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| GMUS-1000 Music Philosophy and Aesthetics..... | 1 |
| GMUS-1030 Recital and Program Attendance..... | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music.....) | 2 |
| THMU-1210, 1220, 2210, 2220 Music Theory I, II, III, and IV. | 12 |
| THMU-1310, 1320, 2310, 2320 Aural Skills I, II, III, and IV..... | 8 |
| Music Contexts | 9 |
| HLMU-2310 Introduction to Music Literature | 3 |
| HLMU-3310, 3320 Music History I and II..... | 6 |
| Music Performance | 19 |
| PFMU-3100-3980 Large Ensemble | 4 |
| PLMU-1000/4830 Private Lessons | 14 |
| *PLMU-4900 Senior Recital..... | 1 |
| Keyboard Pedagogy | 22 |
| KPMU-2010, 2020 Keyboard Pedagogy I and II | 6 |
| KPMU-3110, 3120 Directed Teaching I and II | 2 |
| KPMU-4110, 4120 Directed Teaching III, and IV..... | 4 |
| KPMU-3150, 3160, 4150, 4160 Keyboard Pedagogy Seminar I, II, III, and IV | 8 |
| Approved Music Elective | 2 |

*Capstone Course

Keyboard Pedagogy Major Curriculum Summary

| | |
|---|------------|
| General Education Requirements..... | 49-57 |
| Keyboard Pedagogy Major Requirements | 75-82 |
| Electives | 0-4 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Keyboard Pedagogy

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 4 |
| THMU-1210, 1220 Music Theory I and II..... | 6 |
| THMU-1310, 1320 Aural Skills I and II..... | 4 |
| Quantitative Elective..... | 3 |
| Total | 34 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music | 2 |
| HLMU-2310 Introduction to Music Literature | 3 |
| KPMU-2010, 2020 Keyboard Pedagogy I and II | 6 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 4 |
| THMU-2210, 2220 Music Theory III and IV | 6 |
| THMU-2310, 2320 Aural Skills III and IV | 4 |
| Total | 33 |

Third year:

| | |
|--|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| GSS-1100 Politics and American Culture..... | 3 |
| HLMU-3310 Music History I..... | 3 |
| HLMU-3320 Music History II | 3 |
| KPMU-3110, 3120 Directed Teaching I and II | 2 |
| KPMU-3150, 3160 Keyboard Pedagogy Seminar I and II..... | 4 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 4 |
| Biology Elective | 3.5 |
| History Elective..... | 3 |
| Literature Elective..... | 3 |
| Total | 32.5 |

Fourth year:

| | |
|--|-------------|
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| KPMU-4110, 4120 Directed Teaching III and IV | 4 |
| KPMU-4150, 4160 Keyboard Pedagogy Seminar III and IV | 4 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-4900 Senior Recital | 1 |
| PLMU-XXXX Private Lessons | 2 |
| Music Elective..... | 2 |
| Physical Science Elective | 3.5 |
| Social Science/Global Awareness Elective..... | 3 |
| Elective | 4 |
| Total | 28.5 |

Music

Statement of Purpose

The **Bachelor of Arts in music degree** is designed for students with a strong interest in music and other academic areas. It is an ideal degree for musically talented students who plan to pursue graduate programs that will accept a bachelor's degree in any academic major, such as law, international studies, and music therapy. The general studies credits within the major allow students to add specialized courses from any other area. The degree is organized into two tracks: a) the Recital Track for students who are capable and desirous of performing a senior recital; b) the Project Track for students who are more interested in presenting their senior capstone event through a research project.

Program Objectives

Upon completion of the B.A. in music curriculum, students will be able to:

- Visually and aurally identify the building blocks of musical composition.
- Formulate, articulate, and defend a philosophy of music based upon sound interpretation of biblical principles.
- Demonstrate facility in the use of music technology.
- Perform proficiently in private lessons and in a large ensemble.
 - Recognize the factors that contribute to an artistic musical performance.
 - Fairly appraise and evaluate their musical performances as well as those of others.
 - Compile a repertory for their instrument.
- Research, plan, and perform/present a capstone senior recital or senior project.
 - Recital Track: Interpret music appropriately according to accepted performance practice.
 - Project Track: Investigate and report on a selected aspect of music.
- Value the functional role and stylistic diversity of music from various historical periods and cultures.



Course requirements involve 58 semester hours including:

| | |
|---|------------|
| Proficiencies | 0-7 |
| Piano | 0-4 |
| CLMU-1810 Piano Class I | 0-2 |
| CLMU-1820 Piano Class II | 0-2 |
| THMU-1010 Introduction to Music Theory and Aural Skills... .. | 0-2 |
| THMU-1500 Introduction to Music Technology | 0-1 |
| Music Foundation and Skills | 16 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance | 0 |
| THMU-1210, 1220, 2210 Music Theory I, II, and III | 9 |
| THMU-1310, 1320, 2310 Aural Skills I, II, and III | 6 |
| Music Contexts | 9 |
| HLMU-2310 Introduction to Music Literature | 3 |
| HLMU-3310, 3320 Music History I and II | 6 |
| Music Performance | 8 |
| PFMU-3100-3980 Large Ensemble | 2 |
| PLMU-1000/4830 Private Lessons | 6 |
| Music Concentrations | 25 |
| Primary Concentration (includes capstone course) | 13 |
| Secondary Concentration | 12 |

Select primary and secondary concentrations from the following:

| | |
|--|--------------|
| Jazz and Improvisation Concentration | 12-13 |
| HLMU-2100 Jazz History | 2 |
| PFMU-3650 Chamber Ensemble | 3 |
| PFMU-3980 Jazz Band | 3 |
| THMU-3120 Jazz Theory and Improvisation I | 2 |
| THMU-3130 Jazz Theory and Improvisation II | 2 |
| *PLMU-4920 Senior Project | 1 |
| Music Composition Concentration | 12-13 |
| CLMU-2800 Introduction to Composition | 2 |
| PLMU-2800-4800 Music Composition | 6 |
| THMU-4130 Orchestration | 2 |
| THMU-4140 Choral Arranging | 2 |
| *PLMU-4920 Senior Project | 1 |
| Music Technology Concentration | 12-13 |
| TYMU-1251 Music Technology I | 3 |
| TYMU-2250 Music Technology II | 3 |
| TYMU-2251 Music Technology III | 3 |
| TYMU-3250 Music Technology IV | 3 |
| *PLMU-4920 Senior Project | 1 |
| Open Music Studies Concentration | 12-13 |
| PLMU-3910 Junior Seminar | 1 |
| PLMU-4910 Senior Seminar | 1 |
| Electives (approved by advisor) | 10 |
| *PLMU-4920 Senior Project | 1 |
| Performance Studies Concentration | 12-13 |
| PFMU 3650 Small Ensemble | 3 |
| PLMU-1000/4830 Private Lessons | 8 |
| PLMU-3900 Junior Recital | 1 |
| *PLMU-4920 Senior Project | 1 |
| Worship Concentration | 12-13 |
| BETH-3730 Theology of Worship | 3 |
| CHMU-2060 Music and the Arts in Worship | 3 |
| THMU-1250 Contemporary Musicianship I | 2 |
| WSHP-1010 Introduction to Worship Ministry | 1 |
| WSHP-1020 Introduction to Worship Technology | 2 |
| *PLMU-4920 Senior Project | 1 |

*Capstone Course required only if primary concentration.

Music Major Curriculum Summary

Proficiency Requirements.....0–5
 General Education Requirements.....49–57
 Music Major Requirements.....58–65
 Electives6–21
Total (minimum, not including proficiency) 128

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Music

First year:

BEGE-1710 Christian Life and Thought.....3
 BEGE-1720 Spiritual Formation3
 COM-1100 Fundamentals of Speech.....3
 ENG-1400 Composition.....3
 GMUS-1000 Music Philosophy and Aesthetics1
 GMUS-1030 Recital and Program Attendance (both semesters).....0
 PEF-1990 Physical Activity and the Christian Life2
 PFMU-3100/3980 Large Ensemble2
 PLMU-1000/4830 Private Lessons2
 THMU-1210, 1220 Music Theory I and II.....6
 THMU-1310, 1320 Aural Skills I and II.....4
 Quantitative Elective.....3
Total 32

Second year:

BEGE-2730 Old Testament Literature3
 BEGE-2740 New Testament Literature3
 GMUS-1030 Recital and Program Attendance (both semesters).....0
 HLMU-2310 Introduction to Music Literature3
 PLMU-1000/4830 Private Lessons2
 THMU-2210 Music Theory III.....3
 THMU-2310 Aural Skills III.....2
 Music Electives.....16
Total 32

Third year:

BEGE-3750 Christian Worldview Development.....2
 BEGE-3760 Christian Worldview Integration2
 GMUS-1030 Recital and Program Attendance (both semesters).....0
 GSS-1100 Politics and American Culture.....3
 HLMU-3310, 3320 Music History I and II.....6
 PLMU-1000/4830 Private Lessons2
 Biology Elective3.5
 History Elective.....3
 Literature Elective3
 Music Electives.....4
 Electives4
Total 32.5

Fourth year:

GMUS-1030 Recital and Program Attendance (both semesters).....0
 HUM-1400 Introduction to the Humanities.....3
 PLMU-4900 or 4920 Senior Project or Recital.....1
 Music Electives.....4
 Physical Science Elective3.5
 Social Science/Global Awareness Elective.....3
 Electives17
Total31.5

Performance

Statement of Purpose

The purpose of the **Bachelor of Music degree** in performance is to prepare students for graduate school and careers in performance. The program is designed to offer the highest possible level of studio instruction and mentoring, opportunity for solo and ensemble performance, and general knowledge of the music literature of the performance area.

Program Objectives

A graduate of the Bachelor of Music in performance degree will:

1. Display familiarity with the music of their instrument, including all essential music associated with their instrument.
2. Communicate effectively about music performance from a theological perspective.
3. Evaluate with professional awareness the important performers, recordings, institutions, and events that are significant to their instrument.
4. Develop skills concerning the intricacies of the physical technique of playing their instrument, and be able to articulate this knowledge to others.
5. Have the skills necessary to prepare for performance independent of outside teaching and assistance.
6. Professionally play their instrument with a high level of proficiency, and be able to integrate musical analysis with a variety of theoretical approaches.

Students pursuing this major must complete the general education core.

Continued on page 146



The following requirements involve 75 semester hours:

| | |
|--|------------|
| Proficiencies | 0-7 |
| Piano | 0-4 |
| CLMU-1810 Piano Class I..... | 0-2 |
| CLMU-1820 Piano Class II..... | 0-2 |
| THMU-1010 Introduction to Music Theory and Aural Skills .. | 0-2 |
| THMU-1500 Introduction to Music Technology | 0-1 |
| Music Foundation and Skills | 30 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| GMUS-1000 Music Philosophy and Aesthetics..... | 1 |
| GMUS-1030 Recital and Program Attendance..... | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music | 2) |
| THMU-1210, 1220, 2210, 2220 Music Theory I, II, III, and IV. | 12 |
| THMU-1310, 1320, 2310, 2320 Aural Skills I, II, III, and IV | 8 |
| THMU-4110 Form and Analysis | 3 |
| Select one of the following | 2 |
| CDMU-3610 Choral Conducting | 2 |
| CDMU-3620 Instrumental Conducting | 2 |
| Music Contexts | 9 |
| HLMU-2310 Introduction to Music Literature | 3 |
| HLMU-3310 Music History I..... | 3 |
| HLMU-3320 Music History II..... | 3 |
| Music Performance | 22 |
| CLMU-2750 Performance Seminar | 0 |
| CLMU-2760 Performance Portfolio..... | 0 |
| PFMU-3100-3980 Large Ensemble | 6 |
| PLMU-1000/4830 Private Lessons (in major instrument) | 14 |
| PLMU-3900 Junior Recital..... | 1 |
| *PLMU-4900 Senior Recital..... | 1 |
| Choose one concentration from the following | 14 |
| Instrumental Concentration | 14 |
| EDMU-3750 Instrumental Pedagogy | 2 |
| PFMU-3650 Chamber Ensemble (2 x 1 credit)..... | 2 |
| THMU-4130 Orchestration | 2 |
| Select one of the following | 1 |
| CLMU-2210 Brass Literature | 1 |
| CLMU-2220 Percussion Literature | 1 |
| CLMU-2230 String Literature | 1 |
| CLMU-2240 Woodwind Literature | 1 |
| Approved Electives | 7 |
| Piano Concentration | 14 |
| CLMU-2300 Keyboard Literature | 2 |
| CLMU-2310 Collaborative Piano (6 x 1 credit)..... | 6 |
| Select one of the following | 3 |
| KPMU-2010 Keyboard Pedagogy I..... | 3 |
| KPMU-2020 Keyboard Pedagogy II..... | 3 |
| Approved Electives | 3 |
| Vocal Concentration | 14 |
| CLMU-1170, 1180 Diction for Singers I and II | 4 |
| CLMU-2110 Song Literature..... | 2 |
| CLMU-2120 Oratorio Literature..... | 2 |
| CLMU-2130 Opera Literature..... | 2 |
| PFMU-3850 Opera Ensemble (2 x 1 credit)..... | 2 |
| EDMU-3730 Vocal Pedagogy..... | 2 |
| Required Cognate: Proficiency in two different foreign languages, selected from French, German, Italian, and Spanish (Proficiency in each language may be satisfied by satisfactory completion of two years of the same high school foreign language or one semester of college-level foreign language.) | |
| Performance Major Curriculum Summary | |
| General Education Requirements..... | 49-57 |
| Performance Major Requirements..... | 75-82 |
| Electives | 0-4 |
| Total (minimum, not including proficiency) | 128 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Vocal Performance

| | |
|--|-------------|
| <i>First year:</i> | |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 2 |
| THMU-1210, 1220 Music Theory I and II..... | 6 |
| THMU-1310, 1320 Aural Skills I and II..... | 4 |
| Quantitative Elective..... | 3 |
| Total | 32 |
| <i>Second year:</i> | |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| CLMU-1170, 1180 Diction for Singers I and II..... | 4 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music | 2) |
| HLMU-2310 Introduction to Music Literature | 3 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 4 |
| THMU-2210, 2220 Music Theory III and IV | 6 |
| THMU-2310, 2320 Aural Skills III and IV | 4 |
| Total | 33 |
| <i>Third year:</i> | |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CDMU-3620 Instrumental Conducting..... | 2 |
| (or CDMU-3610 Choral Conducting..... | 2) |
| CLMU-2110 Song Literature | 2 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| EDMU-3730 Vocal Pedagogy | 2 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| GSS-1100 Politics and American Culture..... | 3 |
| HLMU-3310, 3320 Music History I and II..... | 6 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 4 |
| PFMU-3850 Opera Ensemble | 1 |
| PLMU-3900 Junior Recital..... | 1 |
| Biology Elective | 3.5 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Total | 34.5 |
| <i>Fourth year:</i> | |
| CLMU-2120 Oratorio Literature | 2 |
| CLMU-2130 Opera Literature | 2 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| CLMU-2760 Performance Portfolio..... | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PFMU-XXXX Ensemble Performance | 2 |
| PFMU-3850 Opera Ensemble | 1 |
| PLMU-XXXX Private Lessons | 4 |
| PLMU-4900 Senior Recital | 1 |
| THMU-4110 Form and Analysis | 3 |
| Physical Science Elective..... | 3.5 |
| Social Science/Global Awareness Elective..... | 3 |
| Elective | 4 |
| Total | 28.5 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Instrumental Performance

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 2 |
| THMU-1210, 1220 Music Theory I and II..... | 6 |
| THMU-1310, 1320 Aural Skills I and II..... | 4 |
| Quantitative Elective..... | 3 |
| Total | 32 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| CLMU-XXXX Instrumental Literature Elective | 1 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music | 2) |
| HLMU-2310 Introduction to Music Literature | 3 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 4 |
| THMU-2210, 2220 Music Theory III and IV | 6 |
| THMU-2310, 2320 Aural Skills III and IV | 4 |
| Total | 30 |

Third year:

| | |
|--|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CDMU-3620 Instrumental Conducting..... | 2 |
| (or CDMU-3610 Choral Conducting..... | 2) |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| EDMU-3750 Instrumental Pedagogy..... | 2 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| GSS-1100 Politics and American Culture..... | 3 |
| HLMU-3310, 3320 Music History I and II..... | 6 |
| PFMU-XXXX Ensemble Performance | 0 |
| PFMU-XXXX Chamber Music | 2 |
| PLMU-XXXX Private Lessons | 4 |
| PLMU-3900 Junior Recital..... | 1 |
| Biology Elective | 3.5 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Total | 33.5 |

Fourth year:

| | |
|--|-------------|
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| CLMU-2760 Performance Portfolio..... | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 4 |
| PLMU-4900 Senior Recital | 1 |
| THMU-4110 Form and Analysis | 3 |
| THMU-4130 Orchestration..... | 2 |
| Music Elective..... | 7 |
| Physical Science Elective..... | 3.5 |
| Social Science/Global Awareness Elective..... | 3 |
| Elective | 4 |
| Total | 32.5 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Piano Performance

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 2 |
| THMU-1210, 1220 Music Theory I and II..... | 6 |
| THMU-1310, 1320 Aural Skills I and II..... | 4 |
| Quantitative Elective..... | 3 |
| Total | 32 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| CLMU-2310 Collaborative Piano | 2 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HLMU-2100 Jazz History: Music of the Multi-Culture | 2 |
| (or HLMU-3400 Global Music | 2) |
| HLMU-2310 Introduction to Music Literature | 3 |
| KPMU-2010 or 2020 Keyboard Pedagogy I or II..... | 3 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 4 |
| THMU-2210, 2220 Music Theory III and IV | 6 |
| THMU-2310, 2320 Aural Skills III and IV | 4 |
| Total | 34 |

Third year:

| | |
|--|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CDMU-3620 Instrumental Conducting..... | 2 |
| (or CDMU-3610 Choral Conducting..... | 2) |
| CLMU-2300 Keyboard Literature | 2 |
| CLMU-2310 Collaborative Piano | 2 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| GSS-1100 Politics and American Culture..... | 3 |
| HLMU-3310, 3320 Music History I and II..... | 6 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 4 |
| PLMU-3900 Junior Recital..... | 1 |
| Biology Elective | 3.5 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Total | 33.5 |

Fourth year:

| | |
|--|-------------|
| CLMU-2310 Collaborative Piano | 2 |
| CLMU-2750 Performance Seminar (both semesters) | 0 |
| CLMU-2760 Performance Portfolio..... | 0 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 4 |
| PLMU-4900 Senior Recital | 1 |
| THMU-4110 Form and Analysis | 3 |
| Music Elective..... | 3 |
| Physical Science Elective..... | 3.5 |
| Social Science/Global Awareness Elective..... | 3 |
| Elective | 4 |
| Total | 28.5 |

Teacher Education Licensure Program Bachelor of Music Education

Statement of Purpose

The **Bachelor of Music Education** prepares students to teach vocal, instrumental, or general music in grades K–12 in public and Christian schools. Two tracks, choral and instrumental, are available. The Bachelor of Music Education will provide the graduate with all the skills, knowledge, and competencies prerequisite for state certification and employment in music education.

Program Objectives

After completing a degree in the music education program at Cedarville, the student will:

1. Effectively teach music at the elementary, middle, and high school levels by selecting appropriate methods, materials and music, planning course outcomes, and activities, presenting course content, and evaluating course outcomes.
2. Identify and recall current trends, curricula, and methodologies used in music education.
3. Pass the licensure examination in order to qualify as a teacher in a public school in Ohio.
4. Contribute to the community of professional music educators and continue personal lifelong growth in their chosen music field, including local, state, division, and national participation in the National Association for Music Education.
5. Integrate faith, learning, and life as it pertains to the discipline of music education.
6. Value music and the arts while inspiring enthusiasm for music and the arts in others.
7. Create inclusive music education settings that include both children with disabilities and children with extraordinary talents.
8. Articulate a working philosophy of music education.

The following requirements involve 91–98 (choral track) or 92–99 (instrumental track) semester hours:

| | |
|--|--------------|
| Proficiencies | 0–7 |
| Piano | 0–4 |
| CLMU-1810 Piano Class I..... | 0–2 |
| CLMU-1820 Piano Class II..... | 0–2 |
| THMU-1010 Introduction to Music Theory and Aural Skills... | 0–2 |
| THMU-1500 Introduction to Music Technology | 0–1 |
| Music Foundation and Skills | 27–28 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| GMUS-1000 Music Philosophy and Aesthetics..... | 1 |
| HLMU-3400 Global Music | 2 |
| THMU-1210, 1220, 2210, 2220 Music Theory I, II, III, and IV. | 12 |
| THMU-1310, 1320, 2310, 2320 Aural Skills I, II, III, and IV..... | 8 |
| <i>Choral majors also add:</i> | |
| CDMU-3610 Choral Conducting | 2 |
| <i>Instrumental majors also add:</i> | |
| CDMU-3620 Instrumental Conducting..... | 2 |
| CLMU-1860 Voice Class | 1 |
| Music Contexts | 9 |
| HLMU-2310 Introduction to Music Literature | 3 |
| HLMU-3310, 3320 Music History I and II..... | 6 |
| Music Performance | 11 |
| PFMU-3100–3980 Large Ensemble | 2 |
| PLMU-1000/4830 Private Lessons | 8 |
| PLMU-4900 Senior Recital | 1 |

| | |
|---|-----------|
| Music Education | 15 |
| GMUS-1030 Recital and Program Attendance..... | 0 |
| EDMU-1000 MENC | 0 |
| EDMU-3710 Music for Early Childhood | 3 |
| EDMU-3720 Music for Adolescent/Young Adult..... | 3 |
| <i>Choral majors also add:</i> | |
| CLMU-1170 or 1180 Diction for Singers I or II | 2 |
| CDMU-3630 Choral Methods..... | 2 |
| EDMU-2730 Wind and Percussion Methods..... | 2 |
| EDMU-2900 Guitar Methods..... | 1 |
| EDMU-3730 Vocal Pedagogy..... | 2 |
| <i>Instrumental majors also add:</i> | |
| EDMU-3910 Instrumental Administration | 3 |
| Three of the following | 6 |
| EDMU-2870 Brass Methods | 2 |
| EDMU-2910 Woodwind Methods | 2 |
| EDMU-2930 String Methods..... | 2 |
| EDMU-2950 Percussion Methods..... | 2 |

| | |
|---|-----------|
| Teacher Education | 30 |
| EDSE-3900 Music Ed. Field Experience | 2 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-4000 Reading in the Content Area: Multi-Age | 3 |
| *EDUC-4900 Student Teaching and Seminar–Multi-Age..... | 10 |
| *Capstone Course | |

Music Education (Multi-Age) — Choral Major Curriculum Summary

| | |
|---|------------|
| General Education Requirements..... | 49–57 |
| Music Education — Choral Major Requirements..... | 91–98 |
| Total (minimum, not including proficiency) | 141 |

Music Education (Multi-Age) — Instrumental Major Curriculum Summary

| | |
|---|------------|
| General Education Requirements..... | 49–57 |
| Music Education — Instrumental Major Requirements..... | 92–99 |
| Total (minimum, not including proficiency) | 142 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Music Education Multi-Age

First year:

| | |
|--|---|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDMU-1000 MENC (both semesters) | 0 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| ENG-1400 Composition..... | 3 |
| GMUS-1000 Music Philosophy and Aesthetics | 1 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PFMU-XXXX Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 2 |
| THMU-1210, 1220 Music Theory I and II..... | 6 |
| THMU-1310, 1320 Aural Skills I and II..... | 4 |
| Quantitative Elective..... | 3 |

Choral Majors Add:

| | |
|--|-----------|
| CLMU-1170 or 1180 Diction for Singers I or II..... | 2 |
| EDMU-2900 Guitar Methods | 1 |
| Choral Total | 37 |

Instrumental Majors Add:

| | |
|--|-----------|
| EDMU-XXXX Instrumental Methods Electives | 4 |
| Instrumental Total | 38 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CDMU-2600 Introduction to Conducting..... | 2 |
| EDMU-1000 MENC (both semesters) | 0 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2500 Educational Psychology | 3 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HLMU-3400 Global Music | 2 |
| HLMU-2310 Introduction to Music Literature | 3 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 2 |
| THMU-2210, 2220 Music Theory III and IV | 6 |
| THMU-2310, 2320 Aural Skills III and IV | 4 |
| Total | 35 |

Third year:

| | |
|--|-----|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| EDMU-1000 MENC (both semesters) | 0 |
| EDMU-3710 Music for Early Childhood | 3 |
| EDMU-3720 Music for Adolescent/Young Adults | 3 |
| EDSE-3900 Music Ed. Field Experience | 2 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| GSS-1100 Politics and American Culture..... | 3 |
| HLMU-3310, 3320 Music History I and II..... | 6 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 2 |
| Biology Elective | 3.5 |
| History Elective..... | 3 |
| Literature Elective | 3 |

Choral Majors Add:

| | |
|-----------------------------------|-------------|
| CDMU-3610 Choral Conducting | 2 |
| CDMU-3630 Choral Methods | 2 |
| Choral Total | 36.5 |

Instrumental Majors Add:

| | |
|--|-------------|
| CDMU-3620 Instrumental Conducting..... | 2 |
| EDMU-3910 Instrumental Administration..... | 3 |
| Instrumental Total | 37.5 |

Summer:

| | |
|--|---|
| EDUC-4000 Reading in the Content Area: Multi-Age | 3 |
|--|---|

Fourth year:

| | |
|--|-------|
| EDMU-1000 MENC (both semesters) | 0 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-4900 Student Teaching and Seminar: Multi-Age | 10-12 |
| GMUS-1030 Recital and Program Attendance (both semesters)..... | 0 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 2 |
| PLMU-4900 Senior Recital | 1 |
| Physical Science Elective..... | 3.5 |
| Social Science Elective | 3 |

Choral Majors Add:

| | |
|---|------------------|
| EDMU-2730 Wind and Percussion Methods | 2 |
| EDMU-3730 Vocal Pedagogy | 2 |
| Choral Total | 29.5-31.5 |

Instrumental Majors Add:

| | |
|---|------------------|
| CLMU-1860 Voice Class..... | 1 |
| EDMU-XXXX Instrumental Methods Elective | 2 |
| Instrumental Total | 28.5-30.5 |



A complete description of the general education requirements is found on page 26.

Worship

The **Bachelor of Arts in worship degree** is an interdisciplinary degree designed to help prepare students who are interested in careers in worship leadership and related fields. All students must take courses in music, theology, and worship-related fields such as theatre, broadcasting and digital media, or youth ministry.

Elective hours can be used to complete minors or to double major. Students pursuing this major must complete the general education core.

The following requirements involve 56–61 semester hours:

| | |
|---|--------------|
| Music | 14–19 |
| Proficiencies (voice, either piano or guitar, and Theory/Aural Skills) 0–7 | |
| CLMU-1860 Voice Class | 0–1 |
| Piano | 0–4 |
| CLMU-1810 Piano Class I | 0–2 |
| CLMU-1820 Piano Class II | 0–2 |
| OR | |
| PLMU-1830 Contemporary Guitar | 0–2 |
| THMU-1010 Introduction to Music Theory and Aural Skills 2 | |
| THMU-1250 Contemporary Musicianship I | 2 |
| THMU-2250 Contemporary Musicianship II | 2 |
| THMU-2260 Contemporary Musicianship III | 2 |
| PLMU-1000/4830 Private Lessons | 6 |
| PFMU-3100–3980 Large Ensembles | 2 |
| Worship | 18 |
| CHMU-2060 Music and the Arts in Worship | 3 |
| WSHP-1010 Introduction to Worship Ministry | 1 |
| WSHP-1020 Introduction to Worship Technologies | 2 |
| WSHP-2100 Worship Forum (every semester) | 0 |
| WSHP-2200 Worship Field Experience | 1 |
| WSHP-3100 Worship Practicum | 2 |
| WSHP-4900 Worship Internship | 9 |
| Theology | 12 |
| BEOT-3140 Psalms | 3 |
| BEPT-3410 Discipleship | 3 |
| BETH-3720 Spiritual Formation II | 3 |
| BETH-3730 Theology of Worship | 3 |
| Specified Electives | 12 |
| Students are required to take 12 class hours in fields that would be helpful in combination with worship studies. The specified fields are: business administration, Christian education, Christian ministries management, communication studies, broadcasting and digital media, missions, music, philosophy and religion, preseminary, psychology, and theatre. Students must take at least six of these 12 hours outside of the department of music. | |
| Worship Major Curriculum Summary | |
| Proficiency Requirements | 0–5 |
| General Education Requirements | 52–60 |
| Worship Major Requirements | 56–61 |
| Electives | 7–20 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Worship

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| THMU-1250 Contemporary Musicianship I | 2 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PFMU-XXXX Large Ensemble Performance | 2 |
| PLMU-XXXX Private Lessons | 2 |
| WSHP-1010 Introduction to Worship Ministry | 1 |
| WSHP-1020 Introduction to Worship Technologies | 2 |
| WSHP-2100 Worship Forum (both semesters) | 0 |
| Electives | 5 |
| Total | 31 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CHMU-2060 Music and the Arts in Worship | 3 |
| GSS-1100 Politics and American Culture | 3 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 2 |
| THMU-2250 Contemporary Musicianship II | 2 |
| THMU-2260 Contemporary Musicianship III | 2 |
| WSHP-2100 Worship Forum (both semesters) | 0 |
| WSHP-2200 Worship Field Experience | 1 |
| Quantitative Elective | 3 |
| Social Science/Global Awareness Elective | 3 |
| Elective | 7 |
| Total | 32 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BEPT-3410 Discipleship | 3 |
| BETH-3730 Theology of Worship | 3 |
| PFMU-XXXX Ensemble Performance | 0 |
| PLMU-XXXX Private Lessons | 2 |
| WSHP-2100 Worship Forum (both semesters) | 0 |
| WSHP-3100 Worship Practicum | 2 |
| History Elective | 3 |
| Literature Elective | 3 |
| Specified Electives | 9 |
| Electives | 3 |
| Total | 32 |

Fourth year:

| | |
|--|-----------|
| BEOT-3140 Psalms | 3 |
| BETH-3720 Spiritual Formation II | 3 |
| PFMU-XXXX Ensemble Performance | 0 |
| WSHP-2100 Worship Forum (one semester) | 0 |
| WSHP-3100 Worship Practicum | 0 |
| WSHP-4900 Worship Internship | 9 |
| Biology Elective | 3.5 |
| Humanities Elective | 3 |
| Physical Science Elective | 3.5 |
| Specified Electives | 3 |
| Electives | 5 |
| Total | 33 |



Minors

Music Minor

The **music minor** allows students with interests and abilities in music to build upon this background through formal music instruction. Students who minor in music should begin the program no later than their sophomore year.

Course requirements involve 16 semester hours.

| | |
|---|---|
| CDMU-2600 Introduction to Conducting..... | 2 |
| GMUS-1030 Recital and Program Attendance (2 semesters)..... | 0 |
| HUM-2430 Enjoyment of Music..... | 3 |
| PFMU-3100-3980 Large Ensemble | 2 |
| PLMU-1000/4830 Private Lessons | 2 |
| *THMU-1010 Introduction to Music Theory | 2 |
| *THMU-1210 Music Theory I | 3 |
| *THMU-1310 Aural Skills I | 2 |

*Students in this minor are required to take these classes prior to private lessons.

Worship Minor

The **worship minor** is designed to help prepare students who are interested in careers in worship leadership and related fields.

Course requirements involve 15 semester hours.

| | |
|---|---|
| BETH-3730 Theology of Worship | 3 |
| CHMU-2060 Music and the Arts in Worship | 3 |
| PLMU-1810, 1820, or 1830 Private Lessons | 2 |
| THMU-1010 Introduction to Music Theory and Aural Skills | 2 |
| THMU-1250 Contemporary Musicianship I..... | 2 |
| WSHP-1010 Introduction to Worship Ministry | 1 |
| WSHP-1020 Introduction to Worship Technology | 2 |
| WSHP-2100 Worship Forum (2 semesters)..... | 0 |



School of

NURSING

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- Minor
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Mission Statement

As a Christ-centered learning community, the Cedarville University School of Nursing is dedicated to influencing the profession of nursing for Jesus Christ, domestically and globally. In this environment, we contribute to the body of nursing knowledge, provide leadership in nursing and health care arenas, and produce graduates who are grounded in biblical truth and demonstrate mastery in four primary areas: care, culture, godly living, and information management.

Accreditation and Licensure

National

The school of nursing program is accredited by the Commission on Collegiate Nursing Education.

State

The school of nursing has full approval by the Ohio Board of Regents and the Ohio Board of Nursing.

Registration

Graduates are eligible for admission to the National Council Licensure Examination (NCLEX-RN) for licensure as a registered nurse in any state.

Personal Requirements

Students who wish to apply for admission to Cedarville University and major in nursing need a strong commitment to leading a godly lifestyle and to learning ways to use nursing as a ministry for Christ. A college-preparatory curriculum including four years of both mathematics and science (algebra, biology, and chemistry are required) provides the best academic preparation for the nursing major. An ACT composite score of 24 (or SAT composite of 1100) or higher is required to enter the program. A select number of students who have not achieved these scores but have met the above curricular requirements and are otherwise eligible for admission to the University may be admitted to the pre-nursing program. These students may achieve admission into the nursing program by earning a 3.0 cumulative GPA at Cedarville and requesting full admission into the program.

Department Requirements

Progression to Nursing Clinical Courses

Students apply for admission to the school of nursing clinical courses during the *spring semester of their sophomore year*.

Students who meet the following criteria are admitted on a competitive basis:

1. Earn a cumulative GPA of 3.0 or higher. Students with a GPA of 2.8–2.99 may be admitted on probation pending available space.
2. Earn a “C-” or higher in all nursing and science courses, general psychology, and statistics.
3. Submit a written essay.
4. Receive a recommendation from the respective academic advisor.
5. Provide appropriate health information.
6. Pay a \$25 non-refundable application fee.
7. Purchase liability insurance (\$2 million/\$5 million limits) through the school of nursing.
8. Obtain current certification in cardiopulmonary resuscitation (CPR).

9. Valid “No Record” FBI and BCI criminal background checks.
10. Demonstrate computer literacy.
11. Demonstrate a level of health consistent with safe nursing practice.
12. Complete required prerequisite courses prior to enrollment in clinical nursing courses. (Students may have no more than four outstanding general education or Bible courses prior to beginning nursing clinical courses.)
13. Have a plan for provision of own transportation to clinical experiences.

Retention Requirements

1. Earn a grade of “C-” or higher in all nursing courses.
2. Maintain a cumulative GPA of 2.5 or higher at the end of each semester junior and senior year.
3. Maintain current CPR certification and professional liability insurance.
4. Attain clinical objectives.
5. Receive a positive recommendation by the faculty of the school of nursing.

Graduation Requirements

1. Earn a grade of “C-” or higher in all nursing courses.
2. Apply for state licensure and register for the NCLEX-RN.
3. Earn a passing score on a national standardized nursing examination selected by the faculty and taken during the spring semester of the senior year.
4. Receive a positive recommendation by the faculty of the school of nursing.
5. Meet University requirements for graduation.

Financial Aid

Federal Nursing Student Loans are available to qualified students who have been admitted to the nursing program. Some additional scholarships are available through our endowments although primarily offered to upperclassmen accepted into the school of nursing clinical courses. Information is available in the school office, the financial aid office, and on the financial aid website at cedarville.edu/finaid.

Programs of Study

Cedarville’s nursing program leads to a Bachelor of Science in Nursing (B.S.N.) degree. Nursing students may also select a minor in cross-cultural nursing.

Cocurricular Opportunities

Christian Nurses Association

The Christian Nurses Association promotes spiritual growth and professional development for nurses and service for the community. Membership is open to all nursing students.

Technical Resources

- State-of-the-art high fidelity simulation lab
- Moderate fidelity clinical nursing and practice labs
- Eight-unit outpatient clinical lab

Career Opportunities

Graduate and professional schools welcome Cedarville graduates. Nursing graduates obtain positions in the following settings: medical centers, public health departments, home health agencies, clinics, nursing homes, schools, work sites, mental health facilities, and mission fields.

Faculty

Janet Conway, Dean. Senior Professor of Nursing. *Education:* Diploma, Hackley Hospital School of Nursing, 1965; B.S.N., Coe College, 1976; M.S., University of Arizona, 1979; Specialist in Clinical Nursing, Indiana University, 1982; Ph.D., University of Texas, 1988. At Cedarville since 1982.

Lois Baker, Senior Professor of Nursing. *Education:* Diploma, Blodgett Memorial Medical Center School of Nursing, 1974; B.R.E., Grand Rapids Baptist College, 1975; B.S.N., Nazareth College, 1982; M.S.N., University of Cincinnati, 1984; Ph.D., Wayne State University, 1991. At Cedarville since 1984.

Carolyn Barnett, Assistant Professor of Nursing. *Education:* L.P.N., Lewis Wilson Technological Center, 1979; B.S.N., Cedarville University, 1986; M.S.N., University of Phoenix, 2006. At Cedarville since 1997.

David Butgereit, Assistant Professor of Nursing. *Education:* B.S.N., Cedarville University, 1997; M.S.N., University of Cincinnati, 2004. At Cedarville since 2010.

Linda Cave, Assistant Professor of Nursing. *Education:* B.S., University of Northern Colorado, 1981; M.S., University of Colorado Health Sciences Center, 1983. At Cedarville since 1989.

Sharon Christman, Professor of Nursing. *Education:* B.S.N., Cedarville University, 1992; M.S., The Ohio State University, 1995; A.N.P., The Ohio State University, 2000; Ph.D., The Ohio State University, 2003. At Cedarville since 1997.

Kristi Coe, Instructor of Nursing. *Education:* B.S.N., Cedarville University, 1995; M.S., The Ohio State University, 2011. At Cedarville since 2011.

Clifford Fawcett, III, Assistant Professor of Nursing. *Education:* B.S.N., Cedarville University, 1988; M.Ed., University of Virginia, 1989; M.S.N., University of Delaware, 1997. At Cedarville since 2010.

Connie Ford, Associate Professor of Nursing. *Education:* Diploma, Bethesda Hospital School of Nursing, 1977; B.S.N., Xavier University, 1989; M.S., Wright State University, 1992; F.N.P., Wright State University, 2003. At Cedarville since 1993.

Kimberly Higginbotham, Assistant Professor of Nursing. *Education:* B.S.N., Cedarville University, 1993; M.S.N./P.N.P., University of Virginia, 2000. At Cedarville since 2000.

Chu-Yu Huang, Assistant Dean, Director of Graduate Programs. Associate Professor of Nursing. *Education:* A.D.N., Foo Yin Nursing Junior College of Nursing, Taiwan, 1989; B.S.N., University of Dubuque, 1992; M.S., The Ohio State University, 1995; Ph.D., The Ohio State University, 2001. At Cedarville since 2001.

Randall Johnson, Professor of Nursing. *Education:* B.S.N., Cedarville University, 1985; M.S.N., University of Pennsylvania, 1996; Ph.D., University of Central Florida, 2007. At Cedarville since 2009.

Carrie Keib, Assistant Dean, Director of Undergraduate Programs. Assistant Professor of Nursing. *Education:* B.S.N., Liberty University, 1999; M.S., Adult Health Nurse Practitioner, The Ohio State University, 2005; Ph.D., The Ohio State University, 2007. At Cedarville since 2007.

Mark Klimek, Associate Professor of Nursing. *Education:* A.A.S. Nursing, Youngstown State University, 1974; B.S.N., University of Virginia, 1977; M.S.N., Wayne State University, 1979; graduate study, Wayne State University, 1987. At Cedarville since 1983.

Suzanne Lefever, Assistant Professor of Nursing. *Education:* B.S.N., Goshen College, 1983; M.S., SUNY-Stony Brook Neonatal Nurse Practitioner Program, 2004. At Cedarville since 2001.

Yvonne Lusk, Assistant Professor of Nursing. *Education:* B.S.N., University of Cincinnati, 1987; M.S., Indiana Wesleyan University, 2009. At Cedarville since 2007.

Angelia Mickle, Assistant Professor of Nursing. *Education:* A.A.S. Nursing, Central Carolina Community College, 1991; B.S.N., Indiana Wesleyan University, 1999; M.S.N., Indiana Wesleyan University, 2008. At Cedarville since 2008.

Janet Neal, Assistant Professor of Nursing. *Education:* B.S.N., Austin Peay State University, 1983. M.S.N., Indiana Wesleyan University, 2008. At Cedarville since 2008.

Rachel Parrill, Assistant Professor of Nursing. *Education:* B.S.N., Cedarville University, 1997; M.S., Wright State University, 2006; Ph.D., Walden University, 2011. At Cedarville since 2005.

Marsha Swinehart, Assistant Professor of Nursing. *Education:* Diploma, Jewish Hospital School of Nursing, 1973; B.S.N. and Public Health Certification, Ohio University, 1997; M.S.N., Capital University, 2005. At Cedarville since 2008.

Amy Voris, Assistant Professor of Nursing. *Education:* B.S.N., University of Cincinnati, 1981; M.S., Wright State University, 2002; D.N.P., Chatham University, 2010. At Cedarville since 2005.

Emeriti

Irene Alyn, Distinguished Professor Emerita of Nursing. *Education:* B.A., Taylor University, 1962; Diploma, Cook County School of Nursing, 1962; M.S.N., University of Illinois, 1965; Ph.D., University of Illinois, 1972. At Cedarville 1981–2007.

Carolyn Carlson, Distinguished Professor Emerita of Nursing. *Education:* B.S., Capital University, 1959; M.S., U.C.L.A., 1962; M.A., University of Colorado, 1972; Ph.D., University of Colorado, 1972. At Cedarville 1988–2007.

Judith Shrubsole, Associate Professor Emerita of Nursing. *Education:* Diploma, Hamilton Civic Hospital School of Nursing, 1965; Diploma, University of Western Ontario, 1967; B.Sc.N., University of Western Ontario, 1968; M.S., D'Youville College, 1992; Ph.D., Rush University, 2003. At Cedarville 1992–2010.

Nursing Laboratories

Karen Callan, Director of Nursing Laboratory Programs and Facilities. *Education:* B.S.N., Cedarville University, 1985. At Cedarville since 1992.

Denise Martin, Instructor of Nursing (Adjunct). *Education:* B.S.N., Cedarville University, 1987. At Cedarville since 2005.

Rhonda Smith, Instructor of Nursing (Adjunct). *Education:* B.S.N., Lynchburg College, 1988. At Cedarville since 2000.



Clinical Activity Information

Facilities

All clinical activity is conducted under the supervision of the Cedarville University School of Nursing faculty. The program utilizes a number of community resources including public and private, large and small hospitals, health departments, mental health services, rehabilitation centers, clinics, homes for the aged, and physicians' offices.

Students are responsible for transportation to and from clinical settings. Car pools are encouraged to help defray transportation costs.

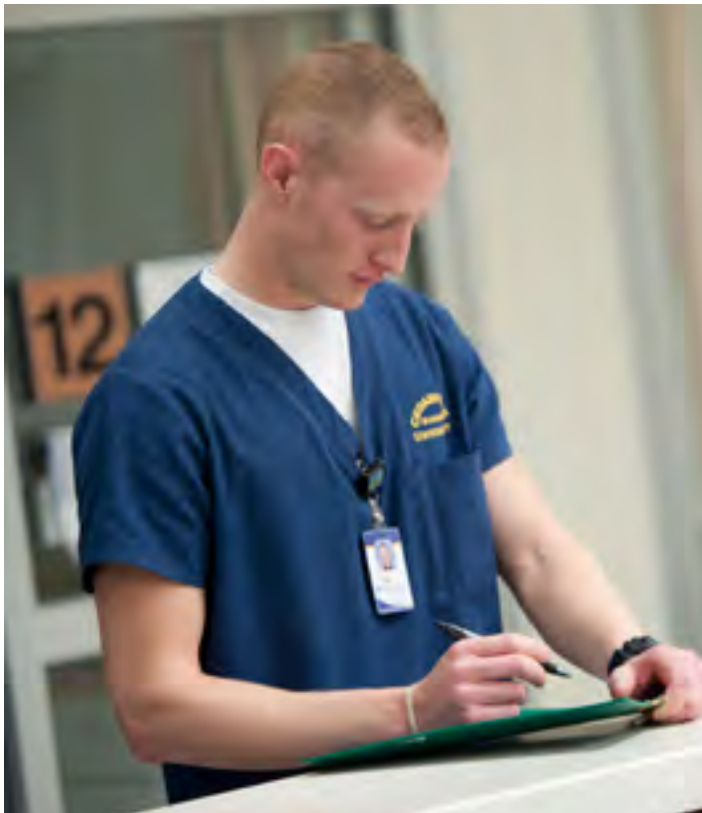
Health Information

Prior to clinical nursing courses, students must provide documentation of:

1. Complete physical examination.
2. Childhood immunizations.
3. Negative Mantoux test. Clinical agencies require a negative chest X-ray in the event of a positive TB skin test.
4. Tetanus booster (within past ten years).
5. Hepatitis B vaccine series and Hepatitis B titer.

Uniforms and Equipment

Each student must secure uniforms and photo identification prior to the first clinical experience. Students must purchase books and equipment needed in clinical settings.



Nursing Course Requirements

In addition to completing the general education requirements, nursing majors must take the following courses. These requirements are divided into two segments, *support cognate requirements and nursing major requirements*.

The support cognate requirements, many of which satisfy general education requirements, include:

| | |
|--|---|
| BIO-2210 Microbiology | 4 |
| CHEM-1000 Principles of Chemistry | 5 |
| GBIO-2010 Human Anatomy and Physiology I | 4 |
| GBIO-2020 Human Anatomy, Physiology, and Pathophysiology ... | 4 |
| PYCH-1600 General Psychology | 3 |
| PYCH-2610 Statistics | 3 |

The nursing major requirements involve 74 semester hours including:

| | |
|---|---|
| NSG-1000 Member of Nursing Profession | 2 |
| NSG-1050 Health Promotion and Wellness | 4 |
| NSG-2000 Nursing Roles in Disease Prevention | 4 |
| NSG-2050 Nursing Roles in Disease Management | 4 |
| NSG-2060 Clinical Immersion | 3 |
| NSG-3000 Care of Ill Adults | 6 |
| NSG-3010 Nursing Care of Women and Newborns | 6 |
| NSG-3030 Care of Children | 6 |
| NSG-3050 Behavioral and Mental Health Care | 6 |
| NSG-3110 Pharmacology | 3 |
| NSG-3930 Nursing Research and Evidence-Based Practice | 3 |
| NSG-4000 Care of Populations | 6 |
| NSG-4020 Nursing Leadership/Management | 6 |
| NSG-4030 Complex Care Management | 6 |
| *NSG-4060 Transition Into Practice | 6 |
| *NSG-4950 Seminar in Nursing | 3 |

*Capstone Courses

Nursing Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| Other General Education Requirements | 36 |
| Nursing Major Requirements | 74 |
| Required Cognates | 23 |
| Total (minimum, not including proficiency) | 133 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Nursing

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1000 Principles of Chemistry | 5 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GBIO-2010 Human Anatomy and Physiology I..... | 4 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| NSG-1000 Member of Nursing Profession..... | 2 |
| NSG-1050 Health Promotion and Wellness..... | 4 |
| PYCH-1600 General Psychology..... | 3 |
| Total | 33 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BIO-2210 Microbiology | 4 |
| GBIO-2020 Human Anatomy, Physiology, and Pathophysiology | 4 |
| GSS-1100 Politics and American Culture..... | 3 |
| NSG-2000 Nursing Roles in Disease Prevention..... | 4 |
| NSG-2050 Nursing Roles in Disease Management | 4 |
| NSG-3110 Pharmacology..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PYCH-2610 Statistics..... | 3 |
| Total | 33 |

Summer:

| | |
|-----------------------------------|---|
| NSG-2060 Clinical Immersion | 3 |
|-----------------------------------|---|

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| NSG-3000 Care of Ill Adults | 6 |
| NSG-3010 Nursing Care of Women and Newborns..... | 6 |
| NSG-3030 Care of Children..... | 6 |
| NSG-3050 Behavioral and Mental Health Care..... | 6 |
| NSG-3930 Nursing Research and Evidence-Based Practice | 3 |
| Literature Elective | 3 |
| Total | 34 |

Fourth year:

| | |
|--|-----------|
| NSG-4000 Care of Populations | 6 |
| NSG-4020 Nursing Leadership/Management | 6 |
| NSG-4030 Complex Care Management | 6 |
| NSG-4060 Transition Into Practice..... | 6 |
| NSG-4950 Seminar in Nursing..... | 3 |
| History Elective..... | 3 |
| Total | 30 |

Minor

Cross-Cultural Nursing Minor

Students anticipating service in intercultural or international settings may choose an emphasis in cross-cultural nursing.

Course requirements involve an additional 16 semester hours selected from:

| | |
|--------------------------------------|---|
| BEPH-2260 Religion and Culture | 3 |
|--------------------------------------|---|

One course selected from..... 3

| | |
|--------------------------------------|---|
| ANTH-1800 Cultural Anthropology..... | 3 |
|--------------------------------------|---|

| | |
|---|---|
| BEPT-3470 Cross-Cultural Ministry | 3 |
|---|---|

| | |
|---|---|
| PYCH-1800 Cross-Cultural Psychology | 3 |
|---|---|

One course selected from..... 3

| | |
|--|---|
| BEPT-2000 Introduction to Missions | 3 |
|--|---|

| | |
|-------------------------------------|---|
| BEPT-2400 Personal Evangelism | 3 |
|-------------------------------------|---|

| | |
|-----------------------------|---|
| BEPT-3410 Discipleship..... | 3 |
|-----------------------------|---|

| | |
|--|---|
| BEPT-3450 Contemporary World Missions..... | 3 |
|--|---|

| | |
|--|---|
| BEPT-3510 Introduction to Urban Ministry | 3 |
|--|---|

| | |
|--|---|
| NSG-2200 Cross-Cultural Interactions | 1 |
|--|---|

| | |
|------------------------------------|---|
| *NSG-4200 Culture and Health | 3 |
|------------------------------------|---|

Credits selected from 3

| | |
|---|-----|
| NSG-3200 Cross-Cultural Nursing Internship..... | 1-3 |
|---|-----|

| | |
|---------------------------------|-----|
| NSG-4800 Independent Study..... | 1-2 |
|---------------------------------|-----|

*Crosslisted as an honor's seminar.



School of

PHARMACY

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Majors

- › Prepharmacy (Page 160)
- › Bachelor of Science in Pharmaceutical Sciences (Page 161)



Admission

Cedarville University uses a direct entry approach for admission to the school of pharmacy. This means that most students compete for admission to the prepharmacy curriculum as incoming new students from high school or another university. If they gain preferred admission as new students, their admission to the final four years of the professional curriculum is secure, provided they meet the requirements to continue in the program. This approach enables students to focus on enjoying their undergraduate education as prepharmacy students, not competing for admission to pharmacy school.

Admission to the school of pharmacy involves two steps. First, students obtain admission to the University. Second, students compete for preferred admission to the school of pharmacy. That competition begins with an invitation by the Pharmacy Admissions Committee to apply for admission to the school of pharmacy. Those invitations are based upon the following criteria:

1. Declared interest in pharmacy
2. Academic curriculum
3. Cumulative GPA (high school or collegiate)
4. ACT composite and subscores of at least 23 (or SAT subscores of 530 or higher)(for high school students)

The Pharmacy Admissions Committee begins inviting students to apply by the first week of December. The application process involves submitting an essay and scheduling an interview with the Pharmacy Admissions Committee. Interviews typically begin in mid-January and continue until the class is full. Final selection is based upon performance in the interview and on the essay.

Students who do not wish to compete for preferred admission or who do not qualify for preferred admission as a new student may still take the prepharmacy curriculum with the approval of the dean of the school of pharmacy. Their eligibility to continue into the professional-level pharmacy curriculum will be contingent upon meeting the continuation requirements outlined below.

The school of pharmacy also encourages students who have earned undergraduate or graduate degrees elsewhere to apply. These “postbaccalaureate” students apply directly for admission to the professional pharmacy program following the procedures outlined on the school of pharmacy website. Factors considered in admission decisions include collegiate grade point average, PCAT scores, experience in and passion for pharmacy, and the interview with the pharmacy admissions committee.

Continuation Requirements

To continue as a prepharmacy student and move into the professional portion of the curriculum, students must meet the following requirements:

1. Maintain a cumulative GPA of at least 3.00.
2. Complete all of the curricular requirements (including the general education language requirements) of the prepharmacy program.
3. Obtain a PCAT score (Pharmacy College Admissions Test) at the 50th percentile or above.
4. Interview successfully with the faculty of the school of pharmacy.

Career Opportunities

The demand for pharmacists appears to be strong for many years to come. Current shortages as well as changes and advances in science and health care will create abundant opportunities for pharmacy graduates. These opportunities may include:

- Clinical specialist in cardiology, oncology, nutrition, infectious disease, diabetes mellitus, psychiatry, etc.
- Community pharmacist
- Compounding pharmacist
- Consultant pharmacist in geriatrics, palliative care, etc.
- Hospital pharmacist
- Long-term care pharmacist
- Managed care pharmacist
- Nuclear pharmacist
- Pediatrics pharmacist

Faculty

Marc Sweaney, *Dean: School of Pharmacy*. Professor of Pharmacy Practice. *Education*: B.S., Pharm., Ohio Northern University, 1993; Pharm.D., The Ohio State University, 1997; M.Div., Southwest Bible College and Seminary, 2006. At Cedarville since 2008.

Jeffrey Lewis, *Associate Dean: School of Pharmacy*. Associate Professor of Pharmacy Practice. *Education*: B.S., Pharm., Ohio Northern University, 1986; Pharm.D., University of Cincinnati, 1988, MACM, Malone University, 2004. At Cedarville since 2009.

David Ormsbee, *Assistant Dean: School of Pharmacy*. *Education*: B.A., Chemistry, Cedarville College, 1978; M.B.A., Syracuse University, 2003. At Cedarville since 1979.

Department of Pharmacy Practice

Douglas Anderson, *Chair: Department of Pharmacy Practice*. Professor of Pharmacy Practice. *Education*: B.S., Pharmacy, University of Oklahoma, 1988; Pharm.D., University of Oklahoma, 1992. At Cedarville since 2009.

Miriam Ansong, *Director, Drug Information Center*. Associate Professor of Pharmacy Practice. *Education*: Pharm.D., Howard University College of Pharmacy, 1998. At Cedarville since 2012.

John Ballentine, Associate Professor of Pharmacy Practice. *Education*: B.S., Pharmacy, University of Houston, 1989; Pharm.D., University of Kentucky, 1991. At Cedarville since 2011.

Aleda Chen, Assistant Professor of Pharmacy Practice. *Education*: Pharm.D., Ohio Northern University, 2006; M.S., Purdue University, 2009; Ph.D., Purdue University, 2011. At Cedarville since 2011.

Marty Eng, Associate Professor of Pharmacy Practice. *Education*: Pharm.D., University of Maryland, Baltimore School of Pharmacy, 2000. At Cedarville since 2012.

Tracy Frame, Assistant Professor of Pharmacy Practice. *Education*: Pharm.D., Samford University, 2008. At Cedarville since 2011.

Thad Franz, *Director of Experiential Programs*. Assistant Professor of Pharmacy Practice. *Education*: B.S., Pharmaceutical Science, The Ohio State University, 2003; Pharm.D., The Ohio State University, 2005. At Cedarville since 2012.

Melody Hartzler, Assistant Professor of Pharmacy Practice. *Education*: Pharm.D., Ohio Northern University, 2009. At Cedarville since 2010.

Kelly Hiteshew, Assistant Professor of Pharmacy Practice. *Education*: Pharm.D., Ohio Northern University, 2010. At Cedarville since 2011.

Jeff Huston, *Director of Student and Professional Development*. Instructor of Pharmacy Practice. *Education*: B.S., Pharmacy, Ohio Northern University, 1990. At Cedarville since 2010.

Phillip Thornton, *Vice Chair of Experiential Programs*, Associate Professor of Pharmacy Practice. *Education*: B.S., Pharmacy, University of Cincinnati College of Pharmacy, 1990; Ph.D., Pharmacology, Wake Forest University, 1999; Postdoctoral Research Fellow, Institute for Brain Aging and Dementia, University of California at Irvine, 1999–2000; Postdoctoral Fellow, Disease Pharmacotherapy Traineeship, ASCP Foundation, 2002. At Cedarville since 2012.

Department of Pharmaceutical Sciences

Rebecca Gryka, *Chair: Department of Pharmaceutical Sciences*. Associate Professor of Pharmaceutical Sciences. *Education*: B.A., University of California San Diego, 1974; Pharm.D., University of Southern California, 1980; Ph.D., University of Southern California, 1984; Postdoctoral Fellow, University of California Riverside, 1985–86. At Cedarville since 2010.

Elisha Injeti, *Director of Research and Development*. Associate Professor of Pharmaceutical Sciences. *Education*: B.S., Pharmaceutical Sciences, Andhra University, 1995; M.S., Pharmaceutical Sciences, Andhra University, 1997; Post Baccalaureate Certificate, Biomedical and Clinical Ethics, Loma Linda University, 2002; Ph.D., Pharmacology, Loma Linda University, 2008. At Cedarville since 2009.

Rocco Rotello, Associate Professor of Pharmaceutical Science. *Education*: B.A., Chadron State College, 1983; M.S., University of Nebraska Medical School, 1985; Ph.D., University of Colorado Medical School, 1991; Postdoctoral Fellow, Harvard Medical School, 1991–94. At Cedarville since 2011.

Denise Simpson, Assistant Professor of Pharmaceutical Sciences. *Education*: B.S., Chemistry and Food Chemistry, University of the West Indies, 1999; Ph.D., Chemistry, University of the West Indies, 2005; Postdoctoral Fellow, Department of Medicinal Chemistry, University of Iowa/University of Kansas, 2006–2008; Postdoctoral Fellow, Specialized Chemistry Center, University of Kansas, 2008–2010. At Cedarville since 2012.

School of Pharmacy

Cedarville University offers a distinct, seven-year program that leads to the Doctor of Pharmacy (Pharm.D.) degree. The curriculum involves three years of prepharmacy coursework followed by four years of graduate-level, advanced professional coursework in pharmacy. By completing the specified requirements, students earn a minor in Bible, Bachelor of Science in pharmaceutical sciences and a Doctor of Pharmacy.

Mission

Cedarville University is a Christ-centered learning community equipping students for lifelong leadership and service through an education marked by excellence and grounded in biblical truth. The school of pharmacy develops exceptional pharmacy practitioners focused on meeting the physical, emotional, and spiritual needs of patients through servant leadership. The school pursues innovative, ethical solutions to health-related issues in diverse populations through collaborative teaching, research, and practice.

Values

Character—Regarding character as the foundation for appropriate decisions, compassionate care, and clear perspectives, the school considers the development of godly character as paramount in the lives of its students.

Global Focus—The school embraces a global perspective to its impact, endeavoring to equip graduates for service locally, regionally, nationally, and internationally, maintaining a particular sensitivity to the underserved.

Ethics—The school advances behavior, practice, and research consistent with the truth of the Scriptures and example of Christ.

Collaboration—Though structured into distinct administrative and academic units, the school pursues collaborative relationships and activities within the school, among other units of the university, and with other organizations outside of the university, exemplifying to students the value and effectiveness of working together to achieve worthwhile goals.

Innovation—The school promotes and celebrates the discovery of creative solutions and approaches to issues and problems that challenge the delivery of effective patient care. Recognizing continuous innovation as a quality found in effective organizations today, the school actively integrates contemporary topics and practices into the curriculum.

Leadership Development—Regarding influence as the essence of leadership and desiring our graduates to be influential in their personal and professional lives, the school pursues opportunities to help its students develop and apply their leadership skills.

Accreditation

Although Cedarville has offered a prepharmacy curriculum for more than 40 years, the current seven-year pharmacy program started in 2009. The Ohio Board of Regents and the Higher Learning Commission of the North Central Association of Colleges and Schools (ncahlc.org) have both granted their approvals to offer the degrees associated with the program. The University has received preliminary approval for the advanced professional curriculum in pharmacy from the Accreditation Council for Pharmacy Education, (acpe-accredit.org), the organization that accredits pharmacy programs in the United States. Since the ACPE accreditation process is ongoing, go to cedarville.edu/pharmacy/accreditation for information regarding the school's current status.

A complete description of the general education requirements is found on page 26.

Prepharmacy

Prepharmacy involves a three-year curriculum that contains the course requirements for the professional curriculum of the Cedarville University School of Pharmacy, as well as other pharmacy programs in the United States. This program is designed to prepare students for advanced professional study in pharmacy. These courses compare closely to degree requirements for the Bachelor of Arts degree with a major in biology, the Bachelor of Science degree with a major in biology, and the Bachelor of Arts degree with a major in chemistry, enabling students who wish to earn a bachelor's degree to do so relatively easily. Since admission is very competitive, the majority of students admitted to the more than 130 other schools of pharmacy across the nation have earned bachelor's degrees. The courses contained in the prepharmacy curriculum described below serve as prerequisites for the professional course requirements for the Cedarville University School of Pharmacy.

The following 100-101-hour program should be included in the three years the prepharmacy student attends Cedarville.

| | |
|--|--------------|
| Biblical Education | 16 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Communication | 6 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| Humanities | 9 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| Literature Elective | 3 |
| Humanities Elective | 3 |
| Physical Education | 2 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Science and Mathematics | 49-50 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-2210 Microbiology | 4 |
| BIO-2250 Cell Biology | 4 |
| BIO-3450, 3460 Human Structure and Function I and II | 8 |
| BIO-4350 Immunology..... | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| MATH-1710 Calculus I | 5 |
| PHYS-2110 General Physics I | 4 |
| (or PHYS-1010 College Physics I.....) | 5 |
| Social Sciences and History | 9 |
| GSS-1100 Politics and American Culture..... | 3 |
| History Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Prepharmacy | 9 |
| PPHR-1011 Profession of Pharmacy—History and Issues | 1 |
| PPHR-1012 Profession of Pharmacy—History and Issues | 1 |
| PPHR-2013 Profession of Pharmacy—Careers..... | 1 |
| PPHR-2014 Profession of Pharmacy—Careers..... | 1 |
| PPHR-3200 Pharmacy Calculations..... | 2 |
| PPHR-3300 Biostatistics in Pharmacy and Medicine | 3 |

Suggested Three-Year Curriculum for Prepharmacy

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| MATH-1710 Calculus I | 5 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PPHR-1011, 1012 Profession of Pharmacy I and II..... | 2 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BIO-2250 Cell Biology | 4 |
| BIO-4350 Immunology..... | 4 |
| CHEM-3510 Organic Chemistry I | 4 |
| CHEM-3520 Organic Chemistry II..... | 4 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PPHR-2013, 2014 Profession of Pharmacy | 2 |
| History Elective..... | 3 |
| Humanities Elective | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 36 |

Third year:

| | |
|--|--------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BIO-2210 Microbiology | 4 |
| BIO-3450, 3460 Human Structure and Function I and II | 8 |
| GSS-1100 Politics and American Culture..... | 3 |
| PHYS-2110 General Physics I | 4 |
| (or PHYS-1010 College Physics I.....) | 5 |
| PPHR-2100 Biostatistics..... | 3 |
| PPHR-3200 Pharmacy Calculations..... | 2 |
| Literature Elective | 3 |
| Total | 31-32 |

Note: The advanced professional pharmacy curriculum is described in the Graduate Catalog and available upon request from pharmacy admissions



A complete description of the general education requirements is found on page 26.

Bachelor of Science in Pharmaceutical Sciences

Students enrolled in the seven-year pharmacy curriculum earn a **Bachelor of Science in pharmaceutical sciences** after completing four and a half years of the program. This degree serves as the foundation for advanced study in pharmacy or the pharmaceutical sciences as well as career opportunities in pharmacy and the pharmaceutical industry.

Course requirements involve 129-130 semester hours including:

| | |
|--|--------------|
| Biblical Education | 16 |
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| Communication | 6 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| Humanities | 9 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| Literature Elective | 3 |
| Humanities Elective | 3 |
| Physical Education | 2 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Science and Mathematics | 49-50 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-2210 Microbiology | 4 |
| BIO-2250 Cell Biology | 4 |
| BIO-3450, 3460 Human Structure and Function I and II | 8 |
| BIO-4350 Immunology..... | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| MATH-1710 Calculus I | 5 |
| PHYS-2110 General Physics I | 4 |
| (or PHYS-1010 College Physics I.....) | 5 |
| Social Sciences and History | 9 |
| GSS-1100 Politics and American Culture..... | 3 |
| History Elective | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Pharmaceutical Sciences | 38 |
| PPHR-1011 Profession of Pharmacy—History and Issues | 1 |
| PPHR-1012 Profession of Pharmacy—History and Issues..... | 1 |
| PPHR-2013 Profession of Pharmacy—Careers..... | 1 |
| PPHR-2014 Profession of Pharmacy—Careers..... | 1 |
| PPHR-3200 Pharmacy Calculations..... | 2 |
| PPHR-3300 Biostatistics in Pharmacy and Medicine | 3 |
| PHAR-6111 Epidemiology and Research Design | 3 |
| PHAR-6130 Medicinal Biochemistry..... | 4 |
| PHAR-6131 Pharmaceutical Sciences I | 5 |
| PHAR-6132 Pharmaceutical Sciences II | 5 |
| PHAR-6133 Genetics and Pharmacogenomics | 3 |
| PHAR-6134 Pharmacokinetics and Biopharmaceutics | 4 |
| PHAR-6250 Applied Biomedical Sciences Module..... | 5 |

Pharmaceutical Sciences Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0-5 |
| General Education Requirements..... | 42 |
| Pharmaceutical Sciences Major Requirements | 38 |
| Cognate requirements | 49-50 |
| Total (minimum, not including proficiency) | 129 |

Suggested Four-Year Curriculum for a Major in Pharmaceutical Sciences - B.S.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| CHEM-1110, 1120 General Chemistry-History and Issues..... | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| MATH-1710 Calculus I | 5 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PPHR-1011, 1012 Profession of Pharmacy I and II..... | 2 |
| Total | 33 |

Second year:

| | |
|---|--------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BIO-2250 Cell Biology | 4 |
| CHEM-3510 Organic Chemistry I | 4 |
| CHEM-3520 Organic Chemistry II | 4 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PPHR-2013, 2014 Profession of Pharmacy-Careers..... | 2 |
| PHYS-2110 General Physics I | 4 |
| (or PHYS-1010 College Physics I.....) | 5 |
| History Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 33-34 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BIO-2210 Microbiology | 4 |
| BIO-3450, 3460 Human Structure and Function I and II | 8 |
| BIO-4350 Immunology..... | 4 |
| GSS-1100 Politics and American Culture..... | 3 |
| PPHR-3200 Pharmacy Calculations..... | 2 |
| PPHR-3300 Biostatistics in Pharmacy and Medicine | 3 |
| Humanities Elective | 3 |
| Literature Elective | 3 |
| Total | 34 |

Fourth year:

| | |
|---|-----------|
| PHAR-6111 Epidemiology and Research Design | 3 |
| PHAR-6130 Medicinal Biochemistry..... | 4 |
| PHAR-6131 Pharmaceutical Sciences I | 5 |
| PHAR-6132 Pharmaceutical Sciences II | 5 |
| PHAR-6133 Genetics and Pharmacogenomics | 3 |
| PHAR-6134 Pharmacokinetics and Biopharmaceutics | 4 |
| Total | 24 |

Fifth year (fall semester):

| | |
|---|---|
| PHAR-6250 Applied Biomedical Sciences Module..... | 5 |
|---|---|

Note: The advanced professional pharmacy curriculum is described in the Graduate Catalog and available upon request from pharmacy admissions



Department of

PSYCHOLOGY

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Major

» Psychology (Page 164)

Minor

» Psychology Minor (Page 165)

Mission Statement

The Cedarville University Department of Psychology seeks to:

- Develop understanding of biblical content that has psychological impact and to investigate all psychological concepts in the light of scriptural truth.
- Provide an analysis of the person from physical, emotional, rational, and spiritual levels.
- Aid students in their personal adjustment to everyday life through an understanding of human behavior.
- Prepare students for graduate study in psychology and related areas.
- Train students desiring to use counseling in vocational ministry and in biblical counseling contexts.
- Introduce students to the work world through internships, Christian ministries, guest lecturers, and advisement.
- Provide courses in psychology necessary for teacher certification.

Personal Requirements

Some students who pursue a major in psychology are interested in providing human services to populations with special needs. Other psychology majors choose to focus on graduate school preparation, including research interests.

Department Requirements

All psychology majors must obtain a cumulative 2.0 GPA or higher in their major for graduation.

Programs of Study

The department of psychology offers a Bachelor of Arts degree with a major or a minor in psychology. For those majoring in psychology, each student chooses at least one track of study from the following:

- Child and Family
- Comprehensive Counseling
- Cognitive Neuroscience
- Cross-Cultural Psychology
- Health Psychology and Addictions
- Research

The psychology program is particularly useful to students who wish to earn a minor field of study at Cedarville, earn a double major, or take a sequence of courses in preparation for graduate school.

Cocurricular Opportunities

Psychology majors have the opportunity to present papers at the Ohio Undergraduate Psychology Research Conference and the Ohio Psychological Association Annual Conference. In addition, the department sponsors the Psi Kappa Theta (PKT) Psychology Club for qualifying psychology majors.

Technical Resources

Psychology students are able to conduct data analysis utilizing the University's SPSS software system. Counseling skill courses involve participation in simulated role-playing experiences. Personality inventories are utilized as part of courses in personality and psychological measurement.



Career Opportunities

The Cedarville University Department of Psychology has a strong track record in seeing alumni placed in quality graduate psychology and counseling programs. In addition, graduates of the psychology major find ready placements in human service agencies after graduation. Careers pursued by psychology majors include:

- Author
- Behavior specialist
- Chaplain
- Child therapist
- College counselor
- Correctional institution counselor
- Counselor in local church
- Crisis pregnancy center director
- Dean of men/women
- Forensic psychologist
- Geriatric center counselor
- Guidance counselor
- Health psychologist in a hospital
- High school psychology teacher
- Industrial psychologist
- Marriage and family therapist
- Missions agency counselor
- Private practice
- Psychologist (clinical)
- School psychologist
- Social agency counselor
- State hospital counselor
- Substance abuse counselor

Faculty

Milton Becknell, *Chair*. Professor of Psychology. *Education*: B.A., University of North Texas, 1973; B.S.N., Texas Christian University, 1977; M.S.N., University of Texas at Austin, 1980; Ph.D., University of Southern Mississippi, 1989. Diplomate, American Board of Professional Psychology in Clinical Health Psychology (ABPP); Registered Nurse (TX); Licensed Psychologist (OH). At Cedarville since 2004.

Amanda Burger, Assistant Professor of Psychology. *Education*: B.A., Cedarville University, 2004; Ph.D., Wayne State University, 2010; Licensed Psychologist (OH). At Cedarville since 2008.

Charles Dolph, Senior Professor of Psychology. *Education*: B.A., Cedarville University, 1974; M.Ed., Georgia State University, 1982; Ph.D., Georgia State University, 1982. Licensed Psychologist (OH). At Cedarville since 1979.

Michael Firmin, Professor of Psychology. *Education*: B.A., Calvary Bible College, 1983; M.A., Calvary Theological Seminary, 1985; M.S. and Ph.D., Bob Jones University, 1987, 1988; M.A., Marywood University, 1992; Ph.D., Syracuse University, 2000. National Certified Counselor (NCC); Licensed Psychologist (OH). At Cedarville since 1998.

Chi-en Hwang, Professor of Psychology. *Education*: B.S., National Taiwan University, 1977; M.A., University of Iowa, 1980; Ph.D., University of Iowa, 1986. At Cedarville since 1991.

Ruth Lowrie, Assistant Professor of Psychology. *Education*: B.A., Grace College, 1979; M.A., Ball State University, 1981; Ed.S., Ball State University, 1982; Ed.D., Ball State University, 1987; Certified School Psychologist (OH). At Cedarville since 2011.

Carl Ruby, Vice President for Student Services. *Education*: B.A., Cedarville University, 1983; M.A., Wheaton College, 1988; Ph.D., Ohio University, 1996. At Cedarville since 1989.

Luke Tse, Associate Professor of Psychology. *Education*: B.A., Embry-Riddle Aeronautical University, 1991; M.Div., New Orleans Baptist Theological Seminary, 1995; Ph.D., New Orleans Baptist Theological Seminary, 2000. Licensed Professional Counselor (LPC); Licensed Independent Marriage and Family Therapist (LIMFT); National Certified Counselor (NCC). At Cedarville since 2001.

Di Wu, Assistant Professor of Psychology. *Education*: B.S., Beijing Normal University, 1999; M.Ed., Beijing Normal University, 2002; M.S., University of Illinois at Urbana-Champaign, 2004; M.A., University of Illinois at Urbana-Champaign, 2005; Ph.D., University of Illinois at Urbana-Champaign, 2010. At Cedarville since 2011.

Emeriti

Robert Abbas, Professor Emeritus of Psychology. *Education*: B.M., Northwestern College, 1959; B.A., Wartburg College, 1962; M.A., University of Northern Colorado, 1965; Ph.D., University of Missouri at Columbia, 1972. Licensed Psychologist (OH). At Cedarville since 1971.

Stanley Ballard, Professor Emeritus of Psychology. *Education*: Graduate, Moody Bible Institute, 1954; Th.B., Baptist Bible College, 1956; Th.M., Dallas Theological Seminary, 1964; M.S., North Texas State University, 1965; Ph.D., North Texas State University, 1971. At Cedarville from 1965–2001.

Psychology

The **psychology major** provides students with general exposure to the field of psychology in preparation for graduate study in psychology and related fields or a number of other human service positions.

Course requirements involve 42 semester credits of psychology core courses and an additional 12 semester hour track:

| | |
|--|-----------|
| Psychology Core Courses | 42 |
| PYCH-1600 General Psychology | 3 |
| PYCH-2600 Human Development: Lifespan | 3 |
| PYCH-2610 Statistics | 3 |
| PYCH-2640 Abnormal Psychology | 3 |
| PYCH-3610 History and Systems of Psychology | 3 |
| PYCH-3620 Psychology and Christianity | 3 |
| PYCH-3650 Learning and Memory | 3 |
| PYCH-3660 Professional Counseling | 3 |
| PYCH-3690 Social Psychology | 3 |
| PYCH-3730 Research Methods | 3 |
| PYCH-3900 Physiological Psychology | 3 |
| PYCH-4640 Psychology Comprehensive Review | 3 |
| *PYCH-4990 Psychology Internship | 3 |
| Professional Issues Block | 3 |
| PYCH-1000 Orientation to Psychology | 1 |
| PYCH-1010 Writing in APA | 1 |
| PYCH-1020 Graduate School and Career Preparation | 1 |

*Capstone Course

| | |
|---|-----------|
| Select one of the following tracks | 12 |
| Comprehensive Counseling Track | 12 |
| PYCH-3630 Testing and Measurement | 3 |
| PYCH-3670 Group Dynamics | 3 |
| PYCH-3680 Counseling Couples and Families | 3 |
| PYCH-4400 Counseling Skills | 3 |
| Health Psychology and Addictions Track | 12 |
| PYCH-3000 Addictions | 3 |
| PYCH-3380 Health Psychology | 3 |
| PYCH-3901 Medications and Behavior | 3 |
| PYCH-4950 Psychology Thesis | 3 |
| Cognitive Neuroscience Track | 12 |
| PYCH-3630 Testing and Measurement | 3 |
| PYCH-3760 Cognitive Neuroscience | 3 |
| PYCH-3901 Medications and Behavior | 3 |
| PYCH-4950 Psychology Thesis | 3 |
| Child and Family Track | 12 |
| PYCH-3130 Intimate Relationships | 3 |
| PYCH-3680 Counseling Couples and Families | 3 |
| PYCH-3701 Counseling Adolescents | 3 |
| PYCH-4700 Counseling Children | 3 |
| Research Track | 12 |
| PYCH-3630 Testing and Measurement | 3 |
| PYCH-3720 Psychology of Personality | 3 |
| PYCH-3740 Qualitative Research | 3 |
| PYCH-4950 Psychology Thesis | 3 |
| Cross-Cultural Psychology Track | 12 |
| PYCH-1800 Cross-Cultural Psychology | 3 |
| PYCH-3740 Qualitative Research | 3 |
| ** <i>Study abroad credits</i> | 6 |

**Students must complete the required internship at an international site. It is strongly recommended that students also minor in one of the language studies.

Psychology Major Curriculum Summary

Proficiency Requirements 0–5
 Psychology Major Requirements 54
 Other General Education Requirements..... 46–54
 Electives 20–28
Total (minimum, not including proficiency) 128

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Psychology

First year:

BEGE-1710 Christian Life and Thought..... 3
 BEGE-1720 Spiritual Formation 3
 COM-1100 Fundamentals of Speech..... 3
 ENG-1400 Composition..... 3
 GSS-1100 Politics and American Culture 3
 HUM-1400 Introduction to the Humanities..... 3
 PEF-1990 Physical Activity and the Christian Life 2
 PSYCH-1000 Orientation to Psychology 1
 PSYCH-1010 Writing in APA 1
 PSYCH-1020 Graduate School and Career Preparation 1
 PSYCH-1600 General Psychology..... 3
 Biology Elective 3.5
 Physical Science Elective 3.5
Total 33

Second year:

BEGE-2730 Old Testament Literature 3
 BEGE-2740 New Testament Literature 3
 PSYCH-2600 Human Development: Lifespan..... 3
 PSYCH-2610 Statistics..... 3
 PSYCH-2640 Abnormal Psychology 3
 PSYCH-3650 Learning and Memory..... 3
 Humanities/Global Awareness Elective 3
 Literature Elective 3
 Track Requirements 6
Total 30

Third year:

BEGE-3750 Christian Worldview Development..... 2
 BEGE-3760 Christian Worldview Integration 2
 PSYCH-3660 Professional Counseling 3
 PSYCH-3690 Social Psychology..... 3
 PSYCH-3730 Research Methods..... 3
 PSYCH-3900 Physiological Psychology..... 3
 Track Requirements 6
 Electives 10
Total 32

Fourth year:

PSYCH-3610 History and Systems of Psychology 3
 PSYCH-3620 Psychology and Christianity..... 3
 PSYCH-4640 Psychology Comprehensive Review 3
 PSYCH-4990 Psychology Internship..... 3
 History Elective..... 3
 Electives 18
Total 33

Minor

Psychology Minor

The **psychology minor** helps students who find that additional coursework in psychology will support their major field of study. In particular, understanding people and human dynamics and applying the scientific method to problem-solving strengthens students' vocational preparation and ultimate job success. The psychology minor is constructed to allow maximum flexibility across a large cross-section of majors at Cedarville University.

Course requirements involve 18 semester hours including:

PSYCH-1600 General Psychology 3
 PSYCH-2640 Abnormal Psychology 3
 Electives in psychology..... 12



Department of

SCIENCE AND MATHEMATICS

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Mission Statement

The Cedarville University Department of Science and Mathematics offers curricula in biology, chemistry, physics, mathematics, the earth-space sciences, and secondary science and mathematics education. The department seeks to present the natural sciences and mathematics as disciplines through which students can learn to understand creation and its Creator. They will learn how to exercise stewardship of this knowledge as professionals who seek to make a difference in their vocations for the glory of God and the benefit of family, church, community, and environment.

This department seeks to:

- Provide a meaningful learning experience in the sciences and mathematics as part of the liberal arts core curriculum.
- Aid students in developing clear and orderly thinking processes through the use of the techniques of science and mathematics.
- Assist students in developing a biblical perspective of the sciences, which is essential in understanding controversial issues such as origin of life, biomedical ethics, and genetic engineering.
- Prepare students for graduate study or further professional study in the medical, environmental, or agricultural sciences.
- Prepare secondary teachers with a biblical perspective of science.
- Prepare students to serve in other science-related vocations.

Personal Requirements

Students who enjoy and excel in high school mathematics and science courses possess the greatest potential for success as graduates of this department. Therefore, to prepare for the mathematics and science curricula, students should take a college-preparatory curriculum which includes:

- Four units of English
- Four units of mathematics (algebra, geometry, and trigonometry)
- Four units of science (physical science, biology, chemistry, and physics)
- Three units of social science
- Three units of a single foreign language
- Electives in computers may also be helpful.

Programs of Study

The department of science and mathematics offers the following programs of study:

Bachelor of Arts (B.A.) in:

- Biology
- Chemistry
- Chemistry Education
- Geoscience
- Life Science Education
- Mathematics
- Mathematics Education – Integrated
- Physical Science Education
- Physics
- Physics Education
- Science Comprehensive Education – Integrated

Bachelor of Science (B.S.) in:

- Biology
- Chemistry
- Environmental Science
- Forensic Science
- Geology
- Mathematics
- Molecular and Cellular Biology
- Physics

Minors

- Actuarial Science
- Biology
- Bioethics
- Chemistry
- Earth Science
- Geology
- Mathematics
- Physics

Special Programs

- Environmental Biology
- Medical Technology
- Preagriculture
- Premedical (pre-health professions)
- Prepharmacy
- Prephysical Therapy

Cocurricular Opportunities

- Chi Theta Pi (pre-health professions organization)
- Cedarville University Emergency Medical Services Squad
- Math Club
- Omega Theta Kappa (science education)

Technical Resources

- A.D.A.M. Interactive Anatomy
- Biology and chemistry support
- Chem Sketch
- DPGraph 2001
- Laboratory simulations
- LaTeX
- Maple 16
- Matlab 7.20
- MicroCalc 7.0 laboratory
- Molecular Modeling Software
- RasMol
- SigmaPlot 10.0 @
- Statistical analysis tools
- Spartan Student v5.0

Career Opportunities

Graduates of this department have gained admission to outstanding graduate and professional schools around the nation. Careers pursued by graduates include:

- Agricultural consultant
- Biologist
- Botanist
- Business actuary
- Chemist
- Chiropractor
- Environmental scientist
- Environmental toxicologist
- Health professional
- Laboratory technician
- Mathematician
- Pharmacist
- Physical therapist
- Physician
- Physicist
- Researcher
- Science educator
- Statistician
- Wildlife biologist

Faculty

Dennis Flentge, *Chair*. Senior Professor of Chemistry. *Education*: B.S., Texas Lutheran College, 1969; Ph.D., Texas A&M University, 1974; Postdoctoral Research Fellow, University of Florida, 1974–75; Texas A&M University, 1976; Summer Faculty Research Fellow, Wright-Patterson Air Force Base, 1981, 1982, 1984–1988, 1990, 1996, 1997, 2001; graduate study, University of Wisconsin, summer, 1984. At Cedarville since 1980.

Donald Baumann, Senior Professor of Biology and Chemistry. *Education*: B.S., Iowa State University, 1960; M.S., Iowa State University, 1962; Ph.D., Iowa State University, 1964. At Cedarville since 1964.

Edwin Braithwaite, Professor of Mathematics. *Education*: B.A., Western Washington University, 1966; M.A., Western Washington University, 1968; Ph.D., University of Illinois, 1975. At Cedarville since 1976.

Darrin Frey, Professor of Mathematics. *Education*: B.S., University of Nebraska, 1989; Ph.D, University of Michigan, 1995. At Cedarville since 1997.

Mark Gathany, Assistant Professor of Biology. *Education*: B.S., Grace College, 2002; M.S.E.S and Conservation Biology Certificate, Ohio University, 2004; Ph.D., Colorado State University. At Cedarville since 2007.

Sarah Gilchrist, Assistant Professor of Mathematics. *Education:* B.S., Cedarville University, 2000; M.S., Wright State University, 2004; Ph.D., The Ohio State University, ABD. At Cedarville 2004–2009, 2012.

Steven Gollmer, Professor of Physics. *Education:* B.S., Pillsbury Baptist Bible College, 1982; B.S., Northern Illinois University, 1985; M.S., University of Illinois, 1986; Ph.D., Purdue University, 1994. At Cedarville since 1994.

Melissa Hartman, Assistant Professor of Biology. *Education:* B.A., Cedarville University, 1996; M.D., Indiana University School of Medicine, 2000. At Cedarville since 2009.

Larry Helmick, Senior Professor of Chemistry. *Education:* B.S., Cedarville University, 1963; Ph.D., Ohio University, 1968; postdoctoral research, University of Florida, 1974–75 and summers of 1969, 1970, 1971; University of Illinois, summers of 1972, 1973, 1974; Summer Faculty Research Fellow, NASA-Lewis Research Center, 1980–1987 and 1990–1993, 1998; National Research Council Senior Research Fellow, 1988–1989; Wright Laboratory, Wright-Patterson Air Force Base, 1994–1997. At Cedarville since 1968.

Nathan Hnatiuk, Assistant Professor of Chemistry. *Education:* B.S., Houghton College, 2003; Ph.D., University of Connecticut, 2010. At Cedarville University since 2008

Geoffrey Holloway, Associate Professor of Chemistry. *Education:* B.S., Ball State University, 1996; Ph.D., University of Illinois, 2001; Dreyfus Postdoctoral Fellow, 2001–2002, Eastern Illinois University. At Cedarville since 2012.

Aaron Hutchison, Associate Professor of Chemistry. *Education:* B.A., Cedarville University, 1998; Ph.D., University of Kentucky, 2007. At Cedarville University since 2003.

Jennifer Hutchison, Assistant Professor of Mathematics. *Education:* B.S., Cedarville University, 2001; M.A., Miami University, 2003; Additional graduate study, Auburn University, 2003–2005. At Cedarville since 2005.

Matthew Ingle, Instructor of Biology. *Education:* B.S., The Master's College, 2008; M.S., Loma Linda University, 2010. At Cedarville since 2011.

William Jones, Associate Professor of Biology. *Education:* B.A., Cedarville University, 1981; M.A., University of Akron, 1999; Ph.D., The Ohio State University. At Cedarville since 1999.

Heather Kuruvilla, Professor of Biology. *Education:* B.S., Houghton College, 1992; Ph.D., State University of New York at Buffalo, 1997. At Cedarville since 1997.

Dali Luo, Associate Professor of Mathematics. *Education:* B.S., South China Institute of Technology, 1982; M.S., Claremont Graduate School, 1988; Ph.D., Washington State University, 1992; M.A., Grand Rapids Baptist Seminary, 2001; Th.M., Calvin Theological Seminary, 2003. At Cedarville 1992–1998 and since 2001.

Mark McClain, Associate Academic Vice President; College of Professions; Professor of Chemistry. *Education:* B.A., Cedarville University, 1989; Ph.D., University of Michigan, 1994; Postdoctoral Fellow, Sandia National Laboratories, 1994–96; Summer Faculty Research Fellow, Air Force Research Laboratory, 1997, 1999, 2000, 2001, 2002; National Research Council Senior Research Associate, 2003–2004. At Cedarville since 1996.

Douglas Miller, Professor of Chemistry. *Education:* B.S., University of Rochester, 1977; Ph.D., University of Colorado, 1981; postdoctoral research, University of Iowa, 1982; City University of New York, 1982–1984; Summer Faculty Research Fellow, NASA-Lewis Research Center, 1986–1990, 1992. At Cedarville since 1984.

Lin Pan, Assistant Professor of Physics. *Education:* B.Sc., Qingdao University, 1991; Ph.D., Michigan Technological University, 2008. At Cedarville since 2011.

Robert Paris, Assistant Professor of Biology. *Education:* B.S., Berea College, 1992; M.S., University of Tennessee, 1997; Ph.D., Virginia Polytechnic Institute and State University, 2000. At Cedarville since 2011.

Kaleb Pauley, Assistant Professor of Biology. *Education:* B.S., Marshall University, 2002; M.S., Marshall University, 2004; Ph.D., University of Florida, 2008; Postdoctoral Research Fellow, University of Florida, 2008–2011. At Cedarville since 2011.

Thomas Rice, Assistant Professor of Geology. *Education:* B.S., West Virginia University, 1978; M.E., Colorado School of Mines, 1987. At Cedarville since 2012.

Kevin Roper, Associate Professor of Mathematics. *Education:* B.S., Southampton University, England, 1979; M.Ed., University of South Carolina, 1988; M.A., University of Kentucky, 1992; Ph.D., University of Kentucky, 1995. At Cedarville 1995–97 and since 2000.

Alicia Schaffner, Associate Professor of Biology. *Education:* B.S., Purdue University, 1992; Ph.D., The Ohio State University, 2000. At Cedarville since 2000.

Robert Schumacher, Associate Professor of Mathematics and Computer Science. *Education:* B.S., Computer Science, United States Air Force Academy, 1970; M.S., Operations Research, Air Force Institute of Technology, 1979. At Cedarville since 1993.

Dennis Sullivan, Professor of Biology. *Education:* B.S., Youngstown State University, 1974; M.D., Case Western Reserve University, 1978; Diplomate, American Board of Surgery, 1985; Fellow, American College of Surgeons, 1996; M.A. (Ethics), Trinity International University, 2004. At Cedarville since 1996.

Andrew Wagers, Assistant Professor of Physics. *Education:* B.A., Berea College, 2002; M.S., Stephen F. Austin State University, 2005; Ph.D., Texas A&M University. At Cedarville since 2011.

John Whitmore, Professor of Geology. *Education:* B.S., Kent State University, 1985; M.S., Institute for Creation Research, 1991; Ph.D., Loma Linda University, 2003. At Cedarville since 1991.

Cynthia Wingert, Assistant Professor of Biology. *Education:* B.A., Cedarville University, 2001; M.S., Wright State University, 2005. At Cedarville 2001–2003 and since 2005.

Otis Wright, Professor of Mathematics. *Education:* B.Sc. (Hons.), The University of Sydney, Australia, 1987; M.A., Princeton University, 1989; Ph.D., Princeton University, 1991. Postdoctoral research, University of North Carolina at Chapel Hill, 1998–1999. At Cedarville since 2002.

Melody Arab, Lecturer of Mathematics. *Education:* B.A., Cedarville University, 1998; M.A.T., Miami University, 2004. At Cedarville since 2009.

Emeriti

Leroy Eimers, Professor Emeritus of Physics and Mathematics. *Education:* B.S., Hobart College, 1963; M.S., Syracuse University, 1966; Ph.D., Syracuse University, 1970. At Cedarville since 1981.

John Silvious, Senior Professor Emeritus of Biology. *Education:* B.A., Malone College, 1969; graduate study, Western Michigan University, 1970; Ph.D., West Virginia University, 1974; postdoctoral study, University of Illinois, 1974–76. At Cedarville since 1979.

Daniel Wetzel, Professor Emeritus of Physics and Mathematics. *Education:* B.S., Morehead State College, 1955; M.S., University of Cincinnati, 1963; Ph.D., The Ohio State University, 1971. At Cedarville since 1963.

Technical Support Staff

Eric Johnson, Science Laboratory Technician. *Education:* B.A., Cedarville University, 1988. At Cedarville since 2003.

Biology — Bachelor of Arts

The **Bachelor of Arts degree with a major in biology** provides general course background in the biological sciences.

Course requirements involve 52 semester hours including:

| | |
|--|-----------|
| Biology Core Requirements | 36 |
| BIO-1110 Introduction to Biology | 4 |
| BIO-1120 General Zoology | 4 |
| BIO-2250 Cell Biology | 4 |
| BIO-2500 General Botany | 4 |
| BIO-2600 General Ecology | 3 |
| BIO-3300 Genetics | 4 |
| BIO-3710 Biochemistry | 4 |
| *BIO-4800 Senior Seminar—Biology | 1 |
| BIO-2XXX, 3XXX, 4XXX, ENVS-2XXX, or 3XXX | 8 |
| Departmental Requirements | 16 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-3510 Organic Chemistry I | 4 |
| GMTH-1030 Precalculus | 4 |

*Capstone Course

Biology Major (B.A.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 42–50 |
| Biology Major Requirements | 52 |
| Electives | 26–34 |
| Total (minimum, not including proficiency) | 128 |

Students preparing for medicine, dentistry, osteopathy, or any of the **health professions** should refer to page 189 for a list of courses generally recommended for admission to professional colleges.

Students anticipating **graduate study** in biology should consider completing the Bachelor of Science in biology curriculum.



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Biology — B.A.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BIO-1110 Introduction to Biology | 4 |
| BIO-1120 General Zoology | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| ENG-1400 Composition | 3 |
| GMTH-1030 Precalculus | 4 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 31 |

Second year:

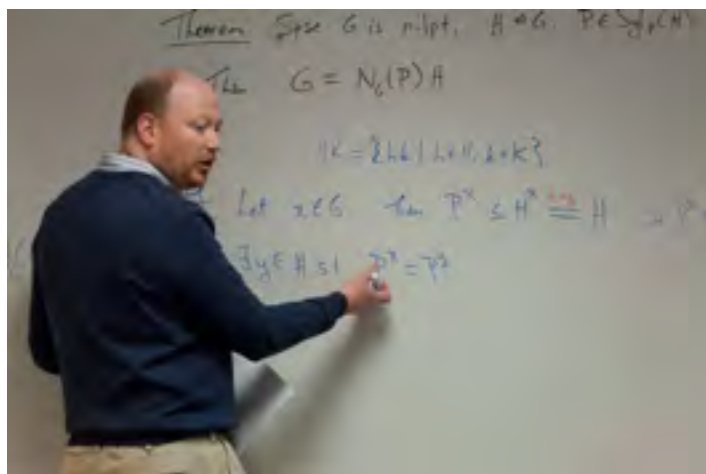
| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BIO-2500 General Botany | 4 |
| BIO-2600 General Ecology | 3 |
| BIO-2250 Cell Biology | 4 |
| CHEM-3510 Organic Chemistry I | 4 |
| COM-1100 Fundamentals of Speech | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| Literature Elective | 3 |
| Total | 33 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BIO-3300 Genetics | 4 |
| BIO-3710 Biochemistry | 4 |
| Biology Electives | 8 |
| Humanities Elective | 3 |
| Electives | 10 |
| Total | 33 |

Fourth year:

| | |
|--|-----------|
| BIO-4800 Senior Seminar — Biology | 1 |
| History Elective | 3 |
| Social Science/Global Awareness Elective | 3 |
| Electives | 24 |
| Total | 33 |



A complete description of the general education requirements is found on page 26.

Biology — Bachelor of Science

The **Bachelor of Science degree with a major in biology** prepares students for graduate study in the biological sciences by including the course requirements prescribed by many of the leading graduate-level biology degree programs in the nation. This major enhances the student's depth of knowledge in biology and increases the breadth of exposure to chemistry, mathematics, and physics.

Course requirements involve 77 hours including:

| | |
|---|-----------|
| Biology Requirements | 46 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| BIO-2250 Cell Biology..... | 4 |
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |
| BIO-3300 Genetics..... | 4 |
| BIO-3710 Biochemistry..... | 4 |
| BIO-3800 Biological Research..... | 2 |
| (Or BIO-3810 Biology Research Internship..... | 2) |
| *BIO-4800 Senior Seminar — Biology..... | 1 |
| BIO-2XXX,3XXX, 4XXX, ENVS-2XXX, or 3XXX..... | 16 |
| Departmental Requirements | 31 |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| CHEM-3510, 3520 Organic Chemistry I and II..... | 8 |
| MATH-1710 Calculus I..... | 5 |
| PHYS-1010, 1020 College Physics I and II..... | 10 |

*Capstone Course

Biology Major (B.S.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| Other General Education Requirements..... | 42 |
| Biology Major Requirements..... | 77 |
| Electives..... | 9 |
| Total (minimum, not including proficiency) | 128 |

Students preparing for medicine, dentistry, osteopathy, or any of the **health professions** should refer to page 189 for a list of courses generally recommended for admission to professional colleges.



Suggested Four-Year Curriculum for a Major in Biology — B.S.

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |
| BIO-2250 Cell Biology..... | 4 |
| CHEM-3510, 3520 Organic Chemistry I and II..... | 8 |
| MATH-1710 Calculus I..... | 5 |
| History Elective..... | 3 |
| Electives..... | 3 |
| Total | 30 |

Third year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| BIO-3300 Genetics..... | 4 |
| BIO-3710 Biochemistry..... | 4 |
| BIO-3800 Biological Research..... | 2 |
| (or BIO-3810 Biology Research Internship..... | 2) |
| GSS-1100 Politics and American Culture..... | 3 |
| PHYS-1010, 1020 College Physics I and II..... | 10 |
| Biology/ENVS Electives..... | 4 |
| Total | 33 |

Fourth year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| BIO-4800 Senior Seminar — Biology..... | 1 |
| Biology/ENVS Electives..... | 12 |
| Humanities Elective..... | 3 |
| Literature Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Electives..... | 6 |
| Total | 32 |



A complete description of the general education requirements is found on page 26.

Chemistry — Bachelor of Arts

The **Bachelor of Arts degree with a major in chemistry** prepares students for careers in the health professions, technical business professions, and other science-related vocations.

Course requirements involve 34 semester hours including:

| | |
|---|-----------|
| Chemistry Requirements | 27 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-2210 Analytical Chemistry I | 3 |
| CHEM-2800 Introduction to Research in Chemistry | 1 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| CHEM-3800 Research Methods in Chemistry | 1 |
| CHEM-4310 Thermodynamics and Kinetics | 4 |
| (or CHEM-4320 Quantum Mechanics and Spectroscopy 4) | |
| *CHEM-4800 Senior Seminar — Chemistry | 1 |
| CHEM 4830 Chemistry Research | 1 |
| CHEM-2XXX, 3XXX, or 4XXX | 7 |

| | |
|--|-----------|
| Required Cognates | 18 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PHYS-2110, 2120 General Physics I and II | 8 |

*Capstone Course

Chemistry Major (B.A.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 45–53 |
| Chemistry Major Requirements | 34 |
| Cognates | 18 |
| Electives | 23–31 |
| Total (minimum, not including proficiency) | 128 |

Students anticipating **graduate study** should consider completing the Bachelor of Science in chemistry curriculum.

Students preparing for medicine, dentistry, osteopathy, or any of the health professions should refer to page 189 for a list of courses generally recommended for admission to professional colleges.



Suggested Four-Year Curriculum for a Major in Chemistry — B.A.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 32 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CHEM-2210 Analytical Chemistry I | 3 |
| CHEM-2800 Introduction to Research in Chemistry | 1 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| PHYS-2110, 2120 General Physics I and II | 8 |
| Literature Elective | 3 |
| Electives | 5 |
| Total | 32 |

Third year:

| | |
|--|-------------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| CHEM-3800 Research Methods in Chemistry | 1 |
| CHEM-2XXX, 3XXX, or 4XXX | 7 |
| Biology Elective | 3.5 |
| Humanities Elective | 3 |
| Social Science/Global Awareness Elective | 3 |
| Electives | 3 |
| Total | 32.5 |

Fourth year:

| | |
|--|-----------|
| CHEM-4310 Thermodynamics and Kinetics | 4 |
| (or CHEM-4320 Quantum Mechanics and Spectroscopy | 4) |
| CHEM-4800 Senior Seminar — Chemistry | 1 |
| CHEM-4830 Chemistry Research | 1 |
| History Elective | 3 |
| Electives | 23 |
| Total | 32 |



Chemistry — Bachelor of Science

The **Bachelor of Science degree with a major in chemistry** prepares students for graduate study in chemistry and for careers in industry or research. The degree requirements provide training in each of the primary areas of chemistry with the necessary support in mathematics, physics, and biology.

Course requirements involve 48 semester hours including:

| | |
|--|-----------|
| Chemistry Requirements | 38 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-2210, 2220 Analytical Chemistry I and II..... | 6 |
| CHEM-2800 Introduction to Research in Chemistry..... | 1 |
| CHEM-3410 Inorganic Chemistry | 3 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| CHEM-3800 Research Methods in Chemistry..... | 1 |
| CHEM-4310 Thermodynamics and Kinetics..... | 4 |
| CHEM-4320 Quantum Mechanics and Spectroscopy | 4 |
| *CHEM-4800 Senior Seminar — Chemistry..... | 1 |
| CHEM-4830 Research in Chemistry | 2 |
| CHEM 2XXX, 3XXX, or 4XXX | 10 |

| | |
|---|-----------|
| Required Cognates | 18 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PHYS-2110, 2120 General Physics I and II..... | 8 |

*Capstone Course

Chemistry Major (B.S.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 45 |
| Chemistry Major Requirements | 48 |
| Cognates | 18 |
| Electives | 17 |
| Total (minimum, not including proficiencies) | 128 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Chemistry — B.S.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 32 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CHEM-2210, 2220 Analytical Chemistry I and II | 6 |
| CHEM-2800 Introduction to Research in Chemistry..... | 1 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| PHYS-2110, 2120 General Physics I and II..... | 8 |
| Biology Elective | 3.5 |
| Total | 32.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CHEM-3800 Research Methods in Chemistry..... | 1 |
| CHEM-4310 Thermodynamics and Kinetics | 4 |
| CHEM-4320 Quantum Mechanics and Spectroscopy | 4 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Electives | 3 |
| Total | 31 |

Fourth year:

| | |
|--|-----------|
| CHEM-3410 Inorganic Chemistry | 3 |
| CHEM-4800 Senior Seminar — Chemistry | 1 |
| CHEM-4830 Research in Chemistry | 2 |
| CHEM-2XXX, 3XXX, or 4XXX | 10 |
| Humanities Elective | 3 |
| Electives | 14 |
| Total | 33 |



A complete description of the general education requirements is found on page 26.

Environmental Science

The **Bachelor of Science degree with a major in environmental science** prepares students with a foundation for entering vocations in ecology, conservation biology, environmental education, environmental consulting companies, etc., and graduate study which is often needed for these careers.

Course requirements involve 78 semester hours including:

Environmental Science Requirements63

| | |
|---|----|
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |
| BIO-3800 Biological Research..... | 2 |
| (or BIO-3810 Biological Research Internship.....) | 2) |
| *BIO-4800 Biology Senior Seminar..... | 1 |
| ENVS-1010 Introduction to Environmental Science..... | 1 |
| ENVS-2100 Principles of Geographic Information Systems..... | 3 |
| ENVS-3200 Ecosystem Science..... | 3 |
| ENVS-3600 Environmental Ethics..... | 3 |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| CHEM-3510 Organic Chemistry I..... | 4 |
| MATH-1710 Calculus I..... | 5 |
| GMTH-2110 Introduction to Biostatistics..... | 3 |
| POLS-3690 Public Policy..... | 3 |
| Emphasis requirements..... | 12 |

Each student must complete 12 hours in an emphasis area that is an extension of the major. Examples of such tracks include public policy, geoscience, and molecular ecology. At least eight of these credits must come from 3000- or 4000-level courses. The courses in the emphasis will be selected by the student and his or her advisor and must be approved by the department chair. This set of courses will be sent to the registrar and will become part of the student's academic file.

Environmental science electives (meeting the following criteria for each set) 15

| | |
|--|----------|
| Set A..... | 7 |
| BIO-2210 Microbiology..... | 4 |
| BIO-3300 Genetics..... | 4 |
| BIO-3710 Biochemistry..... | 4 |
| BIO-3410 Invertebrate Zoology..... | 3 |
| BIO-3420 Vertebrate Zoology..... | 3 |
| BIO-3520 Plant Taxonomy..... | 3 |
| **BIO-3610 Environmental Physiology and Ecology..... | 4 |
| BIOA-3220 Aquatic Biology..... | 4 |
| Set B..... | 8 |
| **BIO-3610 Environmental Physiology and Ecology..... | 4 |
| BIO-4910 Environmental Biology Internship..... | 2 |
| BIOA-4710 Conservation Biology..... | 4 |
| BIOA-4820 Restoration Ecology..... | 4 |
| BIOA-XXXX Au Sable course (Advisor Approval)..... | 4 |
| CHEM-2210 Analytical Chemistry I..... | 3 |
| CHEM-3210 Environmental Chemistry..... | 4 |

* Capstone Course

**This course may not be counted twice in the environmental science elective hours.

Environmental Science Major (B.S.) Curriculum Summary

| | |
|--|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 39–42 |
| Environmental Science Major Requirements..... | 78 |
| General Electives..... | 8–11 |
| Total (minimum, not including proficiency)..... | 128 |

Suggested Four-Year Curriculum for a Major in Environmental Science — B.S.

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| ENVS-1010 Introduction to Environmental Science..... | 1 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Total..... | 34 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |
| CHEM-3510 Organic Chemistry I..... | 4 |
| GMTH-2110 Introduction to Biostatistics..... | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| MATH-1710 Calculus I..... | 5 |
| Humanities Elective..... | 3 |
| Total..... | 31 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BIO-3800 Biological Research..... | 2 |
| ENVS-2100 Introduction to Geographic Information Systems..... | 3 |
| ENVS-3200 Ecosystem Science..... | 3 |
| ENVS-3600 Environmental Ethics..... | 3 |
| POLS-3690 Public Policy..... | 3 |
| Emphasis requirements..... | 6 |
| Environmental Science Electives..... | 7 |
| Literature Elective..... | 3 |
| Total..... | 32 |

Fourth year:

| | |
|--|-----------|
| BEGE-3760 Christian Worldview Integration..... | 2 |
| BIO-4800 Biology Senior Seminar..... | 1 |
| History/Global Awareness Elective..... | 3 |
| Emphasis requirements..... | 6 |
| Environmental Science Electives..... | 8 |
| Electives..... | 11 |
| Total..... | 31 |



A complete description of the general education requirements is found on page 26.

Forensic Science

The **Bachelor of Science degree with a major in forensic science** is an interdisciplinary degree that includes substantial laboratory work and an emphasis on advanced coursework in the sciences. It will involve a collaborative endeavor between Cedarville University and the Ohio Bureau of Criminal Identification and Investigation consisting of a forensic laboratory experience on an internship basis with the bureau.

Course requirements involve 91 semester hours including:

| | |
|---|-----------|
| Science and Math Requirements | 65 |
| BIO-1110 Introduction to Biology | 4 |
| BIO-1120 General Zoology | 4 |
| BIO-2250 Cell Biology | 4 |
| BIO-3710 Biochemistry | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-2210, 2220 Analytical Chemistry I and II | 6 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| FORS-3400 Forensic Science | 4 |
| *FORS-4800 Forensic Science Capstone | 1 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PHYS-2110, 2120 General Physics I and II | 8 |
| Criminal Justice Requirements | 18 |
| CRJU-1310 Introduction to Criminal Justice | 3 |
| CRJU-3350 Criminal Law | 3 |
| CRJU-3390 Criminal Evidence | 3 |
| CRJU-3400 Criminal Procedure | 3 |
| CRJU-4320 Criminal Investigation | 3 |
| GSS-4990 Internship | 3 |
| Science electives selected from | 8 |
| BIO-3300 Genetics | 4 |
| BIO-4300 Molecular Biology | 4 |
| CHEM-4310 Thermodynamics and Kinetics | 4 |
| CHEM-4320 Quantum Mechanics and Spectroscopy | 4 |

*Capstone Course

Forensic Science Major (B.S.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements | 42 |
| Forensic Science Major Requirements | 91 |
| Total (minimum, not including proficiency) | 133 |

Suggested Four-Year Curriculum for a Major in Forensic — B.S.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BIO-1110 Introduction to Biology | 4 |
| BIO-1120 General Zoology | 4 |
| BIO-2250 Cell Biology | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CRJU-1310 Introduction to Criminal Justice | 3 |
| ENG-1400 Composition | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 34 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CHEM-2210, 2220 Analytical Chemistry I and II | 6 |
| COM-1100 Fundamentals of Speech | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| Literature Elective | 3 |
| Total | 34 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BIO-3710 Biochemistry | 4 |
| CHEM-3510, 3510 Organic Chemistry I and II | 8 |
| CRJU-3350 Criminal Law | 3 |
| CRJU-4320 Criminal Investigation | 3 |
| FORS-3400 Forensic Science | 4 |
| GSS-3630 Data Analysis and Research Methodology | 4 |
| Humanities Elective | 3 |
| Total | 33 |

Fourth year:

| | |
|--|-----------|
| CRJU-3390 Criminal Evidence | 3 |
| CRJU-3400 Criminal Procedure | 3 |
| FORS-4800 Forensic Science Capstone | 1 |
| GSS-4990 Internship | 3 |
| PHYS-2110, 2120 General Physics I and II | 8 |
| History Elective | 3 |
| Global Awareness Elective | 3 |
| Science Electives | 8 |
| Total | 32 |



A complete description of the general education requirements is found on page 26.

Geology — Bachelor of Science

The **Bachelor of Science degree with a major in geology** prepares students for graduate studies or employment in a wide variety of geological fields. Skills needed by modern geologists, such as observation, interpretation, model analysis, critical thinking, and field work, are emphasized throughout the program. Opportunities for undergraduate research and publication are also available and encouraged.

Course requirements involve 85 hours including:

| | |
|---|-----------|
| Geology Requirements | 51 |
| GEOL-1110 Introduction to Physical Geology | 4 |
| GEOL-1120 Historical Geology | 4 |
| GEOL-2100 Mineralogy | 4 |
| GEOL-3100 Geomorphology | 4 |
| GEOL-3200 Invertebrate Paleontology | 4 |
| GEOL-3300 Petrology..... | 4 |
| GEOL-3400 Structural Geology..... | 4 |
| GEOL-3800 Philosophy of Science/Research Methods in Geology..... | 3 |
| GEOL-4100 Environmental Geology..... | 4 |
| GEOL-4200 Stratigraphy and Sedimentology..... | 5 |
| GEOL-4400 Summer Field Camp..... | 6 |
| *GEOL-4800 Senior Project..... | 2 |
| Geology electives | 3 |
| Departmental Requirements | 34 |
| BIO-1110 Introduction to Biology..... | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PHYS-2110, 2120 General Physics I, II..... | 8 |
| Earth science electives selected from | 4 |
| ESCI-2310 Oceanography | 4 |
| ESCI-2410 Meteorology..... | 4 |
| ESCI-2510 Astronomy..... | 4 |

*Capstone Course

Geology Major (B.S.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 42 |
| Geology Major Requirements..... | 85 |
| Electives | 1 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in Geology — B.S.

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| GEOL-1110 Introduction to Physical Geology | 4 |
| GEOL-1120 Historical Geology..... | 4 |
| MATH-1710, 1720 Calculus I and II | 10 |
| Total | 32 |

Second year:

| | |
|---|-----------|
| BIO-1110 Introduction to Biology..... | 4 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| GEOL-2100 Mineralogy | 4 |
| GEOL-3300 Petrology..... | 4 |
| GSS-1100 Politics and American Culture..... | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2110, 2120 General Physics I and II..... | 8 |
| Total | 31 |

Third year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GEOL-3100 Geomorphology | 4 |
| GEOL-3200 Invertebrate Paleontology..... | 4 |
| GEOL-3400 Structural Geology..... | 4 |
| GEOL-3800 Philosophy of Science/Research Methods in Geology .. | 3 |
| GEOL-4200 Stratigraphy and Sedimentology..... | 5 |
| Literature Elective | 3 |
| Total | 29 |

Summer

| | |
|----------------------------------|---|
| GEOL-4400 Summer Field Camp..... | 6 |
|----------------------------------|---|

Fourth year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| GEOL-4100 Environmental Geology..... | 4 |
| GEOL-4800 Senior Project | 2 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| Earth Science Elective | 4 |
| Geology Elective..... | 3 |
| History Elective..... | 3 |
| Humanities Elective | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Electives | 1 |
| Total | 30 |



Geoscience — Bachelor of Arts

The **Bachelor of Arts degree with a major in geoscience** prepares students for employment in the areas of geology and environmental science. The major is a hybrid of the geology and environmental science majors.

Course requirements involve 87 hours including:

| | |
|---|-----------|
| Geoscience Requirements | 87 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology | 4 |
| BIO-2500 General Botany | 4 |
| BIO-2600 General Ecology | 3 |
| CHEM-1110,1120 General Chemistry I, II | 8 |
| CHEM-2210 Analytical Chemistry I..... | 3 |
| ENVS-1010 Introduction to Environmental Science | 1 |
| ENVS-2100 Principles of Geographic Information Systems | 3 |
| ENVS-3200 Ecosystem Science | 3 |
| ENVS-3600 Environmental Ethics..... | 3 |
| ESCI-2410 Meteorology | 4 |
| GEOL-1110 Introduction to Physical Geology | 4 |
| GEOL-1120 Historical Geology..... | 4 |
| GEOL-2100 Mineralogy | 4 |
| GEOL-3100 Geomorphology | 4 |
| GEOL-3300 Petrology..... | 4 |
| GEOL-3600 Readings in Geology (1 credit hour, taken twice) . | 2 |
| GEOL-3800 Philosophy of Science/Research Methods in Geology..... | 3 |
| GEOL-4100 Environmental Geology..... | 4 |
| *GEOL-4800 Senior Project..... | 2 |
| GMTH-1030 Precalculus..... | 4 |
| GMTH-2110 Biostatistics | 3 |
| MGMT-3500 Principles of Organization and Management | 3 |
| POLS-3690 Public Policy..... | 3 |
| BIO, ENVS, or GEOL-3000 or 4000 Electives | 3 |

*Capstone Course

Geoscience Major (B.A.) Curriculum Summary

| | |
|---|----------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 42–50 |
| Geoscience Major Requirements | 87 |
| Total (minimum, not including proficiency) | 129–137 |



A complete description of the general education requirements is found on page 24.

Suggested Four-Year Curriculum for a Major in Geoscience — B.A.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology | 4 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| ENVS-1010 Introduction to Environmental Science | 1 |
| GEOL-1110 Introduction to Physical Geology | 4 |
| GEOL-1120 Historical Geology..... | 4 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 31 |

Second year:

| | |
|---|-----------|
| BIO-2500 General Botany | 4 |
| BIO-2600 General Ecology..... | 3 |
| CHEM-1110, 1120 General Chemistry I, II | 8 |
| GEOL-2100 Mineralogy | 4 |
| GEOL-3300 Petrology..... | 4 |
| GMTH-1030 Precalculus..... | 4 |
| GMTH-2110 Biostatistics | 3 |
| History Elective..... | 3 |
| Total | 33 |

Third year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| CHEM-2210 Analytical Chemistry I | 3 |
| ENVS-2100 Principles of Geographic Information Systems | 3 |
| ENVS-3600 Environmental Ethics..... | 3 |
| GEOL-3100 Geomorphology | 4 |
| GEOL-3600 Readings in Geology (1 credit hour, taken twice) | 1 |
| GEOL-3800 Philosophy of Science/Research Methods in Geology .. | 3 |
| MGMT-3500 Principles of Organizational Management | 3 |
| POLS-3690 Public Policy..... | 3 |
| Humanities Elective | 3 |
| Total | 32 |

Fourth year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| ENVS-3200 Ecosystem Science | 3 |
| ESCI-2410 Meteorology | 4 |
| GEOL-3600 Readings in Geology (1 credit hour, taken twice) | 1 |
| GEOL-4100 Environmental Geology..... | 4 |
| GEOL-4800 Senior Project | 2 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| Literature Elective | 3 |
| GEOL, ENVS, or BIO 3000 or 4000 Elective..... | 3 |
| Global Awareness Elective | 3 |
| Total | 33 |

A complete description of the general education requirements is found on page 26.

Molecular and Cellular Biology

The **Bachelor of Science degree with a major in molecular and cellular biology** prepares students for graduate-level training in the context of a broad biological background based in a biblical worldview. This degree allows students to become holistically thinking molecular biologists and will enhance the student's depth of knowledge in this competitive and growing field.

Course requirements involve 78 hours including:

| | |
|---|-----------|
| Biology Requirements..... | 62 |
| BIO-1110 Introduction to Biology..... | 4 |
| ¹ BIO-1120 General Zoology..... | 4 |
| (or BIO-2500 General Botany.....) | 4) |
| BIO-2250 Cell Biology..... | 4 |
| BIO-3300 Genetics..... | 4 |
| BIO-3710 Biochemistry..... | 4 |
| BIO-3800 Biological Research..... | 2 |
| (or BIO-3810 Biology Research Internship.....) | 2) |
| BIO-4210 Advanced Cell Biology..... | 4 |
| BIO-4300 Molecular Biology of the Cell..... | 4 |
| *BIO-4800 Senior Seminar — Biology..... | 1 |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| CHEM-3510, 3520 Organic Chemistry I and II..... | 8 |
| MATH-1710 Calculus I..... | 5 |
| PHYS-1010, 1020 College Physics I and II..... | 10 |
| Biology electives selected from the following..... | 16 |
| Selected from..... | 7 |
| BIO-2210 Microbiology..... | 4 |
| BIO-4310 Eukaryotic Gene Regulation..... | 3 |
| BIO-4220 Signal Transduction..... | 3 |
| BIO-4350 Immunology..... | 4 |
| Any 3000- or 4000-level biology electives..... | 9 |
| Suggested Emphasis Areas | |
| Molecular Biology in Plant Systems: | |
| Biology electives selected from: | |
| BIO-2500 General Botany..... | 4 |
| BIO-3510 Plant Physiology..... | 3 |
| BIO-3520 Plant Taxonomy..... | 3 |
| BIOA-3600 Molecular Field Biology..... | 4 |
| Molecular Biology in Animal Systems: | |
| Biology electives selected from: | |
| BIO-1120 General Zoology..... | 4 |
| BIO-3410 Invertebrate Zoology..... | 3 |
| BIO-3420 Vertebrate Zoology..... | 3 |
| BIO-4410 Developmental Biology..... | 4 |
| Molecular Biology in Human Systems: | |
| Biology electives selected from: | |
| BIO-1120 General Zoology..... | 4 |
| BIO-3450, 3460 Human Structure and Function I and II.... | 4 |
| BIO-4410 Developmental Biology..... | 4 |
| Molecular Biology in Prokaryotic Systems: | |
| Biology electives selected from: | |
| BIO-2210 Microbiology..... | 4 |
| BIO-2600 General Ecology..... | 3 |

¹Students selecting BIO-1120 General Zoology will take this course in the freshman year. Students selecting BIO-2500 General Botany will take this course in the sophomore year.

*Capstone Course

Molecular and Cellular Biology Major (B.S.) Curriculum Summary

| | |
|--|------------|
| Proficiency Requirements..... | 0–5 |
| General Education Requirements..... | 42 |
| Molecular and Cellular Biology Major Requirements..... | 78 |
| Electives..... | 8 |
| Total (minimum, not including proficiency)..... | 128 |

Suggested Four-Year Curriculum for a Major in Molecular and Cellular Biology — B.S.

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| (or BIO-2500 General Botany.....) | 4) |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| ENG-1400 Composition..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Totals..... | 33 |

Second year:

| | |
|---|-----------|
| BIO-2250 Cell Biology..... | 4 |
| CHEM-3510, 3520 Organic Chemistry I and II..... | 8 |
| MATH-1710 Calculus I..... | 5 |
| GSS-1100 Politics and American Culture..... | 3 |
| History Elective..... | 3 |
| Humanities Elective..... | 3 |
| Literature Elective..... | 3 |
| Electives..... | 3 |
| Total..... | 32 |

Third year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| BIO-3300 Genetics..... | 4 |
| BIO-3710 Biochemistry..... | 4 |
| BIO-3800 Biological Research..... | 2 |
| (or BIO-3810 Biology Research Internship.....) | 2) |
| BIO-4210 Advanced Cell Biology..... | 4 |
| PHYS-1010, 1020 College Physics I and II..... | 10 |
| Electives..... | 4 |
| Total..... | 34 |

Fourth year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| BIO-4300 Molecular Biology of the Cell..... | 4 |
| BIO-4800 Senior Seminar — Biology..... | 1 |
| Biology Electives..... | 16 |
| Social Science/Global Awareness Elective..... | 3 |
| Electives..... | 2 |
| Total..... | 30 |



A complete description of the general education requirements is found on page 26.

Mathematics — Bachelor of Arts

The **Bachelor of Arts degree with a major in mathematics** provides coursework and training in advanced mathematics. Because of the general nature of this curriculum and opportunity to complement the major with electives from other fields of study, this curriculum provides excellent preparation for graduate study in areas that require good quantitative and/or analytical skills such as philosophy, business, and theology. This liberal arts major also prepares students for a wide variety of career opportunities that require a general Bachelor of Arts degree. The flexibility of this major enables students to select their mathematics and other electives to meet educational or career goals.

Students should include courses in astronomy, chemistry, and physics as general electives.

Course requirements involve 54 semester hours including:

| | |
|--|-----------|
| Mathematics Core Requirements | 42 |
| CS-1210 C++ Programming..... | 2 |
| MATH-1710, 1720, 2710 Calculus I, II, and III | 13 |
| MATH-1990 Beautiful Math Structures and Thinking | 3 |
| MATH-2210 Logic and Methods of Proof | 3 |
| MATH-2740 Differential Equations | 3 |
| MATH-2800 LaTeX for Technical Documents | 1 |
| MATH-3610 Linear Algebra..... | 3 |
| MATH-3800 Research Methods in Mathematics | 1 |
| *MATH-4800 Capstone Experience in Mathematics..... | 3 |
| PHYS-2110, 2120, 2130 General Physics I, II, and III..... | 10 |
| Electives (meeting the following criteria) | 12 |
| Applied courses (at least three hours from the following applied courses) | 3 |
| MATH-3110, 4110 Probability and Statistics I and II | 6 |
| MATH-3240 Introduction to Operations Research..... | 3 |
| MATH-3550 Discrete Mathematics: Graph Theory..... | 3 |
| MATH-3750 Introduction to Dynamical Systems | 3 |
| MATH-3760 Numerical Analysis..... | 3 |
| MATH-4210 Mathematical Methods for Physicists | 3 |
| MATH-4880 Topics in Mathematics..... | 1–3 |
| MATH-4900 Independent Study in Mathematics..... | 1–3 |
| Theoretical courses (at least three hours from the following) | 3 |
| MATH-3500 Number Theory | 3 |
| MATH-3550 Discrete Mathematics: Graph Theory..... | 3 |
| MATH-3560 Discrete Mathematics: Combinatorics..... | 3 |
| MATH-3710 Advanced Calculus..... | 3 |
| MATH-3740 Complex Variables..... | 3 |
| MATH-4410 Euclidean and Non-Euclidean Geometry..... | 3 |
| MATH-4450 Topology..... | 3 |
| MATH-4610, 4620 Abstract Algebra I and II | 6 |
| MATH-4710, 4720 Real Variables I and II | 6 |
| MATH-4880 Topics in Mathematics..... | 1–3 |
| MATH-4900 Independent Study in Mathematics..... | 1–3 |

*Capstone Course

Mathematics Major (B.A.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 45.5–53.5 |
| Mathematics Major Requirements..... | 54 |
| Electives | 20.5–28.5 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Mathematics — B.A.

First year:

| | |
|---|----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| CS-1210 C++ Programming..... | 2 |
| ENG-1400 Composition..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| MATH-1990 Beautiful Math Structures and Thinking..... | 3 |
| MATH-2800 LaTeX for Technical Documents | 1 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 3 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| MATH-2210 Logic and Methods of Proof | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations | 3 |
| MATH-3800 Research Methods in Mathematics | 1 |
| PHYS-2110, 2120 General Physics I and II..... | 8 |
| Literature Elective | 3 |
| Electives | 3 |
| Total | 33 |

Third year:

| | |
|---|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| GBIO-1000 Principles of Biology | 3.5 |
| MATH-3610 Linear Algebra..... | 3 |
| PHYS-2130 General Physics III..... | 2 |
| Humanities Elective | 3 |
| Mathematics Electives..... | 6 |
| Social Science/Global Awareness Elective..... | 3 |
| Electives | 9 |
| Total | 33.5 |

Fourth year:

| | |
|--|-----------|
| MATH-4800 Capstone Experience in Mathematics | 3 |
| History Elective..... | 3 |
| Mathematics Electives..... | 6 |
| Electives | 18 |
| Total | 30 |



A complete description of the general education requirements is found on page 26.

Mathematics — Bachelor of Science

The **Bachelor of Science degree with a major in mathematics** prepares students for graduate study in mathematics. The curriculum includes the course requirements prescribed by many of the leading graduate-level mathematics programs in the nation.

Students should include courses in astronomy, chemistry, and physics as general electives. Course requirements involve 69 hours:

| | |
|--|-------------|
| Mathematics Core Requirements | 48 |
| CS-1210 C++ Programming..... | 2 |
| MATH-1710, 1720, 2710 Calculus I, II, and III | 13 |
| MATH-1990 Beautiful Math Structures and Thinking | 3 |
| MATH-2210 Logic and Methods of Proof | 3 |
| MATH-2740 Differential Equations | 3 |
| MATH-2800 LaTeX for Technical Documents | 1 |
| MATH-3610 Linear Algebra..... | 3 |
| MATH-3800 Research Methods..... | 1 |
| MATH- 4610 Abstract Algebra I..... | 3 |
| MATH-4710 Real Variables I..... | 3 |
| *MATH-4800 Capstone Experience in Mathematics..... | 3 |
| PHYS-2110, 2120, 2130 General Physics I, II, and III..... | 10 |
| Electives (meeting the following criteria) | 21 |
| Applied courses (at least six hours from the following applied courses) | 6–15 |
| MATH-3110, 4110 Probability and Statistics I and II | 6 |
| MATH-3240 Introduction to Operations Research..... | 3 |
| MATH-3550 Discrete Mathematics: Graph Theory..... | 3 |
| MATH-3750 Introduction to Dynamical Systems | 3 |
| MATH-3760 Numerical Analysis | 3 |
| MATH-4210 Mathematical Methods for Physicists | 3 |
| MATH-4880 Topics in Mathematics..... | 1–3 |
| MATH-4900 Independent Study in Mathematics..... | 1–3 |
| Theoretical courses (at least six hours from the following theoretical courses) | 6–15 |
| MATH-3500 Number Theory | 3 |
| MATH-3550 Discrete Mathematics: Graph Theory..... | 3 |
| MATH-3560 Discrete Mathematics: Combinatorics..... | 3 |
| MATH-3710 Advanced Calculus..... | 3 |
| MATH-3740 Complex Variables..... | 3 |
| MATH-4410 Euclidean and Non-Euclidean Geometry..... | 3 |
| MATH-4450 Topology | 3 |
| MATH-4620 Abstract Algebra II..... | 3 |
| MATH-4720 Real Variables II | 3 |
| MATH-4880 Topics in Mathematics..... | 1–3 |
| MATH-4900 Independent Study in Mathematics..... | 1–3 |

*Capstone Course

Mathematics Major (B.S.) Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| General Education Requirements..... | 45.5 |
| Mathematics Major Requirements..... | 69 |
| Electives | 13.5 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Mathematics — B.S.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| CS-1210 C++ Programming..... | 2 |
| ENG-1400 Composition..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| MATH-1990 Beautiful Math Structures and Thinking..... | 3 |
| MATH-2800 LaTeX for Technical Documents | 1 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 33 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| MATH-2210 Logic and Methods of Proof | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations | 3 |
| MATH-3800 Research Methods in Mathematics | 1 |
| PHYS-2110, 2120 General Physics I and II..... | 8 |
| Literature Elective | 3 |
| Total | 30 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| GBIO-1000 Principles of Biology | 3.5 |
| MATH-3610 Linear Algebra..... | 3 |
| MATH-4610 Abstract Algebra I..... | 3 |
| MATH-4710 Real Variables I..... | 3 |
| PHYS-2130 General Physics III..... | 2 |
| Humanities Elective | 3 |
| Mathematics Electives..... | 6 |
| Electives | 4.5 |
| Total | 32 |

Fourth year:

| | |
|--|-----------|
| MATH-4800 Capstone Experience in Mathematics | 3 |
| History Elective..... | 3 |
| Mathematics Electives..... | 15 |
| Social Science/Global Awareness Elective..... | 3 |
| Electives | 9 |
| Total | 33 |



A complete description of the general education requirements is found on page 26.

Physics — Bachelor of Arts

The **physics major** prepares students for graduate study in physics or for employment opportunities in industry. The curriculum includes courses prescribed by leading graduate-level physics programs in the nation.

Students should include courses in mathematics and chemistry as general electives. Students must demonstrate proficiency in the general physics sequence to advance into 3000- and 4000-level courses.

Course requirements involve 53.5 semester hours:

| | |
|--|-----------|
| Physics Core Requirements | 25 |
| *PHYS-2110, 2120, 2130 General Physics I, II, and III | 10 |
| PHYS-3110 Intermediate Physics Lab | 2 |
| PHYS-3310 Theoretical Mechanics I | 3 |
| PHYS-3410 Electromagnetic Theory I | 3 |
| PHYS-3510 Modern Physics | 3 |
| PHYS-3800 Research Methods in Physics | 1 |
| PHYS-4110 Advanced Physics Lab | 2 |
| **PHYS-4800 Senior Seminar — Physics | 1 |
| Physics electives (3 courses) selected from the following | 9 |
| EGEE-2050 Circuits and Instrumentation | 4 |
| PHYS-3330 Acoustics | 3 |
| PHYS-3350 Thermal Physics | 3 |
| PHYS-4210 Mathematical Methods for Physicists | 3 |
| PHYS-4310 Theoretical Mechanics II | 3 |
| PHYS-4410 Electromagnetic Theory II..... | 3 |
| PHYS-4450 Optics | 3 |
| PHYS-4520 Quantum Mechanics I | 3 |
| PHYS-4530 Quantum Mechanics II | 3 |
| PHYS-4550 Solid State Physics | 3 |
| PHYS-4880 Topics in Physics | 1–3 |

| | |
|--|-------------|
| Departmental Requirements | 19.5 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| MATH-1710, 1720, 2710 Calculus I, II, and III..... | 13 |
| MATH-2740 Differential Equations | 3 |

*All students must earn a C+ or higher in these courses.
 **Capstone Course

Physics Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 45.5–53.5 |
| Physics Major Requirements | 53.5 |
| Electives | 21–29 |
| Total (minimum, not including proficiency) | 128 |



Suggested Four-Year Curriculum for a Major in Physics — B.A.

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2110 General Physics I | 4 |
| Total | 31.5 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations | 3 |
| PHYS-2120, 2130 General Physics II and III | 6 |
| PHYS-3310 Theoretical Mechanics I | 3 |
| Electives | 5 |
| Total | 32.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| HUM-1400 Introduction to the Humanities | 3 |
| PHYS-3110 Intermediate Physics Laboratory | 2 |
| PHYS-3410 Electromagnetic Theory I | 3 |
| PHYS-3800 Research Methods in Physics | 1 |
| Literature Elective | 3 |
| Physics Electives | 3 |
| Electives | 12 |
| Total | 31 |

Fourth year:

| | |
|--|-----------|
| PHYS-3510 Modern Physics | 3 |
| PHYS-4110 Advanced Physics Laboratory | 2 |
| PHYS-4800 Senior Seminar — Physics | 1 |
| History Elective | 3 |
| Humanities Elective | 3 |
| Physics Electives | 6 |
| Social Science/Global Awareness Elective | 3 |
| Electives | 12 |
| Total | 33 |



A complete description of the general education requirements is found on page 26.

Physics — Bachelor of Science

The **physics major** prepares students for graduate study in physics or for employment opportunities in industry. The curriculum includes courses prescribed by leading graduate-level physics programs in the nation.

Students should include courses in mathematics and chemistry as general electives. Students must demonstrate proficiency in the general physics sequence to advance into 3000- and 4000-level courses.

Course requirements involve 68.5 semester hours including:

| | |
|---|-------------|
| Physics Core Requirements | 34 |
| *PHYS-2110, 2120, 2130 General Physics I, II, and III | 10 |
| PHYS-3110 Intermediate Physics Lab | 2 |
| PHYS-3310 Theoretical Mechanics I | 3 |
| PHYS-3350 Thermal Physics | 3 |
| PHYS-3410 Electromagnetic Theory I | 3 |
| PHYS-3510 Modern Physics..... | 3 |
| PHYS-3800 Research Methods in Physics | 1 |
| PHYS-4110 Advanced Physics Lab..... | 2 |
| PHYS-4210 Mathematical Methods for Physicists..... | 3 |
| PHYS-4520 Quantum Mechanics I..... | 3 |
| PHYS-4800 Physics Senior Seminar..... | 1 |
| Electives selected from the following PHYS-3000 and | |
| PHYS-4000-level courses | 9 |
| PHYS-3330 Acoustics | 3 |
| PHYS-4310 Theoretical Mechanics II..... | 3 |
| PHYS-4410 Electromagnetic Theory II | 3 |
| PHYS-4450 Optics | 3 |
| PHYS-4530 Quantum Mechanics II | 3 |
| PHYS-4550 Solid State Physics | 3 |
| PHYS-4880 Topics in Physics | 1–3 |
| Departmental Requirements | 25.5 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| CS-1210 C++ Programming | 2 |
| EGEE-2050 Circuits and Instrumentation..... | 4 |
| MATH-1710, 1720, 2710 Calculus I, II, and III | 13 |
| MATH-2740 Differential Equations | 3 |

*All students must earn a C+ or higher in these courses.

B.S. Physics Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–6 |
| Other General Education Requirements..... | 47.5 |
| Physics Major Requirements | 68.5 |
| Electives | 6–12 |
| Total (minimum, not including proficiency) | 128 |

Suggested Four-Year Curriculum for a Major in Physics — B.S.

| | |
|---|-------------|
| <i>First year:</i> | |
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1050 Chemistry for Engineers | 3.5 |
| COM-1100 Speech | 3 |
| CS-1210 C++ Programming..... | 2 |
| ENG-1400 English Composition | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2110 General Physics I | 4 |
| Total | 31.5 |
| <i>Second year:</i> | |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| EGEE-2050 Circuits and Instrumentation..... | 4 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations | 3 |
| PHYS-2120, 2130 General Physics II and III | 6 |
| PHYS-3310 Theoretical Mechanics I | 3 |
| Total | 31.5 |
| <i>Third year:</i> | |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PHYS-3110 Intermediate Physics Lab | 2 |
| PHYS-3350 Thermal Physics | 3 |
| PHYS-3410 Electromagnetic Theory I | 3 |
| PHYS-3510 Modern Physics | 3 |
| PHYS-3800 Research Methods in Physics..... | 1 |
| Literature Elective | 3 |
| Physics Elective | 3 |
| Electives | 6 |
| Total | 31 |
| <i>Fourth year:</i> | |
| PHYS-4110 Advanced Physics Lab..... | 2 |
| PHYS-4210 Mathematical Methods for Physicists | 3 |
| PHYS-4520 Quantum Mechanics I..... | 3 |
| PHYS-4800 Senior Seminar — Physics | 1 |
| Global Awareness..... | 3 |
| History Elective..... | 3 |
| Humanities Elective | 3 |
| Physics Electives | 6 |
| Social Science Elective | 3 |
| Electives | 6 |
| Total | 33 |



A complete description of the general education requirements is found on page 26.

Chemistry Education (Bachelor of Arts)

The **chemistry education major** prepares students to engage the culture as chemistry teachers in the middle school and high school setting, in both public and private institutions. The goal of the program is to prepare future educators with a heart for Christ and a high view of God's Word.

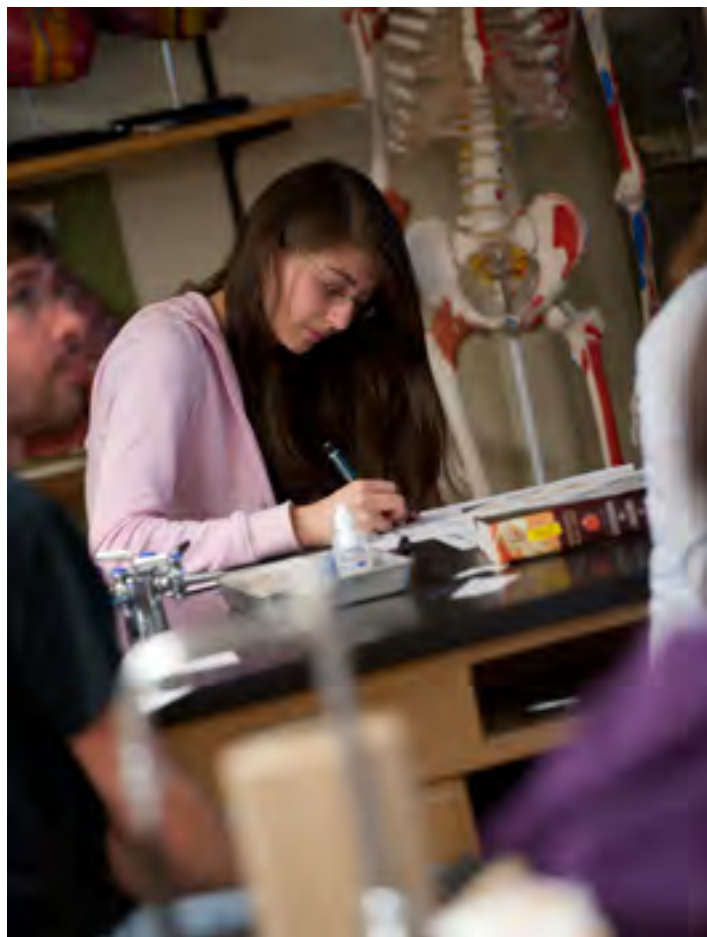
Course requirements involve 94.5 semester hours including:

| | |
|---|-------------|
| Chemistry Core Requirements | 55.5 |
| CHEM-1010 Principles of Biochemistry | 5 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-2210 Analytical Chemistry I..... | 3 |
| CHEM-2800 Introduction to Research in Chemistry..... | 1 |
| CHEM-3210 Environmental Chemistry | 4 |
| CHEM-3410 Inorganic Chemistry | 3 |
| CHEM-3510, 3520 Organic Chemistry I and II | 8 |
| *CHEM-4800 Senior Seminar — Chemistry..... | 1 |
| GBIO-1000 Principles of Biology | 3.5 |
| MATH-1710 Calculus I | 5 |
| PHYS-1010, 1020 College Physics I and II | 10 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| SCED-3120 Teaching Science for Adolescent and Young Adult | 3 |
| Teacher Education | 39 |

*Capstone Course

Chemistry Education (B.A.) Summary

| | |
|---|--------------------|
| Proficiency Requirements | 0–5 |
| Chemistry Education Major Requirements | 55.5 |
| Teacher Education Requirements..... | 39 |
| General Education Requirements..... | 39–47 |
| Total (minimum, not including proficiency) | 133.5–141.5 |



Suggested Four-Year Curriculum for a Major in Chemistry Education

First year:

| | |
|--|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1010 Principle of Biochemistry | 5 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| MATH-1710 Calculus I | 5 |
| Total | 35.5 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| CHEM-2210 Analytical Chemistry I | 3 |
| CHEM-2800 Introduction to Research in Chemistry..... | 1 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| PHYS-1010, 1020 College Physics I and II | 10 |
| Literature Elective | 3 |
| Total | 34 |

Third year:

| | |
|---|-----------|
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CHEM-3210 Environmental Chemistry..... | 4 |
| CHEM-3410 Inorganic Chemistry | 3 |
| CHEM-3510 Organic Chemistry I and II | 8 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| SCED-3120 Teaching Science for Adolescent and Young Adult | 3 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 31 |

Fourth year:

| | |
|--|-----------|
| CHEM-4800 Senior Seminar — Chemistry | 1 |
| COM-2300 Voices of Diversity | 3 |
| EDSE-4000 Reading in the Content Area: AYA | 3 |
| EDSE-4100 Principles of Teaching | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| History Elective..... | 3 |
| Social Science Elective | 3 |
| Total | 34 |

Teacher Education Licensure Programs Adolescent and Young Adult

The department of science and mathematics joins with the education department to offer adolescent/young adult licensure programs in the following areas:

- Chemistry
- Life Science
- Mathematics – Integrated
- Physical Science
- Physics
- Science Comprehensive – Integrated

The course requirements for each licensure field are outlined under each major. However, the following courses are common to all adolescent/young adult majors in this department:

| | |
|---|-----------|
| Teacher Education | 39 |
| EDSE-4000 Reading in the Content Area: AYA..... | 3 |
| or EDUC-4000 Reading in the Content Area: AYA Math Educ 3 | |
| EDSE-4100 Principles of Teaching | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10–12 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDSP-4250 Communication, Collaboration and Inclusion..... | 2 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| EDUC-3200 Faith and Learning Alignment | 1 |

Specific information regarding admission to the Teacher Education Program and course descriptions is located in the education department section (page 68).

Life Science Education — Bachelor of Arts

Course requirements involve 60.5 semester hours including:

| | |
|--|-------------|
| Biology Core Requirements | 32 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology | 4 |
| BIO-2250 Cell Biology | 4 |
| BIO-2500 General Botany | 4 |
| BIO-2600 General Ecology..... | 3 |
| BIO-3300 Genetics | 4 |
| BIO-3710 Biochemistry..... | 4 |
| *BIO-4800 Senior Seminar — Biology..... | 1 |
| Biology electives selected from the following | 4 |
| BIO-3410 Invertebrate Zoology | 3 |
| BIO-3450 Human Structure and Function I..... | 4 |
| BIO-3460 Human Structure and Function II..... | 3 |
| BIO-3510 Plant Physiology | 3 |
| BIO-3520 Plant Taxonomy | 3 |
| BIO-3610 Environmental Physiology and Ecology | 4 |
| BIO-4300 Molecular Biology of the Cell | 4 |
| BIOA-3600 Topics in Environmental Biology | 4 |
| Physical Science/Mathematics/Science Methods | 28.5 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-3510 Organic Chemistry I | 4 |
| GSCI-1010 Principles of Earth Science | 3.5 |
| GMTH-1030 Precalculus..... | 4 |
| PHYS-1010 College Physics I..... | 5 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| SCED-3120 Teaching Science..... | 3 |
| Teacher Education | 39 |

Life Science Education Summary

| | |
|---|--------------|
| Proficiency Requirements..... | 0–5 |
| Other General Education Requirements..... | 39–47 |
| Life Science Education Major Requirements..... | 60.5 |
| Teacher Education Requirements | 39 |
| Total (minimum, not including proficiency) | 138.5 |

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Life Science Education

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| BIO-1110 Introduction to Biology | 4 |
| BIO-1120 General Zoology | 4 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| ENG-1400 Composition..... | 3 |
| GMTH-1030 Precalculus..... | 4 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 33 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BIO-2500 General Botany | 4 |
| BIO-2600 General Ecology..... | 3 |
| BIO-2250 Cell Biology | 4 |
| CHEM-3510 Organic Chemistry I..... | 4 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| Total | 37 |

Third year:

| | |
|---|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| BIO-3300 Genetics | 4 |
| BIO-3710 Biochemistry..... | 4 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| GSCI-1010 Principles of Earth Science | 3.5 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PHYS-1010 College Physics I | 5 |
| Biology Electives | 4 |
| Literature Elective | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 34.5 |

Fourth year:

| | |
|--|--------------|
| BIO-4800 Senior Seminar–Biology..... | 1 |
| EDSE-4000 Reading in the Content Area: AYA | 3 |
| EDSE-4100 Principles of Teaching: AYA | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10–12 |
| EDSP-4250 Communication, Collaboration and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| SCED-3120 Teaching Science | 3 |
| History Elective..... | 3 |
| Total | 34–36 |

*Capstone Course

Mathematics Education — Integrated (Bachelor of Arts)

Course requirements involve 59 semester hours including:

| | |
|---|-----------|
| Mathematics Core Requirements | 42 |
| MATH-1710 Calculus I | 5 |
| MATH-1720 Calculus II | 5 |
| MATH-1990 Beautiful Math Structures and Thinking | 3 |
| MATH-2210 Logic and Methods of Proof | 3 |
| MATH-2710 Calculus III | 3 |
| *MATH-3050 Algebraic Structures for Secondary Education.... | 4 |
| MATH-3110 Probability and Statistics I | 3 |
| MATH-3800 Research Methods in Mathematics | 1 |
| MATH-4410 Euclidean and Non-Euclidean Geometry | 3 |
| **MATH-4800 Capstone Experience in Mathematics | 3 |
| Mathematics electives | 6 |
| One course selected from the following | 3 |
| MATH-3550 Discrete Mathematics: Graph Theory..... | 3 |
| MATH-3560 Discrete Mathematics: Combinatorics..... | 3 |
| Computer/Math Methods/Physics | 17 |
| CS-1210 C++ Programming..... | 2 |
| MATH-2800 LaTeX for Technical Documents | 1 |
| MTED-3110 Clinical Teaching in Mathematics | 1 |
| MTED-3120 Teaching Mathematics..... | 3 |
| PHYS-2110 General Physics I | 4 |
| PHYS-2120 General Physics II | 4 |
| PHYS-2130 General Physics III | 2 |
| Teacher Education | 39 |

*A student may replace MATH-3050 by taking MATH-3500, MATH-3610, and MATH-4610.

**Capstone Course

Mathematics Education — Integrated Major (B.A.) Summary

| | |
|---|--------------|
| Proficiency Requirements | 0–5 |
| Mathematics Education — Integrated Major Requirements | 59 |
| General Education Requirements..... | 39.5–50.5 |
| Teacher Education Requirements..... | 39 |
| Total (minimum, not including proficiency) | 140.5 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Mathematics Education (Integrated)

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech..... | 3 |
| CS-1210 C++ Programming | 2 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| ENG-1400 Composition..... | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| MATH-1710, 1720 Calculus I and II | 10 |
| MATH-1990 Beautiful Math Structures and Thinking..... | 3 |
| MATH-2800 LaTeX for Technical Documents (computer elective).... | 1 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| Total | 35.5 |

Second year:

| | |
|--|-----------|
| BEGE-2730 Old Testament Literature | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| GSS-1100 Politics and American Culture..... | 3 |
| MATH-2210 Logic and Methods of Proof..... | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-3800 Research Methods in Mathematics | 1 |
| PHYS-2110, 2120 General Physics I and II..... | 8 |
| Literature Elective | 3 |
| Total | 34 |

Third year:

| | |
|--|-----------|
| BEGE-2740 New Testament Literature | 3 |
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| MATH-3050 Algebraic Structures for Secondary Education | 4 |
| MATH-3110 Probability and Statistics I | 3 |
| MATH-4410 Euclidean and Non-Euclidean Geometry | 3 |
| MTED-3110 Clinical Teaching in Mathematics..... | 1 |
| Discrete Mathematics Elective..... | 3 |
| MATH-3XXX or 4XXX Elective | 6 |
| PHYS-2130 General Physics III..... | 2 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 36 |

Fourth year:

| | |
|---|-----------|
| EDUC-4000 Reading in the Content Area: AYA math education | 3 |
| EDSE-4100 Principles of Teaching | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10 |
| EDSP-4250 Communication, Collaboration and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| MATH-4800 Capstone Experience in Mathematics | 3 |
| MTED-3120 Teaching Mathematics..... | 3 |
| History Elective..... | 3 |
| Total | 35 |

Physical Science Education (Bachelor of Arts)

Course requirements involve 69.5 semester hours including:

| | |
|--|-------------|
| Physical Science Core | 69.5 |
| GBIO-1000 Principles of Biology | 3.5 |
| (or BIO-1110 Introduction to Biology | 4) |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| CHEM-3510 Organic Chemistry I | 4 |
| CHEM-3710 Biochemistry | 4 |
| GEO-1110 Introduction to Physical Geology | 4 |
| GEO-1120 Historical Geology | 4 |
| ESCI-2310 Introduction to Oceanography | 4 |
| ESCI-2510 Introductory Astronomy | 4 |
| MATH-1710, 1720 Calculus I and II | 10 |
| MATH-2740 Differential Equations | 3 |
| PHYS-2110, 2120, 2130 General Physics I, II, and III | 10 |
| PHYS-3110 Intermediate Physics Lab | 2 |
| PHYS-3510 Modern Physics | 3 |
| SCED-3110 Clinical Teaching in Science | 1 |
| SCED-3120 Teaching Science | 3 |
| Research methods selected from the following | 1 |
| CHEM-2800 Introduction to Research in Chemistry | 1 |
| PHYS-3800 Research Methods in Physics | 1 |
| Senior capstone experience selected from the following... | 1 |
| *CHEM-4800 Senior Seminar — Chemistry | 1 |
| *PHYS-4800 Senior Seminar — Physics | 1 |
| Teacher Education | 39 |

*Capstone Course

Physical Science Education Curriculum Summary

| | |
|---|--------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 39–47 |
| Physical Science Education Major Requirements | 69.5 |
| Teacher Education Requirements | 39 |
| Total (minimum, not including proficiency) | 147.5 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Physical Science Education — B.A.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| COM-1100 Fundamentals of Speech | 3 |
| EDUC-1000 The Education Profession | 2 |
| EDUC-1050 Preliminary Student Involvement | 0 |
| ENG-1400 Composition | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2110 General Physics I | 4 |
| Total | 38 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| (or BIO-1220 Introduction to Biology | 4) |
| CHEM-3510 Organic Chemistry I | 4 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| ESCI-2310 Introduction to Oceanography | 4 |
| GSS-1100 Politics and American Culture | 3 |
| MATH-2740 Differential Equations | 3 |
| PHYS-2120, 2130 General Physics II and III | 6 |
| Total | 39.5 |

Third year:

| | |
|---|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| CHEM-3710 Biochemistry | 4 |
| ESCI-2510 Introduction to Astronomy | 4 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| GEO-1110 Introduction to Physical Geology | 4 |
| GEO-1120 Historical Geology | 4 |
| HUM-1400 Introduction to the Humanities | 3 |
| PHYS-3510 Modern Physics | 3 |
| PHYS-3800 Research Methods in Physics | 1 |
| (or CHEM-2800 Introduction to Research in Chemistry | 1) |
| History Elective | 3 |
| Literature Elective | 3 |
| Social Science/Global Awareness Elective | 3 |
| Total | 37 |

Fourth year:

| | |
|--|--------------|
| EDSE-4000 Reading in the Content Area: AYA | 3 |
| EDSE-4100 Principles of Teaching | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10–12 |
| EDSP-4250 Communication, Collaboration and Inclusion | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| PHYS-3110 Intermediate Physics Lab | 2 |
| PHYS-4800 Senior Seminar — Physics | 1 |
| (or CHEM-4800 Senior Seminar — Chemistry | 1) |
| SCED-3110 Clinical Teaching in Science | 1 |
| SCED-3120 Teaching Science | 3 |
| Total | 33–35 |

Physics Education (Bachelor of Arts)

Course requirements involve 61 semester hours including:

| | |
|--|-----------|
| Physics Core Requirements | 26 |
| PHYS-2110, 2120, 2130 General Physics I, II, and III..... | 10 |
| PHYS-3110 Intermediate Physics Lab | 2 |
| PHYS-3310 Theoretical Mechanics I | 3 |
| PHYS-3410 Electromagnetic Theory I | 3 |
| PHYS-3510 Modern Physics I..... | 3 |
| PHYS-3800 Research Methods in Physics..... | 1 |
| PHYS-4800 Senior Seminar — Physics | 1 |
| Physics electives selected from the following | 3 |
| PHYS-3350 Thermal Physics | 3 |
| PHYS-4210 Mathematical Methods for Physicists | 3 |
| PHYS-4410 Electromagnetic Theory II | 3 |
| PHYS-4450 Optics | 3 |
| PHYS-4520 Quantum Mechanics I | 3 |
| *PHYS-4880 Topics in Physics | 1–3 |
| Departmental Requirements | 35 |
| GBIO-1000 Principles of Biology | 3.5 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| GSCI-1010 Principles of Earth Science | 3.5 |
| MATH-1710, 1720, 2710 Calculus I, II, and III | 13 |
| MATH-2740 Differential Equations | 3 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| SCED-3120 Teaching Science | 3 |
| Teacher Education | 39 |

*Capstone Course

Physics Education Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements..... | 39–47 |
| Physics Education Major Requirements | 61 |
| Teacher Education Requirements | 39 |
| Total (minimum, not including proficiency) | 139 |



A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Physics Education — B.A.

First year:

| | |
|---|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| CHEM-1110, 1120 General Chemistry I and II | 8 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| ENG-1400 Composition..... | 3 |
| MATH-1710, 1720 Calculus I and II | 10 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PHYS-2110 General Physics I | 4 |
| Total | 38 |

Second year:

| | |
|--|-------------|
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| EDSP-2000 Teaching Children with Exceptionalities | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs | 1 |
| EDUC-2000 Introduction to Diverse Learners | 2 |
| EDUC-2100 Technology in the Classroom | 2 |
| EDUC-2200 Multicultural Field Experience | 1 |
| EDUC-2500 Educational Psychology | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| GSS-1100 Politics and American Culture..... | 3 |
| MATH-2710 Calculus III | 3 |
| MATH-2740 Differential Equations | 3 |
| PHYS-2120, 2130 General Physics II and III | 6 |
| Physics Elective | 3 |
| Total | 37.5 |

Third year:

| | |
|---|-------------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration | 2 |
| EDUC-3200 Faith and Learning Alignment | 1 |
| GSCI-1010 Principles of Earth Science | 3.5 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PHYS-3110 Intermediate Physics Laboratory | 2 |
| PHYS-3310 Theoretical Mechanics I | 3 |
| PHYS-3510 Modern Physics I | 3 |
| PHYS-3800 Research Methods in Physics | 1 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| History Elective..... | 3 |
| Literature Elective | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total | 30.5 |

Fourth year:

| | |
|--|--------------|
| EDSE-4000 Reading in the Content Area: AYA | 3 |
| EDSE-4100 Principles of Teaching | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA | 10–12 |
| EDSP-4250 Communication, Collaboration and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education | 3 |
| PHYS-3410 Electromagnetic Theory I | 3 |
| PHYS-4800 Senior Seminar — Physics | 1 |
| SCED-3120 Teaching Science | 3 |
| Total | 33–35 |

A complete description of the general education requirements is found on page 26.

Science Comprehensive Education — Integrated (Bachelor of Arts)

Course requirements involve 73 semester hours including:

| | |
|--|-----------|
| Core Requirements | 63 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |
| BIO-3300 Genetics..... | 4 |
| *BIO-4800 Senior Seminar — Biology..... | 1 |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| CHEM-2800 Introduction to Research in Chemistry..... | 1 |
| CHEM-3510 Organic Chemistry I..... | 4 |
| CHEM-3710 Biochemistry..... | 4 |
| ESCI-2510 Introductory Astronomy..... | 4 |
| GEOL-1110 Introduction to Physical Geology..... | 4 |
| GMTH-1030 Precalculus..... | 4 |
| PHYS-1010, 1020 College Physics I and II..... | 10 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| SCED-3120 Teaching Science..... | 3 |
| Electives selected from the following | 10 |
| One biology selected from the following | 3 |
| BIO-3410 Invertebrate Zoology..... | 3 |
| BIO-3450 Human Structure and Function I..... | 4 |
| BIO-3510 Plant Physiology..... | 3 |
| BIO-3520 Plant Taxonomy..... | 3 |
| BIO-3610 Environmental Physiology and Ecology..... | 4 |
| BIO-4300 Molecular Biology of the Cell..... | 4 |
| BIOA-3600 Topics in Environmental Biology..... | 4 |
| One chemistry selected from the following | 3 |
| CHEM-2210 Analytical Chemistry I..... | 3 |
| CHEM-3520 Organic Chemistry II..... | 4 |
| One earth science selected from the following | 4 |
| GEOL-1120 Historical Geology..... | 4 |
| ESCI-2310 Introduction to Oceanography..... | 4 |
| ESCI-2410 General Meteorology..... | 4 |
| Teacher Education | 39 |

*Capstone Course

Science Comprehensive Education — Integrated Summary

| | |
|---|------------|
| Proficiency Requirements..... | 0–5 |
| Other General Education Requirements..... | 39–47 |
| Science Comprehensive Education Major Requirements..... | 73 |
| Teacher Education Requirements..... | 39 |
| Total (minimum, not including proficiency)..... | 151 |



Suggested Four-Year Curriculum for a Major in Science Comprehensive Education

First year:

| | |
|--|-----------|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| CHEM-2800 Introduction to Research in Chemistry..... | 1 |
| EDUC-1000 The Education Profession..... | 2 |
| EDUC-1050 Preliminary Student Involvement..... | 0 |
| ENG-1400 Composition..... | 3 |
| GEOL-1110 Introduction to Physical Geology..... | 4 |
| GMTH-1030 Precalculus..... | 4 |
| GSS-1100 Politics and American Culture..... | 3 |
| PEF-1990 Physical Activity and the Christian Life..... | 2 |
| Total..... | 41 |

Second year:

| | |
|---|-----------|
| BEGE-2730 Old Testament Literature..... | 3 |
| BEGE-2740 New Testament Literature..... | 3 |
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |
| CHEM-3510 Organic Chemistry I..... | 4 |
| COM-1100 Fundamentals of Speech..... | 3 |
| EDSP-2000 Teaching Children with Exceptionalities..... | 1 |
| EDSP-2050 Field Experience: Exceptional Learning Needs..... | 1 |
| EDUC-2000 Introduction to Diverse Learners..... | 2 |
| EDUC-2100 Technology in the Classroom..... | 2 |
| EDUC-2200 Multicultural Field Experience..... | 1 |
| EDUC-2500 Educational Psychology..... | 3 |
| ESCI-2510 Introductory Astronomy..... | 4 |
| Total..... | 34 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development..... | 2 |
| BEGE-3760 Christian Worldview Integration..... | 2 |
| BIO-3300 Genetics..... | 4 |
| CHEM-3710 Biochemistry..... | 4 |
| EDUC-3200 Faith and Learning Alignment..... | 1 |
| HUM-1400 Introduction to the Humanities..... | 3 |
| PHYS-1010, 1020 College Physics I and II..... | 10 |
| Biology Elective..... | 3 |
| Chemistry Elective..... | 3 |
| History Elective..... | 3 |
| Literature Elective..... | 3 |
| Social Science/Global Awareness Elective..... | 3 |
| Total..... | 41 |

Fourth year:

| | |
|---|--------------|
| BIO-4800 Senior Seminar — Biology..... | 1 |
| EDSE-4000 Reading in the Content Area: AYA..... | 3 |
| EDSE-4100 Principles of Teaching..... | 5 |
| EDSE-4450 Adolescent/Young Adult Clinical Experience..... | 3 |
| EDSE-4900 Student Teaching and Seminar: AYA..... | 10–12 |
| EDSP-4250 Communication, Collaboration and Inclusion..... | 2 |
| EDUC-3100 Philosophical Foundations of Education..... | 3 |
| SCED-3110 Clinical Teaching in Science..... | 1 |
| SCED-3120 Teaching Science..... | 3 |
| Earth Science Elective..... | 4 |
| Total..... | 35–37 |

Minors

The minors in the department of science and mathematics are designed to provide nonmajors with additional background in the biological sciences, mathematics, and physical sciences.

Actuarial Science Minor

Course requirements for the **actuarial science minor** involve 40 semester hours including:

| | |
|--|----|
| ACCT-2110 Principles of Accounting I..... | 3 |
| ECON-2330 Microeconomics..... | 3 |
| ECON-2340 Macroeconomics..... | 3 |
| FIN-3710 Principles of Finance..... | 3 |
| GMTH-3100 Theory of Interest..... | 3 |
| MATH-1710, 1720, 2710 Calculus I, II, and III..... | 13 |
| MATH-3110, 4110 Probability and Statistics I and II..... | 6 |
| MATH-3610 Linear Algebra..... | 3 |
| MRKT-3600 Principles of Marketing..... | 3 |

Bioethics Minor

Course requirements for the **bioethics minor** involve 16.5–17.5 semester hours including:

| | |
|--|-----|
| BEPH-2250 Ethics..... | 3 |
| BEPH-2200 Introduction to Philosophy..... | 3 |
| GBIO-1000 Principles of Biology (or higher-level BIO course).... | 3.5 |
| GBIO-4700 Bioethics Colloquium..... | 1 |

Human studies elective (select one).....3–4

| | |
|---|---|
| GBIO-2010 Human Anatomy and Physiology I..... | 4 |
| BIO-3450 Human Structure and Function I..... | 4 |
| PYCH-1600 General Psychology..... | 3 |
| ANTH-1800 Cultural Anthropology..... | 3 |

Bioethics elective (select one).....3

| | |
|---|---|
| BIO-4710 Principles of Bioethics..... | 3 |
| GBIO-2720 Bioethics and the Human Experience..... | 3 |

Biology Minor

Course requirements for the **biology minor** involve 19 semester hours including:

| | |
|---------------------------------------|---|
| BIO-1110 Introduction to Biology..... | 4 |
| BIO-1120 General Zoology..... | 4 |
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |

Biology Electives.....4

Chemistry Minor

Course requirements for the **chemistry minor** involve 18 semester hours including:

| | |
|---|---|
| CHEM-1110, 1120 General Chemistry I and II..... | 8 |
| CHEM-2210 Analytical Chemistry I..... | 3 |
| CHEM-3510 Organic Chemistry I..... | 4 |
| Chemistry Electives..... | 3 |

Earth Science Minor

Course requirements for the **earth science minor** involve 20 semester hours including:

| | |
|---|---|
| GEOL-1110 Introduction to Physical Geology..... | 4 |
| GEOL-1120 Historical Geology..... | 4 |
| ESCI-2310 Introduction to Oceanography..... | 4 |
| ESCI-2410 General Meteorology..... | 4 |
| ESCI-2510 Introductory Astronomy..... | 4 |

Geology Minor

Course requirements for the **geology minor** involve 17 semester hours including:

| | |
|---|---|
| GEOL-1110 Introduction to Physical Geology..... | 4 |
| GEOL-1120 Historical Geology..... | 4 |
| GEOL-3600 Readings in Geology..... | 1 |
| Geology Electives..... | 8 |

Mathematics Minor

Course requirements for the **mathematics minor** involve 19 semester hours including:

| | |
|--|----|
| MATH-1710, 1720 Calculus I and II..... | 10 |
|--|----|

Mathematics electives selected from the following.....9

| | |
|---|---|
| MATH-2210 Logic and Methods of Proof..... | 3 |
| MATH-2710 Calculus III..... | 3 |
| MATH-2740 Differential Equations..... | 3 |

Any 3000- or 4000-level mathematics course

Physics Minor

Course requirements for the **physics minor** involve 18 semester hours including:

| | |
|---|----|
| PHYS-2110, 2120, 2130 General Physics I, II, and III..... | 10 |
| PHYS-3110 Intermediate Physics Laboratory..... | 2 |
| PHYS-3510 Modern Physics..... | 3 |

Physics Electives.....3

Special Programs

Preagriculture Curriculum

The **preagriculture curriculum** is designed to satisfy the technical and non-technical requirements of the first two years of a typical agriculture program. Students should research agricultural schools to which they wish to transfer at the junior level so that application materials can be completed in advance of deadlines. The preagriculture students should confer with their advisor to select electives based on the following criteria:

- The requirements of the school to which they will transfer after leaving Cedarville University
- The specific agricultural program they wish to enter

Course requirements include core requirements and an emphasis in either agriculture business or agriculture science.

Core requirements include:

| | |
|--|---|
| BEGE-1710 Christian Life and Thought..... | 3 |
| BEGE-1720 Spiritual Formation..... | 3 |
| BIO-1110 Introduction to Biology..... | 4 |
| CHEM-1110 General Chemistry I..... | 4 |
| ENG-1400 Composition..... | 3 |
| GMTH-1030 Precalculus..... | 4 |
| (or MATH-1710 Calculus I.....) | 5 |
| GSS-1100 Politics and American Culture..... | 3 |
| HUM-1400 Introduction to the Humanities..... | 3 |

Agriculture Business Emphasis

The **agriculture business emphasis** prepares students for careers in the industry and business phases of agriculture.

Course requirements include:

Two courses selected from..... 10

| | |
|---|---|
| ACCT-2110 Principles of Accounting..... | 3 |
| BIO-1120 General Zoology..... | 4 |
| BIO-2500 General Botany..... | 4 |
| BIO-2600 General Ecology..... | 3 |
| BIO-2210 Microbiology..... | 4 |
| BIO-3300 Genetics..... | 4 |
| BUS-2150 Statistics for Business..... | 3 |
| ECON-2330, 2340 Microeconomics and Macroeconomics.. | 6 |
| MGMT-3500 Principles of Organization and Management.... | 3 |

Humanities Electives.....6

Social Science Elective.....3

Agriculture Science Emphasis

The **agriculture science emphasis** prepares students for careers including agronomy, animal science, food science, and horticulture.

Course requirements include:

BIO-1120 General Zoology4
 BIO-2500 General Botany4
 BIO-2600 General Ecology.....3
 CHEM-3510, 3520 Organic Chemistry I and II8
 MATH-1720 Calculus II5
 MATH-3110 Probability and Statistics I3
 Biological Science Elective4
 (or CHEM-3710 Biochemistry 4)
 Humanities Elective3
 Social Science Elective3

Environmental Biology Emphasis

The **environmental biology emphasis**, within the biology major, provides undergraduate preparation for students who wish to emphasize the biological sciences while pursuing careers in such fields as conservation biology, wildlife biology, environmental toxicology, and environmental health.

BIO-3800 Biological Research.....2

Electives selected from..... 16

BIO-2210 Microbiology..... 4
 BIO-3410 Invertebrate Zoology 3
 BIO-3420 Vertebrate Zoology 3
 BIO-3520 Plant Taxonomy 3
 BIO-3610 Environmental Physiology and Ecology 4
 BIO-4910 Environmental Biology Internship 2
 *BIOA-3220 Aquatic Biology 4
 *BIOA-4710 Conservation Biology 4
 *BIOA-4820 Restoration Ecology 4
 ENVS-2100 Introduction Geographic Information Systems .. 3
 ENVS-3200 Ecosystem Science..... 3

*Course provided by Cedarville University in partnership with AuSable Institute. Additional elective courses may be completed in May or Summer sessions at AuSable Institute by approval of the student's academic advisor.

Medical Technology Option

A **medical technology** option is available within the biology major. The student must spend one year in a hospital internship program to become a certified medical technologist. Prerequisites to the hospital internship include: 16 hours of biology, 16 hours of chemistry, one mathematics course, and completion of all general education requirements.

Students may do an internship during their senior year with 32 hours of transfer credit applied to the biology major upon successful completion of the internship. Many students complete the requirements for a biology major first and then take the internship after graduation from Cedarville University.

Predental, Premedical, Preoptometric, Preosteopathic, Physician's Assistant, Prepharmacy, and Preveterinary Medicine

Cedarville University students have been successful in gaining admission to medical and professional schools. For many of these schools, no specific major is required; however, students typically choose majors in biology or chemistry. In addition to general degree requirements, the following courses are recommended for admission:

Biology courses:

BIO-1110 Introduction to Biology.....4
 BIO-1120 General Zoology4
 BIO-2210 Microbiology4
 BIO-3300 Genetics4

BIO-3420 Vertebrate Zoology3
 (or BIO-4410 Developmental Biology 4)
 BIO-3450, 3460 Human Structure and Function I and II8
 BIO-4710 Principles of Bioethics3
 (or BIO-4770 Pathophysiology 3)

Chemistry courses:

CHEM-1110, 1120 General Chemistry I and II8
 CHEM-3510, 3520 Organic Chemistry I and II8
 CHEM-3710 Biochemistry4

Additional courses:

MATH-1710, 1720 Calculus I and II 10
 PHYS-1010, 1020 College Physics I and II 10
 (or PHYS-2110, 2120 General Physics I and II..... 8)

Note: Students who desire admission to physician assistant programs will also need to have 1,000 hours or more of direct health care experience. Specific requirements vary from one program to another.

Prephysical Therapy

Many Cedarville students who successfully apply to graduate programs in physical therapy have completed the B.A. in biology. Students should contact the specific schools they wish to attend to determine the exact prerequisites. Physical therapy schools usually require 40 to 100 hours of experience assisting a licensed physical therapist prior to application. In addition to general degree requirements, the following courses are recommended for admission to most physical therapy schools:

Biology courses:

BIO-1110 Introduction to Biology.....4
 BIO-1120 General Zoology4
 BIO-3300 Genetics4
 BIO-3450, 3460 Human Structure and Function I and II7
 BIO-4770 Pathophysiology3

Chemistry courses:

CHEM-1110, 1120 General Chemistry I and II8
 CHEM-3510 Organic Chemistry I4
 CHEM-3710 Biochemistry4

Additional mathematics and science courses:

GMTH-1030 Precalculus.....4
 PHYS-1010, 1020 College Physics I and II 10

Psychology:

PYCH-1600 General Psychology3
 PYCH-2600 Human Development: Lifespan3
 PYCH-2610 Statistics.....3
 PYCH-2640 Psychology of Abnormal Behavior3

Other highly recommended electives:

ATRN-2650 Therapeutic Exercise.....3
 ATRN-3660 Therapeutic Modalities3
 BIO-4710 Principles of Bioethics3
 ESS-3920 Biomechanics.....3
 ESS-3940 Structural Kinesiology 1
 ESS-3900 Physiology of Exercise3

Department of

SOCIAL WORK

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Mission Statement

The Cedarville University Department of Social Work develops competent servant leaders grounded in biblical truth to practice generalist social work in diverse settings worldwide advancing human and community well-being.

Department Objectives

Graduates of the Cedarville University Baccalaureate Social Work Program will demonstrate a basic level of competency in the profession of social work by

- Integrating faith and practice through a process of ethical reasoning while respecting spiritual diversity.
- Evaluating multiple sources of knowledge and applying strategies of ethical reasoning to integrate knowledge and practice.
- Communicating effectively with diverse individuals, groups, communities, organizations, and colleagues while being mindful of the importance of difference in shaping life experiences.
- Assuring continual professional development by practicing reflection and self-correction and managing personal values in a way that allows professional values to guide practice.
- Assessing client strengths and needs using a bio-psycho-social-spiritual model and analyzing, formulating, and advocating for policies that advance social well-being, recognizing the extent to which a culture's structures and values may oppress, marginalize, alienate, or create or enhance privilege and power.

Personal Requirements

A solid high school college-preparatory program provides an excellent background for students entering the social work major.

Department Requirements

To graduate with a degree from the department of social work students must earn a cumulative average of 2.5 or higher and a "C-" or higher in all courses required by the major. In addition, students must be admitted into the social work program.

Admission to the Social Work Program

Admission to the social work program occurs during the sophomore year. Freshmen and sophomores interested in social work should declare their intent to major in social work and meet with an appropriate advisor to ensure that courses are taken in the proper sequence.

Admission Requirements and Procedures

1. Complete at least 42.5 hours of the general education requirements, including the necessary prerequisites. (Submit a summary of prerequisites.)
2. Complete SWK-1100 Total Immersion Experience with a "C" or higher by the junior year.
3. Complete SWK-2330 Introduction to Social Work with a "C" or higher by the junior year.
4. Complete SWK-2350 Field Survey with a "C" or higher by the junior year.
5. Complete SWK-2900 Ethics in the Helping Professions with a "C" or higher by the junior year.
6. Complete and submit an Application for Admission to the social work program director, including an autobiographical statement detailing interest in social work.
7. Submit letters of recommendation from a pastor, an employer or volunteer supervisor, and a teacher or adult friend.
8. Be interviewed by a minimum of two social work faculty.

9. Earn a cumulative GPA of 2.25 or higher. Submit a copy of current unofficial grade transcript from CedarInfo.
10. Complete and document 40 hours of post high school social service volunteer experience (submit form).
11. Provide a background check for the State of Ohio and an additional FBI background check for those who live out of state.
12. Submit a social work program handbook sign-off sheet.
13. Submit a sign-off sheet attesting to having read the Code of Ethics and agreeing to conform to the Code of Ethics.

The final decision as to whether all requirements are adequately met for admission to and progression in the social work program will be made by the social work program director.

Programs of Study

Cedarville's social work program leads to a Bachelor of Science (B.S.) degree in social work.



Cocurricular Opportunities

Social work has two professional organizations in which students may participate. Students can also broaden their understanding and knowledge through a variety of travel opportunities, internships, and student organizations.

Epsilon Alpha Pi

Epsilon Alpha Pi is a professional organization for social work majors that seeks to promote professional development, political and social awareness, and community outreach.

Epsilon Omega

Epsilon Omega is a local chapter of Phi Alpha Honor Society, the National Social Work Honor Society, committed to promoting a high standard of education for social workers.

Technical Resources

A large number of computer software programs are available to students, including:

- A variety of presentation programs
- Database programs
- Spreadsheet programs
- Statistical analysis programs
- Various search engines
- Web and HTML programs
- Word processing programs

The department prepares students for careers directly following graduation. Through a variety of modalities (including field work and class presentation by practitioners), students are able to network with actual career representatives and on occasion be exposed to the technologies being utilized by a career area.

Career Opportunities

Graduates of the department have attended some of the nation's outstanding graduate and professional schools. Careers pursued by graduates include:

- Administrator
- Adoption social worker
- Children's services social worker
- Community developer
- Family violence prevention case worker
- Government worker
- Medical social worker
- Mental health social worker
- Missionary
- Prison caseworker
- Probation officer
- School social worker
- Senior citizen center outreach worker
- Youth minister

Faculty

Nelson Henning, *Chair*. Professor of Social Work. *Education*: B.S.W., Southern Illinois University, 1976; M.S.W., University of Illinois, 1977; Ph.D., University of Pittsburgh, 1986. Licensed Independent Social Worker. At Cedarville since 1994.

Lisa Clifton, Assistant Professor of Social Work. *Education*: B.S.W., Morehead State University, 1992; M.S.W., University of Kentucky, 1994; J.D., Northern Kentucky University, Chase College of Law, 2004. At Cedarville since 2011.

Christine Fulmer, Associate Professor of Social Work. *Education*: B.S., Baptist Bible College, 1990; M.S.W., Marywood University, 1996. Licensed Independent Social Worker-Supervisor. At Cedarville since 2004.

George Huff, Professor of Social Work. *Education*: B.A., Ashland University, 1973; M.S.S.A., Case Western Reserve University, 1977. Licensed Independent Social Worker-Supervisor. At Cedarville since 2000.

Julie Kuhn, Assistant Professor of Social Work. *Education*: B.S.W., Philadelphia Biblical University, 2000; M.S.W., The University of Pennsylvania, 2004. At Cedarville since 2008.



Social Work

The **social work major** prepares students for future ministries/careers in professional social work, professional church and church-related specializations, and informal assistance. The wide range of opportunities within the social work field provides graduates with numerous ways of investing in the lives of individuals, families, groups, and communities.

The social work program is accredited by the Council of Social Work Education. Social work graduates are eligible for licensure and for advanced standing in graduate schools of social work. Advanced standing allows students to earn a Master of Social Work degree in a little over one year.

Goals

The goal of the social work program is ultimately to enable students to integrate the knowledge, values, and skills of the social work profession into competent practice by:

1. Providing content about social work practice from a generalist perspective with client systems of various sizes and types.
2. Preparing students with the skills, values, and knowledge to practice with diverse populations at risk.
3. Providing content about social contexts, the changing nature of those contexts, the behavior of organizations, and the dynamics of change.
4. Preparing students who are aware of their responsibilities to continue their professional growth and development.
5. Preparing students to practice with populations at risk with unique discrimination and oppressive histories (with a special focus on poverty).
6. Integrating biblical principles throughout the curriculum so that students can appropriately integrate their faith and that of their clients into the helping relationship.
7. Laying a foundation of core skills essential to a high caliber of social work practice (i.e., problem solving, listening, verbal and written communication, and critical thinking).
8. Creating an appreciation for the profession as well as an understanding of the history, personalities, and issues and events that helped to shape it.
9. Infusing throughout the curriculum the values and ethics that guide professional social workers in their practice.

International Field Experience

The social work program offers an international field experience in Uganda or Romania to junior or senior social work students. Students work in a variety of social service agencies in the host country, supervised by an on-site master's level social worker and under the direction of the social work department's international field coordinator. Courses at a local university expand the student's understanding of the host country, and planned activities further enhance the cultural experience. Students receive academic credits for the coursework and for the internship, allowing them to complete their Cedarville degree within the normal four years. The international field coordinator supports the student throughout the entire process — pre-departure, during the international experience, and after the student's return to campus.

International field experience is available over the summer break or during the fall semester. Students interested in international field experience should meet with their advisor as early as possible to discuss the feasibility and scheduling needs. Students should then meet with the international field coordinator to initiate the application process.

Application Requirements

Early application is advised. Students should check with the international field coordinator for the application deadline for their choice of country and desired semester. Students must have gained admission into the social work program or be on track for successful completion of all program admission requirements prior to the international experience.

Four reference letters from the following individuals are required for acceptance for an international field experience:

- Advisor or faculty member
- Pastor
- Friend
- Dean or residence director

Pre-Departure Requirements

The student will meet with the international field coordinator once a week for four weeks for a briefing of each country's culture, people, climate, and other pertinent topics. The student is to complete assigned readings and come prepared for discussion. Questions of concern or interest will also be discussed during the weekly sessions.

The student must also fulfill all orientation obligations within the international programs department.

Reentry Requirements

It is recommended the student keep their return semester as light as possible. The student will meet with the international field coordinator once a week for two months during the return semester. The student will be required to read and discuss *Re-Entry* by Peter Jordan.

The student must also fulfill all reentry obligations within the international programs department.



Social Work Advisory Council

The Social Work Advisory Council consists of social work professionals, agency administrators, clergy, and educators representing public, private, and church-related service agencies. Through semi-annual meetings, these experts advise the program and evaluate its plans for training skilled social work professionals with a commitment to core values and a biblical world and life view.

Lisa Clifton, Cedarville University, Cedarville, Ohio

David Drew, Dayton Veterans Administration Medical Center, Dayton, Ohio

Nelson Henning, Advisory Council Chair, Cedarville University, Cedarville, Ohio

Joan Fleming, Kirkmont Presbyterian Church, Beavercreek, Ohio

Christine Fulmer, Cedarville University, Cedarville, Ohio

Julie Kuhn, Cedarville University, Cedarville, Ohio

Sharon Guenther, Miami Valley Hospital, Dayton, Ohio

Deborah Holt, The Hospice of Dayton, Dayton, Ohio

George Huff, Cedarville University, Cedarville, Ohio

Greg Kelly, The Bair Foundation

Kitty Kincaid, New Creation Counseling Center

Esther Lanham, Advisory Council Secretary, Cedarville University, Cedarville, Ohio

Penny Madry-Johnson, American Red Cross

Debbie Matheson, Family Violence Prevention Center, Xenia, Ohio

Candace McHand, Student Representative, Cedarville University, Cedarville, Ohio

Greg Meriwether, Dept. of Veteran Affairs Readjustment Counseling Services, Dayton, Ohio

Linda Moenter, Montgomery County Department of Job and Family Services, Dayton, Ohio.

Sandra Patton, Student Representative, Cedarville University, Cedarville, Ohio

Elizabeth Charlton, Talbert House

Dianne Smith-Foster, Dayton Veterans Administration Medical Center, Dayton, Ohio

Denise Summerville, Greene County Board of MRDD, Xenia, Ohio

Eric VanVlymen, Alzheimer's Association, Dayton, Ohio



Course Requirements

Course requirements for the B.S. degree with a major in social work involve 85.5 semester hours including:

| | |
|---|-----|
| ¹ ANTH-1800 Cultural Anthropology | 3 |
| ¹ BEPH-2200 Introduction to Philosophy | 3 |
| ¹ GBIO-1000 Principles of Biology | 3.5 |
| ¹ HIST-3750 Social Movements | 3 |
| PYCH-1600 General Psychology | 3 |
| SOC-1300 Introduction to Sociology | 3 |
| ² SWK-1100 Total Immersion Experience | 2 |
| ² SWK-2330 Introduction to Social Work | 3 |
| ² SWK-2350 Field Survey | 2 |
| SWK-2840 Concepts of Chemical Dependency | 3 |
| ² SWK-2900 Ethics in the Helping Professions | 3 |
| ³ SWK-3010 Human Behavior and Social Environment | 4 |
| ³ SWK-3020 Generalist Social Work Practice with Multicultural Groups | 3 |
| ³ SWK-3110 Social Welfare Programs and Policy | 4 |
| ³ SWK-3210 Social Work Practice with Individuals and Families | 4 |
| ³ SWK-3430 Junior Seminar I | 1 |
| ³ SWK-3440 Junior Field Experience I | 3 |
| ³ SWK-3450 Junior Seminar II | 1 |
| ³ SWK-3460 Junior Field Experience II | 3 |
| ³ SWK-4210 Social Work Practice with Special Populations | 3 |
| ³ SWK-4220 Social Work Practice with Communities and Organizations | 4 |
| ³ *SWK-4510 Senior Seminar I | 2 |
| ³ *SWK-4520 Senior Seminar II | 2 |
| ³ *SWK-4560 Senior Field Experience I | 7 |
| ³ *SWK-4570 Senior Field Experience II | 7 |
| ^{1,3} SWK-4610 Data Analysis | 3 |
| ³ SWK-4620 Social Work Research Methods | 3 |

¹Satisfies general education requirement.

²Available to non-majors.

³Available only to social work majors who have been accepted into the program.

*Capstone Course

Social Work Major Curriculum Summary

| | |
|---|------------|
| Proficiency Requirements | 0–5 |
| Other General Education Requirements | 42.5 |
| Social Work Major Requirements | 85.5 |
| Total (minimum, not including proficiency) | 128 |

Because of the specific, sequential course requirements involved, completion of the program in four years requires careful planning. Failure to take courses in their sequential order may result in a fifth year for completion. Transfer students, particularly those transferring in as juniors, will most likely require three years of study at Cedarville to complete program requirements.

A complete description of the general education requirements is found on page 26.

Suggested Four-Year Curriculum for a Major in Social Work

First year:

| | |
|---|-------------|
| BEGE-1710 Christian Life and Thought | 3 |
| BEGE-1720 Spiritual Formation | 3 |
| COM-1100 Fundamentals of Speech | 3 |
| ENG-1400 Composition | 3 |
| GBIO-1000 Principles of Biology | 3.5 |
| PEF-1990 Physical Activity and the Christian Life | 2 |
| PYCH-1600 General Psychology | 3 |
| SOC-1300 Introduction to Sociology | 3 |
| SWK-2330 Introduction to Social Work | 3 |
| SWK-2350 Field Survey | 2 |
| SWK-2840 Concepts of Chemical Dependency | 3 |
| Total | 31.5 |

Summer:

| | |
|---|---|
| SWK-1100 Total Immersion Experience | 2 |
|---|---|

Second year:

| | |
|--|-------------|
| ANTH-1800 Cultural Anthropology | 3 |
| BEGE-2730 Old Testament Literature | 3 |
| BEGE-2740 New Testament Literature | 3 |
| BEPH-2200 Introduction to Philosophy | 3 |
| GSS-1100 Politics and American Culture | 3 |
| HIST-3750 Social Movements | 3 |
| HUM-1400 Introduction to the Humanities | 3 |
| SWK-2900 Ethics in the Helping Professions | 3 |
| Physical Science Elective | 3.5 |
| Science or Math Elective | 3 |
| Total | 30.5 |

Third year:

| | |
|--|-----------|
| BEGE-3750 Christian Worldview Development | 2 |
| SWK-3010 Human Behavior and Social Environment | 4 |
| SWK-3020 Generalist Social Work Practice with Multicultural Groups | 3 |
| SWK-3110 Social Welfare Programs and Policy | 4 |
| SWK-3210 Social Work Practice with Individuals and Families | 4 |
| SWK-3430, 3450 Junior Seminar I and II | 2 |
| SWK-3440, 3460 Junior Field Experience I and II | 6 |
| Literature Elective | 3 |
| Science or Math Elective (Bioethics recommended) | 3 |
| Total | 31 |

Fourth year:

| | |
|--|-----------|
| BEGE-3760 Christian Worldview Integration | 2 |
| SWK-4210 Social Work Practice with Special Populations | 3 |
| SWK-4220 Social Work Practice with Communities and Organizations | 4 |
| SWK-4510, 4520 Senior Seminar I and II | 4 |
| SWK-4560, 4570 Senior Field Experience I and II | 14 |
| SWK-4610 Data Analysis | 3 |
| SWK-4620 Social Work Research Methods | 3 |
| Total | 33 |

COURSE DESCRIPTIONS

| | | | |
|--|-----|---|-----|
| Accounting (ACCT)..... | 197 | General Engineering (EGGN)..... | 228 |
| Adolescent / Young Adult Education (EDSE)..... | 223 | General Mathematics (GMTH)..... | 242 |
| Air Force ROTC (AES)..... | 197 | General Music (GMUS)..... | 242 |
| Allied Health (ALHL)..... | 198 | General Science (GSCI)..... | 243 |
| Anthropology (ANTH)..... | 198 | General Social Science (GSS)..... | 243 |
| Arabic Language (ARBC)..... | 198 | Geography (GEO)..... | 240 |
| Army ROTC (MIL)..... | 259 | Geology (GEOL)..... | 241 |
| Art (ART)..... | 198 | German (GER)..... | 243 |
| Athletic Training (ATRN)..... | 200 | Graphic Design (GDES)..... | 239 |
| Biblical Languages (BEBL)..... | 200 | History (HIST)..... | 244 |
| Biblical Education — Biblical Studies (BEBS)..... | 201 | Honors (HON)..... | 246 |
| Biblical Studies — Bible Teacher Education (BEDU)..... | 202 | Humanities (HUM)..... | 247 |
| Biblical Studies — Christian Education (BECE)..... | 201 | Industrial and Innovative Design (IDES)..... | 247 |
| Biblical Studies — General Education (BEGE)..... | 202 | Information Technology Management (ITM)..... | 249 |
| Biblical Studies — History (BEHI)..... | 202 | International Studies (INTL)..... | 248 |
| Biblical Studies — New Testament (BENT)..... | 202 | Journalism (JOUR)..... | 250 |
| Biblical Studies — Old Testament (BEOT)..... | 203 | Keyboard Pedagogy (KPMU)..... | 252 |
| Biblical Studies — Philosophy and Religion (BEPH)..... | 204 | Liberal Arts (LART)..... | 252 |
| Biblical Studies — Practical Theology (BEPT)..... | 204 | Linguistics (LING)..... | 252 |
| Biblical Studies — Special Topics (BEST)..... | 205 | Literature (LIT)..... | 253 |
| Biblical Studies — Theology (BETH)..... | 206 | Management (MGMT)..... | 258 |
| Biology (BIO)..... | 206 | Marketing (MRKT)..... | 259 |
| Business Administration (BUS)..... | 208 | Mathematics (MATH)..... | 256 |
| Coaching (CCHG)..... | 209 | Mathematics Education (MTED)..... | 260 |
| Conducting (CDMU)..... | 209 | Mechanical Engineering (EGME)..... | 228 |
| College Studies (COLL)..... | 213 | Middle Childhood Education (EDMC)..... | 220 |
| Communication Studies (COM)..... | 213 | Multi-Age Health Education (MAHE)..... | 255 |
| Computer Engineering (EGCP)..... | 225 | Multi-Age Physical Education (MAPE)..... | 255 |
| Criminal Justice (CRJU)..... | 215 | Music Class Studies (CLMU)..... | 212 |
| Chemistry: Major (CHEM)..... | 210 | Music Education (EDMU)..... | 221 |
| Chemistry: General Education (CHEM)..... | 210 | Music History (HLMU)..... | 245 |
| Chinese (CHN)..... | 212 | Music Performance (PFMU)..... | 262 |
| Church Music (CHMU)..... | 211 | Music Private Study (PLMU)..... | 265 |
| Computer Science (CS)..... | 216 | Music Technology (TYMU)..... | 278 |
| Developmental (DEV)..... | 218 | Music Theory (THMU)..... | 274 |
| Early Childhood/Special Education (ECSP)..... | 218 | Nursing (NSG)..... | 260 |
| Early Childhood Education (EDEC)..... | 219 | Prepharmacy (PPHR)..... | 267 |
| Earth Science (ESCI)..... | 236 | Physical Education Activity Courses (PEAX)..... | 262 |
| Economics (ECON)..... | 218 | Physical Education Fitness (PEF)..... | 262 |
| Education (EDUC)..... | 221 | Physics: General Education (PHYS)..... | 263 |
| Electrical Engineering (EGEE)..... | 226 | Physics: Major (PHYS)..... | 263 |
| Electronic Media (EMTC)..... | 231 | Political Science (POLS)..... | 265 |
| English (ENG)..... | 234 | Psychology (PSYCH)..... | 267 |
| Environmental Science (ENVS)..... | 235 | Public Administration (PUAD)..... | 269 |
| End-User Information Systems (EUIS)..... | 235 | Science Education (SCED)..... | 269 |
| Exercise and Sport Science (ESS)..... | 236 | Sociology (SOC)..... | 270 |
| Exercise and Sport Science Education (ESED)..... | 236 | Spanish (SPAN)..... | 271 |
| Exercise and Sport Science Elective (ESSE)..... | 237 | Sport and Exercise Studies (SES)..... | 269 |
| Exercise Science (EXSC)..... | 237 | Sport Management (SMGT)..... | 270 |
| Film (FILM)..... | 238 | Special Education (EDSP)..... | 224 |
| Finance (FIN)..... | 238 | Social Work (SWK)..... | 273 |
| Forensic Science (FORS)..... | 239 | Technical and Professional Communication (TPC)..... | 277 |
| French (FREN)..... | 239 | Theatre (THTR)..... | 275 |
| General Biology (GBIO)..... | 239 | Worship (WSHP)..... | 278 |

A

Accounting (ACCT)

ACCT-2110 Principles of Accounting I–Fa, Sp 3 hours

An introduction to accounting for business organizations with an emphasis on financial statement preparation and interpretation. Topics include the accounting cycle, present value, and accounting for stock and debt instruments. *Prerequisite:* *sophomore status.*

ACCT-2120 Principles of Accounting II–Fa, Sp 3 hours

A continuation of accounting for business organizations. Topics include cash flow statements, investments, and managerial accounting concepts. *Prerequisite:* *ACCT-2110 Principles of Accounting I.*

ACCT-3110 Intermediate Financial Accounting I–Fa 3 hours

Theoretical concepts and accounting standards that form the basis for accounting practices, financial statement preparation, and analysis. Topics include financial statement formats, present value, and accounting for receivables and inventory. *Prerequisite:* *ACCT-2120 Principles of Accounting II.*

ACCT-3120 Intermediate Financial Accounting II–Sp 3 hours

Continuation of theoretical concepts and accounting standards that form the basis for accounting practices and financial statement preparation and analysis. Topics include: accounting for fixed assets, intangible assets, current liabilities, long-term debt, and stockholders' equity. *Prerequisite:* *ACCT-3110 Intermediate Financial Accounting I.*

ACCT-3150 Accounting Information Systems–Sp 3 hours

A study of the flow of information through the accounting system, emphasizing systems analysis and design, internal controls, and computer applications in the business environment. *Prerequisites:* *ACCT-2120 Principles of Accounting II; ITM-1500 Information Technology for Business; junior status.*

ACCT-3170 Managerial Accounting–Sp 3 hours

Principles of industrial and distribution cost accounting, job order and process cost systems, and standard costs. *Prerequisite:* *ACCT-2120 Principles of Accounting II.*

ACCT-4110 Federal Income Taxes–Fa 3 hours

Examines the computation of federal income tax liabilities for individuals and sole proprietorships. Typical course content includes income, exclusions, exemptions, deductions, credits, property transactions, and tax accounting methods. Introduces basic principles of tax research and planning. *Prerequisite:* *ACCT-2120 Principles of Accounting II.*

ACCT-4120 Auditing–Fa 3 hours

A study of auditing standards and related auditing procedures. Topics include evaluation of audit evidence, professional responsibilities, and auditors' reports and opinions. *Prerequisite:* *ACCT-3120 Intermediate Financial Accounting II.*

ACCT-4130 Advanced Financial Accounting–Sp 3 hours

A study of consolidated financial statements, foreign exchange, estates and trusts, branch accounting, and related problems. *Prerequisite:* *ACCT-3120 Intermediate Financial Accounting II.*

ACCT-4150 Government and Nonprofit Accounting–Fa 3 hours

Accounting and reporting principles, standards, and procedures applicable to nonprofit organizations. *Prerequisite:* *ACCT-3120 Intermediate Financial Accounting II or permission of instructor.*

ACCT-4170 Advanced Managerial Accounting–Sp 3 hours

Advanced topics in accounting for manufacturing companies and the use of the computer in cost accounting applications. *Prerequisite:* *ACCT-3170 Managerial Accounting.*

ACCT-4190 CPA Review–Sp 3 hours

Comprehensive review of the application of accounting principles, using specific problems and development of approaches to problem solving. Useful as intensive preparation for the CPA examination. *Prerequisite:* *ACCT-3120 Intermediate Financial Accounting II.*

ACCT-4210 Taxation of Business Entities–Sp 3 hours

An examination of the tax provisions governing C Corps, S Corps, partnerships, and estates. Analyzes international and multi-state taxation of corporations. *Prerequisite:* *ACCT-4110 Federal Income Taxes.*

ACCT-4220 International Accounting–Sp 3 hours

This course offers information about global accounting diversity and the reasons for it. International Financial Reporting Standards (IFRS) are discussed along with the history of international standard development. Foreign currency exchange rates, transactions, and hedging are covered. Students also do research into accounting in multinational corporations. *Prerequisites:* *ACCT-2110 Principles of Accounting I, ACCT-2120 Principles of Accounting II.*

ACCT-4810 Seminar in Accounting–Sp 1 hour

A forum for discussion of contemporary topics and issues in accounting. Current issues will be chosen from topics in financial and managerial accounting, auditing, tax, and governmental and nonprofit accounting. *Prerequisites:* *ACCT-3170 Managerial Accounting; ACCT-4110 Federal Income Taxes; ACCT-4120 Auditing.*

Air Force ROTC (AES)

AES-1210,1220 The Air Force Today 1 hour/sem

A survey course designed to introduce students to the United States Air Force and the Air Force Reserve Officer Training Corps (ROTC). Featured topics include the mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer career opportunities, group leadership problems, and an introduction to communication skills.

AES-1211 Leadership Laboratory (GMC): Applied Air Force ROTC Training 0 hours

This lab provides an opportunity for students to apply Air Force procedures, techniques, and knowledge. Students will learn the Air Force organizational structure as well as customs and courtesies. GMC cadets will also develop their followership and teamwork skills in a cadet-led, cadre-supervised lab environment. Taken concurrently with 1000-level AES courses. Credit/no credit.

AES-2210,2220 History of the Air Force 1 hour/sem

A survey course designed to provide students with an overview of the general aspects of air and space power through a historical perspective. It begins with the first military application of balloons through the actions in Kosovo and Afghanistan. It also shapes communication skills introduced in the freshman year.

AES-2211 Leadership Laboratory (FTP): Applied Air Force ROTC Training 0 hours

This lab further develops skills and concepts introduced in the GMC Leadership Laboratory. Students are prepared mentally and physically for the demanding requirements of the upcoming Field Training summer program. Training is cadet-led, where the students will display their ability to apply Air Force concepts and procedures. Taken concurrently with 2000-level AES courses. Credit/no credit.

AES-3310,3320**3 hours/sem****Air Force Leadership and Management**

This course is a study of quality leadership and management fundamentals, professional military knowledge, Air Force doctrine, leadership ethics, and communication skills. Students use case studies to examine Air Force leadership and management situations.

AES-3311**0 hours****Leadership Laboratory (ICL): Applied Air Force ROTC Training**

The (ICL) lab builds the foundation of leadership skills required as an Air Force Officer. Cadets apply leadership/management concepts learned in Field Training and previous aerospace studies classes and labs to assist in training the GMC cadets. Taken concurrently with 3000-level AES courses. Credit/no credit.

AES-4310,4320 Preparation for Active Duty**3 hours/sem**

This course examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Topics focus on the military as a profession, officership, military justice, civilian control of the military, and current issues. Considered the capstone ROTC course with continued refinement of communication skills.

AES-4311**0 hours****Leadership Laboratory (SCL): Applied Air Force ROTC Training**

This lab prepares students for progression into active duty life. As in the ICL lab, students take leadership roles in execution of leadership labs for the cadet wing. Students hone leadership fundamentals learned in previous courses and labs to a level commensurate to entry into the active duty Air Force. Taken concurrently with 4000-level AES courses. Credit/no credit.

Allied Health (ALHL)**ALHL-1000****1 hour****Introduction to the Allied Health Professions–Fa**

Introductory course for students planning career involvement in health and health-related professions. The students will be introduced to health careers by providing descriptions of jobs, the educational and legal requirements, the work environment, and additional information about specific fields.

ALHL-2000 Medical Terminology–Fa, Sp**0–1 hours**

An online self-paced program designed to familiarize students with vocabulary indigenous to the medical profession; including terms of anatomic/physiologic features, medical diagnosis, procedures and therapies. Credit/no credit. (Fee: \$95)

ALHL-3940 Professional Development–Fa**1 hour**

This course is designed to help students acquire an in-depth understanding of the requirements and practice in their chosen allied health profession and to facilitate students' selection of the field to which they wish to apply. Students will also prepare to complete the centralized application process.

ALHL-4950 Allied Health Seminar I–Fa**1 hour**

Students will research a topic of interest from their chosen allied health field in preparation for giving a scholarly presentation of their findings in ALHL-4960 Health Science Seminar II. Students will be encouraged to collaborate with a practicing clinician for advice and counsel. *Prerequisite: ALHL-2000 Medical Terminology; EXSC-4600 Research in Exercise Science*

ALHL-4960 Allied Health Seminar II–Sp**1 hour**

Students will prepare a scholarly presentation based on research done in ALHL-4950 Allied Health Seminar I with specific attention given to integrating concepts across disciplines from a Christian worldview. Students will be encouraged to collaborate with a practicing clinician for advice and counsel. Presentations will be given to a panel of allied health professionals. (Fee: \$25)

Anthropology (ANTH)**ANTH-1800 Cultural Anthropology–Fa, Sp****3 hours**

Analysis of the concept and its importance for the study of man; an examination of various cultures of the world as they relate to technological, economic, social, political, and religious aspects of these cultures.

ANTH-4940**1–3 hours****Independent Study in Anthropology**

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*

Arabic Language (ARBC)**ARBC-1400****3 hours****Introduction to Arabic Language and Culture**

Introduction of the Arabic script and basic vocabulary used for greetings and other everyday situations. Introduction to various aspects of Arab culture, including history, religion, literature, politics, and daily life. This course is intended for non-native speakers with no previous Arabic study. *This course satisfies the global awareness course requirement.*

ARBC-1410 Elementary Arabic I–Fa**4 hours**

Development of basic skills in reading, writing, speaking, and listening in Arabic, along with an introduction to Arabic culture.

ARBC-1420 Elementary Arabic II–Sp**4 hours**

Development of basic skills in reading, writing, speaking, and listening in Arabic, along with an introduction to Arabic culture.

Prerequisites: ARBC-1410 Elementary Arabic I, instructor's approval, or placement by exam.

ARBC-2410 Intermediate Arabic I–Fa**4 hours**

Development of all four language skills through grammar review, composition, conversation, and readings in Arabic literature and culture. *Prerequisites: ARBC-1410 Elementary Arabic I and ARBC-1420 Elementary Arabic II, instructor's approval, or placement by exam.*

ARBC-2420 Intermediate Arabic II–Sp**3 hours**

Development of all four language skills through grammar review, composition, conversation, and readings in Arabic literature and culture. *Prerequisites: ARBC-1410 Elementary Arabic I, ARBC-1420 Elementary Arabic II, ARBC-2410 Intermediate Arabic I, instructor's approval, or placement by exam.*

ARBC-3500**1–3 hours****Independent Study in Arabic Language and Culture–Fa, Sp**

This course gives opportunity for independent study in a particular area of Arabic language and culture for students who demonstrate special interests and ability.

Art (ART)**ART-1100 Introduction to Art–Fa****3 hours**

Introduction to visual vocabulary and the understanding of visual communication: form, line, space, color, texture, and movement. Development of visual awareness and analytical thinking in response to works of art, use of media, and techniques and the application of design principles.

ART-1210 Drawing I–Fa, Sp**3 hours**

Investigation of the visual language used in drawing. Students work with concepts of point, line, and plane definition to develop an awareness of the elements used to indicate form in a variety of media. (Fee: \$75)

ART-1230 Design I–Sp**3 hours**

An exploration of the visual elements and concepts of design utilizing a variety of media. *Prerequisite: ART-1100 Introduction to Art.* (Fee: \$75)

ART-2120 Drawing II–Sp**3 hours**

Further exploration in representing form and space. Emphasis on personal interpretation and media experimentation.

Prerequisite: ART-1210 Drawing I ART-1230 Design I. (Fee: \$75)

ART-2220 Design II–Fa**3 hours**

Theory and application of compositional elements and principles of design and visual organization. Manipulation of two- and three-dimensional forms to explore their expressive and structural possibilities. *Prerequisites:* ART-1210 Drawing I; ART-1230 Design I. (Fee: \$75)

ART-2250 Creative Photography–Fa, Sp**3 hours**

Students will learn and apply technical knowledge and aesthetic techniques necessary to produce creative, well composed, quality digital photographs. Additionally, students will gain historical and contemporary knowledge and appreciation of photography as a medium for artistic expression. Students must provide a digital point-n-shoot camera or DSLR camera and tripod. (Fee: \$50)

ART-3210 Painting I–Fa**3 hours**

An introduction to oil painting, emphasizing the perception and use of light and color in accurately representing form and space.

Prerequisites: ART-1210 Drawing I; ART-1230 Design I. (Fee: \$150)

ART-3220 Painting II–Sp**3 hours**

Studio. Study of the principles of composition, value, pattern, tone, mood, and color theories. Emphasis is placed on the creative process from concept to finished art. Imaginative and individual responses of the student increase throughout the course. *Prerequisite:* ART-3210 Painting I. (Fee: \$150)

ART-3230 Watercolor–Sp**2 hours**

A location painting watercolor course for students who have had drawing instruction and who have a basic understanding of composition and color theory. *Prerequisites:* ART-1210 Drawing I; ART-2210 Design I; or by portfolio. (Fee: \$180)

ART-3250 Studio Photography–Fa, Sp**3 hours**

Students will learn to control and manipulate various aspects and qualities of light in a photographic studio environment to create and implement lighting solutions for various commercial, fine art, and creative digital photography projects. Additional expenses for materials and services beyond the course fee are required for successful completion of this course — students should plan and budget accordingly. *Prerequisites:* GDES-1220 Digital Image/Photography and a grade of “B” or higher in ART-2250 Creative Photography and declared digital photography minor, or permission of instructor. (Fee: \$200)

ART-3310 Art History I–Fa**3 hours**

Survey of the development of western art and architecture from the ancient world through the early renaissance.

ART-3320 Art History II–Sp**3 hours**

Survey of the development of western painting, architecture, sculpture, and the graphic arts from the early renaissance through impressionism at the end of the 19th century. *Prerequisite:* ART-3310 Art History I.

ART-3330 Three-Dimensional Design–Fa**3 hours**

Application of principles of design and visual organization with emphasis on volume, mass, and rendering forms in space. *Prerequisite:* ART-1100 Introduction to Art, ART-1210 Drawing I, ART-1230 Design I. (Fee: \$175)

ART-3410 Ceramics–Sp**3 hours**

Provides an introduction to clay from construction to finished fired pieces. Students will build forms using basic hand-building techniques and the potter’s wheel. Surface decoration will be emphasized using color, texture, and glazes. (Fee: \$115)

ART-3510 Introduction to Printmaking–Fa**3 hours**

An introduction to intaglio and relief printmaking processes. *Prerequisites:* ART-2120 Drawing II; ART-2220 Design II. (Fee: \$250)

ART-3610 Sculpture–Sp**3 hours**

An exploration of basic studio sculpting including additive and subtractive methods in a variety of media: carving, modeling, casting, and assemblage. *Prerequisites:* ART-1230 Design I, ART-3330 Three-Dimensional Design. (Fee: \$300)

ART-4010 Studio–Fa, Sp**3 hours**

This course allows the studio art major an opportunity to explore a particular studio discipline or may be a continuation of work completed in previous studio courses; allowing the student a concentration in that particular discipline. *Prerequisites:* ART-2120 Drawing II, ART-3220 Painting II. (No course fee. Students purchase own supplies)

ART-4250 Advanced Creative Photography–Sp**3 hours**

Students will learn, create, and apply advanced photography and digital image manipulation techniques on location, in the studio, and with Adobe Photoshop. With instructor guidance and approval, students will develop and complete a significant, comprehensive photography project related to their major or area of interest that demonstrates technical expertise, knowledge, creative composition, and artistic expression in digital photography. Additional expenses for materials and services beyond the course fee are required for successful completion of this course — students should plan and budget accordingly. *Prerequisite:* ART-3250 Studio Photography, or permission of the instructor. (Fee: \$100)

ART-4260 Photography Portfolio and Exhibition–Sp**2 hours**

As a capstone to the digital photography minor, students will produce both traditional and digital portfolios of their photography work, complete proper archival mounting and framing of photographs, participate in photographic exhibitions, and develop and apply knowledge of copyright and legal and ethical issues related to photography. Additional expenses for materials and services beyond the course fee are required for successful completion of this course — students should plan and budget accordingly. *Prerequisites:* ART-4250 Advanced Creative Photography, or permission of the instructor. (Fee: \$325)

ART-4300 Art Exhibition–Sp**3 hours**

Designed to provide the student a hands-on experience in mounting an art exhibition. Topics include archival matting and framing, lighting, and hanging techniques, as well as publicity and signage. Studio work is a requirement to balance a portfolio of work for a senior exhibition. Capstone course. *Prerequisite:* senior studio art major status.

ART-4400 20th Century Art–Fa**3 hours**

Investigation of the development of 20th century art history from Post-Impressionism to the present. Particular attention to the underlying worldviews and changes in media. Classroom lectures are supplemented with student research, critique, and museum studies. (odd years)

ART-4440 Installation Art–Fa**3 hours**

Survey of Installation Art, culminating in student directed projects, executed on and off campus. *Prerequisite:* ART-4400 20th Century Art recommended. (Fee: \$125) (even years)

ART-4980 Special Topics in Art–Fa, Sp, Su**1–3 hours**

This is a workshop for students who are interested in a collaborative studio learning experience in applied art. Applied areas offered include painting (watercolor, oil, acrylic), pottery, or photography. Rotation of course content will be determined by faculty schedules. In instances where Cedarville University faculty are acting as instructors in professional workshops held off-campus, Cedarville University students who participate and pay Cedarville tuition can earn elective credit. Actual contact hours would determine amount of credit granted. *Prerequisite:* permission of the instructor. (Fee: \$75).

ART-4990 Independent Study in Art**1–3 hours**

Independent and intensive study in a particular area of art for individual students who demonstrate special interests and ability.

Athletic Training (ATRN)**ATRN-1500 Introduction to Athletic Training–Fa 1 hour**

This course will introduce the basic concepts of the profession of athletic training. Emphasis will be placed on the history of the profession as well as the core domains of athletic training.

ATRN-1550 Basic Athletic Training–Sp 3 hours

An overview of the allied health profession known as athletic training. This course focuses on prevention, management, and rehabilitation of sport-related injuries. Relevant topics include physical conditioning, evaluation, injury cycle, and superficial modalities. (Fee: \$50)

ATRN-2560 Lower Body Injury Management–Fa 3 hours

Comprehensive evaluation, management, and initial rehabilitation of athletic injuries involving the lower portion of the human body. *Prerequisites: ATRN-1550 Basic Athletic Training; GBIO-2010 Human Anatomy and Physiology I.* (Fee: \$35)

ATRN-2570 Upper Body Injury Management–Sp 3 hours

Comprehensive evaluation, management, and initial rehabilitation of athletic injuries involving the upper portion of the human body. *Prerequisites: ATRN-1550 Basic Athletic Training; GBIO-2010 Human Anatomy and Physiology I.* (Fee: \$35)

ATRN-2650 Therapeutic Exercise–Sp 3 hours

Management of injuries from the subacute phase through return to participation. Based on principles of biomechanics with emphasis on strength, flexibility, proprioception, endurance, and agility. *Prerequisites: ATRN-1550 Basic Athletic Training or permission of instructor.*

ATRN-2901 Clinical I–Fa 2 hours

This course focuses on the application of learned principles and athletic training clinical skills. This course includes implementation and practice of specific clinical skills from the previous year to facilitate comprehensive learning. Athletic training students will be supervised and given the opportunity to practice learned skills in the clinical setting. Only for athletic training students wishing to matriculate in the athletic training education program. *Prerequisite: ATRN-1500 Introduction to Athletic Training, ATRN-1550 Basic Athletic Training.* (Fee: \$50)

ATRN-2902 Clinical II–Sp 2 hours

This course focuses on the application of learned principles and athletic training clinical skills. This course includes implementation and practice of specific clinical skills from the previous year to facilitate comprehensive learning. Athletic training students will be supervised and given the opportunity to practice learned skills in the clinical setting. Only for athletic training students wishing to matriculate in the athletic training education program. *Prerequisite: ATRN-1500 Introduction to Athletic Training, ATRN-1550 Basic Athletic Training.* (Fee: \$50)

ATRN-3550 3 hours**Organization and Administration in Athletic Training–Fa**

Management of the athletic training program and facility at all levels of sport. Topics include budgets, policies, design, record-keeping, and legal aspects of athletic training.

ATRN-3660 Therapeutic Modalities–Fa 3 hours

An overview of the modalities used in athletic training including thermal agents, electrical agents, and mechanical modalities. *Prerequisite: ATRN-1550 Basic Athletic Training or permission of the instructor.* (Fee: \$35)

ATRN-3903 Clinical III–Fa 2 hours

A practicum course that allows the student to demonstrate mastery of clinical proficiency by applying course content to the actual practice of athletic training. Students will be assigned to a clinical rotation site where they will be supervised by an Approved Clinical Instructor (ACI) or Clinical Instructor (CI) and assist the Allied Health Care Professional with providing services. Students are responsible for their own transportation. *Prerequisites: ATRN-2560 Lower Body Injury Management; ATRN-2570 Upper Body Injury Management.* (Fee: \$50)

ATRN-3904 Clinical IV–Sp 2 hours

A practicum course that allows the student to demonstrate mastery of clinical proficiency by applying course content to the actual practice of athletic training. Students will be assigned to a clinical rotation site where they will be supervised by an Approved Clinical Instructor (ACI) or Clinical Instructor (CI) and assist the Allied Health Care Professional with providing services. Students are responsible for their own transportation. *Prerequisites: ATRN-3903 Clinical III.* (Fee: \$175)

ATRN-4560 General Medical Issues–Fa 3 hours

Focuses on the medical issues related to allied health including, but not limited to conditions of the cardiovascular, respiratory, digestive, and urinary systems.

ATRN-4610 Issues in Athletic Training–Sp 1 hour

A study of the current significant issues in athletic training with an emphasis on legal/ethical issues and professional development.

ATRN-4850 1–3 hours**Independent Study in Athletic Training–Fa, Sp**

An independent study in athletic training by students pursuing the athletic training major. *Departmental approval is required.*

ATRN-4905 Clinical V–Fa 2 hours

A practicum course that allows the student to demonstrate mastery of clinical proficiency by applying course content to the actual practice of athletic training. Students will be assigned to a clinical rotation site where they will be supervised by an Approved Clinical Instructor (ACI) or Clinical Instructor (CI) and assist the Allied Health Care Professional with providing services. Students are responsible for their own transportation. *Prerequisites: ATRN-3904 Clinical IV.* (Fee: \$50)

ATRN-4906 Clinical VI–Sp 2 hours

A practicum course that allows the student to demonstrate mastery of clinical proficiency by applying course content to the actual practice of athletic training. Students will be assigned to a clinical rotation site where they will be supervised by an Approved Clinical Instructor (ACI) or Clinical Instructor (CI) and assist the Allied Health Care Professional with providing services. Students are responsible for their own transportation. Capstone Course. *Prerequisites: ATRN-4905 Clinical V.* (Fee: \$175)

B**Biblical Languages (BEBL)****BEBL-2510, 2520 5 hours/semester****Elementary Greek I and II–Fa, Sp**

Basic elements of the Greek language. Careful attention is given to grammar, syntax, vocabulary, and the reading of selected portions of the Greek New Testament.

BEBL-2610, 2620 3 hours/semester**Elementary Hebrew I and II–Fa, Sp**

Introduction to the basic elements of biblical Hebrew. Attention is given to vocabulary, grammar, and the use of language tools.

BEBL-3510, 3520 3 hours/semester**Intermediate Greek I and II–Fa, Fa, Sp**

Detailed study of advanced Greek grammar, reading in the Greek New Testament, the application of advanced syntactical rules, and an introduction to exegesis. *Prerequisite: BEBL-2510, 2520 Elementary Greek.*

BEBL-4900 1–3 hours**Independent Study in Biblical Language–Fa, Sp, Su**

The student will translate and/or exegete a Scripture passage or investigate advanced grammar and syntax.

BEBL-4990 Topics in Biblical Languages—Fa, Sp 1–3 hours

Investigation of special topics in Bible and theology that have intrinsic worth and engage student interest. *Prerequisites: permission of instructor required for non-majors.*

Biblical Education — Biblical Studies (BEBS)**BEBS-1000 Introduction to Biblical Studies—Fa 1 hour**

This course will introduce the student to the field of biblical studies and related career opportunities. This will provide an overview of the major and the various complementary minors, introduce the various areas of study and related skills, survey career possibilities, and aid the student in determining his or her fit with the field. (Fee: \$35)

BEBS-2010 3 hours**Introduction to Biblical Language Tools—Sp**

Learning the original language opens the Scriptures to serious students of the Bible in exciting ways. This course is an introduction to the basic principles of phonology (sounds), morphology (forms), and grammar of biblical Greek and Hebrew with a focus on gaining proficiency to be able to use digital language tools such as Logos and the New English Translation Bible. (Fee \$150)

Biblical Studies — Christian Education (BECE)**BECE-1000 Orientation to Bible Ministries Majors—Fa 1 hour**

An introduction to the ministries majors provided within the department of biblical and ministry studies (youth ministries, Christian education, or missions). The course will provide an overview of the program, survey career opportunities in Christian ministry, and introduce the student to significant people and resources in the field, on the campus, and in the community. Credit/no credit.

BECE-2100 Wilderness Ministry 3 hours

See the kinesiology and allied health department course description for ESSE-2100 Wilderness Ministry. Credit/no credit. (Fee: \$340)

BECE-2200 Introduction to Youth Ministry—Sp 2 hours

The course will examine the status of contemporary youth ministries, including a survey of various models of ministry. Foundational personal issues for the professional Christian minister will be explored, including a definition of “success” in youth ministries, and the knowledge, skills, heart, and character necessary for one to lead such ministries successfully.

BECE-2400 Interpreting and Teaching the Bible—Fa 6 hours

Principles for interpreting, organizing, and presenting the biblical text, and a survey of learning theory are examined to provide a framework for effective lesson preparation in light of the characteristics and needs of students. *Prerequisite: BEGE-1720 Spiritual Formation.*

BECE-2830 Recreational Leadership—Sp 2 hours

Survey of the recreational aspects of games and activities from a noncompetitive perspective. Small and large group activities are planned such as new games and challenge initiatives to enhance individual and group development and recognize group process and group dynamics. Practical work in planning, implementing, and evaluating recreational programs for children, youth, and adults in school, youth group outings, Bible clubs, and camps will be provided. (odd years)

BECE-3510 Small Group Ministry—Fa 3 hours

Study of the theory and practice of the small group process in ministry. Emphasis will be given to the formulation and maintenance of small groups. Emphasis placed on how evangelism and spiritual maturity can be fostered by the small group environment.

BECE-3520 Counseling and Mentoring Women—Fa 3 hours

Study of the distinctives of biblical counseling specifically applied to counseling women, the mandate and skill of mentoring woman to woman, and biblical responses to life struggles that are specific to women. Crosslisted as PSYCH.

BECE-3530 Contemporary Women’s Ministry—Sp 3 hours

Study of women today who are impacting the Church and edifying the body of Christ through various ministry opportunities. The course also includes a survey of current and potential full-time, part-time and volunteer opportunities for women, concluding with the development of each student’s own “dream ministry.” (Fee: \$10)

BECE-3540 Women in Church History—Fa 3 hours

Study of women in various eras throughout Church history and their impact on the body of Christ.

BECE-3680 Children’s Ministries—Fa, Sp 4 hours

Principles from Scripture are examined to prepare a biblical philosophy for ministry to children in light of developmental characteristics and contemporary sociological factors. Students are equipped to utilize creative, interactive strategies for teaching the Bible and to develop effective age-appropriate ministry programs. Course consists of three weekly class sessions and a two-hour teaching lab. *Prerequisites: BECE-2400 Interpreting and Teaching the Bible; major or minor status or permission of the instructor.*

BECE-3685 3 hours**Children’s Ministries for Non-Majors—Fa, Sp**

Principles from Scripture are examined to prepare a biblical philosophy for ministry to children in light of developmental characteristics and contemporary sociological factors. Students are equipped to utilize creative, interactive strategies for teaching the Bible and to develop effective age-appropriate ministry programs. Course consists of three weekly class sessions but does not include the teaching lab.

BECE-3700 Campus Ministries—Sp 4 hours

Principles from Scripture are examined to prepare a biblical philosophy for ministry to junior high and senior high youth in light of developmental characteristics and contemporary sociological factors. Students are equipped to utilize creative, interactive strategies for teaching the Bible and to develop effective age-appropriate ministry programs. Course consists of three weekly class sessions and a two-hour teaching lab. *Prerequisites: BECE-2400 Interpreting and Teaching the Bible; major or minor status or permission of the instructor.* (Fee: \$20)

BECE-3705 Campus Ministries for Non-Majors—Sp 3 hours

Principles from Scripture are examined to prepare a biblical philosophy for ministry to junior high and senior high youth in light of developmental characteristics and contemporary sociological factors. Students are equipped to utilize creative, interactive strategies for teaching the Bible and to develop effective age-appropriate ministry programs. Course consists of three weekly class sessions but does not include the teaching lab. (Fee: \$20)

BECE-3720 Adult Ministries—Fa 4 hours

Principles from Scripture are examined to prepare a biblical philosophy for ministry to adults in light of developmental characteristics and contemporary sociological factors. Students are equipped to utilize creative, interactive strategies for teaching the Bible and to develop effective age-appropriate ministry programs. Course consists of three weekly class sessions and a two-hour teaching lab. *Prerequisites: BECE-2400 Interpreting and Teaching the Bible; major or minor status or permission of the instructor.*

BECE-3725 Adult Ministries for Non-Majors—Fa, Sp 3 hours

Principles from Scripture are examined to prepare a biblical philosophy for ministry to adults in light of developmental characteristics and contemporary sociological factors. Students are equipped to utilize creative, interactive strategies for teaching the Bible and to develop effective age-appropriate ministry programs. Course consists of three weekly class sessions but does not include the teaching lab.

BECE-4100 Leadership of Christian Educational Ministries—Sp 3 hours

An examination of models of leadership for Christian ministries, emphasizing practical issues such as developing mission and vision statements, creating effective leadership teams, and the strategic planning, implementation, and oversight of ministries. For youth ministry and Christian education majors, this must be the final course taken from the sequence of the required BECE courses. *Prerequisites:* For CE and youth ministries majors: BECE-2400; BECE-3680; BECE-3700; BECE-3720. No prerequisites for non-majors. (Fee: \$40)

BECE-4220 Seminar in Christian Education 2 hours

Trends and problems of the field are analyzed and defined by individual research and group conferences.

BECE-4740 Internship in Christian Education 3–12 hours

A mentored and evaluated ministry experience under the direction of a qualified field mentor. This is an opportunity to utilize and develop knowledge and skills from classes in a ministry context appropriate for student interest and preparation. Repeatable up to 12 hours. Capstone course. *Prerequisites:* 1) Approval of the faculty of the department of biblical and ministry studies. 2) Senior academic status. 3) Completion of the following five courses: BETH-2350 *Theological Foundations of Ministry*; BEST-2400 *Interpreting and Teaching the Bible*; BECE-3680, 3700, or 3720 *Children's Ministries, Campus Ministries, or Adult Ministries*; BEPT-2400 *Personal Evangelism* or BEPT 3410 *Discipleship*; and one course in ministry concentration area. Credit/No Credit.

BECE-4750 Internship in Youth Ministries 3–12 hours

A mentored and evaluated youth experience under the direction of a qualified youth minister. This is an opportunity to utilize and develop knowledge and skills from classes in a youth ministry context appropriate for student's interest and preparation. Capstone course. Repeatable to 12 hours. *Prerequisites:* 1) Approval of the faculty of the department of biblical and ministry studies. 2) Senior academic status. 3) Completion of the following six courses: BETH-2350 *Theological Foundations of Ministry*; BECE-2200 *Introduction to Youth Ministry*; BEST-2400 *Interpreting and Teaching the Bible*; BECE-3680, 3700, or 3720 *Children's Ministries, Campus Ministries, or Adult Ministries*; BEPT-2400 *Personal Evangelism* or BEPT-3410 *Discipleship*; and one course in ministry concentration area. Credit/No Credit.

BECE-4900 Independent Study in Christian Education—Fa, Sp, Su 1–3 hours

Students will investigate a significant topic or Scripture passage of special interest with a view toward integration of knowledge.

BECE-4990 Topics in Christian Education—Fa, Sp 1–3 hours

Investigation of special topics in Bible and theology, that have intrinsic worth and engage student interest. Permission of instructor required for non-majors.

Biblical Studies — Bible Teacher Education (BEDU)**BEDU-3110 Clinical Teaching in Bible**—Fa, Sp 1 hour

Students are assigned to assist a college instructor in classroom teaching, evaluation, and related responsibilities. The student must complete 45 clock hours of clinical involvement.

Biblical Studies — General Education (BEGE)**BEGE-1710 Christian Life and Thought**—Fa, Sp, Su 3 hours

A foundational course designed to introduce the student to a Christian worldview. Attention is first given to the definition, function, formation, and evaluation of worldview. Then Christian responses and applications will be developed from a survey of biblical theology with emphasis upon the teaching about the Creator, creation, redemption, and consummation. (Fee: \$15)

BEGE-1720 Spiritual Formation—Fa, Sp, Su 3 hours

The nature and process of spiritual formation is examined from a biblical perspective with an emphasis upon the practice of spiritual disciplines. The course undergirds students with a theology of the Bible and an introduction to the inductive method of Bible study.

BEGE-2730 Old Testament Literature—Fa, Sp, Su 3 hours

Survey of the entire Old Testament, giving special attention to authorship, historical background, and the theme of each book with attention to literary genre. This study traces the history of the Hebrew nation from its origin to the time of Jesus Christ. *Prerequisites:* BEGE-1710 *Christian Life and Thought*; BEGE-1720 *Spiritual Formation*.

BEGE-2740 New Testament Literature—Fa, Sp, Su 3 hours

Survey of the entire New Testament, including the historical background of the Inter-Testamental period, giving special attention to main events, the authorship and content of each book with attention to literary genre, and the unfolding of God's redemptive purpose through the Lord Jesus Christ. *Prerequisites:* BEGE-1710 *Christian Life and Thought*; BEGE-1720 *Spiritual Formation*.

BEGE-3750 Christian Worldview Development—Fa, Sp, Su 2 hours

A continued development of a Christian worldview, with a particular emphasis on the essence and work of the Triune God and the cosmic and communal dimensions of His plan in history. *Prerequisite:* completion of either BEGE-2730 *Old Testament Literature* or BEGE-2740 *New Testament Literature* and at least concurrent enrollment in the second 2000-level BEGE course. (Fee: \$15)

BEGE-3760 Christian Worldview Integration—Fa, Sp, Su 2 hours

An evaluation of selected contemporary issues in the light of a Christian worldview as informed by the theological content of the Scriptures. *Prerequisite:* BEGE-3750 *Christian Worldview Development*.

Biblical Studies — History (BEHI)**BEHI-2500 Church History**—Fa 3 hours

An introduction to the history of Christianity covering the major people, movements, institutions, and events of the Church from its founding by Jesus Christ to the present. This course examines the unique ways Christianity has shaped and been shaped by its environment, the rich diversity of its expressions through the ages, and the significant purpose it fulfills in society and the world.

Biblical Studies — New Testament (BENT)**BENT-3110 Jesus and the Gospels**—Fa 3 hours

Study of the four Gospels and their central figure, Jesus of Nazareth. Attention is given to the historical background, scholarly methods for studying the Gospels, the trustworthiness of the Gospels, and a survey of Christ's life. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BENT-3120 The Book of Acts—Fa 3 hours

Analysis of the missionary outreach of the apostolic period with special emphasis on transitional theological problems, the journeys of Paul, and the historical setting of the epistles. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (odd years)

BENT-3130 The Prison Epistles—Fa 3 hours

Detailed study of Ephesians, Philippians, Colossians, and Philemon including their historical settings and doctrinal distinctives. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (even years)

BENT-3140 3 hours**The Thessalonian and Pastoral Epistles—Sp**

An exegesis of 1 and 2 Thessalonians, 1 and 2 Timothy, and Titus with special attention given to their background, eschatological features, and presentation of local church administration. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (odd years)

BENT-3150 The General Epistles—Sp 3 hours

Examination of James, 1 and 2 Peter, the three epistles of John, and Jude with consideration placed upon their backgrounds, exposition on apostate teachers, and lessons on practical living. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (odd years)

BENT-3160 The Book of Revelation—Fa 3 hours

Detailed exposition of this book with stress upon its literary structure, its exaltation of Christ, and its outline of future events. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BENT-4110 Romans and Galatians—Sp 3 hours

Exegetical study with stress upon Paul's logical development of doctrinal themes, the relationship of Israel to God's redemptive program, and practical Christian living. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BENT-4120 The Corinthian Epistles—Sp 3 hours

Exposition of 1 and 2 Corinthians with attention given to their historical backgrounds, their teachings, and the integrity of Pauline apostleship. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (even years)

BENT-4130 The Book of Hebrews—Sp 3 hours

Exposition of this book with stress upon the nature of Christ's priesthood, the typology of the Old Testament sacrificial system, and the superiority of Christianity. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (even years)

BENT-4900 1–3 hours**Independent Study in New Testament—Fa, Sp, Su**

Student will investigate a significant topic or Scripture passage of special interest with a view toward integration of knowledge.

BENT-4990 Topics in New Testament 1–3 hours

Investigation of special topics in Bible and theology, that have intrinsic worth and engage student interest. *Permission of instructor required for non-majors.*

Biblical Studies — Old Testament (BEOT)**BEOT-3110 Pentateuch—Fa 3 hours**

Detailed study of the five books of Moses. Attention is given to the historical material, theological problems, and practical and homiletic values of these books. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BEOT-3125 3 hours**Selected Studies in the Historical Books—Sp**

Selected studies in key issues related to the historical books. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BEOT-3140 Psalms—Fa 3 hours

Examination of the book of Psalms with special attention given to the various types of psalms and their application to life. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BEOT-3150 Wisdom Literature—Sp 3 hours

Examination of the books of Job, Proverbs, Ecclesiastes, and Song of Solomon. Special attention is given to their literary qualities and practical applications for today. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BEOT-3165 3 hours**Selected Studies in the Prophetic Books—Sp**

Selected studies in the prophetic books. The ministry of the prophets to their own times is considered as well as their predictions, both fulfilled and unfulfilled. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor.

BEOT-3210 Historical Books I—Fa 3 hours

Study of Joshua, Judges, and Ruth with an emphasis on the premonarchical history of ancient Israel, literary features of the texts, and the theology of the period. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (every third year)

BEOT-3220 Historical Books II—Fa 3 hours

Study of Samuel and Kings with an emphasis on the monarchical history of ancient Israel, literary features of the texts and the theology of the period. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (every third year)

BEOT-3230 Historical Books III—Fa 3 hours

Study of Ezra, Nehemiah, Esther and 1 and 2 Chronicles with an emphasis on the post-exilic history of ancient Israel, literary features of the texts and the theology of the period. *Prerequisite:* BEGE-2730 *Old Testament Literature*; BEGE-2740 *New Testament Literature*; or permission of the instructor. (every third year)

BEOT-3265 Minor Prophets—Sp 3 hours

Study of Hosea, Joel, Amos, Obadiah, Jonah, Micah, Nahum, Habakkuk, Zephaniah, Haggai, Zechariah, and Malachi. This course engages the historical, literary, and theological features of these books with a view to contemporary relevance. While the content of all 12 books are covered, the course concentrates on the methodology of interpreting prophetic literature through focused study of selected books and passages. *Prerequisites:* BEGE-2730 *Old Testament Literature*; or permission of the instructor. (even years)

BEOT-3275 Major Prophets—Sp 3 hours

The major prophets — Isaiah, Jeremiah, and Ezekiel — reveal God and His relationship with His people in complex and beautiful ways. By examining the historical, literary, and theological features of these books, the course builds a biblical theology of God in this important corpus of the Old Testament. While the content of all three of the major prophets are covered, the course concentrates on the methodology of interpreting prophetic literature through focused study of selected passages. *Prerequisites:* BEGE-2730 *Old Testament Literature*; or permission of the instructor. (odd years)

BEOT-4900 1–3 hours**Independent Study in Old Testament—Fa, Sp, Su**

Students will investigate a significant topic or a Scripture passage of special interest with a view toward integration of knowledge.

BEOT-4990 Topics in Old Testament—Fa, Sp 1–3 hours

Investigation of special topics in Bible and theology that have intrinsic worth and engage student interest. *Permission of instructor required for non-majors.*

Biblical Studies — Philosophy and Religion (BEPH)**BEPH-2200 Introduction to Philosophy—Fa, Sp 3 hours**

Survey of the principle issues in Western philosophy, covering such areas as epistemology, metaphysics, aesthetics, and the major systems of philosophy.

BEPH-2240 Logic—Fa 3 hours

Study of the principles of correct and fallacious reasoning involved in traditional logic and modern logic.

BEPH-2250 Ethics—Fa 3 hours

Study and evaluation of the major theories of goodness, obligation, and motive and the development of a consistent Christian ethical system, together with the application of ethical theories to contemporary moral problems.

BEPH-2260 Religion and Culture—Fa, Sp 3 hours

Introduction to religious issues, themes, and alternatives as they emerge in the historical context of Eastern and Western culture.

BEPH-3240 Epistemology—Fa 3 hours

Study of the nature, sources, types, tests, and limits of human knowledge. *Prerequisite: BEPH-2200 Introduction to Philosophy.*

BEPH-3250 Philosophy of Religion—Sp 3 hours

Analysis of the major philosophical problems relating to religion as these have arisen in the modern intellectual environment. *Prerequisite: BEPH-2200 Introduction to Philosophy.*

BEPH-3260 Symbolic Logic—Sp 3 hours

Study of systems of natural deduction (including metatheoretic proofs and methods) in propositional logic, first-order logic, and modal logic with emphasis on assessing arguments in natural language. *Prerequisite: BEPH-2240 Logic; or MATH-2210 Logic and Methods of Proof; or permission of instructor.*

BEPH-3280 Metaphysics—Sp 3 hours

Study of selected topics in metaphysics, including the mind-body problem, substance, qualities and universals, identity, space and time, causation, and freedom and determinism. *Prerequisite: BEPH-2200 Introduction to Philosophy. (odd years)*

BEPH-3310 3 hours**History of Ancient and Medieval Philosophy—Fa**

Survey of men and movements in Greek and Christian philosophy from Thales to Aquinas. Selected, representative writings of the philosophers will be read. *Prerequisite: BEPH-2200 Introduction to Philosophy. (odd years)*

BEPH-3320 History of Modern Philosophy—Sp 3 hours

Study of the principal philosophers from Descartes through Nietzsche. The development of rationalism and empiricism with the Kantian synthesis and its results will be emphasized. *Prerequisite: BEPH-2200 Introduction to Philosophy. (odd years)*

BEPH-3330 19th Century Philosophy—Fa 3 hours

Survey of significant European and American philosophies of the 19th and early 20th centuries from Hegel to the first World War. Special attention will be given to Hegelianism, early existentialism, pragmatism, and analytic philosophy. *Prerequisite: BEPH-2200 Introduction to Philosophy. (even years)*

BEPH-3340 Current Philosophical Developments—Sp 3 hours

Survey of significant European and American philosophies of the 20th century, focusing specifically on developments from the 1960s to the present. (even years)

BEPH-3400 Philosophy of Law and Economics 3 hours

Course will clarify the conceptual structures that underlie both law and economic analysis. Explores the connections between ethics and legal theory and practice and economics. (odd years)

BEPH-4030 Philosophy and Literature—Sp 2 hours

Course will be divided into two sections. The first will focus on philosophy of literature, exploring literary theory, hermeneutics, and literature as a work of art. The second part of the course will examine philosophy in literature, looking at the ways in which philosophical ideas are expressed through the medium of literature. (even years)

BEPH-4250 Philosophy of Science 2 hours

Critique of the concepts, methods, and arguments of the various sciences, as well as an analysis of the theological and philosophical underpinnings of science, which aims to demarcate science from pseudo-science, evaluate contemporary thought in the limits of science, and evaluate the relations between science, human values, religion, and technology. (odd years)

BEPH-4260 Philosophy of Art—Sp 2 hours

Study of the nature of art and the aesthetic experience. Possible topics include the concept of creativity, the nature and value of the work of art, the function of art, the truth in art, the relation of art and society, and the aesthetic attitude and aesthetic values, such as beauty and the philosophy of art. (Fee: \$10) (odd years)

BEPH-4290 Topics in Philosophy—Sp 1–3 hours

Various topics offered as interest demands. For majors in philosophy. Permission of instructor required for non-majors and minors.

BEPH-4900 1–3 hours**Independent Study in Philosophy—Fa, Sp, Su**

The student will investigate a significant topic of philosophy of special interest with a view toward integration of knowledge.

BEPH-4910 Seminar in Philosophy—Fa 2 hours

Senior course in which students will demonstrate their knowledge of philosophy and the integration of philosophy with Scripture and the liberal arts. This will be accomplished through guided research, critical thinking, and demonstration of oral and written skills. Course will be taken during the year immediately prior to graduation. Capstone course. Credit/no credit.

Biblical Studies — Practical Theology (BEPT)**BEPT-2000 Introduction to Mission—Sp 3 hours**

Foundational concepts and concerns of mission today including definitions, mission theology, “calling,” mission ministries, qualifications, preparation, mission and the local church, the missionary family, the MK, short-term missions, mission agencies, the application process, and cultural adjustment.

BEPT-2400 Personal Evangelism—Fa, Sp 3 hours

Study of the philosophy, principles, and methodology of personal evangelism. The course includes developing a personal witnessing methodology, understanding the current issues in evangelism, and learning to answer the difficult questions often asked in witnessing experiences. A one-day evangelistic field trip is required. *Prerequisite: BEGE-1710 Christian Life and Thought. (Fee: \$15)*

BEPT-2420 History of Mission—Fa 3 hours

Survey of the history of the expansion of the church from apostolic times to World War II with attention to differing conceptions of the mission task and the strategies and lessons that may be learned for mission today.

BEPT-2730 Church Business Administration—Sp 3 hours

A study of the principles and procedures of the financial management of the local church organization. (Credit not applicable to meet business elective requirements.) Crosslisted with FIN-2730.

BEPT-3410 Discipleship—Fa, Sp 3 hours

Study of personal discipleship within a biblical framework, utilizing a variety of resources and practical experience. The model developed will be applicable in multiple contexts.

BEPT-3420 Pastoral Ministry–Sp 2 hours

The pastor's life and ministry. Course provides broad overview of pastoral duties such as presiding over weddings, funerals, church services, etc. In addition, such issues as the pastoral call, candidating, ordination, cultivating 21st century leadership, family issues, etc., are also addressed.

BEPT-3430 Pastoral Counseling–Fa 3 hours

Principles and practices of pastoral counseling. Course provides overview of the nature, scope, and basic practices of counseling within a church ministry context. Such issues as crisis counseling, family life issues, depression, abuse issues, etc., are also addressed within a ministry paradigm.

BEPT-3450 Contemporary World Missions–Sp 3 hours

Study of the development, methods, and problems of Christian missions since World War II. (Fee \$50)

BEPT-3470 Cross-Cultural Ministry–Sp 3 hours

Understanding culture, basic methods in researching culture, becoming competent in another culture, cross-culture communication, relevant to a mission ministry, and the practice of ministry contextualization.

BEPT-3480 Women's Communication for Ministry–Sp 3 hours

A course designed to help women refine communication skills that will help them to articulate their beliefs effectively and further develop communication platforms in the areas of giving a testimony, leading a discussion, and expositing Scripture for various age groups. *Prerequisite: BEGE-1720 Spiritual Formation.*

BEPT-3490 The Pastor's Wife 2 hours

The pastor's wife: her responsibilities, problems, and privileges. Practical suggestions from area pastors' wives, individual research, and group discussion will be explored.

BEPT-3500 Homiletics–Fa 3 hours

Introductory course designed to develop the students' philosophies of preaching. Emphasis is placed on the preparation of expository sermons and practice in their delivery. *Prerequisites: COM-1100 Fundamentals of Speech; junior or senior status.*

BEPT-3510 Introduction to Urban Ministry–Fa 3 hours

An introduction to the principles and practices of urban ministry. Focus will be on developing a biblical view of the city as well as understanding the sociological, anthropological, and multi-cultural distinctives of the urban context. Attention will be given to particular urban issues such as ministering to the poor, developing an incarnational lifestyle, and authentic strategies for urban ministry. (Fee: \$75)

BEPT-4300 Missiology and Missiologists–Fa 3 hours

An introduction into the discipline of missiology and a survey of the contributions of key missiologists from the mid-19th century.

BEPT-4510 Advanced Urban Ministry–Sp 3 hours

Continuation of the earlier Urban Ministry course, including global urban issues, particular challenges in world-class cities, sociology of the city, and its implications for mission in the city. *Prerequisite: BEPT-3510 Introduction to Urban Ministry.* (Fee: \$75)

BEPT-4560 Advanced Homiletics–Sp 3 hours

Advanced study of sermon structure development and effective delivery. Designed to give the student practice in outlining, writing, delivering, and evaluating sermons for different types of preaching situations. *Prerequisite: BEPT-3500 Homiletics.*

BEPT-4710 Ministry Internship–Fa, Sp, Su 2–3 hours

A mentored and evaluated ministry experience under the direction of a qualified field mentor. Capstone course for Comprehensive Bible majors. This program is open to students in other majors. *Prerequisites: approval of the faculty of the department of biblical and ministry studies; senior academic status; BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; one theology elective BETH-XXXX; one practical theology elective BEPT-XXXX.*

BEPT-4720 Missionary Internship 3–12 hours

Four to six weeks in a crosscultural context gaining experience in actual missions activity under the supervision of Bible department faculty and a qualified missionary. This program is open to students in various majors. Up to three hours may count toward the preseminary major. Capstone course. *Prerequisites: completion of at least two missions courses; approval of the Bible faculty. Repeatable up to 12 credit hours.*

BEPT-4730 Pastoral Internship 3–12 hours

A mentored and evaluated local church ministry experience under the direction of qualified pastoral staff. This is an opportunity to utilize and develop knowledge and skills from courses in a ministry context appropriate for student's interest and preparation. Capstone course. Repeatable to 12 hours. *Prerequisite: approval of the faculty of the department of biblical and ministry studies, senior academic status, completion of the following courses BEPT-3420 Pastoral Ministry; BEPT-3430 Pastoral Counseling; BEPT-3500 Homiletics; BEPT-4560 Advanced Homiletics.*

BEPT-4900 1–3 hours**Independent Study in Practical Theology–Fa, Sp, Su**

Students will investigate an area of pastoral ministry or missions, the latter including mission boards, methods, and places of service.

BEPT-4990 Topics in Practical Theology–Fa, Sp 1–3 hours

Investigation of special topics in Bible and theology, which have intrinsic worth and engage student interest. Permission of instructor required for non-majors.

Biblical Studies — Special Topics (BEST)**BEST-2910 Theological Research–Fa, Sp 2 hours**

This course is designed to survey the basic process, as well as selected special processes, germane to the field of theological research. *Prerequisite: BEGE-1720 Spiritual Formation.*

BEST-2920 3 hours**Scriptural Interpretations of Gender Issues and Roles–Fa**

A survey of key biblical components that delineate what it means to be male and female in Christ. The course includes a study of various views held within the evangelical community, a survey of women in the Bible, and a discussion of gender within the current cultural milieu. Crosslisted with BETH-2920 *Prerequisite: BEGE-1720 Spiritual Formation.*

BEST-3400 Bible Backgrounds–Sp 3 hours

An introduction to the world of the Bible including the historical context, geographical setting, cultural milieu, and archaeological evidences that help explain the biblical text. (odd years)

BEST-3410 Biblical Archaeology I–Sp 2 hours

An introduction to biblical archaeology and the historical and cultural backgrounds of the Old and New Testaments. (even years)

BEST-3420 Biblical Archaeology II–Su 1 hour

An introduction to the archaeology of the Old and New Testaments and the historical and cultural background of the Bible on a field trip to Europe. It will also introduce the historical and cultural aspects of European Christianity. (Fee: Not to exceed \$3,000) (even years)

BEST-4310 Hermeneutics–Fa 3 hours

A study of the theory and related practice of the roles of author, reader, and text toward the end of authoritative interpretation and contextualization of the Bible.

BEST-4900 1–3 hours**Independent Study in Special Topics–Fa, Sp**

Students will investigate a significant topic or Scripture passage of special interest with a view toward integration of knowledge.

BEST-4910 Seminar in Bible–Fa, Sp 2 hours

Senior course for preseminary and comprehensive Bible majors. Students demonstrate the ability to articulate and defend an appropriate systematic theology. Capstone course.

BEST-4950 Men and Women in Leadership–Fa 3 hours

A complementary perspective of men and women providing leadership for the body of Christ within the current cultural milieu.

BEST-4990 Topics in Special Topics–Fa, Sp 1–3 hours

Investigation of special topics in Bible and theology, which have intrinsic worth and engage student interest. Permission of instructor required for non-majors.

Biblical Studies — Theology (BETH)**BETH-2350 Theological Foundations of Ministry–Fa 3 hours**

An examination of theological issues critical for the formation of a biblical philosophy of ministry, as well as a critical survey of historical developments in Christian educational ministries in light of those theological discussions. *Prerequisite: BEGE-1710 Christian Life and Thought.*

BETH-2920 3 hours**Scriptural Interpretations of Gender Issues and Roles–Fa**

A survey of key biblical components that delineate what it means to be male and female in Christ. The course includes a study of various views held within the evangelical community, a survey of women in the Bible, and a discussion of gender within the current cultural milieu. Crosslisted with BEST-2920 *Prerequisite: BEGE-1720 Spiritual Formation.*

BETH-3330 Christian Evidences and Apologetics–Fa 3 hours

Study of the basis for, and the nature of, evidence for Christianity. Emphasis on biblical revelation and its use in the defense and confirmation of the Gospel. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; or permission of the instructor.*

BETH-3350 Bibliology and Theology Proper–Fa 3 hours

Study of bibliology, the doctrine of the Scriptures. Emphasis on its revelation, inspiration, canonicity, and illumination; and theology proper, the doctrine of the being of God with attention given to His existence, attributes, trinitarian relationships, and decrees. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; or permission of the instructor. (odd years)*

BETH-3360 Angelology and Anthropology–Sp 3 hours

Study of angelology, the doctrine of the unfallen angels, the fallen angels, and Satan; and anthropology, the doctrine of man, with stress on his creation, constitution, fall, and sinful condition. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; BEGE-3750 Christian Worldview Development; or permission of instructor. (odd years)*

BETH-3400 Current Religious Movements–Sp 3 hours

Survey of new religious movements with attention given to their history, beliefs, and practices, as well as to critical assessment and appropriate response. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; or permission of the instructor.*

BETH-3500 Historical Theology–Sp 3 hours

An examination of the development of Christian doctrine from the Apostolic Fathers to the modern era. The course will highlight key thinkers and theological developments in the patristic, medieval, Reformation and modern eras. Attention will be given to the reading and analysis of primary documents. *Prerequisites: BEGE-2730 Old Testament Literature, BEGE-2740 New Testament Literature, and BEHI-2500 Church History.*

BETH-3720 Spiritual Formation II–Fa 3 hours

This course will develop a biblical theology of spiritual formation, explore alternative models of spiritual formation, and engage students in personal and corporate study and practice of spiritual disciplines as informed by influential thinkers through the history of the Church. *Prerequisites: BEGE-1710 Christian Life and Thought; BEGE-1720 Spiritual Formation; BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; major status or permission of instructor.*

BETH-3730 Theology of Worship–Fa 3 hours

This course explores the theology, history, and practice of Christian worship, with particular attention to how worship practices both reflect and shape theological commitments. Various elements of Christian worship will be examined in light of diverse cultural contexts and theological perspectives with the goal of enabling the student to plan appropriately and to lead worship in a particular ministry setting. *Prerequisites: BEGE-1710 Christian Life and Thought; BEGE-1720 Spiritual Formation; BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature.*

BETH-4320 Contemporary Theology–Sp 3 hours

Critical study of traditions, trends, issues, and major thinkers in contemporary theology. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; BEPH-2200 Introduction to Philosophy; or permission of the instructor.*

BETH-4370 Soteriology and Christology–Fa 3 hours

Study of soteriology, the doctrine of salvation, including election, the atonement, and eternal security; and Christology, the doctrine of Christ with emphasis upon His deity, humanity, and redemptive work. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; or permission of the instructor. (even years)*

BETH-4380 Pneumatology and Ecclesiology–Fa 3 hours

Study of pneumatology, the doctrine of the person and work of the Holy Spirit; and ecclesiology, the doctrine of the Church with stress on the universal Church and the local church. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; BEGE-3750 Christian Worldview Development; or permission of instructor. (even years)*

BETH-4390 Eschatology–Sp 3 hours

Study of eschatology, the doctrine of last things with attention given to the rapture of the Church, the tribulation, the millennium, the eternal state, and the distinctives of dispensationalism. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; or permission of the instructor. (even years)*

BETH-4900 1–3 hours**Independent Study in Theology–Fa, Sp, Su**

Students will investigate a significant topic of theology of special interest with a view toward integration of knowledge. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; or permission of the instructor.*

BETH-4990 Topics in Theology–Fa, Sp 1–3 hours

Investigation of special topics in Bible and theology, which have intrinsic worth and engage student interest. Permission of instructor required for non-majors. *Prerequisite: BEGE-2730 Old Testament Literature; BEGE-2740 New Testament Literature; or permission of the instructor.*

Biology (BIO)**BIO-1110 Introduction to Biology–Fa 4 hours**

Structure and function of plant and animal cells with emphasis in central concepts. This is the first biology course for majors, open to others with high school biology and chemistry backgrounds. Three lectures and one 2-hour laboratory per week. (Fee: \$100)

BIO-1120 General Zoology–Sp 4 hours

This course will provide an integrative study of the diversity of organisms that make up the animal kingdom. Morphology, physiology, and ecology of the major phyla will be integrated with principles of population dynamics to study the continuities and discontinuities among the animal taxa. Two fifty-minute lectures and two 2-hour labs per week. *Prerequisite: BIO-1110 Introduction to Biology.* (Fee: \$100)

BIO-2210 Microbiology–Fa 4 hours

A study of the characteristics, culture, and control of bacteria, viruses, and fungi. A major emphasis is placed on microorganisms and disease, with some coverage of industrial and environmental topics. Laboratory techniques are emphasized. Two lectures and two two-hour laboratories per week. *Prerequisite: CHEM-1000 Principles of Chemistry; CHEM-1010 Principles of Biochemistry or equivalent.* (Fee: \$100)

BIO-2250 Cell Biology–Sp 4 hours

Foundational knowledge of cell biology including basic mechanisms of prokaryotic and eukaryotic metabolism, division, and physiology. Three fifty-minute lectures and one three-hour laboratory. *Prerequisite: BIO-1110 Introduction to Biology.* (Fee: \$100)

BIO-2500 General Botany–Fa 4 hours

A survey of the phyla of the plant kingdom and autotrophic prokaryotes and protists. Laboratory experiences will focus upon field botany, plant communities, and opportunities to investigate plant processes. Special emphasis will be upon the growth and development and the anatomy and physiology of flowering plants. Three lectures and one three-hour laboratory per week. *Prerequisites: BIO-1110 Introduction to Biology.* (Fee: \$100)

BIO-2600 General Ecology–Sp 3 hours

A study of the interrelationships among plants, animals, and microbes and with their environment. Basic theory of biotic communities and ecosystems will provide insights about energy flow, nutrient cycling, and responses to natural and human disturbances of terrestrial, aquatic, and wetland systems. Two lectures and one three-hour laboratory per week. *Prerequisites: BIO-2500 General Botany.* (Fee: \$100)

BIO-3300 Genetics–Fa 4 hours

This is an integrative course of the areas of classical and molecular genetics. Focus on the principles of heredity in prokaryotic and eukaryotic organisms, which includes the understanding of transmission genetics on a molecular level. The molecular nature of genes, including gene expression, mutations, and manipulation of DNA will be emphasized. Three lectures and one three-hour laboratory per week. *Prerequisite: BIO-1110 Introduction to Biology; BIO-2250 Cell Biology.* (Fee: \$100)

BIO-3410 Invertebrate Zoology–Fa 3 hours

This course will provide an overview of the diversity of invertebrates. It will take an integrative approach to learning about invertebrate taxonomy, ecology, morphology, and physiology. Field collections of local fauna will be used to learn the principles of invertebrate classification and to study local biological diversity. *Prerequisite: BIO-1120 General Zoology.* (Fee: \$100) (even years)

BIO-3420 Vertebrate Zoology–Sp 3 hours

This course is a study of the diversity among the vertebrate classes with an emphasis on continuity and discontinuity of morphological form and physiological function of vertebrate systems. *Prerequisite: BIO-2250 Cell Biology.* (Fee: \$100)

BIO-3450 Human Structure and Function I–Fa 4 hours

Study of the structure and function of the human body with an emphasis on body systems. Includes human tissues, skeletal, muscular, nervous, and endocrine systems. Two lectures and one three-hour laboratory per week. *Prerequisite: BIO-2250 Cell Biology.* (Fee: \$100)

BIO-3460 Human Structure and Function II–Sp 4 hours

Study of the structure and function of the human body systems, including cardiovascular, respiratory, gastrointestinal, and renal systems. Laboratory focuses on physiological phenomena. Three lectures and one three-hour lab per week. *Prerequisite: BIO-3450 Human Structure and Function I.* (Fee: \$100)

BIO-3510 Plant Physiology–Sp 3 hours

A study of the physiological aspects of vascular plants with emphasis upon plant-soil water relationships, mineral nutrition, photosynthesis, and plant growth and development. Two lectures and one 3-hour laboratory per week. *Prerequisite: BIO-2500 General Botany.* (Fee: \$100) (odd years)

BIO-3520 Plant Taxonomy–Sp 3 hours

A study of the naming and classification of common vascular plants with emphasis upon field identification in the context of plant community and taxonomic family, plant collecting and herbarium techniques, and the importance of plants in global stewardship and missions. Two lectures and one three-hour laboratory per week. Includes a travel study opportunity during spring break. *Prerequisite: BIO-2500 General Botany.* (Fee: \$100) (even years)

BIO-3600 Topics in Environmental Biology–Sp, Su 4 hours

Enrollment in this course signifies that the student has chosen to enroll in two or more Au Sable Institute courses in an upcoming term taught by faculty of various evangelical Christian colleges and universities. Course descriptions of the more than 20 Cedarville-approved Au Sable courses are available in the Au Sable Institute Bulletin available from the department Au Sable representative or at the Au Sable website. Enrollment begins when the student contacts the University Au Sable representative. Appropriate course titles will appear on the student's transcript with letter grades when the studies are completed. More information on Au Sable Institute is available under Travel Studies Opportunities or at ausable.org. *Prerequisite: acceptance to attend Au Sable Institute.*

BIO-3610 Environmental Physiology and Ecology–Sp 4 hours

A study of both physiological ecology and field ecology. The course begins with field and laboratory studies of adaptations to winter at the organismic and cellular levels and includes a travel study experience in the "North Woods." Spring emphasis shifts to field ecology with emphasis on aquatic, forest, and prairie ecosystems. Three lectures and one 3-hour laboratory per week. *Prerequisites: BIO-1120 General Zoology; BIO-2500 General Botany, BIO-2600 General Ecology.* (Fee: \$100)

BIO-3710 Biochemistry–Sp 4 hours

A study of the chemical and physical properties of macromolecules such as proteins, carbohydrates, lipids, and nucleic acids, and the metabolic pathways, enzyme kinetics, and thermodynamics associated with these molecules. Four lectures per week. *Prerequisites: BIO-1110 Introduction to Biology; CHEM-3510 Organic Chemistry I.*

BIO-3800 Biological Research–Fa, Sp 2 hours

Student will undertake an original research project under the direction of a departmental faculty mentor or approved mentor within a summer research program or within an approved academic internship experience geared toward completion of the capstone experience. *Prerequisites: junior status; permission of instructor.* (Fee: \$150)

BIO-3810 Biological Research Internship–Fa 1–2 hours

Student will participate in an 8–10 week summer undergraduate research program of their choosing at an accredited university or medical facility. Prior to participation in the research program, the student must have the program approved by the biology faculty member in charge of the course. In addition, the student will receive a progress report form which will be filled out by the student and signed by the student's research advisor. To receive credit for the course, the student must turn in the progress report along with a copy of their laboratory notebook or research log, submit a 5–10 page research summary, and meet with the faculty member in charge of the course. *Prerequisite: completion of the first two years of the biology core.*

BIO-4210 Advanced Cell Biology–Fa 4 hours

In-depth study of the cell includes the following topics: normal cell physiology and division, differentiation, basic signaling pathways, and programmed cell death. Study of cell pathogenesis, aberrant signaling mechanisms, and other elective topics of current agricultural or biomedical interest may be included. Three lectures and one three-hour laboratory per week. *Prerequisites: BIO-2250 Cell Biology. (Fee \$100)*

BIO-4220 Signal Transduction–Su 3 hours

Study of major cellular signaling pathways in normal function and disease. Emphasis upon current discoveries and analysis of current, peer-reviewed literature in the field. Online course. *Prerequisites: BIO-2250 Cell Biology.*

BIO-4300 Molecular Biology of the Cell–Fa 4 hours

Study of the molecules that make up the living cell, with emphasis on nucleic acid biology and protein biology. Other topics include origin of life, abiogenesis, and a historical analysis of the discovery of DNA and proteins. *Prerequisites: BIO-1110 Introduction to Biology; CHEM-3510 Organic Chemistry. (Fee: \$100)*

BIO-4310 Eukaryotic Gene Regulation–Fa 3 hours

This course covers eukaryotic gene regulation which encompasses the knowledge of both basal and regulated transcriptional machinery, how these proteins are regulated, how they regulate gene expression, and their role in cancer progression. Emphasis is placed on the role of chromatin structure and epigenetics in gene expression. *Prerequisite: BIO-3300 Genetics.*

BIO-4350 Immunology–Fa 3 hours

Study of the human immune system, including descriptions of basic immunological phenomena, biochemistry of antibodies and antigens, the cellular and genetic components of the immune response, and immunopathology. Three lectures per week. *Prerequisite: BIO-1110 Introduction to Biology.*

BIO-4351 Immunology Laboratory–Fa 1 hours

Students will learn immunological techniques commonly used in clinical and research applications. One 3-hour laboratory per week. *Prerequisite: BIO-1110 Introduction to Biology. Corequisite: BIO-4350 Immunology. (Fee: \$100)*

BIO-4410 Developmental Biology–Fa 4 hours

Systematic study of the mechanism of reproduction, gametogenesis, and organogenesis, with an emphasis on human development. Morphological laboratory study of selected vertebrates will reinforce the lecture material. Three lectures and one lab per week. *Prerequisites: Junior status as a biology major or premed chemistry major, or BIO-3450 Human Structure and Function, or GBIO-2015 Human Anatomy and Physiology II and permission of instructor, or GBIO-2020 Human Anatomy, Physiology and Pathophysiology, and permission of instructor. (Fee: \$100)*

BIO-4710 Principles of Bioethics–Fa 3 hours

Christian principles of bioethics, with an emphasis on personhood and the sanctity of human life. Three lectures per week. *Prerequisites: completion of core biology curriculum; junior status.*

BIO-4770 Pathophysiology–Sp 3 hours

Study of the abnormal functions of the human body during disease. Includes case study discussions and research writing. Three lectures per week. *Prerequisite: BIO-3450 Human Structure and Function I, permission of instructor. Corequisite: BIO-3460 Human Structure and Function II.*

BIO-4800 Senior Seminar–Biology–Fa, Sp 1 hour

In this capstone course required of all senior biology majors, students compile data from laboratory, field study, or extensive literature research and give an oral presentation. Approval of the topic must be given by the student's academic advisor. The student must also attend a minimum of 10 seminars during the senior year. *Prerequisites: Senior status; attendance of a minimum of 10 seminars prior to the senior year.*

BIO-4880 Topics in Biology 1–3 hours

Topics of special interest by the biology faculty from the areas of modern biology. *Prerequisites: Junior status; permission of instructor.*

BIO-4900 Independent Study: Biology–Fa, Sp 1–3 hours

Supervised independent study of a particular biological phenomenon. Submission and approval of a research proposal must precede registration. *Prerequisites: major in biology; permission of advisor.*

BIO-4910 Environmental Biology Internship–Fa, Sp 4 hours

An opportunity to participate in an internship experience involving research projects with field biologists, ecologists, environmental health scientists, or environmental educators, depending upon the student's vocational preference. Involves department faculty or faculty in conjunction with local or state agencies or private institutions. Provides practical experience in field biology and ecology techniques related to habitat characterization, monitoring, management, and restoration. *Prerequisites: BIO-1120 General Zoology; BIO-2500 General Botany, BIO-2600 General Ecology; permission of instructor. (Fee: \$25)*

Business Administration (BUS)**BUS-1000 The Business Profession–Fa, Sp 2 hours**

Provides a broad and comprehensive introduction to the field of business and encourages students to discover their calling to ministry in the marketplace. Includes an introduction to the academic requirements of the program and provides opportunity for practical experience in the field of business. (Fee \$25)

BUS-1040 The Business Experience–Fa, Sp 0 hours

Includes topics and experiences designed to prepare the student to transition into the work world upon graduation, as well as encourage significant service opportunities. Designed to be cocurricular in nature and to augment the curricular experience of the Business student. Provides a thematic framework for each year of study in the business program (Fee \$20).

BUS-1410 Topics in Business 1–3 hours

A variety of courses are covered under this heading on an experimental basis. This allows the department to meet the changing needs of the students without formally adding or dropping courses.

BUS-2100 Business Communication–Fa, Sp 3 hours

Instruction for writing business letters, memos, email, and business reports. Oral business presentations, group collaboration, and the communication process in general are also discussed. *Prerequisite: ENG-1400 Composition.*

- BUS-2110 Statistics I**—Fa, Sp **2 hours**
An introduction to statistical methods used in business decision making, including descriptive statistics, probability, probability distributions, estimation, and hypothesis testing. *Prerequisite:* GMTH-1020 College Algebra.
- BUS-2120 Statistics II**—Fa, Sp **2 hours**
An extension of Statistics I to include tests of hypothesis, analysis of variance, chi-square, simple and multiple regression models. *Prerequisite:* BUS-2110 Statistics I.
- BUS-2150 Statistics for Business**—Fa, Sp **3 hours**
An introduction to statistical methods used in business decision making including descriptive statistics, probability, probability distributions, interval estimation, hypothesis tests involving variances, analysis of variance, ch-square tests, F-tests, simple and multiple regression models, model building, and time series. *Prerequisites:* GMTH-1020 College Algebra.
- BUS-2180 Business Law I**—Fa, Sp **3 hours**
Examines the legal environment in which business operates. The course begins by surveying various sources and law and related ethical principles, and the structure and function of the judicial system. The remainder of the course addresses substantive areas of law, typically including torts, contracts, warranty and consumer protection, agency and employment, business entities, antitrust, intellectual property, and environmental law.
- BUS-3150 Operations Analysis**—Fa, Sp **3 hours**
Introduces mathematical methods of decision analysis. Topics include probability, forecasting, decision under uncertainty, decision trees, inventory models, linear programming, and networks. *Prerequisites:* BUS-2150 Statistics for Business.
- BUS-3180 Business Law II**—Sp **3 hours**
Continues the study of the legal environment in which business operates, with particular focus on topics covered on the CPA exam. Typical course content includes sales, negotiable instruments, secured transactions, bankruptcy, partnerships, securities regulation, real and personal property, wills and trusts, and insurance. *Prerequisite:* BUS-2180 Business Law I.
- BUS-3280 Integrated Business Core Practicum**—Fa **3 hours**
In this course, students will apply concepts from the corequisite courses in which they are enrolled to their own start-up business ventures and to community service projects. Students in the class will form a 30- to 35-person company. Each company will develop a plan of organization to form and operate a business for the semester, as well as an organizational and operating plan to complete a community service project. *Prerequisites:* ITM-1500 Information Technology for Business; ITM-1510 Software Tools for Business; ACCT-2110 Principles of Accounting I; ACCT-2120 Principles of Accounting II; BUS-2150 Statistics for Business; BUS-2180 Business Law I; ECON-2330 Microeconomics; ECON-2340 Macroeconomics. *Corequisites:* MRKT-3600 Principles of Marketing; MGMT-3500 Principles of Organization and Management; FIN-3710 Principles of Finance (blocked courses).
- BUS-3400 Independent Study in Business Administration**—Fa, Sp, Su **1–3 hours**
Research in problems of accounting, management information systems, general business, economics, finance, management, or marketing.
- BUS-3410 Topics in Business**—Fa, Sp, Su **1–3 hours**
A variety of courses are covered under this heading on an experimental basis. This allows the department to meet the changing needs of the students without formally adding or dropping courses.
- BUS-3450 Business Internship** **3–12 hours**
A work-study program designed for junior and senior business administration majors to receive a variety of job-related experiences in a business environment. The program is arranged and administered by the department.
- BUS-3910 International Business**—Fa, Sp **3 hours**
To give a global perspective of the business environment, international business terms are defined and the interactions of the various actors, firms, institutions, countries, and groups of countries are developed. An environmental approach including both cultural and financial perspectives develops a broad view of the world economy. (Fee: \$25)
- BUS-4420 Business Ethics and Social Responsibility**—Fa, Sp **2 hours**
Ethics asks questions about what goals one should pursue and what actions are appropriate in attempts to achieve these goals. The course examines alternative frameworks for analyzing difficult situations. Social responsibility refers to business decision making linked to ethical values, compliance with legal requirements, and respect for people, communities, and the environment. Ultimately, the course will deal with how our biblical worldview defines and drives the choices we face in the business world. Open only to seniors in business administration. Must be taken at Cedarville University; transfer or transient credit for this course will generally not be accepted.

C

Coaching (CCHG)

- CCHG-3670 Fundamentals of Coaching**—Fa **3 hours**
Overview of the philosophy, psychology, organization, and general responsibilities of an athletic coach. Knowledge of motor learning and development and an overview of the organizational fundamentals of coaching for all the major sports. (even years)
- CCHG-3680 Scientific Basis of Coaching**—Fa **2 hours**
Practical study of physiological and kinesiological principles of training and their application to various sports. (odd years)
- CCHG-3700 through CCHG-3760 Coaching** **2 hours each**
Organization, skills, techniques, and strategies of the following sports:
- CCHG-3700 Coaching Volleyball**—Fa (even years) **2 hours**
- CCHG-3720 Coaching Basketball**—Fa (odd years) **2 hours**
- CCHG-3730 Coaching Track and Field and Cross Country**—Sp (odd years) **2 hours**
- CCHG-3740 Coaching Softball and Baseball**—Fa (even years) **2 hours**
- CCHG-3760 Coaching Soccer**—Sp (odd years) **2 hours**
- CCHG-4850 Independent Study in Coaching**—Fa, Sp **1–3 hours**
Independent study in the area of coaching by students pursuing the coaching minor. *Departmental approval is required.*
- CCHG-4950 Internship in Coaching**—Fa, Sp **3 hours**
Field experience at the University or a nearby high school involving actual coaching experience for a minimum of 100 hours. *Departmental approval is required. Credit/no credit. Prerequisites:* CCHG-3670 Fundamentals of Coaching; CCHG-37XX Coaching; junior year status or permission of the instructor.

Conducting (CDMU)

- CDMU-2600 Introduction to Conducting**—Fa **2 hours**
The basic technique of the conductor's art: score reading, conducting patterns, interpreting, cueing, rehearsal procedures, and stylistic conceptualization. *Prerequisite:* THMU-1210 Music Theory I or permission of instructor. (Fee: \$20)

CDMU-3610 Choral Conducting–Sp 2 hours

Concentrated focus upon the choral conductor's stylistic gestures and verbal communication as they impact ensemble intonation, diction, tone, blend, and balance. This course emphasizes diagnostic listening, problem solving, observation of professional conductors, the conducting of larger choral/instrumental works, and student rehearsal of various music department choral ensembles. *Prerequisite: CDMU-2600 Introduction to Conducting or permission of instructor.* (Fee: \$20)

CDMU-3620 Instrumental Conducting–Sp 2 hours

Designed to take the student beyond basic conducting techniques and present the special characteristics of instrumental conducting. The student will develop skills in rehearsal technique and score analysis while learning to conceptualize musical fundamentals such as tone, intonation, balance, rhythmic ensemble, and interpretation. *Prerequisite: CDMU-2600 Introduction to Conducting or permission of instructor.*

CDMU-3630 Choral Methods–Fa 2 hours

Further development of conducting skills with special emphasis placed upon the organization of a comprehensive school choral curriculum. Rehearsal strategies and vocal techniques are discussed and practiced as they apply to choirs of all levels and voicings. *Prerequisite: CDMU-2600 Introduction to Conducting or permission of the instructor.* (Fee: \$20)

CDMU-4990 Independent Study in Conducting 1–3 hours

Independent and intensive study in a particular area of conducting for individual students who demonstrate special interests and ability. *Prerequisite: CDMU-3620 Instrumental Conducting; CDMU-3630 Choral Methods; or equivalent.*

Chemistry: General Education (CHEM)

Except where noted, general education courses are designed to meet the general education requirements for graduation. These courses will not count toward graduation requirements for majors found in the department of science and mathematics unless they are specifically listed in the curriculum requirements for a major. A student majoring in science or mathematics may take these courses only as electives. However, any course listed for a science or mathematics major or minor may also count toward fulfilling general education requirements.

CHEM-1000 Principles of Chemistry–Fa 5 hours

For non-science majors, an introduction to atomic structure, ionic and covalent bonding, stoichiometry, kinetic theory, solutions and equilibria, nuclear chemistry, nomenclature, structure, and reactions of organic compounds. Four lectures and one two-hour laboratory per week. (Fee: \$100)

CHEM-1010 Principles of Biochemistry–Sp 5 hours

For non-science majors, an introduction to organic compounds not covered in CHEM-1000 and a study of the nomenclature and metabolism of proteins, carbohydrates, lipids, and nucleic acids. Four lectures and one two-hour laboratory per week. *Prerequisite: CHEM-1000 Principles of Chemistry.* (Fee: \$100)

CHEM-1050 Chemistry for Engineers–Fa 3.5 hours

Fundamental concepts of chemistry are developed with applications of chemistry to engineering disciplines. Students learn measurement, number handling, the Periodic Table, descriptive properties of atoms, elements, molecules, and ions, chemical reactions, stoichiometry, chemical bonding, equilibrium, thermodynamics, gas laws, and the nature of solids and liquids. Three lectures per week, and one bi-weekly two-hour laboratory. (Fee: \$75)

Chemistry: Major (CHEM)**CHEM-1110 General Chemistry I–Fa 4 hours**

Fundamental concepts of physical, inorganic, and analytical chemistry are developed. Students are introduced to the physical chemistry concepts of atomic theory, chemical bonding, molecular structure, intermolecular forces, states of matter, and thermodynamics. Inorganic concepts of reaction types and stoichiometry are included. Lab stresses analytical techniques including quantitation, separation, titration, and statistical analysis of data. Many of the lab reports require use of spreadsheets or other computer software. Three lectures and one three-hour lab per week. *Prerequisite: satisfactory performance on the chemistry placement exam.* (Fee: \$100)

CHEM-1120 General Chemistry II–Sp 4 hours

A continuation of General Chemistry I, including the physical chemistry concepts of kinetics and equilibrium. Inorganic topics include acids and bases, oxidation-reduction reactions, nuclear chemistry, and the descriptive chemistry of the main group and transition metal elements. Lab exercises stress quantitative analytical techniques and application of visible light spectroscopy. Lab reports require use of spreadsheets or other computer software and statistical analysis of data. Three lectures and one three-hour lab per week. *Prerequisite: CHEM-1110 General Chemistry I.* (Fee: \$100)

CHEM-2210 Analytical Chemistry I–Fa 3 hours

A study of the fundamental concepts and skills of analytical chemistry including measurement, statistical treatment of data, equilibrium constant calculations, acid-base equilibria, electrochemistry, and volumetric analysis. The laboratory sessions focus on volumetric methods such as precipitation titrations, acid-base titrations, complexation titrations, and redox titrations in which accurate measurement of volume is essential. Two lectures and one three-hour laboratory per week. *Prerequisite: CHEM-1120 General Chemistry II.* (Fee: \$100)

CHEM-2220 Analytical Chemistry II–Sp 3 hours

Detailed study of analytical instrumentation, including electro-analytical methods such as potentiometry, coulometry, voltammetry, spectrochemical analysis, and analytical separations, including various types of chromatography. Two lectures and one three-hour laboratory per week. *Prerequisite: CHEM-2210 Analytical Chemistry I.* (Fee: \$100)

CHEM-2800 Introduction to Research in Chemistry–Fa 1 hour

An introduction to the purpose and methodology of research in chemistry, including keeping a laboratory notebook, retrieving information, using the chemical literature, and writing research reports. One lecture per week. *Prerequisite: CHEM-1120 General Chemistry II.* (Fee: \$100)

CHEM-3210 Environmental Chemistry–Sp 4 hours

A detailed study of energy resources, atmospheric chemistry, and surface water chemistry, with an emphasis on the application of principles from previous courses to current environmental issues. Three lectures and one three-hour lab per week. *Prerequisite: CHEM-2220 Analytical Chemistry II and CHEM-3510 Organic Chemistry II, or permission of the instructor.* (Fee: \$100) (odd years)

CHEM-3410 Inorganic Chemistry–Fa 3 hours

Detailed study of inorganic compounds, including atomic structure, the structure of solids, molecular structure and bonding, molecular symmetry and its applications, acids and bases, and oxidation and reduction. Lab stresses synthesis and characterization using instrumental methods. Two lectures and one three-hour lab per week. *Prerequisite: CHEM-2210 Analytical Chemistry I.* (Fee: \$100)

CHEM-3510 Organic Chemistry I–Fa 4 hours

Study of the structure, nomenclature, stereochemistry, physical properties, spectra, syntheses, reactions, and reaction mechanisms of alkanes, alkenes, alkynes, alkyl halides, alcohols, and ethers. Biological and medical applications are included. Lab includes basic techniques, procedures, and instruments, as well as syntheses and reactions. Three fifty-minute lectures and one three-hour lab per week. *Prerequisite:* CHEM-1120 *General Chemistry II*. (Fee: \$100)

CHEM-3520 Organic Chemistry II–Sp 4 hours

Continuation of Organic Chemistry I, including the detailed study of conjugated aliphatics, aromatics, aldehydes, ketones, carboxylic acids, anhydrides, esters, acyl halides, amines, phenols, and aryl halides. Lab includes systematic qualitative organic analyses using modern instrumental methods (H-NMR, C-NMR, FTIR, GC/MS). Three fifty-minute lectures and one three-hour lab per week. *Prerequisite:* CHEM-3510 *Organic Chemistry I*. (Fee: \$100)

CHEM-3710 Biochemistry–Sp 4 Hours

A study of the chemical and physical properties of macromolecules such as proteins, carbohydrates, lipids, and nucleic acids, and the metabolic pathways, enzyme kinetics, and thermodynamics associated with these molecules. Four lectures per week. *Prerequisites:* BIO-1110 *Introduction to Biology*; CHEM-3510 *Organic Chemistry I*.

CHEM-3800 Research Methods in Chemistry–Fa,Sp,Su 1 hour

An introduction to the chemical literature and laboratory skills associated with an upcoming research project. This course may be repeated up to a total of three times. *Prerequisites:* CHEM-2800 *Introduction to Research in Chemistry*; CHEM-2210 *Analytical Chemistry I* or CHEM-3510 *Organic Chemistry I*; *permission of instructor*. (Fee: \$150)

CHEM-4210 Advanced Chemistry Lab–Sp 2 hours

This laboratory course will integrate organic and inorganic synthetic methodology with the application of various characterization techniques. Analytical, physical, and instrumental analysis techniques will be utilized. One three-hour lab per week. *Prerequisite:* CHEM-4320 *Quantum Mechanics and Spectroscopy*. (Fee: \$100)

CHEM-4310 Thermodynamics and Kinetics–Fa 4 hours

A study of the laws of thermodynamics, chemical equilibrium, solutions, and kinetics. Three lectures and one three-hour lab per week. *Prerequisites:* CHEM-2210 *Analytical Chemistry I*; PHYS-2120 *General Physics II*. (Fee: \$100)

CHEM-4320 4 hours

Quantum Mechanics and Spectroscopy–Sp
A study of the states of matter, surface phenomena, quantum mechanics, bonding, and spectroscopy. Three lectures and one three-hour lab per week. *Prerequisites:* CHEM-2210 *Analytical Chemistry I*; PHYS-2120 *General Physics I*. (Fee: \$100)

CHEM-4410 Advanced Inorganic Chemistry–Sp 3 hours

Study of d-metal complexes, the systematic chemistry of the elements, and advanced topics in inorganic chemistry. Topics may include main group organometallics, d- and f-block elements, catalysis, and bioinorganic chemistry. Three lectures per week. *Prerequisite:* CHEM-3410 *Inorganic Chemistry*.

CHEM-4800 Senior Seminar–Chemistry–Sp 1 hour

Capstone course for majors in chemistry. Students present a paper from library or laboratory research. Before enrollment, each student must obtain approval of the topic from their advisor and the seminar instructor and set the date of presentation. The students must also attend a minimum of 10 seminars during the senior year. Guest lecturers or faculty members may present papers at the invitation of the instructor. *Prerequisites:* *senior status; attendance of a minimum of 10 seminars during the sophomore and junior years.*

CHEM-4830 Research in Chemistry–Fa, Sp 1–3 hours

Investigation of a chemical research project and its culmination in a scholarly research report. Submission and approval of a research proposal must precede registration. May be repeated once for credit. *Prerequisites:* CHEM-2800 *Introduction to Research in Chemistry*; CHEM-3800 *Research Methods in Chemistry*; *permission of instructor*. (Fee: \$150)

CHEM-4880 Topics in Chemistry 1–3 hours

Topics of special interest are selected by the chemistry faculty from the areas of modern chemistry. *Prerequisites:* CHEM-2210 *Analytical Chemistry I*; *junior status; permission of instructor*.

CHEM-4900 Independent Study in Chemistry 1–3 hours

Supervised independent study of some chemical phenomena. Submission and approval of a research proposal must precede registration. *Prerequisites:* CHEM-2210 *Analytical Chemistry I*; CHEM-3510 *Organic Chemistry I*; CHEM-4310 *Thermodynamics and Kinetics*.

CHEM-4910 Chemistry Internship–Fa, Sp, Su 1–3 hours

Students will gain experience in the chemistry profession in a departmentally approved work environment. A technical report detailing the skills and techniques utilized and a supervisor's evaluation will be the basis for successful completion. *Prerequisite:* CHEM-2220 *Analytical Chemistry II* or CHEM-3520 *Organic Chemistry II*.

Church Music (CHMU)**CHMU-2060 Music and the Arts in Worship–Fa 3 hours**

An introduction to and overview of the philosophy and history of church music ministry in the evangelical tradition, including the biblical foundation of worship and music, the philosophical foundations for various worship approaches, the application of biblical principles to past and present traditions, and biblical, cultural, and practical principles for worship and praise ministries.

CHMU-2100 Church Music Seminar–Fa, Sp 0 hours

A once-per-semester seminar designed to expose students to various aspects of church music ministry. The seminar may take the form of a lecture or masterclass. Crosslisted with WSHP-2100 *Worship Forum*. *Prerequisite:* *enrollment as a church music major or minor*.

CHMU-2200 Field Experience–Fa, Sp 1 hour

Initial field experience in a local church. Students are responsible for finding a place of ministry involvement to begin developing music ministry skills. Supervision will be provided by the church's pastor or minister of music. *Prerequisite:* *enrollment as a church music major or minor*.

CHMU-2600 Music of the Church–Fa 3 hours

An in-depth review of the past, present, and future of music in the church and its use in worship. The course provides tools that students can use to evaluate the quality and usefulness of various musical styles within the context of different worship traditions. (odd years)

CHMU-3630 Administering Church Music I–Sp 3 hours

Training in the organization, administration, planning, and presentation of vocal music in worship. Included in the course is a study of the administrative, organizational, and pedagogical methods for teaching and training children, youth, and adults, along with an extensive examination of music literature and curricula appropriate to different age groups. (even years)

CHMU-3640 Administering Church Music II–Sp 3 hours

Training in the organization, administration, planning, and presentation of instrumental music in worship. Included in the course is a study of the development of small wind and brass ensembles, large ensembles, repertoire and the function of ensembles in worship and Christian education. (odd years)

CHMU-4900 Church Music Internship 9 hours

Intensive field experience in a local church. Place of service is determined by student interest, recommendation of supervising faculty, availability of local church, and supervising minister of music. Students must apply for internships and receive endorsement from the advisor and the chair of the department of music and worship one academic semester before period of service desired and prior to registering. Students should see the director of the church music area for complete internship requirements.

CHMU-4990 Independent Study–Church Music 1–3 hours

Independent and intensive study in a particular area of church music for individual students who demonstrate special interests and ability.

Chinese (CHN)**CHN-1100 Elementary Chinese I–Fa, Sp 4 hours**

This course will teach students elementary levels of Chinese language proficiency in Mandarin or Putonghua. Students will develop skills in listening, speaking, reading, and writing in Chinese.

CHN-1200 Elementary Chinese II–Fa, Sp 4 hours

This course will teach students elementary levels of Chinese language proficiency in Mandarin or Putonghua. Students will develop skills in listening, speaking, reading, and writing in Chinese. *Prerequisite: CHN-1100 Elementary Chinese I.*

Music Class Studies (CLMU)**CLMU-1170 Diction for Singers I–Fa 2 hours**

Students will master the rules of pronouncing Italian and Latin language song texts using the International Phonetic Alphabet. Classroom activities will include listening to, reading, and singing Italian and Latin language song texts.

CLMU-1180 Diction for Singers II–Sp 2 hours

Students will master the rules of pronouncing German and French language song texts using the International Phonetic Alphabet. Classroom activities will include listening to, reading, and singing German and French language song texts.

CLMU-1810 Piano Class I–Fa 2 hours

Group instruction in piano fundamentals. Required for music majors who are unable to pass the piano proficiency. Open to other individuals with permission of the instructor. (Fee: \$30)

CLMU-1820 Piano Class II–Sp 2 hours

Continued group instruction in piano fundamentals and repertoire. *Prerequisite: CLMU-1810 Piano Class I.* (Fee: \$30)

CLMU-1860 Voice Class–Fa 1 hour

Group instruction in basic vocal technique and repertoire. Enrollment open to any student not majoring in voice. Repeatable. (odd years)

CLMU-2110 Song Literature–Sp 2 hours

Survey of literature for the solo voice from the onset of Thoroughbass to the 20th century. Analysis of scores will be done through recordings and live performances. (even years)

CLMU-2120 Oratorio Literature–Sp 2 hours

A chronological study of the world of oratorio beginning with the *Passions* of Johann Sebastian Bach continuing through Andrew Lloyd-Webber's *Joseph and the Amazing Technicolor Dreamcoat* and on to the staged oratorios of today. Class time is heavily devoted to aural and score analysis, with the occasional solos from major oratorio works. (odd years)

CLMU-2130 Opera Literature–Fa 2 hours

Designed to acquaint the student with the world of opera literature from the earliest opera *Euridice* written in 1600 to the present 21st century operas. Representative works will be discussed from the Baroque, Seria, Buffa, Bel Canto, Romantic, Verismo, English, and Contemporary American styles. (odd years)

CLMU-2200 Music Literature: Special Topics 1–2 hours

A survey of the history and literature for the specified instrument.

CLMU-2210 Brass Literature–Fa 1 hour

A survey of brass literature covering all historical periods but emphasizing the chamber music genre. (even years)

CLMU-2220 Percussion Literature–Sp 1 hour

A survey of literature for percussion with special emphasis on the 20th century. Total percussion will be considered. (even years)

CLMU-2230 String Literature–Sp 1 hour

A survey of string literature covering all historical periods but emphasizing the chamber music genre. (even years)

CLMU-2240 Woodwind Literature–Fa 1 hour

The study of the history and literature of the woodwind instruments (flute, oboe, clarinet, bassoon). (odd years)

CLMU-2300 Keyboard Literature–Sp 2 hours

A survey of music for the piano and its precursors, covering the period from 1600 to the present, with a focus on the works which have come to form the core of the repertoire. (odd years)

CLMU-2310 Collaborative Piano–Fa, Sp 1 hour

Supervised piano accompanying experience. The student is assigned to work with one vocalist or instrumentalist for the semester and will prepare music for studio lessons as well as public performances.

CLMU-2750 Performance Seminar–Fa, Sp 0 hours

A once-per-semester seminar, that may take the form of a lecture, masterclass, or recital.

CLMU-2760 Performance Portfolio–Fa, Sp 0 hours

The student will assemble and present materials, that demonstrate performance achievement and professional awareness. The portfolio may include documentation of performances, masterclass, and repertoire.

CLMU-2800 Introduction to Music Composition–Fa 2 hours

Designed to introduce the student to the foundational concepts of musical composition. Students will gain facility with the tools of composition and will begin composing in various styles.

CLMU-2850 Composition Seminar–Fa, Sp 0 hours

A once-per-semester seminar designed to expose students to aspects of the compositional art that are not part of general course material. The seminar may take the form of a lecture, masterclass, or recital.

CLMU-2860 Composition Portfolio–Fa 0 hours

Designed as an opportunity for students to receive guidance and feedback on preparing, assembling, and presenting a composition portfolio. The portfolio may include documentation of performances, masterclasses, and completed compositions.

CLMU-3110 Choral Repertoire–Fa 2 hours

This course exposes the student to exemplary repertoire for choirs of all levels and voicings. Most class sessions are devoted to sight-reading and discussing a large number of choral pieces as well as evaluative listening to recordings. Open to all music majors, minors, and to all CU ensemble members. For music majors, it is recommended that this course be taken concurrently with CDMU-3630 Choral Methods.

CLMU-3410 Traditional Irish Music–Fa 2 hours

This course introduces students to the practice of traditional Irish music through study of primary tune forms, experience of the social context of Irish music-making, and acquaintance with leading performers within the tradition. The class culminates in an Irish music festival held at a local coffee shop. Crosslisted with HLMU-3410 Traditional Irish Music. *Prerequisite: permission of instructor.* (Fee: \$30)

College Studies (COLL)**COLL-0900 Foundations—Fa, Sp 1 hour**

Foundations is designed to orient students to the Cedarville University learning community, explore academic and life goals, and develop strengths to enhance academic success. The one-credit hour may not be used toward the hours needed for graduation. (Fee: \$150)

COLL-1010 MAP 0 hours

MAP (academic probation course) — a unique avenue in which to cultivate scholarship and discipline from a holistic approach for students who are struggling academically. The course is designed to help students in the context of relationship and accountability, to enable students to learn within the dynamics of their lives, to bring concrete strategies to the learning process and to develop skills that will translate into other realms of living. (Fee: \$200)

Communication Studies (COM)**COM-1100 Fundamentals of Speech—Fa, Sp 3 hours**

Usually a prerequisite for other courses in speech, the fundamental course offers theory and practice in basic speech skills for extemporaneous speaking and the use of voice and delivery in oral interpretation of prose and poetry. Students gain extensive training in public speaking as an art.

COM-1150 Communication Seminar—Fa, Sp 1 hour

A foundational seminar to provide students with a background in the discipline of communication and an orientation to the professional standards of the discipline.

COM-1120 Honors Speech—Fa 3 hours

Exposes students to and prepares them for competition in the three general areas of intercollegiate forensic competition: oral interpretation (prose, poetry, dramatic-duo), public speaking (persuasion, informative, communication analysis), and limited preparation events (impromptu and extemporaneous speaking).

Prerequisites: Audition; permission of instructor.

COM-1230 Voice for the Performer—Fa 3 hours

See course description for THTR-1230 Voice for the Performer.

COM-2000 Persuasive Theory—Fa 3 hours

Methods of applying contemporary communication theories on attitudes, involvement, and change combined with classical positions on the principles and methods of persuasive communications. Attention is given to the study, analysis, and delivery of persuasive speeches in a free society along with background in the rhetorical criticism of logical, emotional, and ethical proofs.

COM-2050 Communication Theory—Fa, Sp 3 hours

Introduction and critical assessment of communication theories that underlie interpersonal, group, organization, public, mass media, and cultural studies.

COM-2140 Intercultural Communication—Fa, Sp 3 hours

Provides the foundations of the way communication functions in intercultural settings with a focus on the way culture affects communication. Students learn to identify cultural differences, understand adaptation processes and learn communication effectiveness in cross-cultural contexts.

COM-2200 2 hours**Communication in Applied Contexts—Fa, Sp**

Provides students with an opportunity to develop their speaking skills beyond Fundamentals of Speech, emphasizing the use of technology, professional use of public address, and preparation for upper-level applied and speaking courses. *Prerequisite: COM-1100 Fundamentals of Speech or COM-1120 Honors Speech.*

COM-2220 Quantitative Research—Fa 3 hours

Students select samples, write surveys, conduct interviews, and administer experiments to discover how communication works in both personal and professional settings. Learning formal methods of inquiry encourages critical thinking, problem solving, good writing, and personal effectiveness. Quantitative research trains students to seek explanations, find answers, and test solutions.

Prerequisite: COM-2050 Communication Theory.

COM-2225 Qualitative Research—Sp 3 hours

Students conduct interviews, observe interactions, and analyze documents and discourse to understand the cultural and organizational contexts in which they are a part. Learning to know people, events, and organizations through interacting with them requires commitment, rigor, transparency, and coherence. Qualitative research produces knowledge that promotes effective communication with unique people in particular situations.

Investigative techniques are useful to those anticipating careers in counseling, consulting, administering, negotiating, marketing, and ministry.

COM-2230 Group Discussion—Sp 2 hours

Group interaction and principles of directing effective groups are studied to develop individual understanding of group processes. Emphasis on the different aims of discussion situations.

COM-2300 Voices of Diversity—Fa, Sp 3 hours

Examination and critical analysis of the significant contributions and issues related to women, people of color, cultural minority groups, and the differently abled in the development of American cultural history. Cultural, social, and artistic contributions are examined and discussed. Field trips and guest performers/speakers will be incorporated.

COM-2320 Theories of Mass Media—Fa, Sp 3 hours

Contemporary mass media is surveyed with attention to the nature, role, structure, influence, operation, and problems of newspapers, magazines, radio, and television-journalistic activities. The course also examines issues involving new communication technologies such as the web, personal digital assistants, and digital broadcasting.

COM-2330 3 hours**Writing for Communication Professions—Fa**

This course covers the form and style of writing for internal and external communications, including use of social media and persuasive writing. Course work includes writing executive summaries, memos, proposals, reports, grants, press releases, and opeds as part of a semester-long project. Students will also learn to manage communication in email, Twitter, and Facebook.

COM-2410 Fundamentals of Oral Interpretation—Fa 3 hours

The study of literature through the medium of oral performance involves development in analysis and performance skills. Interpretation theories and techniques that deal with poetry, prose, and dramatic literature are presented.

COM-2440 Advanced Forensics—Fa, Sp 1 hour

Advanced training for intercollegiate forensic competition. Focus on literary and rhetorical criticism, extemporaneous speaking, and the writing of original oratory. Repeatable up to six hours.

COM-2510 Media History—Sp 3 hours

This course offers the historical foundations of mass communication from colonial America to the present. Focuses on the growth of news and entertainment media within a social, political, and economic framework of each era of development. Particular attention is given to the interaction of minority and mainstream media.

COM-2520 Virtual Communication—Fa 3 hours

This course will teach students how to be successful biblical and professional virtual communicators through hands-on practice of successful online communication principles and techniques.

COM-2820 Political Communication–Sp 3 hours

A survey of the theory and practice surrounding the relationship between media and politics. Issues such as the role of media in promoting democracy; media effect theories, political knowledge, and the public's response to news; and the role of public opinion in an open society will be explored.

COM-3100 Advanced Public Speaking–Sp 3 hours

Emphasizes the creative, logical, and audience-centered thinking needed for excellent public address. Students exhibit logical communication skills through writing and speaking assignments. *Prerequisite: COM-2200 Communication in Applied Contexts.*

COM-3120 Argumentation–Sp 3 hours

The study of principles and practices of critical thinking and argumentation. Course includes an overview of debate theory as a vehicle for argumentation as well as the theory involved in logical preparation and refutation of a position.

COM-3150 Gender, Politics, and Communication–Fa 3 hours

Using communication theory and biblical application, this course studies the patterns and the effects of communication upon male and female genders identifying the political struggles that are a part of gender relationships and communication. The women's movement, contemporary masculinity studies, and the Christian church's response to gender issues are surveyed.

COM-3230 Organizational Communication–Sp 3 hours

The study using communication for organizational structure. The course focuses on major organizational theories, topics, and their communicative implications. The role of communication during conflict management, negotiation, crisis management, and small group process in the organizational context. (Fee: \$10)

COM-3240 Interpersonal Communication–Sp 2 hours

Centers on the nature and function of interpersonal communication as it operates within casual encounters, families, organizations, and institutions. Implications for personal, social, and professional growth will be considered.

COM-3250 Interviewing–Fa, Sp 3 hours

Focuses on the study of fundamental interviewing principles. Instruction and training are offered across a variety of interviewing situations, including informational, employment, and persuasive interviews.

COM-3260 Organizational Negotiation–Fa 3 hours

Focus on communication and the negotiation process in the organizational context, coverage of negotiation theories, elements of the negotiation process, and negotiation formats (e.g., salary negotiations, budget negotiations, collective bargaining, etc.).

COM-3330 Organizational Training–Fa 3 hours

Focuses on trainer skills essential for training the adult employee in an organizational setting. Techniques and learning resources are presented to aid the trainer in assessing training needs. *Prerequisite: COM-3230 Organizational Communication or permission of instructor.*

COM-3350 Event Planning–Sp 3 hours

This course introduces students to event planning processes and techniques. Emphasis is on creating, organizing, planning, processing, marketing, implementing, and evaluating a wide variety of events. Focus includes information and resources applicable to community, professional, private, nonprofit and for-profit events.

COM-3450 Forensics/Individual Events–Fa, Sp 1 hour

Students receive individual coaching for participation in intercollegiate speech competition. Areas of competition include oral interpretation, public speaking, and limited preparation events. *Prerequisite: permission of instructor.*

COM-3451 Debate Practicum–Fa, Sp 1 hour

Students receive individual coaching for participation in intercollegiate debate competition. *Prerequisite: permission of instructor.* Credit/no credit; repeatable up to six times.

COM-3500 Storytelling–Sp 3 hours

The history, development, and usage of storytelling is presented in a format where the student participates in developing skills as a teller. Students are assisted in developing their own style and method for presenting stories. Open to all majors.

COM-3550 Advocacy Communication–Fa 3 hours

This course studies advocacy as it relates to social and political change. Advocacy communication requires unique practices that rely on public speaking skills and analysis of advocacy discourse. Students will think critically about current social, political, and ethical issues and will develop persuasive and strategy skills as they practice how to mobilize the public, influence public opinion, and negotiate policy decisions. These skills are useful to those anticipating careers in politics, consulting, speechwriting, law, sales, nonprofits, and religion.

COM-3650 2 hours**Clinical Methods in Teaching Speech–Fa, Sp**

Students seeking certification for teaching speech will gain classroom experience. One credit hour equals 20 classroom hours. Department staff members will supervise all assignments. Credit/no credit.

COM-3710 Narrative and Cultural Literacy–Sp 3 hours

An examination of early New Testament and American cultural narratives helps students examine current communication practices using biblical, critical, and theological perspectives

COM-3790 Cultural Immersion Clinic–Fa, Sp, Su 3 hours

Encourages personal development toward intercultural sensitivity and adaptation. Requires regular contact with faculty monitoring immersion experience. *Prerequisite: COM-2140 Intercultural Communication, SOC-1300 Introduction to Sociology, or PSYCH-1800 Cross-Cultural Psychology.* (Fee \$100)

COM-3810 Speechwriting for the Professional–Sp 3 hours

This course focuses on the skills necessary to research for and effectively write a variety of public messages. Students will practice using the skills necessary for effective communication in organizational, political, and nonprofit contexts. Theory that enriches the understanding of speech writing will be presented and applied. *Prerequisite: COM-3100 Advanced Public Speaking.*

COM-3840 Media Analysis–Fa 3 hours

Overviews the study and application of theories that analyze and critique news, and film media. Theories of media criticism will be presented, along with a Christian view. Students will produce critiques of media using the theories presented and integrating a Christian worldview into their analysis.

COM-4060 Organizational Leadership–Fa, Sp 3 hours

Leadership as a societal role is addressed through analysis of theory and observation of practitioners. A chronology of methodological approaches to the study of leadership is presented. Students observe and evaluate leaders in a variety of disciplines.

COM-4110 History of Public Address–Fa 3 hours

Classical rhetorical systems and theories are studied from the perspective of the rhetorical critic. The development of rhetoric is traced from the Greek period to the present. Analysis is made of the part rhetoric has played in the development of philosophies and nations.

COM-4120 Contemporary Rhetoric–Sp 3 hours

A survey of rhetorical theory that has developed since WWII. Selected representative, contemporary rhetorical theories will be studied and applied to U.S. political communication. Seeks to integrate the study of political messages and the current political culture. *Prerequisite: COM-4110 History of Public Address or permission of instructor.*

COM-4600 Speech Seminar–Sp 2 hours

Courses are available to the advanced student who desires intensive study in a particular area of speech communications.

COM-4610 Communication Ethics–Sp 2 hours

Seminar focuses on how to reason biblically about ethical issues. Surveys contemporary Christian ethicists; examines issues of concern to the Christian community; suggests communication dynamics that build Christian social ethics.

COM-4640 Special Topics–Fa, Sp 2–3 hours

Topics of important interest are examined on an as-needed basis.

COM-4710–4760 Independent Study 1–3 hours**COM-4710–General Communication–Fa, Sp 1–3 hours****COM-4720–Organizational Communication–Fa, Sp 1–3 hours****COM-4730–Oral Interpretation–Fa, Sp 1–3 hours****COM-4740–Drama–Fa, Sp 1–3 hours****COM-4750–Media–Fa, Sp 1–3 hours****COM-4760–Forensics–Fa, Sp 1–3 hours**

Taken to secure an in-depth background in one of the areas of communication. Repeatable to a total of eight credit hours in the field. *Prerequisite: permission of instructor.*

COM-4810 Research Pre-Seminar–Sp 2 hours

Senior students present research findings to beginning researchers. Senior students mentor beginning students. Beginning researchers employ library search techniques to prepare a research prospectus. *Prerequisite: COM-2220 Quantitative Research.* (Fee: \$25)

COM-4820 Senior Research Project–Fa 3 hours

Students select a topic of interest, research, and write a paper under the direction of a research mentor. Students present findings before faculty and peers. Research is published by the department and retained in the department of media and applied communications archives. *Prerequisites: COM-2050 Communication Theory; COM-2220 Communication Research; COM-4810 Research Pre-Seminar.* (Fee: \$45)

COM-4825 3 hours**Senior Research Capstone Internship–Fa, Sp, Su**

Students with an emphasis in political communication may elect to complete a capstone internship for their senior project. Internship experiences must be approved by faculty within the political communication specialization and must demonstrate strong academic preparation and a capacity for professional development during the internship experience. For more information on the capstone internship, contact the media and applied communications department office. *Prerequisites: COM-2050 Communication Theory; COM-2220 Communication Research; COM-2820 Political Communication; COM-3120 Argumentation; COM-3150 Gender, Politics, and Communication; COM-3810 Speechwriting for the Professional; COM-4810 Research Pre-Seminar.*

COM-4830 Research–Post Seminar–Sp 0 hours

Senior students present research findings to beginning researchers. Senior students mentor beginning students. Beginning researchers employ library search techniques to prepare a research prospectus.

COM-4850 Senior Seminar–Sp 1 hour

A transitional seminar to provide students with the opportunity to culminate their academic program and begin the orientation to the professions of communication. The course will prepare students for employment demands, revise resumes, develop interview skills, and establish networking techniques for success in their communication profession.

COM-4900 Internship in Communications–Fa, Sp 3–12 hours

Students are placed with professional organizations to gain experience in actual career situations. Internships depend upon availability.

COM-4950 Applied Capstone–Fa, Sp 3 hours

This course is the culmination of the major in applied communication. It provides an opportunity for students to bring together the academic training and professional skills in a focused application. Students work with an advisor to develop a project culminating their program of study in one of four options selected with approval of the capstone coordinator and the faculty advisor. All capstone projects will be presented in written form and presented in a public forum. *Prerequisites: COM-2050 Communication Theory or COM-2320 Theories of Mass Media and COM-2220 Quantitative Research or COM-2225 Qualitative Research.* (Fee: \$15)

Criminal Justice (CRJU)**CRJU-1310 Introduction to Criminal Justice–Fa 3 hours**

Introduction to the discipline and institutions of criminal justice in the United States. Law enforcement, the courts, and corrections will be recognized as a system with interacting and interdependent institutions. An understanding and comprehensive view of the formal criminal justice system is essential. (Fee: \$60)

CRJU-1350 1 hour**Career Planning for the Criminal Justice Professional–Sp**

The course is designed to provide an understanding of how to select the right major as a student and how to identify your professional career aspiration. Understanding one's unique skill set, interest, and God's will is paramount to identifying the correct vocation to select. This course will utilize two personal assessment instruments to help students better understand their personal profile in relationship to professional opportunities. Students will learn the fundamentals of how to develop and implement a career plan. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.* (Fee: \$60)

CRJU-2200 Criminology–Fa 3 hours

Introduction to the major criminological perspectives regarding crime causation. Selected notorious crimes are considered as case studies to enhance understanding of each perspective. Crosslisted as CRJU or SOC.

CRJU-2310 Juvenile Delinquency–Sp 3 hours

Study and assessment of causal theory and problems of correction and prevention of delinquency. Crosslisted as CRJU or SOC (Fee: \$30)

CRJU-2840**Concepts of Chemical Dependency–Fa, Sp 3 hours**

Designed to investigate the concept of chemical dependency. Course emphasis is on the various drugs of abuse and methods of assessment, intervention, and treatment. Crosslisted as CRJU, PSYCH, SOC, or SWK. *Prerequisite: PSYCH-1600 General Psychology, SOC-1300 Introduction to Sociology, or permission of instructor.*

CRJU-3300 Corrections–Sp 3 hours

In-depth consideration of probation, penology, and community supervision sectors of the field of criminal justice. (Fee: \$30)

CRJU-3310 Corrections Administration–Fa 3 hours

Contemporary issues related to management of correctional organizations from the administrator's perspective within the context of legal and political parameters. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-3350 Criminal Law–Sp 3 hours

Focuses on the general classification of criminal offenses, rules of construction, burden and degree of proof, jurisdiction and venue, limitations to criminal prosecution, requirements for criminal liability, culpable mental states, defenses to criminal liability, and elements of criminal offenses. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-3360 American Judicial System—Fa 3 hours

An introduction to federal and state court systems, duties and responsibilities of the prosecutor, defense counsel, jury, and judge including related topics ranging from plea bargaining to sentencing. Crosslisted as CRJU or POLS. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-3390 Criminal Evidence—Sp 3 hours

Focuses on the evidence process applicable to criminal case preparation and presentation in court. Emphasis on types of evidence, tests of admissibility, objections, weight of evidence, witness competency and credibility, defenses, suppressions, order of evidence presentation at trial, and rules of evidence. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-3400 Criminal Procedure—Sp 3 hours

Pertains to procedural law, which governs the enforcement of substantive criminal law. Emphasis on legal authority of law enforcement personnel and rights of the accused person with a review of pertinent U.S. Supreme Court decisions. Consideration is given to various procedural stages from criminal charges through post-conviction appeal. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-3410 Ethics and Civil Liability for Criminal Justice Personnel—Sp 3 hours

Focuses on civil liability issues with a review of pertinent U.S. Supreme Court decisions. Emphasis on federal civil liability, tort liability and damages, acts of negligent employment, qualified immunity, seizures and civil liability, special duty to protect, liability for policy or custom, and preventive measures. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-3700 Financial Management for Social Science Professionals—Fa 3 hours

Biblical principles of personal financial responsibility and their importance for honoring God, a Christian testimony, and avoiding monetary-corruptive influences in a criminal justice career. Topics in this area include: the biblical basis of work, budgeting, giving, tithing, spending, saving, debt, investing and financial stewardship. *Prerequisites: CRJU 1000-level core courses; ECON-2110 Essentials of Economics; or permission of instructor.*

CRJU-3990 Criminal Justice Internship—Fa, Sp, Su 3–12 hours

This internship places students in a professional criminal justice setting where they will gain insight into the practical and challenging situations of a career in criminal justice. Under supervision, students will apply classroom knowledge and contribute to agency operations. Students may earn up to 12 credit hours. *Prerequisite: CRJU 1000 and 2000-level core courses or program director's permission.*

CRJU-4150 Homeland Security—Fa 3 hours

This course is a study of the four central missions of domestic security. These areas are: domestic security, emergency preparedness, intelligence gathering and communication, and policy making. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-4200 Police Administration—Fa 3 hours

Focuses on contemporary policing issues and related administrative matters from the perspective of executive leadership. Emphasis on management of organizational resources regarding basic line and staff functions. Consideration is given to contemporary issues of community-oriented policing and federal legislative mandates. Case study is utilized. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-4320 Criminal Investigation—Fa 3 hours

Focuses on criminal investigative methods, identification procedures, crime scene search, categories of physical evidence, evidence collection and preservation, sources of information, interviews, and interrogations. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

CRJU-4330 Contemporary Issues in Criminal Justice—Sp 3 hours

Analysis of key issues influencing the criminal justice system.

CRJU-4440 Special Topics-Criminal Justice 1–3 hours

Investigation of specific topics in Social Science and History that have intrinsic worth and engage student interest.

CRJU-4630 American Constitutional Law — Civil Liberties and Rights—Sp 3 hours

The United States Constitution defines the powers and scope of the American government and delineates the rights and liberties retained by the American people. This course focuses on the Supreme Court's interpretation of those rights and liberties by examining the Court's decisions in their legal and historical contexts. Crosslisted as POLS. *Prerequisites: GSS-1100 Politics and American Culture*

CRJU-4900 Research Issues in Criminal Justice—Fa 3 hours

This is a capstone course for criminal justice majors. The course will usually focus on a significant issue in contemporary criminal justice. Major papers will be presented by individual students on sub-categories of the primary topic. Additionally, the course will prepare a project that will be presented in a public forum. *Prerequisite: senior status as a CRJU major. (Fee: \$100)*

CRJU-4960 Independent Study in Criminal Justice 1–3 hours

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*

Computer Science (CS)**CS-1210 C++ Programming—Fa, Sp 2 hours**

Introduction to computer programming, software engineering principles, structured program design and implementation, and object-oriented design using the C++ programming language; students will become familiar with compiling programs in the UNIX operating system. One lecture hour and two one-hour laboratories per week. (Fee: \$50)

CS-1220 Object-Oriented Design Using C++—Fa, Sp 3 hours

Continuation of CS-1210 C++ programming to include pointers, the object paradigm, and abstract data types; advanced topics include exception handling, event-driven programming, and Graphical User Interface (GUI); principles of object-oriented design are applied to programming tasks in both the UNIX and Windows environments. *Prerequisite: CS-1210 C++ Programming. (Fee: \$50)*

CS-2210 Data Structures Using Java—Fa, Sp 3 hours

Introduction to the proper use of data structures for developing efficient software; data structures include stacks, queues, priority queues, hash tables, trees, and graphs. Students will develop skill in object-oriented design and the Java programming language. Design project required. *Prerequisite: CS-1220 Object-Oriented Design Using C++. (Fee: \$50)*

CS-3210 Programming Language Survey—Sp 3 hours

Systematic study of the principles, concepts, and mechanisms of computer programming languages: their syntax, semantics, and pragmatics; the processing and interpretations of computer programs; programming paradigms; and language design. Illustrative examples will be selected from a variety of programming language paradigms. *Prerequisite: CS-2210 Data Structures Using Java. (Fee: \$50)*

CS-3310 Operating Systems–Fa 3 hours

A state-of-the-art survey of operating system principles. Covers fundamental technology and contemporary design issues such as threads, real-time systems, multiprocessor scheduling, distributed systems, security, and object-oriented design. Course content is developed through lectures, student research of the relevant literature, presentations, and programming projects using both C++ and Java. *Prerequisite:* CS-2210 *Data Structures Using Java*. (Fee: \$50)

CS-3410 Algorithms–Fa 3 hours

Introduction to classical algorithms that have broad application in solving computer science problems; topics include analysis of algorithms, advanced data structures, graph algorithms, numerical methods, and NP-completeness. *Prerequisite:* CS-2210 *Data Structures Using Java*; MATH-2510 *Discrete Math for Computer Science* (Fee: \$50)

CS-3510 Compiler Theory and Practice–Sp 3 hours

Introduction to the foundational technology of modern compilers, with emphasis on underlying theory and practical techniques for implementing a compiler by applying object-oriented and appropriate data structures. Design project typically developing a compiler is required. *Prerequisite:* CS-3410 *Algorithms*. (Fee: \$50)

CS-3610 Database Organization and Design–Sp 3 hours

Introduction to the analysis, design, and implementation of relational databases and The Structured Query Language (SQL); topics include data modeling techniques, data model to logical schema conversion techniques, relational algebra, SQL, database file organizations, query evaluation, transaction management, and client-server application architectures. Design project required. *Prerequisites:* CS-2210 *Data Structures Using Java*; MATH-2510 *Discrete Mathematics for Computer Science*. (Fee: \$50)

CS-3920 Computer Science Internship–Fa, Sp 1–3 hours

An opportunity for a computer science student to work closely with an industrial advisor. Specific attention is given to solving a particular problem(s) in the industry or firm. A faculty advisor assists in supervising and approving the internship, including assessing the number of credit hours. A final report (approximately seven pages per credit hour) describing the experience, including the problem and solution, is required. Must be arranged with a faculty sponsor and work supervisor before starting. No more than one hour of CS-3920 can be used to fulfill program technical elective requirements. *Prerequisites:* junior or senior computer science major status; faculty advisor permission.

CS-3950 Topics in Computer Science–Fa, Sp, Su 1–3 hours

Selected topics in computer science at the 3000-level that will complement or extend existing 2000- and 3000-level courses or expose students to topics not taught in other courses. Topics may be proposed by the computer science faculty or students. *Prerequisite:* permission of instructor.

CS-3980 1–3 hours**Independent Study in Computer Science–Fa, Sp, Su**

Opportunity to perform independent study or research in computer science and allied fields of application. A formal proposal for study must be approved by the faculty advisor before registering for this course. *Prerequisites:* junior or senior computer science or engineering major status, and permission of instructor.

CS-4220 Web Applications–Sp 3 hours

Introduction to the design and implementation of web-based applications using tools such as JavaScript, PHP, JSP, and Java servlets; applications will be developed using both the IIS and Apache servers. Multiple design projects required. *Prerequisite:* CS-2210 *Data Structures Using Java*. (Fee: \$50)

CS-4320 Network Security–Fa 3 hours

Introduction to network security, including policy, malicious code, intrusion detection, prevention, response, cryptographic protocols for privacy and integrity, tradeoffs between risk of misuse, cost of prevention, and societal issues. Crosslisted as CS and EGCP. *Prerequisite:* CS-3310 *Operating Systems*; permission of instructor. (Fee: \$50)

CS-4410 Parallel Computing–Fa 3 hours

Introduction to the exploitation of parallelism to solve computationally intensive problems; explores schemes for achieving parallelism, architectures required for parallel computing, performance analysis, and parallel algorithm design; uses common standards for message passing (e.g., MPI), local clusters and remote supercomputer systems. Crosslisted as CS and EGCP. *Prerequisites:* CS-3410 *Algorithms*; permission of instructor. (Fee: \$50) (even years)

CS-4710 Computer Graphics–Fa 3 hours

Introduction to two- and three-dimensional computer graphics; topics include analytic geometry of computer graphics (vectors, planes, clipping, visibility testing) and techniques for enhancing graphical realism such as lighting and shading, texture mapping, bump mapping, and reflection. *Prerequisite:* CS-3410 *Algorithms*, MATH-2510 *Discrete Math for Computer Science*. (odd years) (Fee: \$50)

CS-4810 Software Engineering I–Fa 3 hours

The capstone design experience for computer science majors. Introduction to software engineering principles focusing on requirement development, detailed design, project scheduling, quality assurance, and testing. Student teams meet regularly to develop a project management plan, a requirements document, a detailed design, and begin to implement their project that will be completed in CS-4820. *Prerequisite:* CS-3410 *Algorithms*. (Fee: \$50)

CS-4820 Software Engineering II–Sp 4 hours

Continuation of CS-4810 Software Engineering I. Student teams will complete the implementation, testing, and release of their capstone project, submit regular progress reports, prepare a final report, and make a formal project presentation. *Prerequisite:* CS-4810 *Software Engineering*. (Fee: \$50)

CS-4950 Advanced Topics in Computer Science 1–3 hours

Selected topics in computer science at the 4000-level that expand the depth of existing 3000- and 4000-level courses or that expose the students to advanced concepts not taught in other courses. *Prerequisite:* permission of instructor.

CS-4980 Independent Study in Computer Science 1–3 hours

Opportunity to perform independent study or research in computer science and allied fields of application. A formal proposal for study must be approved by the faculty advisor before registering for this course. *Prerequisites:* junior or senior computer science or engineering major status, permission of instructor.

D

Developmental (DEV)

DEV-0900 Intermediate Algebra—Fa, Sp **2 hours**

Review of algebraic principles, which are then extended to the solution of polynomial equations, systems of linear equations, rational and radical equations, functional notation, exponential functions, and logarithmic functions with emphasis on computational proficiency. This course is designed to prepare the student for GMTH-1020 College Algebra or other mathematics courses of comparable difficulty. The class time consists of two hours of lecture and two one-hour laboratories each week. May not be applied toward the 128 semester hours needed for graduation nor toward the science and mathematics General Education Requirement.

E

Economics (ECON)

ECON-2110 Essentials of Economics—Fa, Sp **3 hours**

The course provides an introduction to the essential principles of economics. These principles would include such areas as supply and demand, elasticity, productivity and cost analysis, economic efficiency, national income, the consumer price index, monetary and fiscal policy, business cycles, and economic performance. Course not applicable to any major from the school of business administration and also not open to students with credit for ECON-2330 Microeconomics and/or ECON-2340 Macroeconomics.

ECON-2330 Microeconomics—Fa, Sp **3 hours**

The area of economic inquiry that is concerned with the effect of human behavior on the conduct of affairs within rather narrowly defined units. It is the study of decision making regarding consumption, production, and exchange that is carried on by individual households and by business firms.

ECON-2340 Macroeconomics—Fa, Sp **3 hours**

The area of economic study that focuses on how human behavior affects outcomes in highly aggregated markets, such as the market for labor or for consumer products. It is a study of the behavior of the economy as a whole, including the study of economic phenomena such as interest rates, the price level and national income, and output and employment. *Prerequisite or corequisite: ECON-2330 Microeconomics or permission of instructor.*

ECON-3130 Government and Business **3 hours**

A study of the governmental agencies and their effect on American business. Case studies and current events are developed to show the trends and status of various laws and regulations. The economic impact and difficulties that arise in managing a business are reviewed. *Prerequisite: ECON-2330 Microeconomics.* (odd years)

ECON-3310 Money and Financial Markets—Sp **3 hours**

A study of money, banking, and monetary theory, with particular emphasis on international financial markets. *Prerequisite: ECON-2340 Macroeconomics or permission of instructor. Crosslisted with FIN-3310.*

ECON-3340 History of Economic Thought **3 hours**

Principal figures in the development of economic ideas and the contribution of each period of economic thought from the mercantilist to the present. *Prerequisite: ECON-2330 Microeconomics.* (even years)

ECON-3350 Comparative Economic Systems—Fa **3 hours**

Analysis of different types of economic systems. Special emphasis is placed on centralized planning from both a theoretical and empirical perspective. Centralized economic planning is compared and contrasted with a free-market distribution of resources. Individual country case studies are included. *Prerequisite: ECON-2340 Macroeconomics or permission of instructor.* (odd years)

ECON-3360 International Trade and Economics—Fa **3 hours**

A study of international economic theory and international trade policy. The economic basis of trade and factor mobility, the benefits of international trade, and the barriers to international trade flows will be examined. *Prerequisite: ECON-2330 Microeconomics or permission of instructor.*

ECON-3370 Labor Economics **3 hours**

An examination of the role of unions and the labor market in a free enterprise system. Emphasis is given to the impact of unions as a social institution in the collective bargaining process. Labor legislation and the labor movement are studied from both a historical and current perspective. *Prerequisite: ECON-2330 Microeconomics.* (even years)

ECON-3380 Economic Development and Political Economy—Sp **3 hours**

A study of the interaction of political and economic systems to produce economic development and growth of nation states. A framework for analysis of development is explored and applied to specific case studies of both industrial and developing economies that have recently undergone significant change. *Prerequisite: ECON-2340 Macroeconomics or permission of instructor.*

ECON-3390 Public Finance—Fa **3 hours**

A consideration of the financing of local, state, and federal governments. Much attention is given to three functions of government: stabilization, distribution, and allocation. All major taxes that are present in the United States are studied as to structure, revenue gained, and present status. Crosslisted as PUAD. *Prerequisite: ECON-2340 Macroeconomics.* (even years)

Early Childhood/Special Education (ECSP)

ECSP-2500 Young Children with Special Needs—Sp **3 hours**

An introduction to the education of young children with special needs. The course will focus on child development and factors affecting development, partnership with families, as well as strategies for nurturing language and cognitive development. *Prerequisite: EDUC-1000 The Education Profession, Introduction to Teaching Block.*

ECSP-3500 Assessing and Teaching Young Children w/ Special Needs—Sp **3 hours**

A study of educational tests and materials for teaching and assessing young children with disabilities. Teacher candidates will develop assessment strategies and lesson plans for children in prekindergarten special education programs. *Prerequisite: EDUC-1000 The Education Profession, Introduction to Teaching Block, ECSP-2500 Young Children with Special Needs.*

ECSP-3550 Clinical: Young Children w/ Special Needs—Sp **3 hours**

The course provides a clinical experience for the development of skills and strategies for instruction of students with exceptional educational needs in a prekindergarten setting. Emphasis is on understanding of development and adaptation of curriculum, materials, and teaching skills. *Prerequisite: ECSP-2500 Young Children with Special Needs, ECSP-3500 Assessing and Teaching Young Children with Special Needs.* (Fee: \$140)

Early Childhood Education (EDEC)**EDEC-2100 2 hours****Art and Music for Early Childhood–Fa, Sp**

An overview of the use of art and music to enhance the early childhood classroom. A strong emphasis on practical techniques and projects for personal expression based on an understanding of the importance of art and music at the system, school, classroom, and individual levels. *Prerequisite: EDUC-1000 The Education Profession.* (Fee: \$20)

EDEC-2300 Phonics and the Reading Process–Fa, Sp 4 hours

The study of phonics and the place of phonics in the overall reading program. The course focuses on the four parts of the reading process: reading, speaking, listening, and writing. Special emphasis on literacy and reading readiness. *Prerequisite: EDUC-1000 The Education Profession.*

EDEC-3500 Early Childhood Education–Fa, Sp 3 hours

An introductory descriptive overview of current early childhood education, including various approaches, programs, and curricula. Emphasis on the development, implementation, and evaluation of early childhood programs. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Early Childhood Methods I block.* (Fee: \$10)

EDEC-3600 3 hours**Issues in Early Childhood Administration–Fa, Sp**

An examination of program issues important to both teachers and administrators. Includes examination of models for leadership and for developing and maintaining personal and community working relationships. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Early Childhood Methods I block.*

EDEC-3800 4 hours**Teaching Reading and Language Arts: Early Childhood–Fa, Sp**

An introduction to the objectives, skills, instructional strategies, teaching aids, resource materials, and assessment techniques for teaching reading and the language arts to the early childhood student. An associated clinical experience provides theory-driven application. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Early Childhood Methods I block.*

EDEC-3900 1 hour**Field Experience in Early Childhood Education–Fa, Sp**

An observation and participation experience in which teacher candidates spend 12–15 full consecutive days focusing on classroom routines and instruction in a kindergarten or other preschool classroom. Designed to give a practical field-based aspect to all of the courses in the Early Childhood Methods I block. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Early Childhood Methods I block.* (Fee: \$45)

EDEC-3950 Early Childhood Clinical I–Fa, Sp 3 hours

Teacher candidates spend 14–17 full consecutive days in an early childhood classroom including 12–15 days of teaching. The implementation of reading and language arts objectives, skills, strategies of instruction, teaching aids, and resource materials is practiced in a University-supervised setting. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Early Childhood Methods I block.* (Fee: \$135)

EDEC-3990 1–3 hours**Independent Study in Early Childhood Education–Fa, Sp, Su**

An investigation of contemporary topics in early childhood education through reading, writing, or creative projects.

EDEC-4000 2 hours**Reading in the Content Areas: Early Childhood–Fa, Sp**

An introduction to the dimensions, strategies, and programs for learning and teaching the reading process, including the nature of the reading process, assessment techniques, and instructional strategies to increase comprehension of the textual material of the various disciplines taught in the elementary grades. *Prerequisite: successful completion of the Early Childhood Methods I block. Corequisite: other courses in the Early Childhood Methods II block.* (Fee: \$25)

EDEC-4100 4 hours**Teaching Mathematics: Early Childhood–Fa, Sp**

An introduction to the objectives, skills, instructional strategies, teaching aids, and resource materials for teaching mathematics to the young child, based on the Ohio Model and NCTM Standards. An associated clinical experience provides theory-driven application. *Prerequisite: successful completion of the Early Childhood Methods I block. Corequisite: other courses in the Early Childhood Methods II block.*

EDEC-4200 3 hours**Teaching Science: Early Childhood–Fa, Sp**

An examination of science curricula for the young child with particular emphasis on the Ohio Model and the National Science Standards. Instructional methodologies that emphasize an inquiry approach will be modeled and practiced with attention given to a hands-on approach to instruction. *Prerequisite: successful completion of the Early Childhood Methods I block. Corequisite: other courses in the Early Childhood Methods II block.* (Fee: \$35)

EDEC-4300 3 hours**Teaching Social Studies: Early Childhood–Fa, Sp**

An examination of social studies curricula for the young child with particular emphasis on the Ohio Model, the NASS Standards, and the integration of social studies with other disciplines. Instructional methodologies that emphasize the teaching of thinking, student interaction, and the use of instructional technologies will be modeled and practiced. *Prerequisite: successful completion of the Early Childhood Methods I block. Corequisite: other courses in the Early Childhood Methods II block.*

EDEC-4450 Early Childhood Clinical II–Fa, Sp 3 hours

Teacher candidates spend 20–25 days in an early childhood classroom, including 17–22 days teaching mathematics, social studies, and science. This field experience provides theory-driven application to instruction with an emphasis on reflective teaching and collegial teamwork. Teacher candidates are formally supervised and evaluated by University supervisors using Praxis/Pathwise criteria. *Prerequisite: successful completion of the Early Childhood Methods I block. Corequisite: other courses in the Early Childhood Methods II block.* (Fee: \$105)

EDEC-4880 1–3 hours**Topics in Early Childhood Education–Fa, Sp, Su**

Selected topics in early childhood education that will complement or extend existing courses or expose candidates to topics not taught in other courses; may be proposed by an EDEC faculty or student. *Prerequisites: faculty advisor and instructor's permission*

EDEC-4900 10–12 hours**Student Teaching and Seminar: Early Childhood–Fa, Sp**

A teaching experience in an early childhood setting under the supervision of the cooperating teacher and a university supervisor. Required seminars encourage reflection on the teaching experience, as well as discussion of issues of importance to educators. *Prerequisite: successful completion of the Early Childhood Methods II block.* (Fee: \$220)

Middle Childhood Education (EDMC)**EDMC-2800 2 hours****Developmental Issues in Young Adolescents–Su**

A study of the physiological, social, emotional, cognitive, and spiritual issues in human development endemic to the transition from preadolescence to adolescence. Emphasis on development research as it applies to the development of educational objectives, learning environments, and teacher characteristics conducive to the needs of younger adolescents

EDMC-3300 3 hours**Topics in Middle School Mathematics–Fa**

An investigative approach to selected mathematics topics that are taught in middle schools. Topics include logic, mathematics modeling, formulating, and problem solving in both mathematical and every day life situations. Real world connections with opportunities for exploration and communication by written, oral, and technological presentations are provided. *Prerequisite: EDUC-2800 Principles of Mathematics II.*

EDMC-3500 3 hours**Principles of Teaching Middle School–Sp**

Teacher candidates learn to develop instruction and various types of assessment based on observable learning objectives aligned with curriculum guides. Emphasis will be given to instructional models most appropriate for middle school students, including use of instructional technology. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the M.C. Methods I block.*

EDMC-3550 3 hours**Curriculum and Instruction for Grades 4 and 5–Su**

An examination of the curricula of grades 4–5 and instructional strategies that emphasize content mastery and the development of critical inquiry. Particular emphasis placed on the Ohio Academic Content Standards for grades 4–5 in language arts, mathematics, science, and social studies. *Prerequisite: admission to Early Childhood Education Endorsement program. Corequisite: enrollment with EDMC-2800 Development Issues in Young Adolescents and EDMC-3970 Middle school clinical (Grades 4–5).*

EDMC-3600 3 hours**Phonics and the Structure of Language–Sp**

An introduction to the rationale, skills, instructional and assessment strategies, teaching aids, resource materials, and appropriate technologies for the teaching of phonics. Emphasis given to the source, structure, function, and history of spoken language. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the M.C. Methods I block.*

EDMC-3700 4 hours**Teaching Reading Through Middle School Literature–Sp**

A survey of the early history, major types, and modern trends of literature for children in grades 4–9. The social and personal value of literature is studied along with methods for using trade books to support reading instruction in an integrated reading/ writing/ language arts program. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the M.C. Methods I block.*

EDMC-3800 3 hours**Writing Process and Language Arts Methods for Middle School–Sp**

A study of the curriculum, methods, and resources for assessing and teaching of the language arts at the middle school level. Emphasis will be on an integrated reading/writing/ language arts program and its importance across the curriculum. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the M.C. Methods II block*

EDMC-3970 Middle School Clinical (Grades 4–5)–Su 2 hours

An observation and participation experience in grades 4 or 5. Clinical experience provides for the implementation of the objectives, skills, and strategies of grad 4–5 instruction and classroom management under the supervision of the experienced cooperating teacher and university supervisor. *Prerequisite: admission to Early Childhood Education Endorsement program. Corequisites: enrollment with EDMC-2800 Development Issues in Young Adolescents and EDMC-3550 Curriculum and Instruction for Grades 4–5.*

EDMC-3950 2 hours**Middle School Clinical I: Teaching Reading–Sp**

This experience provides for implementation of the objectives, skills, and strategies of instruction relative to middle grade reading instruction in a field-based setting. Teacher candidates are formally supervised and evaluated by cooperating teachers and university supervisors using Praxis/Pathwise criteria. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the M.C. Methods I block. (Fee: \$115)*

EDMC-3990 1–3 hours**Independent Study in Middle Childhood Education–Fa, Sp, Su**

An investigation of contemporary topics in middle childhood education through reading, writing, or creative projects.

EDMC-4000 3 hours**Reading in the Content Area: Middle Childhood–Fa**

An introduction to the range of strategies and programs for teaching the reading process, including the nature of the reading process, assessment techniques, and instructional strategies to increase comprehension. The use of trade books and informational books in the content areas across the disciplines taught in the middle childhood grades is emphasized. *Prerequisite: successful completion of the M.C. Methods I block. Corequisite: other courses in the M.C. Methods II block.*

EDMC-4050 2 hours**Responsive Schools for Middle Childhood–Fa**

An examination of the developmental periods of later childhood and early adolescence from a psychological and sociological perspective. The course will also examine how school programs can be designed and implemented to deal with the unique aspects of these developmental periods. *Prerequisite: admission into the TEP courses in the M.C. Methods I block.*

EDMC-4100 3 hours**Teaching Mathematics: Middle Childhood–Fa**

An introduction to the objectives, skills, and instructional strategies for teaching middle school mathematics, based on the Ohio Model and NCTM Standards. An associated clinical experience provides opportunity for theory-driven application of knowledge and skills. *Prerequisite: successful completion of the M.C. Methods I block. Corequisite: other courses in the M.C. Methods II block.*

EDMC-4200 Teaching Science: Middle Childhood–Fa 3 hours

An introduction to the objectives, skills, and instructional strategies for teaching middle school science, based on the Ohio Model and NSTA Standards. The course provides a particular emphasis on hands-on science instruction, the scientific method, and the integration of science with other disciplines. *Prerequisite: successful completion of the M.C. Methods I block. Corequisite: other courses in the M.C. Methods II block. (Fee: \$95).*

EDMC-4300 3 hours**Teaching Social Studies: Middle Childhood–Fa**

An introduction to the objectives, skills, and instructional strategies for teaching middle school social studies, based on the NSSA Standards. The course provides a particular emphasis on the Ohio Model and the integration of social studies with other disciplines. *Prerequisite: successful completion of the M.C. Methods I block. Corequisite: other courses in the M.C. Methods II block. (Fee: \$75)*

EDMC-4440 Middle Childhood Clinical II–Fa 2 hours

This clinical experience allows the teacher candidate to apply the theories, principles, and techniques provided in the associated methods courses. *Prerequisite: successful completion of the M.C. Methods I block. Corequisite: other courses in the M.C. Methods II block.* (Fee: \$135)

EDMC-4880 1–3 hours**Topics in Middle Childhood Education–Fa, Sp, Su**

Selected topics in middle childhood education that will complement or extend existing courses or expose candidates to topics not taught in other courses; may be proposed by an EDMC faculty or student. *Prerequisites: faculty advisor and instructor's permission.*

EDMC-4900 10–12 hours**Student Teaching and Seminar: Middle Childhood–Fa, Sp**

A teaching experience in a middle childhood setting under the supervision of the cooperating teacher and the University supervisor. Required seminars encourage reflection on the teaching experience as well as discussion of issues of importance to educators. *Prerequisite: successful completion of the M.C. Methods II block.* (Fee: \$250)

Music Education (EDMU)**EDMU-1000 MENC–Fa, Sp 0 hours**

The National Association for Music Education is to advance music education by encouraging the study and making of music by all. MENC is the primary professional organization for music educators. The campus chapter provides informative seminars including a focus on Value Added Assessment along with service activities. MENC offers music educators a connection to the professional world of music education and increased understanding of the role of MENC in the field of music teaching. All music education majors are required to enroll in this course as part of their professional development and career preparation. A minimum of 8 semesters of satisfactory participation is required. (Fee: \$30)

EDMU-2730 Wind and Percussion Methods–Sp 2 hours

Overview of the history, pedagogy, and performance techniques of all band instruments. Required for the vocal major pursuing the B.M.E. degree and instrumental performance majors; open to others by permission of the instructor. (Fee: \$40) (even years)

EDMU-2870 Brass Methods–Fa 2 hours

This course presents a framework of learning environments and varied activities through which students gain the knowledge and acquire the skills requisite to playing and teaching the brass instruments (i.e., trumpet, horn, trombone, baritone, tuba). (Fee: \$40) (even years)

EDMU-2900 Guitar Methods–Sp 1 hour

Study of the historical background and pedagogical and performance techniques of the guitar. Required of music education majors pursuing the choral track. Open to other students by permission of instructor. (Fee: \$40)

EDMU-2910 Woodwind Methods–Sp 2 hours

This course presents a framework of learning environments and varied activities through which students gain the knowledge and acquire the skills requisite to playing and teaching the woodwind instruments (i.e., flute, oboe, clarinet, saxophone, and bassoon). (Fee: \$40) (even years)

EDMU-2930 String Methods–Fa 2 hours

This course presents a framework of learning environments and varied activities through which students gain the knowledge and acquire the skills requisite to playing and teaching the string instruments (i.e., violin, viola, cello, string bass). (Fee: \$40) (odd years)

EDMU-2950 Percussion Methods–Sp 2 hours

Concentration in snare drum techniques and an introduction to tympani and tuned percussion methods. (Fee: \$40) (odd years)

EDMU-3710 Music for Early Childhood–Fa 3 hours

Music literature and teaching aids for children, including basic music theory, development of skills on keyboard, classroom instruments, and voice; music in the curriculum; and teaching music concepts. (Fee: \$30)

EDMU-3720 Music for Adolescent/Young Adults–Sp 3 hours

The history of and basis for music in the secondary curriculum, administration of the music program, methods of teaching music in groups, and sources of materials for instruction. (Fee: \$30)

EDMU-3730 Vocal Pedagogy–Fa 2 hours

Philosophy, objectives, and techniques of offering vocal instruction at all levels with emphasis on vocal production and pedagogical approaches. *Prerequisite: CLMU-1860 Voice Class or completion of sophomore vocal review.*

EDMU-3750 Instrumental Pedagogy–Fa 2 hours

The study of techniques and literature for the teaching of wind, percussion, brass, and string students in the private studio. Investigation of studio teaching through readings, interaction and discussion. *Prerequisite: PLMU 1000 and 2000-levels.* (odd years)

EDMU-3910 Instrumental Administration–Fa 3 hours

A course designed to present the philosophy, learning process, and organizational problems associated with beginning, intermediate, and advanced bands. Along with classroom instruction, students will be involved in marching band field experiences and hands-on instruction in the basic repair of band instruments. (Fee: \$50) (even years)

EDMU-4990 1–3 hours**Independent Study in Music Education**

Independent and intensive study in a particular area of music education for individual music education majors who demonstrate special interests and ability.

Education (EDUC)**EDUC-1000 The Education Profession–Fa, Sp 2 hours**

An introduction to the rewards and requirements of the teaching profession, including social issues and historical context of the profession. Focus is on the five domains of good teaching, teacher licensure, professional issues, and an overview of the mission statement, conceptual framework, and requirements of the Teacher Education Program at Cedarville University. (Fee: \$129)

EDUC-1050 0 hours**Preliminary Student Involvement–Fa, Sp, Su**

Teacher candidates arrange a field experience for five consecutive full days in a public or private P-12 school setting where they observe and participate in classroom activities.

A follow-up report is required. *Prerequisite: EDUC-1000 The Education Profession or permission of instructor.*

EDUC-1800 Principles of Mathematics I–Fa, Sp 3 hours

A framework for the content of this course is Ohio's Competency Based Comprehensive Programs for Mathematics (NCTM Standards). The course utilizes a problem-solving approach and makes connections to real-world situations and other disciplines.

Prerequisite: EDUC-1000 The Education Profession.

EDUC-2000 Introduction to Diverse Learners–Fa, Sp 2 hours

An introductory survey to the complexities of the education, as well as cultural competency issues that accompany various aspects of multicultural education. General overview of the racial, social and cultural aspects of teaching students from diverse backgrounds, particularly as they relate to urban schooling. Initial aspects of teaching and classroom management are introduced and demonstrated. *Prerequisites: EDUC-1000 The Education Profession; ENG-1400 Composition; COM-1100 Fundamentals of Speech. Corequisites: EDSP-2000 Teaching Children with Exceptionalities; EDSP-2050 Field Experience: Exceptional Learning Needs; EDUC-220 Multicultural Field Experience.* (Fee: \$60)

EDUC-2100 Technology in the Classroom—Fa, Sp 2 hours

Teacher candidates learn to use a wide range of technology for developing and enhancing classroom instruction. The course focuses on the technology required for projects to be done in EDUC-2000 Introduction to Diverse Learners and in the upper-level methods courses. *Prerequisite: EDUC-1000 The Education Profession.*

EDUC-2200 Multicultural Field Experience—Fa 1 hour

An introduction to the professional side of schooling through a four-week field experience in a multicultural school setting. Some field-based assignments focus on issues of multicultural education. *Prerequisites: EDUC-1000 The Education Profession; ENG-1400 Composition; COM-1100 Fundamentals of Speech. Corequisites: other courses in the Introduction to Teaching block. (Fee: \$90)*

EDUC-2400 Children's Literature—Fa, Sp 3 hours

A survey of the early history, major types, and modern trends of literature for children in preschool through grade 5. The social and personal value of literature is studied along with methods for using trade books for reading instruction. *Prerequisite: EDUC-1000 The Education Profession.*

EDUC-2500 Educational Psychology—Fa, Sp 3 hours

An introduction to the principles of child and adolescent development, learning theories, and the principles and processes that affect teaching and learning. The course focuses on learning theory and the skills necessary to create and maintain an optimal learning environment in a diversity of settings. *Prerequisite: EDUC-1000 The Education Profession.*

EDUC-2600 Topics in Children's Literature—Su 3 hours

An overview of current topics and trends in children's literature. May be credited toward the reading/language arts middle school concentration. Offered during Summer School Session III and intermittently by arrangement with instructor. *Prerequisite: EDUC-2400 Children's Literature or permission of department chair.*

EDUC-2800 Principles of Mathematics II—Fa, Sp 3 hours

A course building on the NCTM standards-based framework begun in Principles of Math I and including a development of new mathematical topics that are connected to real world situations and other disciplines. *Prerequisite: EDUC-1800 Principles of Mathematics I.*

EDUC-3030 Computers in Education—Su 3 hours

This course prepares the teacher candidate to use computers and related technology to support instruction in the K–12 setting. Productivity tools, assistive technologies, and instructional strategies prepare the student for the practicum experience. *Prerequisite: EDUC-2100 Technology in the Classroom. Offered in fall or spring on an as-needed basis only.*

EDUC-3100 3 hours**Philosophical Foundations of Education—Fa, Sp**

A study of the institutional development of schooling in the United States. Examines the biblical foundations for education and engages in a critical analysis of foundational educational philosophies and their impact on Christian approaches to education. Examines current and historical philosophical, social, and economic issues and how these affect the principles and practices of American schooling.

EDUC-3200 Faith and Learning Alignment—Fa, Sp 1 hour

An introduction into the principles and practices of biblical integration in the K-12 school settings. Course examines the theological and theoretical foundations of biblical integration and prepares the teacher candidate to align curriculum and instructional techniques to their teaching/licensure area. *Prerequisite: Admission to the Teacher Education Program. Corequisite: Enrollment in appropriate methods of teaching block for licensure area.*

EDUC-3560 3 hours**Practicum in Educational Technology—Fa, Sp, Su**

A placement in a K–12 setting under the supervision of a qualified technology director during which the Teacher Education Program candidate assists in operation of the technology program. *Prerequisite: completion of 75% of the computer/technology endorsement or permission of instructor.*

EDUC-3570 Supervised Field Experience 1–3 hours

A 30–90 clock hour supervised placement in an early, middle, and/or adolescent/young adult classroom. Designed to give a transfer teacher candidate, an early childhood education candidate seeking a Reading Endorsement, or a teacher candidate repeating other field experiences the necessary P-12 supervised experience needed to meet program requirements.

EDUC-3600 2 hours**Principles Value Added Assessment—Fa, Sp**

A study of assessment concepts and procedures in the K–12 school setting, including the Ohio Model of Values Added Assessment. Application of Skills in the field is required. *Prerequisite: Enrollment in methods block. Corequisite: Methods I block and Principles of Teaching.*

EDUC-3610 Practicum—Fa, Sp, Su 2 hours

Independent teaching of ESL students under the general supervision of a master teacher. In a K–12 placement under the supervision of a qualified ESL teacher, the student will practice teaching in a formal classroom situation. During this experience, the student will be provided opportunities to establish goals and objectives and design curricula that reflect Ohio's grade-level learning outcomes in content areas. The student will also be given opportunities to select, adapt, create, and use varied resources appropriate to age, cultural groups, and different learning styles. Activities should include integrating technology in planning and delivering instruction and strategies for creating and maintaining communication with families. Practicum will also provide the student with knowledge and skills in assessment. Ongoing during this experience, the student will analyze, evaluate, reflect on, and describe their field experience. *Prerequisite: LING-3500 Methods of Teaching Foreign Language. (Fee: \$45)*

EDUC-3990 Independent Study in Education 1–3 hours

An investigation of contemporary topics in education through reading, writing, or creative projects. *Prerequisite: 15 semester hours in education.*

EDUC-4000 3 hours**Reading in the Content Area—Fa**

An introduction to the range of strategies and programs for learning and teaching the reading process, including the nature of the reading process, assessment techniques, and instructional strategies to provide increased comprehension of the textual material of the disciplines represented by students in the class. This course is for Adolescent and Young Adult Mathematics and Multi-Age Music and Physical Education Teacher Education Program majors. *Prerequisite: admission to the Teacher Education Program or senior status and permission of department chair.*

EDUC-4500 Philosophy of Education—Fa, Sp 2 hours

A critical analysis of foundational educational philosophies in the context of history and their impact on Christian educational philosophy. Examines current ethical and moral issues relevant to education, schooling, and the family. *Prerequisite: admission to the Teacher Education Program or permission of department chair. Normally taken with student teaching.*

EDUC-4510 0 hours**Seminar in Cross-Cultural Student Teaching—Fa, Sp**

This seminar for students who will be student teaching cross-culturally in a subsequent semester will introduce the requirements for completing Philosophy of Education while student teaching and address issues related to the cross-cultural student teaching experience.

EDUC-4850 Internship in Applied Education 3–12 hours

Juniors and seniors who have been accepted into the Teacher Education Program may, with the approval of the education department chair, engage in an internship that involves the meaningful use of knowledge gained in previous education courses and experiences. A departmental faculty member will assist with the internship, arrangements, and evaluation of the experience. The department chair will approve the number of credit hours to be granted for the experience. *Prerequisite: permission of the education department chair.* (Fee: \$25)

EDUC-4880 Student Teaching (Nonlicensure) and Seminar–Sp 10 hours

A teaching experience working with students in a range of age levels under the supervision of the cooperating teacher and University supervisor. Seminars encourage reflection on the teaching experience as well as discussion of issues of importance to educators. *Prerequisite: Completion of all TEP requirements except internship.* (Fee: Early Childhood \$220; Middle Childhood \$250; Adolescent and Young Adult Education \$220; Special Education \$220; Multi-Age \$250; and Early Childhood/Special Education \$340)

EDUC-4900 Student Teaching and Seminar: Multi-Age–Fa, Sp 10–12 hours

A teaching experience working with students in a range of age levels under the supervision of the cooperating teacher and the University supervisor. Seminars encourage reflection on the teaching experience as well as discussion of issues of importance to educators. Capstone for the Multi-Age Physical Education Major. (Fee: \$250)

EDUC-4910 Special Student Teaching 3–10 hours

Occasionally, unusual situations arise that entail special provisions (e.g., summer school student teaching for experienced teachers, repeated experiences, etc.). (Fee: \$100)

EDUC-4950 Student Teaching and Seminar in Special Education and Early Childhood–Fa, Sp 12 hours

A full semester teaching experience with significant exposure in both special education and early childhood education settings. The student teacher will work under the supervision of cooperating teachers and University supervisors in each field. Seminars encourage reflection upon the teaching experience and discussion of issues of importance to educators. (Fee: \$340)

Adolescent / Young Adult Education (EDSE)**EDSE-3100 Contemporary Young Adult Literature–Sp 3 hours**

A study of contemporary young adult literature, addressing issues of interpretation, analysis, and personal response with an emphasis on literature that reflects a diversity of gender, race, and ethnicity. *Corequisite: other courses in the Adolescent and Young Adult Principles of Teaching block or permission of department chair.*

EDSE-3300 Developmental Reading–Sp 3 hours

This course focuses on the reading goals and processes used in teaching English, language arts, and literature by language arts teachers at the secondary level. *Corequisite: other courses in the Adolescent and Young Adult Principles of Teaching block or permission of department chair.* (Fee: \$60)

EDSE-3800 Teaching Social Studies: Adolescent and Young Adult–Fa 2 hours

An emphasis on the identification, examination, and implementation of the methods and materials that are appropriate for each teacher candidate's discipline area. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Adolescent and Young Adult Principles of Teaching block or permission of department chair.*

EDSE-3900 Music Education Field Experience–Fa, Sp 2 hours

This supervised experience in a K–12 school prepares the teacher candidate for the student teaching experience by providing an opportunity to practice teaching methods. Candidates will be evaluated and must show potential to be successful in student teaching to receive credit. *Prerequisites: Admission to the Teacher Education Program and completion of or concurrent registration in EDMU-3710 Music for Early Childhood; and/or EDMU-3720 Music for Adolescent/Young Adults.* (Fee: \$90)

EDSE-3990 Independent Study in Adolescent and Young Adult Education –Fa, Sp, Su 1–3 hours

An investigation of contemporary topics in adolescent and young adult education through reading, writing, or creative projects.

EDSE-4000 Reading in the Content Areas: Adolescent and Young Adult–Fa 3 hours

An introduction to the range of strategies and programs for learning and teaching the reading process, including the nature of the reading process, assessment techniques, and instructional strategies to provide increased comprehension of the textual material of the disciplines represented by teacher candidates in the class. This course is for Multi-Age Spanish and Adolescent and Young Adult Teacher Education Program majors. *Prerequisite: admission to the Teacher Education Program. Corequisites: other courses in the Adolescent and Young Adult Principles of Teaching block or permission of department chair.* (Fee: \$60)

EDSE-4100 Principles of Teaching: Adolescent and Young Adult–Fa 5 hours

An introduction to the objectives, skills, and instructional strategies needed for the teaching of adolescent and young adult students. An associated field experience gives opportunity to apply the knowledge and skills learned in the course. *Prerequisite: admission to the Teacher Education Program. Corequisites: other courses in the Adolescent and Young Adult Principles of Teaching block.*

EDSE-4450 Adolescent/Young Adult Clinical Experience–Fa 3 hours

An opportunity for the implementation of the objectives, skills, and instructional strategies in a setting appropriate for each discipline area. Teacher candidates teach two–three periods a day for five weeks. *Prerequisite: admission to the Teacher Education Program. Corequisites: other courses in the Adolescent and Young Adult Principles of Teaching block.* (Fee: \$90)

EDSE-4880 Topics in Adolescent and Young Adult Education–Fa, Sp, Su 1–3 hours

Selected topics in adolescent and young adult education that will complement or extend existing courses or expose candidates to topics not taught in other courses; may be proposed by an EDSE faculty or student. *Prerequisite: faculty advisor or instructor's permission.*

EDSE-4900 Student Teaching and Seminar: Adolescent / Young Adult–Fa, Sp 10–12 hours

A teaching experience in an adolescent/young adult setting under the supervision of the cooperating teacher and the University supervisor. Required seminars encourage reflection on the teaching experience, as well as discussion of issues of importance to educators. (Fee: \$180)

Special Education (EDSP)**EDSP-2000 1 hour****Teaching Children with Exceptionalities—Fa, Sp**

An exploration of the implications of federal laws with an emphasis on the definitions, characteristics, and strategies for intervention in inclusive settings. The course includes an introduction to the use of assistive technology. *Prerequisite: EDUC-1000 The Education Profession. Corequisites: other courses in the Introduction to Teaching block.*

EDSP-2050 1 hour**Field Experience: Exceptional Learning Needs—Fa, Sp**

A field-based experience in special education in which the teacher candidate observes and participates with classroom personnel in assisting students with accentuated learning needs. *Prerequisites: COM-1100 Fundamentals of Speech; ENG-1400 Composition; EDUC-1000 The Education Profession. Corequisites: other courses in the Introduction to Teaching block.*

EDSP-2400 2 hours**Language Development and Communication Disorders—Sp**

An introduction to speech and language development for teachers. The course incorporates a range of instructional practices, technologies, and curricular materials to address the communication needs of students with disabilities and/or differing cultural and linguistic backgrounds. (Fee: \$10).

EDSP-2500—Su (Out of class) 1 hour**Survey of Intellectual and Developmental Disabilities**

Survey of the multidisciplinary perspectives, identification, early influences, causation, levels of support, and practices related to the education of individuals with mental retardation and developmental disabilities in early childhood. Offered summers only in a mediated (out-of-class) format. (Fee: \$60)

EDSP-2700 2 hours**Teaching Children with Mild to Moderate Disabilities—Fa**

An overview of mild to moderate disabilities with a focus on instructional strategies and accommodations for students in inclusive settings. *Prerequisite: TEP Acceptance, Early Childhood Methods I.* (Fee: \$10)

EDSP-3100 3 hours**Diagnostics and Intervention in Reading—Fa, Sp**

An introduction to the use of formal and informal assessment techniques for identification and remediation of reading difficulties. Teacher candidates learn practical instructional strategies for teaching students with reading problems and apply the techniques by working with elementary students in a school setting.

Prerequisite: EDUC-2300 Introduction to the Reading Process. For Early Childhood majors. Corequisite: other courses in the Methods I block. (Fee: \$60)

EDSP-3150 3 hours**Intervention and Diagnosis in Reading for Special Educators—Sp**

Study and implementation of individual testing and teaching strategies for skill development in reading, analysis of programs and materials, and development of individualized plans for remediation of specific skill deficits. *Prerequisites: the Introduction to Teaching block; EDUC-2300 Introduction to the Reading Process. For Special Education majors. Corequisite: other courses in the Methods I block* (Fee: \$60)

EDSP-3400 2 hours**Advanced Study in the****Teaching of Developmental Reading—Fa, Su**

Presentation of theory, research and strategy for the instruction of adolescent readers (grades four–12) with a focus on addressing the reading needs of students who are not able to meet literacy expectations for their grade level. Particular focus is on the range of instructional practices, technologies and curricular materials that may meet the academic needs of older students with disabilities and/or with culturally/linguistically diverse backgrounds. *Prerequisite: EDSP-2400 Language Development and Communication Disorders.*

EDSP-3500 Special Education Law—Su 1 hour

An overview of special education law with an emphasis on the history of the law and children with disabilities and understanding the implementation and accountability mechanisms of inclusive education. *Prerequisites: Introduction to Education block, Corequisites: Introduction block may be taken during the same summer.*

EDSP-3950 3 hours**Special Education Clinical: Early Childhood—Fa, Sp**

An introduction to the objectives, skills, instructional strategies, teaching aids, and resource materials for teaching reading and the language arts to students with and without mild–moderate needs at the early childhood level. *Prerequisites: admission to the Teacher Education Program; major in special education. Corequisite: other courses in the Early Childhood Methods I block.* (Fee: \$135)

EDSP-4000 Principles of Inclusion—Fa 1 hour

An examination of the theories, research, and practices of adapting and modifying curriculum, instruction, and the learning environment for students with special educational needs. An accompanying clinical experience allows teacher candidates to implement what they have learned. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Special Education Block*

EDSP-4100 Adaptive Curriculum and Instruction—Fa 2 hours

An introduction to the curriculum, intervention strategies, instructional materials, and educational technology used with students with mild–moderate special educational needs. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Special Education block.*

EDSP-4150 Career and Occupational Training—Fa 2 hours

A look at the role of occupational training in the special education curriculum, including the techniques used in developing occupational interests and abilities at various age levels. *Prerequisite: admission to the Teacher Education Program. Corequisite: other courses in the Special Education block.*

EDSP-4250 2 hours**Communication, Collaboration, and Inclusion—Fa, Sp**

A presentation of the techniques of collaboration and consultation needed to enhance the teacher candidate's communication with individuals with special needs, parents, educational team members, and other professionals. Also includes strategies for adapting and modifying instruction for students with special needs and an introduction to assistive technology. *Prerequisite: admission to the Teacher Education Program.*

EDSP-4300 3 hours**Behavioral and Instructional Management—Fa**

A presentation of the learning theory, motivation, and behavioral approaches to management of the social and academic environment of learners with mild–moderate special educational needs. Emphasis is on applied behavior analysis and functional assessment. *Prerequisite: admission to the Teacher Education Program. Corequisites: other courses in the Special Education block.*

EDSP-4400 Assessment in Special Education–Fa 3 hours

Study in the administration and interpretation of formal and informal educational assessment instruments to identify and place students with mild–moderate needs in special education and the development of appropriate education goals and objectives.

Prerequisite: admission to the Teacher Education Program.
Corequisites: other courses in the Special Education block.

EDSP-4450 3 hours**Special Education Clinical: Middle Childhood–Fa, Sp**

An opportunity to implement the objectives, skills, and instructional strategies for teaching mathematics, science, and social studies to students with mild to moderate needs at the middle childhood level. *Prerequisite:* successful completion of the *Early Childhood Methods I* block. *Corequisites:* other courses in the *Early Childhood Methods II* block. (Fee: \$135)

EDSP-4550 3 hours**Special Education Clinical: Adolescent and Young Adult**

An opportunity to use the skills learned developing and implementing individualized educational plans and behavior intervention strategies for adolescent and young adult students with mild to moderate special educational needs. *Prerequisite:* admission to the Teacher Education Program. *Corequisite:* other courses in the Special Education block. (Fee: \$135)

EDSP-4880 1–3 hours**Topics in Special Education–Fa, Sp, Su**

Selected topics in special education that will complement or extend existing courses or expose candidates to topics not taught in other courses; may be proposed by an EDSP faculty or student. *Prerequisites:* faculty advisor and instructor's permission.

EDSP-4900 10–12 hours**Student Teaching and Seminar: Special Education**

A teaching experience for special education only majors with students who have mild–moderate special educational needs under the supervision of the cooperating teacher and the University supervisor. Seminars encourage reflection on the teaching experience as well as discussion of issues of importance to educators. *Prerequisite:* successful completion of the *Early Childhood Methods II* and *Special Education* blocks. (Fee: \$220)

Computer Engineering (EGCP)**EGCP-1010 Digital Logic Design–Fa, Sp 3 hours**

Introduction to digital logic design, number systems, Boolean algebra, Karnaugh maps, computer simulation tools, combinational network design, flip flops, counters, state machines, and sequential networks. Circuits are designed in class and are built and evaluated in the laboratory. Two lecture hours and one two-hour laboratory per week. (Fee: \$100)

EGCP-2120 Microcontrollers–Fa 3 hours

Introduction to the fundamentals of microcontrollers and embedded systems, including microcontroller architecture, assembly and C programming, peripheral interfacing, design and data communications. *Prerequisite:* EGCP-1010 *Digital Logic Design*; CS-1210 *C++ Programming*. (Fee: \$100)

EGCP-3010 Advanced Digital Logic Design–Sp 3 hours

Advanced treatment of digital logical design techniques and practices with emphasis on rapid electronic prototyping and effective use of advanced computer-aided design tools; schematic, textual, and VHDL design entry; arithmetic circuits, advanced finite-state machines, and advanced controller implementations. Three lecture hours per week with periodic integrated laboratory; multiple projects and laboratory experiences including a class design contest usually involving a robot. *Prerequisites:* EGCP-1010 *Digital Logic Design*; CS-1210 *C++ Programming*; junior status or permission of instructor. (Fee: \$100)

EGCP-3210 Computer Architecture–Sp 3 hours

Introduction to computer architecture with an emphasis on hardware, RISC vs. CISC, pipeline and vector processing, I/O, and memory hierarchy including caches. Students design and construct a small microprocessor using a logic simulator and then write an assembler for their processor. *Prerequisites:* EGCP-1010 *Digital Logic Design*; CS-1210 *C++ Programming*.

EGCP-3510 Software Engineering–Fa 3 hours

Discussion of the engineering process as it applies to software development, life-cycle analysis and modeling, software metrics and management tools, project cost and size estimation, system requirement analysis, software design paradigms, and software testing and verification. *Prerequisites:* CS-3410 *Algorithms*; CS-3310 *Operating Systems*.

EGCP-3920 Computer Engineering Internship 1–3 hours

An opportunity for a computer engineering student to work closely with an industrial advisor. Specific attention is given to solving a particular problem(s) in that industry or firm. A faculty advisor assists in supervising and approving the internship, including assessing the number of credit hours. A final report (approximately seven pages per credit hour) describing the experience, including the problem and solution, is required. Must be arranged with a faculty sponsor and work supervisor before starting and cannot be used to satisfy elective credit requirements. *Prerequisites:* junior or senior engineering major status; faculty advisor's permission.

EGCP-3950 Topics in Computer Engineering–Fa, Sp 1–3 hours

Selected topics in computer engineering at the 3000-level that will complement or extend existing 2000- and 3000-level courses or expose students to topics not taught in other courses; may be proposed by the engineering faculty or students. *Prerequisite:* instructor's permission.

EGCP-3980 1–3 hours**Independent Study in Computer Engineering**

Opportunity to perform independent study or research in computer engineering and allied fields of application. A formal proposal for study must be approved by the faculty advisor before registering for this course. Up to three credit hours of engineering electives can be satisfied by an equivalent number of independent-study hours. *Prerequisites:* junior or senior engineering major status; faculty advisor's permission.

EGCP-3990 1–3 hours**Project Design in Computer Engineering**

An elective course for students to get academic credit for extracurricular design work in computer engineering; project may be related to a design competition, ministry, industry, or personal interest. Cannot be used to satisfy engineering elective requirements. *Prerequisite:* instructor's permission.

EGCP-4210 Advanced Computer Architecture–Fa 3 hours

Advanced study of computer architecture with an emphasis on performance, performance metrics, benchmarks, integer and floating point concepts, data-path and control, super-scalar processing and pipelining, memory hierarchy, I/O and peripherals, vector, array and parallel processors, and multiprocessors. *Prerequisites:* EGCP-3010 *Advanced Digital Logic Design*; EGCP-3210 *Computer Architecture*. (Fee: \$100)

EGCP-4250 CMOS VLSI Design–Sp 3 hours

Introduction to CMOS VLSI design with emphasis on circuit analysis, modeling, mask layout, simulation, and design verification; both theoretical concepts and CAD tools are used together for circuit design and verification. Three lecture hours per week with integrated laboratory. *Prerequisite:* EGEE-3210 *Electronics I*.

EGCP-4310 Computer Networks–Fa 3 hours

Introduction to the basic concepts of computer networking. The course will present the layered network architecture protocols and examine each of the layers in depth. Important topics such as packet switching, internetworking, client-server computing, wireless networking, and network security will be addressed.

Prerequisites: CS-2210 *Data Structures Using Java*; *Corequisite:* CS-3310 *Operating Systems*. (Fee: \$50)

EGCP-4320 Network Security–Fa 3 hours

Introduction to network security, including policy, malicious code, intrusion detection, prevention, response, cryptographic protocols for privacy and integrity, tradeoffs between risk of misuse, cost of prevention, and societal issues. Crosslisted as CS and EGCP. *Prerequisite:* CS-3310 *Operating Systems*; permission of instructor. (Fee: \$50)

EGCP-4410 Parallel Computing–Fa 3 hours

Introduction to the exploitation of parallelism to solve computationally intensive problems; explores schemes for achieving parallelism, architectures required for parallel computing, performance analysis, and parallel algorithm design; uses common standards for message passing (e.g., MPI), local clusters and remote supercomputer systems. Crosslisted as CS and EGCP. *Prerequisites:* CS-3410 *Algorithms*; permission of instructor. (Fee: \$50) (even years)

EGCP-4810 4 hours**Computer Engineering Senior Design I–Fa**

Design and development of electronic products to meet specific requirements. Introduction to computer system design, power supply design, hardware-software co-design, software engineering, system performance trade-offs, electronic design tools, prototype methods, estimating and managing time and cost constraints, and project management. Student teams prepare a project proposal, design and prototype a microprocessor-based system or sub-system, use computerized design tools, submit weekly progress reports, and conduct design reviews. Three lecture hours and one two-hour laboratory per week. *Prerequisite:* EGEE-3210 *Electronics I*, CS-3410 *Algorithms*, CS-3310 *Operating Systems*, and *Senior status in computer engineering* *Corequisite:* EGCP-4210 *Advanced Computer Architecture*. (Fee: \$100)

EGCP-4820 4 hours**Computer Engineering Senior Design II–Sp**

Continuation of EGCP-4810 *Computer Engineering Senior Design I*. Student teams will complete their capstone project, submit weekly progress reports, prepare a formal final report, and make a formal design review presentation. *Prerequisite:* EGCP-4810 *Computer Engineering Senior Design I*. (Fee: \$100)

EGCP-4950 1–3 hours**Advanced Topics in Computer Engineering**

Selected topics in computer engineering at the 4000-level that expand the depth of existing 3000- and 4000-level courses or expose the students to advanced concepts not taught in other courses. Topics may be proposed by the engineering faculty or students. *Prerequisite:* instructor's permission.

Electrical Engineering (EGEE)**EGEE-2010 Circuits–Sp 5 hours**

Introduction to basic circuit analysis using Ohm's law, Kirchoff's laws, independent and dependent sources, Thévenin and Norton equivalency and source transformations, transient responses in RC, RL, and RLC circuits, phasor analysis of RLC circuits, power in AC circuits, introduction to 3-phase circuits, mutual inductance, frequency response, Transforms, Laplace circuit analysis, Fourier Series, and introduction to transfer functions. Computer simulations and bread-board circuits are constructed and evaluated in the laboratory. Four lecture hours and one two-hour laboratory per week. *Prerequisites:* PHYS-2120 *General Physics II*; MATH-2740 *Differential Equations*. (Fee: \$100)

EGEE-2050 Circuits and Instrumentation–Sp 4 hours

Introduction to basic circuit analysis using Ohm's law, Kirchoff's laws, independent and dependent sources, Thévenin and Norton equivalency and source transformations, transient responses in RC, RL, and RLC circuits, operational amplifiers, and introduction to polyphase AC circuits. Circuit applications for transducers such as resistance strain gages, piezoelectric load cells, piezoelectric accelerometers, and thermocouples are emphasized along with measurement uncertainty analysis and statistical methods. Circuits are designed, simulated, constructed, and tested in the laboratory. Three lecture hours and one two-hour laboratory per week. This course does not satisfy the EGEE-2010 *Circuits* requirement for the Electrical or Computer Engineering majors.

Prerequisites: PHYS-2120 *General Physics II*; MATH-2740 *Differential Equations*. (Fee: \$100)

EGEE-3110 Linear Systems–Fa 3 hours

Introduction to linear time-invariant analysis of continuous and discrete-time systems, using both time and frequency domain methods that include convolution, Fourier Series, Fourier, Laplace, and Z transforms; classical and computer solution methods are utilized. *Prerequisite:* EGEE-2010 *Circuits*.

EGEE-3150 Analog Filters–Sp 3 hours

Introduction to theory, design, and implementing passive and active analog filters; basic filter structures, passive network synthesis, operational amplifier limitations, multiple-amplifier filters, and filter realization methods. *Prerequisite:* EGEE-3110 *Linear Systems*. (even years)

EGEE-3210 Electronics I–Fa 3 hours

Introduction to the analysis of semiconductor electronic device theory and application, diodes, bipolar-junction transistors (BJTs), field-effect transistors (FETs), and the non-ideal characteristics of operational amplifiers. Two lecture hours and one two-hour lab or recitation period per week. *Prerequisite:* EGEE-2010 *Circuits*. (Fee: \$100)

EGEE-3220 Electronics II–Sp 5 hours

Continuation of EGEE-3210 *Electronics I* to include differential amplifiers, frequency response of amplifier circuits, multi-stage amplifiers, power amplifiers, feedback circuits, power supplies, filters, digital logic families, and oscillators. Four lecture hours and one two-hour lab per week. *Prerequisite:* EGEE-3210 *Electronics I*. (Fee: \$100)

EGEE-3310 Electromagnetics–Fa 3 hours

Engineering applications of vector calculus, phasors, and Maxwell's equations to electrostatic, magnetostatic and time varying fields, transmission lines, Smith Chart, propagation of uniform plane waves, and single-stub matching. Laboratory exercises introduce field-plotting, transmission line concepts using wave guides, single stub-tuning, introduction to the network analyzer, polarization, and radiation fields. Two lecture hours and one two-hour laboratory or recitation period per week.

Prerequisites: MATH-2710 *Calculus III*; EGEE-2010 *Circuits*. (Fee: \$100)

EGEE-3330 Communications Theory–Sp 4 hours

Introduction to analog and digital communications theory. Probability and random processes are developed to facilitate noise analysis in modulation techniques. Three lecture hours and one two-hour laboratory per week; design project required.

Prerequisite: EGEE-3110 *Linear Systems*. (Fee: \$100)

EGEE-3370 3 hours**Probability and Random Processes for Engineers–Sp**

Introduction to sample points, sample spaces, probability, random variables, random vectors, statistical averages, linear transformations, random processes, linear system response to stochastic input, spectral analysis with application of the central-limit theorem, and Gaussian processes to engineering problems. May be used to satisfy the mathematics elective requirement for electrical engineers. *Prerequisite:* EGEE-3110 *Linear Systems*.

EGEE-3510 Power Electronics–Sp 3 hours

Introduction to the fundamentals of power electronics, characteristics and application of semiconductor switches, motor control, device applications, and power processing design. Design project required. *Prerequisite: EGEE-3210 Electronics I.* (odd years)

EGEE-3530 Electrical Machines–Fa 3 hours

Introduction to the fundamentals of power circuits and the principles of analysis and characteristics of transformers and AC and DC rotating machines. Two lecture hours and one two-hour laboratory per week. *Prerequisite: EGEE-2010 Circuits; or EGEE-2050 Circuits and Instrumentation.* (Fee: \$100)

EGEE-3920 Electrical Engineering Internship 1–3 hours

An opportunity for an electrical engineering student to work closely with an industrial advisor. Specific attention is given to solving a particular problem(s) in that industry or firm. A faculty advisor assists in supervising and approving the internship, including assessing the number of credit hours. A final report (approximately seven pages per credit hour) describing the experience, including the problem and solution, is required. Must be arranged with faculty sponsor and work supervisor before starting and cannot be used to satisfy elective credit requirements. *Prerequisites: junior or senior engineering major status; faculty advisor's permission.*

EGEE-3950 Topics in Electrical Engineering–Fa, Sp 1–3 hours

Selected topics in electrical engineering at the 3000-level that will complement or extend existing 2000- and 3000-level courses or expose students to topics not taught in other courses; may be proposed by the engineering faculty or students. *Prerequisite: instructor's permission.*

EGEE-3980 1–3 hours**Independent Study in Electrical Engineering**

Opportunity to perform independent research or study in electrical engineering and allied fields of application. A formal proposal for study must be approved by the faculty advisor before registering for this course. Up to three credit hours of engineering electives can be satisfied by an equivalent number of independent-study hours. *Prerequisites: junior or senior engineering major status and faculty advisor's permission.*

EGEE-3990 1–3 hours**Project Design in Electrical Engineering–Fa, Sp**

An elective course for students to get academic credit for extracurricular design work in computer engineering; project may be related to a design competition, ministry, industry, or personal interest. Cannot be used to satisfy engineering elective requirements. *Prerequisite: instructor's permission.*

EGEE-4110 Digital Signal Processing–Fa 2 hours

Introduction to digital signal processing with emphasis on FIR and IIR filter design, application of Z-transforms and Fourier Transforms, spectral analysis, realization and frequency response of discrete-time systems, and properties and design of FIR and IIR filters with infinite and finite word-length processors. Filter designs are implemented in Matlab. Design project required. *Prerequisites: EGEE-3110 Linear Systems; CS-1210 C++ Programming.*

EGEE-4120 Digital Image Processing–Sp 3 hours

Introduction to digital image processing. Topics include linear filtering in the spatial and frequency domains, morphology, image segmentation, wavelets, image compression, and pattern recognition. *Prerequisites: EGEE-3110 Linear Systems.* (even years)

EGEE-4310 RF Circuit Design–Fa 3 hours

Introduction to the characteristics of noise and nonlinearity in radio-frequency (RF) circuit, scattering parameters and two-port network model, impedance matching techniques, and the radio transmitter and receiver architecture. Topics of designing the circuit of low noise amplifier, mixers, oscillators, RF filters, and power amplifier will be covered. Student will learn to use the state-of-the-art CAD tool and vector network analyzer. *Prerequisites: EGEE-3220 Electronics II, EGEE-3330 Communications Theory.* (Fee: \$100)

EGEE-4330 3 hours**Advanced Communications and Networks–Fa**

Analysis of the performance of analog and digital communication systems and networks in the presence of noise, M-ary signals, signal space concepts, orthogonal signals, and introduction to communication networks. *Prerequisite: EGEE-3330 Communications Theory. Corequisite: EGEE-3370 Probability and Random Processes for Engineers or instructor's permission.*

EGEE-4410 Feedback Control Systems–Fa 4 hours

Introduction to the analysis and design of analog feedback control systems with emphasis on modeling, transfer functions, root locus, frequency response, Bode plots, Nyquist Criterion, stability, compensator design for performance and robustness, PID, phase-lead, phase-lag, lead-lag, and performance indices. Three lecture hours and one two-hour laboratory or recitation per week. Design project required. *Prerequisite: EGEE-3110 Linear Systems.* (Fee: \$100)

EGEE-4450 Digital Control Systems–Sp 3 hours

Introduction to analysis and design of discrete-time sampled-data control systems, signal sampling, A/D and D/A conversion, quantization, application of Z-domain transfer function techniques, transient response, frequency response, stability and performance of computer controlled systems, digital compensation, and controller design. Design project required. *Prerequisite: EGEE-4410 Feedback Control Systems.*

EGEE-4510 Power Systems–Sp 3 hours

Principles of electrical power generation, transmission, and distribution, three-phase power circuits, power system analysis, load flow, symmetrical components, fault currents, system protection, and stability. *Prerequisite: EGEE-3310 Electromagnetics.* (Fee: \$50) (even years)

EGEE-4610 Medical Imaging–Sp 3 hours

Introduction to the physics, phenomenology, and engineering aspects of major medical imaging modalities: photon radiation, radiography, computed tomography, ultrasound, and magnetic resonance imaging. Matlab will be used to process imagery. *Prerequisite: EGEE-3110 Linear Systems.* (odd years)

EGEE-4810 4 hours**Electrical Engineering Senior Design I–Fa**

Design and development of electronic products to meet specific requirements using the top-down design method. Introduction to serial communication design, design for reliability, product cost and safety, environmental issues, project management, electronic design tools, prototype methods, noise analysis in data conversion, and circuit-board layout. Student teams prepare a project proposal, design and prototype electronic subsystems using analog and digital integrated circuits and microcontrollers, use computerized design tools, and conduct design reviews. Three lecture hours and one two-hour lab per week. *Prerequisites: EGEE-3220 Electronics II; EGCP-2120 Microcontrollers; EGEE-3110 Linear Systems; senior status in electrical engineering.* (Fee: \$100)

EGEE-4820**4 hours****Electrical Engineering Senior Design II–Sp**

Continuation of EGEE-4810 implementing the top-down design method. Students design, build, and test a working electronic product to meet specific requirements within budget. Engineering time, team management costs, and component costs are incorporated into the total cost and grade for the final product. Formal design reports and presentations required. Two three-hour laboratories per week. *Prerequisite: EGEE-4810 Electrical Engineering Senior Design I.* (Fee: \$100)

EGEE-4950**1–3 hours****Advanced Topics in Electrical Engineering–Sp**

Selected topics in electrical engineering at the 4000-level that expand the depth of existing 3000- and 4000-level courses or expose the students to advanced concepts not taught in other courses; topics may be proposed by the engineering faculty or students. *Prerequisite: instructor's permission.*

General Engineering (EGGN)**EGGN-1110 The Engineering Profession–Fa****1 hour**

Introduction to the basic concepts and skills necessary to function effectively as a Christian engineer; ethical and moral issues in engineering practice and engineering computer applications. Term project introduces Christian heritage in science and engineering; students participate in group activities and design projects. (Fee: \$50)

EGGN-1960 Competition Project–Sp**0 hours**

Engineering freshmen on a department of engineering intercollegiate design competition may use this course to provide on their transcript a record of their participation throughout the year. The name of the competition will be designated.

EGGN-2960 Competition Project–Sp**0 hours**

Engineering sophomores on a department of engineering intercollegiate design competition may use this course to provide on their transcript a record of their participation throughout the year. The name of the competition will be designated.

EGGN-3110 Professional Ethics–Sp**3 hours**

Introduction to the theories of morality and philosophical issues of determining what is true and what is good. Applications are made to professional conduct, engineer-client relations, and product liability. Legal problems and the engineering code of ethics are discussed from a biblical perspective.

EGGN-3610 Biomedical Engineering Systems–Sp**3 hours**

Introduction to the field of biomedical engineering and the application of engineering to the field of medicine; fundamental aspects of measuring and modeling physiological systems, biomedical device design, tissue engineering, bioelectric phenomena, biosensors, physiological modeling, biomedical imaging, and biomaterials. Team taught by ME and EE professors. *Prerequisites: Engineering major with junior standing; GBIO-1000 Principles of Biology.* (even years)

EGGN-3910 Co-op I**0 hours**

First term for an engineering or computer science student to work in industry for one semester. A final report is required. Students completing a co-op work assignment and registered for this course are granted full-time student status. *Prerequisite: junior status in engineering or computer science and enrollment in the co-op program.* (Fee \$75).

EGGN-3911 Co-op IA**0 hours**

First half of the first term for an engineering or computer science student to work in industry part-time for one semester. A final report is required. Students enrolled in part-time co-op must register for six or more credit hours to maintain full-time student status. *Prerequisite: junior status in engineering or computer science and enrollment in the co-op program.* (Fee \$40).

EGGN-3912 Co-op IB**0 hours**

Second half of the first term for an engineering or computer science student to work in industry part time for one semester. A final report is required. Students enrolled in part-time co-op must register for six or more credit hours to maintain full-time student status. *Prerequisite: EGGN-3911 Co-op IA.* (Fee \$40).

EGGN-3920 Co-op II**0 hours**

Second term for an engineering or computer science student to work in industry for one semester. A final report is required. *Prerequisite: EGGN-3910 Co-op I or EGGN-3912 Co-op IB.* (Fee \$75).

EGGN-3921 Co-op IIA**0 hours**

First half of the second term for an engineering or computer science student to work in industry part time for one semester. A final report is required. Students enrolled in part-time co-op must register for six or more credit hours to maintain full-time student status. *Prerequisite: EGGN-3910 Co-op I or EGGN-3912 Co-op IB.* (Fee \$40).

EGGN-3922 Co-op IIB**0 hours**

Second half of the second term for an engineering or computer science student to work in industry part time for one semester. A final report is required. Students enrolled in part-time co-op must register for six or more credit hours to maintain full-time student status. *Prerequisite: EGGN-3921 Co-op IIA.* (Fee: \$40).

EGGN-3930 Co-op III**0 hours**

Third term for an engineering or computer science student to work in industry for one semester. A final report is required. *Prerequisite: EGGN-3920 Co-op II or EGGN-3922 Co-op IIB.* (Fee: \$75). May be repeated.

EGGN-3931 Co-op IIIA**0 hours**

First half of the third term for an engineering or computer science student to work in industry part time for one semester. A final report is required. Students enrolled in part-time co-op must register for six or more credit hours to maintain full-time student status. *Prerequisite: EGGN-3920 Co-op II or EGGN-3922 Co-op IIB.* (Fee \$40). May be repeated.

EGGN-3932 Co-op IIIB**0 hours**

Second half of the third term for an engineering or computer science student to work in industry part time for one semester. A final report is required. Students enrolled in part-time co-op must register for six or more credit hours to maintain full-time student status. *Prerequisite: EGGN-3931 Co-op IIIA.* (Fee \$40). May be repeated.

EGGN-3960 Competition Project–Sp**0 hours**

Engineering juniors on a department of engineering intercollegiate design competition may use this course to provide on their transcript a record of their participation throughout the year. The name of the competition will be designated.

EGGN-4010 Senior Seminar–Fa**0 hours**

Required weekly meeting of senior engineering majors to discuss the transition into the professional work environment. *Prerequisite: senior status in engineering or computer science.* (Fee: \$35)

EGGN-4960 Competition Project–Sp**0 hours**

Engineering seniors on a department of engineering intercollegiate design competition may use this course to provide on their transcript a record of their participation throughout the year. The name of the competition will be designated.

Mechanical Engineering (EGME)**EGME-1810 Engineering Graphics–Fa****1 hour**

Introduction to basic techniques of sketching, drawing, dimensioning, multiple views, sectioning, multi-view projections, and pictorial views. Introduction to commercial software for three-dimensional solid modeling and preparing engineering drawings. (Fee: \$25)

EGME-2050 Computational Methods–Sp 4 hours

Introduction to computer programming and the numerical methods for solving roots of equations, simultaneous linear algebraic equations, ordinary differential equations, integration, introduction to finite-difference approximations, and least-squares curve fits. *Pre- or Corequisites:* MATH-2710 Calculus III; MATH-2740 Differential Equations.

EGME-2310 Manufacturing and Finance–Fa 3 hours

Introduction to the fundamentals of manufacturing and contemporary materials processing, molding, casting, forming, machining, inspection techniques, and quality assurance. Applications to the time value of money, break-even and payback analysis, and economic analysis of engineering alternatives. *Prerequisite:* EGME-2410 Properties of Engineering Materials. (Fee: \$55)

EGME-2410 Properties of Engineering Materials–Fa 4 hours

Introduction to the properties of metallic, ceramic, polymeric, and composite materials; plastic deformation, strengthening, fracture, fatigue, corrosion, diffusion, equilibrium and nonequilibrium processes, phase diagrams, electrical and magnetic properties, and application to materials selection. Three lecture hours and one two-hour laboratory per week. *Prerequisite:* EGME-2530 Statics and Mechanics of Materials. (Fee: \$100)

EGME-2510 Statics–Fa 3 hours

Introduction to analyzing forces in isolated and connected rigid-body systems; vector analysis, forces, moments, resultants, two- and three-dimensional equilibrium, centroids, moment of inertia, friction, trusses, frames, and machines. Design project required. *Prerequisites:* EGME-1810 Engineering Graphics; PHYS-2110 General Physics I; MATH-1720 Analytical Geometry and Calculus II. (Fee: \$10)

EGME-2530 Statics and Mechanics of Materials–Fa 5 hours

Introduction to analyzing forces in isolated and connected rigid-body systems; vector analysis, forces, moments, resultants, two- and three-dimensional equilibrium, centroids, distributed loading, moment of inertia, friction, trusses, frames, and machines. Introduction to the theoretical and experimental analysis of deformable bodies subject to applied loads; normal and shear stress and strain, strain energy, torsion, stresses in beams, deflection of beams, combined stress, stress transformation, failure theories, and buckling of columns. Design project required. *Prerequisites:* EGME-1810 Engineering Graphics; PHYS-2110 General Physics I; MATH-1720 Calculus II. (Fee: \$25)

EGME-2630 Dynamics–Sp 3 hours

Introduction to kinematic and kinetic analysis of particles, systems of particles, and rigid bodies; position, velocity, acceleration, non-rotating and rotating frames of reference, Newton's laws, work, energy, impulse, momentum, conservative and non-conservative systems, and vibration of single-degree-of-freedom systems. Design project required. *Prerequisite:* EGME-2510 Statics or EGME-2530 Statics and Mechanics of Materials. *Pre- or Corequisite:* MATH-2740 Differential Equations. (Fee: \$10)

EGME-3010 Mechanical Engineering Laboratory I–Fa 2 hours

Experiments using the wind tunnel, engine test cell, testing machines in the mechanics laboratory, vibrations laboratory, fluids laboratory, refrigeration laboratory, and heat transfer laboratory are conducted. Students measure mechanical phenomena such as acceleration, force, pressure, temperature, strain, fluid flow, viscosity, and heat transfer using transducers, instrumentation, and PC-based data acquisition. Students design some of the experiments. Two 2-hour laboratories per week. *Prerequisites:* EGME-2630 Dynamics; EGEE-2050 Circuits and Instrumentation. *Corequisites:* EGME-3110 Thermodynamics; EGME-3210 Fluid Mechanics. (Fee: \$100)

EGME-3020 Mechanical Engineering Laboratory II–Sp 2 hours

Continuation of EGME-3010. Two two-hour laboratories per week. *Prerequisite:* EGME-3010 Mechanical Engineering Laboratory I. *Corequisite:* EGME-3150 Heat Transfer. (Fee: \$100)

EGME-3050 Introduction to Finite Element Analysis–Sp 3 hours

Introduction to basic components of the finite element method including element selection, shape functions, strain-displacement and stress-strain relations, formulation of the stiffness matrix for 1-D, 2-D, and 3-D elements, linear strain and isoparametric formulations, application of boundary conditions, and interpretation of results; application to 2-D and 3-D problems and experience using a commercial code. *Prerequisites:* EGME-2050 Computational Methods; EGME-2530 Statics and Mechanics of Materials. (Fee: \$25)

EGME-3110 Thermodynamics–Fa 5 hours

Introduction to engineering thermodynamics, properties of pure substances, work, heat, first and second laws of thermodynamics, energy, enthalpy, and entropy. Specific application to power, refrigeration cycles, and combustion processes. *Prerequisites:* CHEM-1050 Chemistry for Engineers; MATH-2710 Calculus III.

EGME-3130 Internal Combustion Engines–Sp 3 hours

Introduction to internal combustion engines, fuel-air cycles, engine simulation, emissions, engine performance and alternative fuels. *Prerequisites:* EGME-2630 Dynamics; EGME-3110 Thermodynamics.

EGME-3150 Heat Transfer–Sp 3 hours

Introduction to conduction, convection, and radiation heat transfer in one and two dimensions; free and forced convection, analytical and computational techniques applied to Fourier's Law of conduction, Newton's Law of cooling, and Stefan-Boltzmann's Law of thermal radiation. A heat exchanger design project is required. *Prerequisites:* EGME-3110 Thermodynamics; EGME-3210 Fluid Mechanics. *Corequisite:* EGME-2050 Computational Methods.

EGME-3170 Thermal Systems–Sp 2 hours

Introduction to engineering thermodynamics, properties of pure substances, work, heat, enthalpy, and first law of thermodynamics. Introduction to conduction and convection modes of heat transfer. *Prerequisites:* CHEM-1050 Chemistry for Engineers; MATH-2740 Differential Equations.

EGME-3210 Fluid Mechanics–Fa 3 hours

Introduction to fluid properties, fluid statics, and the concepts, definitions, and basic equations for subsonic fluid dynamics; Navier-Stokes equation, viscous and inviscid fluid flows, potential flow analysis, boundary layers, laminar and turbulent flows, analytical and computational solutions, vector fields, and finite-integral-control-volume method. *Prerequisites:* MATH-2710 Calculus III; MATH-2740 Differential Equations.

EGME-3430 Principles of Physical Metallurgy–Sp 3 hours

Introduction to the physical and mechanical properties of metals and alloys; crystal structure, phase equilibria, defects, strengthening mechanisms, and kinetics of reactions. *Prerequisite:* EGME-2410 Properties of Engineering Materials.

EGME-3450 Plastic and Composite Materials–Sp 2 hours

Introduction to the properties and processing of plastics, resins, and adhesives; rheology, creep-deformation history, and injection molding. Fiber-reinforced, carbon-carbon, and metal-matrix composites are analyzed for strength, anisotropy, and applicability. *Prerequisite:* EGME-2410 Properties of Engineering Materials.

- EGME-3610 Kinematics and Design of Machines–Sp** **3 hours**
Introduction to the analysis and synthesis of motion in planar mechanisms and linkages; velocity and acceleration analysis, cam design, gears, simple and compound gear trains, computer solution and simulation. Design project required. *Prerequisite: EGME-2630 Dynamics.* (Fee: \$40)
- EGME-3850 Mechanical Design–Sp** **3 hours**
Further development of load determination, stress, strain, deflection and failure theories; integration of an iterative problem solver in the design process; and analysis of fatigue failure. Introduction to the design of mechanical components including shafts, keys, couplings, bearings, gears, springs, and fasteners. *Prerequisite: EGME-2410 Properties of Engineering Materials. Corequisites: EGME-3020 Mechanical Engineering Laboratory II; EGME-3610 Kinematics and Design of Machines.* (Fee: \$25)
- EGME-3920 Mechanical Engineering Internship** **1–3 hours**
An opportunity for a mechanical engineering student to work closely with an industrial advisor. Specific attention is given to solving a particular problem(s) in that industry or firm. A faculty advisor assists in supervising and approving the internship, including assessing the number of credit hours. A final report (approximately seven pages per credit hour) describing the experience, including the problem and solution, is required. Must be arranged with faculty sponsor and work supervisor before starting and cannot be used to satisfy elective credit requirements. *Prerequisites: junior or senior engineering major status; faculty advisor's permission.*
- EGME-3950 Topics in Mechanical Engineering–Fa, Sp** **1–3 hours**
Selected topics in mechanical engineering at the 3000-level that will compliment or extend present 2000- or 3000-level courses or expose students to topics not taught in other courses; may be proposed by the engineering faculty or students. *Prerequisite: instructor's permission.*
- EGME-3980 Independent Study in Mechanical Engineering** **1–3 hours**
Opportunity to perform independent study or research in the various branches of engineering and allied fields of application. A formal proposal for study must be approved by the faculty advisor before registering for this course. Up to three credit hours of engineering electives can be satisfied by an equivalent number of hours of independent study. *Prerequisites: junior or senior engineering major status; faculty advisor's permission.*
- EGME-3990 Project Design in Mechanical Engineering** **1–3 hours**
An elective course for students to get academic credit for extracurricular design work in mechanical engineering; project may be related to a design competition, ministry, industry, or personal interest. Cannot be used to satisfy engineering elective requirements. *Prerequisite: instructor's permission.*
- EGME-4050 Finite Difference Methods In Engineering–Fa** **2 hours**
Finite-difference approximations for derivatives and differential equations applied to solve engineering problems; consistency, stability, truncation error, and introduction to grid generation. *Prerequisites: EGME-2050 Computational Methods; MATH-2710 Calculus III.*
- EGME-4060 Computational Fluid Dynamics–Sp** **2 hours**
Introduction to computational fluid dynamics for solving 2-D and 3-D engineering problems. Formulations of the Navier-Stokes equations will be examined. The basis of the numerical methods in advanced CFD commercial codes will be studied for understanding how to intelligently use engineering software to solve problems. Topics include: formulation of new problems, generating CAD grids, identifying and writing appropriate boundary/initial conditions, selecting solution techniques and turbulence models available in the code, and running and interpreting the validity of the results. *Prerequisites: EGME-3210 Fluid Mechanics; EGME 4050 Finite Difference Fluid Methods.*
- EGME-4160 Radiation and Solar Energy–Fa** **2 hours**
Introduction to the fundamentals of radiation heat transfer including shape factors, wave-length dependence, and material properties. Applications to solar energy engineering and design problems. *Prerequisite: EGME-3150 Heat Transfer.*
- EGME-4250 Propulsion–Fa** **2 hours**
Introduction to the principles of thrust production, compressible flow of gases, thermodynamics of jet propulsion systems, and parametric performance analysis of jet engines. *Prerequisites: EGME-3110 Thermodynamics; EGME-3210 Fluid Mechanics.*
- EGME-4270 Compressible Fluid Flow–Sp** **2 hours**
Introduction to the compressible flow of gases in engineering systems; isentropic flow in variable-area passages, shock and expansion waves; and flow with wall friction and heat transfer. *Prerequisites: EGME-2050 Computational Methods; EGME-3110 Thermodynamics; EGME-3210 Fluid Mechanics.*
- EGME-4410 Introduction to Fracture Mechanics–Sp** **3 hours**
Introduction to failure modes caused by static and dynamic loading, brittle fracture criteria, elastic behavior, stress fields around cracks, fatigue failure, stress corrosion cracking, and strain hardening mechanisms. *Prerequisite: EGME-2410 Properties of Engineering Materials.*
- EGME-4530 Advanced Mechanics of Materials–Fa** **3 hours**
Advanced treatment of stress and strain including coordinate transformations, the eigenvalue problem, Mohr's circle and linear constitutive equations. Failure theories and energy methods, including Castigliano's theorems, are studied; applications to classical topics including analysis of beams with non-symmetrical sections, non-circular torsion, thin-wall beams, and beams on elastic foundations. *Prerequisite: EGME-2530 Statics and Mechanics of Materials.*
- EGME-4560 Biomechanics and Biomaterials–Sp** **3 hours**
Introduction to biomechanics of the human body, reactions of biological tissue and synthetic materials to load, and the biomechanics of biomaterials. Advanced mechanical analysis of rigid and deformable bodies and fluid mechanics applied to bone, muscle, connective tissue and blood. This course will provide foundational knowledge to the engineering student for occupations in medical device manufacturing, health and sport sciences industries, and advanced fields of study. *Prerequisites: EGME-2410 Properties of Engineering Materials, PHYS-2120 General Physics II and MATH-2740 Differential Equations.* (odd years)
- EGME-4610 Dynamics of Machines–Fa** **3 hours**
Dynamic analysis of machines and mechanisms; Newton's laws of motion, energy methods, force analysis, shaking forces, static and dynamic balancing, engine dynamics, multi-cylinder engines, and cam dynamics. *Prerequisite: EGME-3610 Kinematics and Design of Machines.*

EGME-4660 Principles of Automatic Controls–Fa 3 hours

Introduction to theoretical and experimental analysis of classical analog feedback control systems with emphasis on modeling, transfer function formulation, frequency response, root locus, Bodé plots, stability, and compensator design. Three lecture hours and one two-hour laboratory or recitation per week; design project required. *Prerequisite: EGEE-2050 Circuits and Instrumentation.* (Fee: \$100)

EGME-4710 Vibrations–Sp 3 hours

Free and forced vibrations of mechanical systems having lumped mass and elasticity, single and multiple degree-of-freedom systems, matrix formulation, eigenvalues and eigenvectors, normal mode theory, Laplace Transform, dissipative systems, introduction to random, continuous, nonlinear vibrations, and engineering applications. *Prerequisite: EGME-2630 Dynamics.* (Fee: \$15)

EGME-4720 Vibrations Lab–Sp 1 hour

Laboratory experiments to demonstrate and support EGME-4710 Vibrations; function and calibration of instrumentation and motion detection transducers, measuring the frequency response and impulse response function, electrodynamic shakers, instrumentation, Fast Fourier Transform, spectral analysis, and experience using a commercial FFT analyzer. One two-hour laboratory per week. *Pre- or Corequisite: EGME-4710 Vibrations.* (Fee: \$100)

EGME-4750 3 hours**Random Vibrations and Signature Analysis**

Introduction to vibration analysis of discrete and continuous systems to random excitation, harmonic vibration, transient response, convolution integral, Laplace and Fourier Transform, Discrete Fourier Transform, Fast Fourier Transform, random variables, coherence, correlation, auto- and cross-correlation, power spectral density, transfer function, and modal analysis; experience using a commercial FFT analyzer. Design project required. *Prerequisite: EGME-4710 Vibrations.* (Fee: \$100)

EGME-4810 3 hours**Mechanical Engineering Senior Design I–Fa**

This is the senior capstone design project for mechanical engineers. Student teams work independently on a design project to find a solution consistent with stated specifications using principles studied in previous courses. Work in this semester includes writing the proposal and performing background research and preliminary design. Students conduct a mid-term design review and end-of-semester oral and written presentation. Projects are advised by a faculty committee; course includes weekly written progress reports and meetings with the faculty project advisor. *Prerequisites: EGME-3850 Mechanical Design; EGME-3610 Kinematics and Design of Machines; EGME-3150 Heat Transfer; EGME-3020 Mechanical Engineering Lab II; and senior status.* (Fee: \$100)

EGME-4820 3 hours**Mechanical Engineering Senior Design II–Sp**

A continuation of EGME-4810, emphasizing detailed design, prototyping, troubleshooting, design modifications, project completion, reporting, and oral presentation. Students submit written progress reports and attend meetings each week with the faculty project advisor, conduct an oral presentation, and prepare the final report. *Prerequisite: EGME-4810 Mechanical Engineering Senior Design I.* (Fee: \$100)

EGME-4950 1–3 hours**Advanced Topics in Mechanical Engineering–Sp**

Selected topics in mechanical engineering at the 4000-level that expand the depth of existing 3000- and 4000-level courses or expose the students to advanced concepts not taught in other courses. Topics may be proposed by the engineering faculty or students. *Prerequisite: instructor's permission.*

Electronic Media (EMTC)**EMTC-1110 Introduction to Electronic Media–Fa 3 hours**

A survey of electronic media, including history and development, types, audience research, regulations, and globalization.

EMTC-1120 Audio Production–Fa, Sp 3 hours

Students receive instruction and training in the operation of electronic equipment used in electronic media. This course emphasizes the roles of sound designer and engineer; the student will be introduced to the techniques of audio production and will produce a variety of media projects. (Fee: \$45)

EMTC-1210 Media Performance–Sp 3 hours

Examines all types of announcing and applies each with particular emphasis to radio and television performance. Emphasis is on the use of the voice as a tool for communication of ideas on a one-to-one basis. (Fee: \$45)

EMTC-1610 Digital Media Performance–Fa 3 hours

An introduction to “industry standard” tools used in the production of digital audio, video, interactive interfaces, motion graphics and animation. Topics will include factors to be considered in the creation of digital media optimized for online and mobile delivery. Crosslisted with EMTC, JOUR.

EMTC-2061 Proficiency in HTML–Fa, Sp 0 hours

The student will demonstrate the ability to create webpages using an HTML editor. A list of resources is available from the interactive media faculty to help the student prepare to pass this proficiency requirement. (Fee: \$10)

EMTC-2062 Proficiency in Photoshop–Fa, Sp 0 hours

The student will demonstrate the ability to create screen designs for television and interactive media in Photoshop. A list of resources is available from the interactive media faculty to help the student prepare to pass this proficiency requirement. (Fee: \$10)

EMTC-2063 Proficiency in Illustrator–Fa, Sp 0 hours

The student will demonstrate the ability to create vector-based designs in Illustrator. A list of resources is available from the interactive media faculty to help the student prepare to pass this proficiency requirement. (Fee: \$10)

EMTC-2110 Video Technical Training–Sp 3 hours

This course provides hands-on training with all video production equipment, including cameras, lighting, sound, and editing. The student will learn basic television skills and technical terms. (Fee: \$45)

EMTC-2130 Writing for Electronic Media–Fa 3 hours

Covers the form and style of writing for radio, television, and interactive media. Work in the course includes news writing, public service announcements, promotional announcements, advertisements, video scripting, and writing for the web.

EMTC-2220 Sound Design–Sp 3 hours

This course is designed to prepare the media production student to create sound designs for radio, television, film and other audio media by studying the nature of sound, psychoacoustics, the power of the voice, sound effects, and music and how they can be used in combination with visual image to influence listeners/viewers. Students will create and execute a variety of sound designs for radio, television, and other audio media. *Prerequisite: EMTC-1120 Audio Production.* (Fee: \$45)

EMTC-2320 3 hours**Preproduction and Planning for Video and Film–Fa**

This course examines the framework for preparation for video and film production in fiction and nonfiction programming. The duties of the producer and director are covered as they relate to scripting, budgets, legalities, scheduling, site surveys and other related preproduction duties for studio and field productions. (Fee \$45)

- EMTC-2350** **3 hours**
Introduction to Graphics for TV and Film–Fa
 An introduction to the creation and use of graphics for television and film. Topics covered include titling for main and “lower third” titles, motion graphics for program introductions and “bumps,” 2D and 3D animation and SFX for compositing with live action. (Fee: \$40).
- EMTC-2601** **3 hours**
Interactive Interface Design–Fa
 An in-depth study of the design principles and processes used to develop effective interactive interfaces for websites, mobile devices, or other consumer products. Through classroom discussion, research, and studio assignments, students will learn the fundamentals of user-centric design as it relates to digital interfaces. Crosslisted as GDES. *May not be counted as major hours for broadcasting and digital media majors.* (Fee: \$35)
- EMTC-2606** **2 hours**
Introduction to Computer Animation for Electronic Media–Fa
 An introduction to the use of 3D animation software. Intended for students who do not have a background in 3D animation and who need some directed help in preparing for EMTC-3065 Proficiency in Maya. May not be counted as major hours for broadcasting and digital media majors. (Fee: \$35)
- EMTC-2610 Preproduction Planning–Fa** **3 hours**
 Examines the preproduction phase of television and multimedia productions. Topics covered include planning, specifications, contracts, scheduling, budgeting, and evaluation. Special emphasis is placed on project management and research to understand the design and effectiveness of television and multimedia projects.
- EMTC-2810 Sophomore Seminar–Fa** **1 hours**
 The sophomore seminar in broadcasting and digital media is designed to acquaint students with current trends in the electronic media and to aid students in formulating strategies for entry into careers in the electronic media. *Prerequisite: EMTC-1110 Introduction to Electronic Media.*
- EMTC-3061 Proficiency in Flash–Fa, Sp** **0 hours**
 The student will demonstrate the ability to create Flash animations and interactive programs. A list of resources is available from the interactive media faculty to help the student prepare to pass this proficiency requirement. (Fee: \$10)
- EMTC-3062 Proficiency in Director–Fa, Sp** **0 hours**
 The student will demonstrate the ability to create interactive media products using Director. A list of resources is available from the interactive media faculty to help the student prepare to pass this proficiency requirement. (Fee: \$10)
- EMTC-3065 Proficiency in Maya–Fa, Sp** **0 hours**
 The student will demonstrate the ability to create 3D models and animations in Maya. A list of resources is available from the interactive media faculty to help the student prepare to pass this proficiency requirement. (Fee: \$10)
- EMTC-3111** **3 hours**
Survey Research for Electronic Media–Sp
 The study of survey research methodologies used in electronic media, including audience analysis; program and screen design testing; station and website ratings. Includes an introduction to academic research in electronic communication using survey methodologies. *Prerequisite: EMTC-1110 Introduction to Electronic Media.*
- EMTC-3150 Media Ethics–Fa** **2 hours**
 Development of an applied theistic ethic for media practitioners. Topics for ethical examination include media content, business practices, advertising, journalism, privacy, and intellectual property rights. Crosslisted with JOUR-3150. *Prerequisite: junior or senior status.*
- EMTC-3151** **2 hours**
Christian Approaches to Electronic Media–Sp
 Builds upon theistic critiques of the connections between society and technology to develop an understanding of how Christians approach the electronic media, both as consumers and practitioners.
- EMTC-3210 Digital Audio Post Production–Fa** **3 hours**
 This course is designed to teach the theories, principles, and practices of multi-track studio production. Emphasis will be given to the use of digital recording technologies and their usage related to other media. *Prerequisite: EMTC-1120 Audio Production.* (Fee: \$45)
- EMTC-3211 Digital Music Production–Sp** **3 hours**
 This course offers students hands-on experience with modern mixing techniques, specifically utilizing Pro Tools hardware and software. Current theory and methods of signal processing utilized in the mix down process are covered. Each student will have the opportunity to mix various styles of music, critiqued by the instructor. This class is for the serious student of audio who is interested in learning about the music production process. *Prerequisites: EMTC-1120 Audio Production and EMTC-3210 Digital Audio Post Production.* (Fee: \$35).
- EMTC-3215 Live Sound–Fa** **3 hours**
 This course will prepare the student for work in live sound for churches and other venues. Through a series of lectures and labs, students will learn how to set up and operate a PA systems, operate mixers/consoles/control surfaces, trouble shoot problems in audio set-up, mix live sound, complete stage set-up, and the selection of microphones, amps, mixers, speakers and monitors. *Prerequisite: EMTC-1120 Audio Production.* (Fee: \$45)
- EMTC-3216 Audio for Video and Film–Sp** **3 hours**
 Audio for video/film will expose the student to the theories and the practical challenges of gathering audio in the field as a part of a video/film project. The course will also focus on working with sound in the studio during post-production and will include areas such as automatic dialogue replacement and Foley sound effects. Students will record and produce all of the sounds for a major film project. *Prerequisite: EMTC-1120 Audio Production and EMTC-3210 Digital Audio Post Production.* (Fee: \$45).
- EMTC-3310 Digital Film Production–Fa** **3 hours**
 Taught from the producer’s perspective. Hands-on training dealing with all the variables in making a video’s and short films, including preproduction, production, and post-production non-linear editing platforms. *Prerequisite: EMTC-2110 Video Technical Training or approval from the instructor.* (Fee: \$45)
- EMTC-3330 Screenwriting–Fa** **2 hours**
 An advanced writing course for students interested in learning the formal construction involved in writing a professional screenplay, with emphasis on dramatic writing and strong character development. *Prerequisite: EMTC-2130 Writing for Electronic Media.*
- EMTC-3350 Documentary Film–Fa** **3 hours**
 An overview of the origins, development, and current trends in the production of documentary films. Emphasis is given to the viewing and analysis of selected documentary programs. (Fee: \$25) (even years)
- EMTC-3355 SFX and Compositing for TV and Film–Fa** **3 hours**
 This course deals with the creation of computer-generated visual effects and the process for compositing those effects into live action video or film footage. Topics include VFX creation, image matching and manipulation and compositing techniques using industry standard software. *Prerequisites: EMTC-2350 Introduction to Graphics for TV and Film and EMTC-2606 Introduction to Computer Animation for Electronic Media.* (Fee: \$40)

EMTC-3370 Documentary Film-Style Production—Sp 3 hours

Further study of the framework for non-fiction film-style production. Emphasis is placed on cinematography, interviewing, paper editing, directing, post-production, and distribution unique to documentary programming. Students will take the treatment completed in Documentary Film-Style Production I and produce a final program. *Prerequisite: EMTC-1110 Introduction to Electronic Media; EMTC-2110 Video Technical Training.* (odd years)

EMTC-3410 Electronic Media Sales—Fa 3 hours

Emphasis on conducting a customer needs analysis and developing sales presentations. Sales executives work with the class to develop technique, copywrite, and presentation skills. *Prerequisite: EMTC-3111 Survey Research for Electronic Media.* (Fee: \$45)

EMTC-3420 Electronic Media Management—Sp 3 hours

This course is designed to acquaint the student with the concerns facing the management of a media company including legal requirements of the FCC, personnel management, implementation of programming, and station acquisition. *Prerequisite: EMTC-3111 Survey Research for Electronic Media.*

EMTC-3605 Writing and Design for Web and Mobile Media—Sp 3 hours

The purpose of the course is to introduce students to the special design and writing necessary for emerging new media, including the Web, mobile media and social networking sites and services. Crosslisted with JOUR.

EMTC-3610 Visual Design for Electronic Media—Sp 3 hours

This course applies the theory and principles of visual communication to screen design for interactive media. Emphasis is placed on designing for both NTSC and wide-screen HDTV aspect ratios. *Prerequisites: ART-1100 Introduction to Art; EMTC-1110 Introduction to Electronic Media.* (Fee: \$35)

EMTC-3611 Web Analytics—Fa 3 hours

The study of methods for gathering and interpreting Web tracking and usage data. The approach taken is a consumer-centric strategic analysis called Key Insights Analysis which has as its goal delivery of actionable insights and matrices for Web site developers.

EMTC-3620 Digital Compression and Streaming—Sp 3 hours

The course deals with the preparation and delivery of digital media files. Topics include digital media file formats, methods for compression of audio and video files and methods of streaming digital media files over the Internet via Web sites. Students work in a lab setting with a media server to practice compressing and streaming digital media. *Prerequisite: completion of a 3000-level Digital Production course in audio, video, or digital film production.* (Fee: \$15)

EMTC-3630 Principles of Computer Animation—Sp 3 hours

Application of the principles of traditional cell-based animation to computer animation, as well as the effective use of animation for communication. *Prerequisite: EMTC-3065 Proficiency in Maya.* (Fee: \$35)

EMTC-3640 Issues in Mobile Electronic Media—Sp 3 hours

Examines a variety of issues associated with portable communication devices such as personal digital assistants and web-capable cell phones. Topics covered include applications of traditional media theories to wireless communication, diffusion, regulation of wireless technology, e-commerce, and industrial and sociological implications of media mobility. *Prerequisite: junior or senior status.* (Fee: \$35)

EMTC-3650 Networked Audience—Fa 3 hours

Students will develop a framework for understanding the audience by looking at the intersection of a wide variety of factors that shape the media environment. The students will then project current trends to anticipate where the audience will be in the next five years. Crosslisted with JOUR. (Fee: 10)

EMTC-3720 Audio Production Practicum—Fa, Sp 1 hour

The practicum is designed to place the student in a variety of professional settings on and off campus, with the purpose of allowing the student to practice audio skills acquired in earlier courses. The course is repeatable for a total of two hours. *Prerequisites: EMTC-1110 Introduction to Electronic Media; EMTC-1120 Audio Production.* (Fee: \$45)

EMTC-3731 Video Production Practicum—Fa, Sp 1 hour

Production on a video crew in large auditorium production as assigned by the instructor. The course is repeatable for a total of six hours. *Prerequisites: EMTC-2110 Video Technical Training; junior or senior status; permission of instructor.* (Fee: \$25)

EMTC-3733 Sports Production Practicum—Fa, Sp 1 hour

Production on a video crew in sports production as assigned by the instructor. The course is repeatable for a total of six hours. *Prerequisites: EMTC-2110 Video Technical Training; junior or senior status; permission of instructor.* (Fee: \$25)

EMTC-3734 Film Practicum—Fa, Sp 1 hours

Production on a digital film crew as assigned by the instructor.

EMTC-3741 Sales and Management Practicum—Fa, Sp 1 hour

The practicum is designed to place the student in a variety of professional settings on and off campus, with the purpose of allowing the student to observe and practice sales and management skills acquired in earlier courses. The course is repeatable for a total of three hours. *Prerequisites: EMTC-3410 Electronic Media Sales; EMTC-3420 Electronic Media Management; junior or senior status; permission of the instructor.*

EMTC-3761 Interactive Media Practicum—Fa, Sp 1 hour

The student will develop an interactive medium product, such as a webpage or Director-based program, either individually or as a member of a production team under the supervision of a faculty mentor. Repeatable for a total of 2 credit hours. *Prerequisites: EMTC-2061, 2062, 3061, 3062 Proficiencies in HTML, Photoshop, Flash, and Director.* (Fee: \$25)

EMTC-3765 Animation Practicum—Fa 1 hour

The student will develop an animation project individually or with a team, working under the supervision of a faculty mentor. Repeatable for a total of 2 credit hours. *Prerequisites: EMTC-3630 Principles of Computer Animation; permission of faculty mentor.* (Fee: \$25)

EMTC-4110 Electronic Media Law and Regulation—Fa 3 hours

A study of the legal protections and requirements placed upon the electronic media. Emphasis is placed upon court decisions that help to define First Amendment freedoms for those in the media, as well as regulations placed upon the electronic media.

EMTC-4155 Image and Word in a Visual Culture—Sp 3 hours

An inquiry into the tension between image and word in Jewish and Christian thought and the implications for Christians living in a visual culture. Traces this tension through the art of Judaism and the Medieval church, the iconoclastic controversies of early Byzantium and the English Civil Wars, and recent and contemporary religious thinkers. Crosslisted as HON-4155.

EMTC-4310 Advanced Cinematography and Lighting—Sp 3 hours

Taught from the director's perspective, each student will learn advanced digital film production techniques including camera movement, lighting techniques, and non-linear editing advanced use of effects and color correction. *Prerequisite: EMTC-2110 Video Technical Training.* (Fee: \$25)

EMTC-4410 Media Marketing and Promotions–Fa 3 hours

This course will explore issues involved in managing a firm's promotional operations, including advertising, sales promotion, personal selling, public relations, institutional promotion, and publicity. Promotional strategy, objective setting, communication models and listener/viewer response, competitive positioning, legal issues, media strategy, planning and design, and measurement of promotion effectiveness are also studied.

Prerequisites: EMTC-1110 Introduction to Electronic Media, and EMTC-3420 Electronic Media Management

EMTC-4650 3 hours**Designing Solutions for New Audiences–Fa**

Because of the ongoing changes in the communication system, media companies and businesses are in constant reinvention of the ways in which they meet the needs of their audiences by innovations in programming, products and services. In this course students will be presented with a current problem in the use of new and emerging media to connect a client with its audience. Teams will then design a solution to meet the needs of both client and audience. Crosslisted with JOUR. *Prerequisite: EMTC/JOUR-3650 Networked Audience.*

EMTC-4700 Special Topics in Electronic Media–Fa, Sp 3 hours

Available to advanced students who desire intense study in special areas of electronic media. *Prerequisites: junior or senior status as an broadcasting and digital media major; permission of the faculty mentor.*

EMTC-4710 Independent Study: Digital Media 1–3 hours

Taken to allow the student to study an area beyond what is provided through regular course offerings. The student must make a proposal of what is to be studied for the term when applying to a faculty mentor. The student will then follow a schedule approved by the faculty mentor for studying the topic and submitting a report. Repeatable to a total of 6 credit hours in the field.

Prerequisite: approval of proposal by faculty mentor.

EMTC-4810 Senior Seminar–Fa, Sp 1 hour

A transition to the professional world. Includes development of resumés, resumé tapes, and portfolios; interviewing skills; and business etiquette. Students enrolled in Senior Seminar must take the Tek.Xam, a national, standardized assessment tool that measures technology applications and problem-solving skills within the technology environment. The cost for Tek.Xam is covered by the course fee. Capstone course. *Prerequisite: senior status as broadcasting and digital media major. (Fee: \$50)*

EMTC-4920 Senior Project 3 hours

The student selects one of two options: 1) a paper reporting on the student's original research that investigated a topic in electronic media or 2) a media production. A proposal detailing the student's plan for the senior project must be submitted and approved by the faculty mentor prior to registration for the course. Capstone course. *Prerequisites: EMTC-3111 Survey Research for Electronic Media; GPA of 3.0 in major courses; senior status; permission of EMTC faculty. (Fee: \$35)*

EMTC-4930 Electronic Media Internship 3–12 hours

Students are placed with media companies to gain experience in actual career situations. The work must be done under the supervision of an employee of the company approved by the faculty mentor. Students should discuss this option with their advisors at least one semester prior to the internship. Internship agreements must be signed by the student, job supervisor, and faculty mentor prior to registration for the experience. Internships depend upon availability and approval by the electronic media faculty. Capstone course. *Prerequisites: GPA of 3.0 in major courses; senior status; approval by the electronic media faculty.*

English (ENG)**ENG-1000 Basic English–Fa 3 hours**

Study of nomenclature, identification, and application in the linguistic process. Admission by departmental designation only. May not be applied toward the hours needed for graduation.

ENG-1400 Composition–Fa, Sp 3 hours

Designed to assist the student in developing the skills necessary to meet the demands of typical writing situations, both academic and professional. The course will introduce the student to the common expository writing methods of description, narration, analysis, persuasion, and research presentation. (Fee: \$25)

ENG-2070 Fundamentals of English Grammar–Fa, Sp 3 hours

This course is a foundational course for preservice language arts educators and is a prerequisite for Advanced Grammar. It covers forms and functions of words, pronoun/antecedent agreement, subject/verb agreement, and pedagogy.

ENG-2210 Principles of Journalism–Fa, Sp 3 hours

An introductory study of the fundamental skills needed for collecting, organizing, writing, editing, and evaluating material for the common types of news stories, along with a consideration of ethical and legal issues for the print journalist. Strong emphasis on developing journalistic writing skills. *Prerequisite: ENG-1400 Composition.*

ENG-2220 Introduction to Creative Writing–Fa, Sp 3 hours

This course is a prerequisite requirement for any 3000-level creative writing course. The course covers basic instruction in technique and style for all three genres of creative writing: fiction, creative nonfiction, and poetry. *Prerequisite: Eng-1400 Composition.*

ENG-2230 Advanced Composition–Fa, Sp 3 hours

An advanced treatment of the composing process, particularly related to the planning, drafting, revision, and final composition of essays. Writing workshops and peer evaluations are included. *Prerequisite: ENG-1400 Composition.*

ENG-3010 Style and Mechanics for Writers–Fa, Sp, Su 3 hours

Students will learn to apply reliable principles to make writing clear, concise, coherent, and cohesive. (Crosslisted with TPC-3010 Style and Mechanics for Writers) *Prerequisite: ENG-1400 Composition.*

ENG-3020 Creative Writing: Short Forms–Su 3 hours

Intensive summer study in the writing of specific and various short forms in creative writing (selected by instructor); utilizing a "workshop" approach, with a focus on the completion of a final portfolio. Topics may include, but are not limited to, flash-fiction, the prose poem, and the creative nonfiction short. *Prerequisite: ENG-2230 Advanced Composition.*

ENG-3030 Creative Writing: Fiction–Sp 3 hours

Workshop approach to studying, creating, and responding to short stories. Course focuses on the elements of the modern short story from Chekhov forward. Emphasis is on traditional literary fiction; the course does not cover science fiction, fantasy, adolescent fiction, or children's literature. *Prerequisite: ENG-1400 Composition; ENG-2220 Introduction to Creative Writing.*

ENG-3040 Creative Writing: Poetry–Sp 3 hours

Provides guided practice, instruction in craft, constructive criticism, and a supportive atmosphere. Students should leave the course with more confidence about how to read and write poetry, as well as knowledge of the tradition, issues, and forms of poetry. *Prerequisite: ENG-1400 Composition; ENG-2220 Introduction to Creative Writing.*

ENG-3050 Creative Writing: Nonfiction–Sp 3 hours

Intensive study in writing literary nonfiction. Course focuses on sub-genres in contemporary nonfiction: the personal essay, autobiography/the memoir, the short, reportage. Workshop and conference approach. *Prerequisite: ENG-1400 Composition; ENG-2220 Introduction to Creative Writing.*

ENG-3060 The English Language—Fa 3 hours

Historic treatment of the growth and change in the English language with some attention to the ideologies implicit in the development of variant conventions. *Prerequisite: ENG-1400 Composition.*

ENG-3070 3 hours**Advanced Grammar for Adolescent Teachers—Fa, Sp,**

Review of standard grammar with emphasis on current teaching methods of grammatical analysis. Required of all majors with English as a teaching field. *Prerequisite for Adolescent and Young Adult Language Arts majors only: ENG-2070 Fundamentals of English Grammar.*

ENG-3180 Visual Rhetoric—Fa 2 hours

See course description for TPC-3180 Visual Rhetoric.

ENG-3220 Advanced Journalism—Sp 2 hours

Designed for the student who anticipates writing as a vocation or avocation. The emphasis is on reporting and writing for newspapers and magazines. Topics of study include: beat reporting, developing the in-depth features and series, investigative practices, standards and ethics, community and publisher relations, and manuscript production. *Prerequisite: ENG-2210 Principles of Journalism.*

ENG-3300 Developmental Reading—Sp 3 hours

Includes basic philosophies, testing, evaluation, clinical methods, and materials utilized in the prescriptive teaching of basic reading skills in the language arts content area for adolescent/young adult teachers. Field and clinical experiences included. *Prerequisite: admission to the Teacher Education Program. (Fee: \$25)*

ENG-3550 Writing Center Theory and Training—Sp 2 hours

Designed to orient students to writing center theory and practice. Will train students for employment opportunities in the writing center. *Prerequisite: ENG-1400 Composition; permission of instructor.*

ENG-3620 Practicum in Journalism—Fa, Sp 1 hour

Experience in the varied tasks of the journalistic enterprise. *Prerequisite: ENG-2210 Principles of Journalism.*

ENG-4030 Advanced Workshop: Fiction—Fa 2 hours

Course provides an opportunity to do high-level work in fiction writing. Workshop environment will be rigorous and diagnostic, but also supportive. *Prerequisite: ENG-3030 Creative Writing: Fiction (odd years)*

ENG-4040 Advanced Workshop: Poetry—Sp 2 hours

Course provides an opportunity to do high-level work in poetry. Workshop environment will be rigorous and diagnostic, but also supportive. *Prerequisite: ENG-3040 Creative Writing: Poetry (odd years)*

ENG-4050 Advanced Workshop: Nonfiction—Sp 2 hours

Course provides an opportunity to do high-level work in creative nonfiction. Workshop environment will be rigorous and diagnostic, but also supportive. *Prerequisite: ENG-3050 Creative Writing: Nonfiction. (even years)*

ENG-4200 Methods of Teaching Writing—Fa 2 hours

This course will prepare students to teach writing. Course content will include instructional methodology and conferencing and assessment techniques. *Prerequisite: EDSE-4100 Principles of Teaching: Adolescent and Young Adult; currently enrolled in student teaching or by permission of instructor.*

ENG-4230 Independent Study in English—Fa, Sp 1–3 hours

Independent study in a selected field for students with special interests and demonstrated ability.

ENG-4345 1 hour**Creative Writing: Portfolio and Performance—Fa, Sp**

Course provides an opportunity to prepare a final collection of creative writing in close consultation with the advising professor. Students will also organize and present a public reading of their work. *Prerequisite: any two 4000-level creative writing workshops.*

Environmental Science (ENVS)**ENVS-1010 Introduction to Environmental Science—Sp 1 hour**

An entry level course for environmental science majors to introduce the environmental curriculum, initiate camaraderie among students and faculty, and provide guidance in vocational planning. One lecture per week; occasional field trips. *Prerequisite: permission of instructor.*

ENVS-2100 3 hours**Principles of Geographic Information Systems—Fa**

An introduction to the use of geographical information systems (GIS). Topics of emphasis are related to the fields in which these systems are used including, biology, environmental chemistry, epidemiology, geography, geology, and economics. Students will analyze geographical data in order to present potential solutions to a variety of situations. Two one-hour lectures and one two-hour lab per week. *Prerequisite: GMTH-1030 Precalculus or GMTH-2110 Biostatistics, or permission of instructor. (Fee: \$100)*

ENVS-3200 Ecosystem Science—Fa 3 hours

The ecosystem is recognized as the fundamental unit of ecology (as the cell is in cell biology). Emphasis will be placed on determining patterns and identifying the processes connecting the physical environment (climate, soil, and water) and living organisms (microbes, plants, and animals). Three one-hour lectures per week, with occasional field exercises. *Prerequisites: BIO-1120 General Zoology; CHEM-1120 General Chemistry II; ENVS-2100 Principles of Geographic Information Systems; GMTH-2110 Introduction to Biostatistics. (Fee: \$50)*

ENVS-3600 Environmental Ethics—Sp 3 hours

An introductory study of ethical systems that addresses the relationship and responsibility of humankind toward the natural world. Emphasis will be upon the biblical environmental stewardship ethic and its application to contemporary environmental issues. Three lectures per week. *Prerequisites: BIO-2600 General Ecology; junior status; permission of instructor.*

End-User Information Systems (EUIS)**EUIS-1000 3 hours****Word Processing Concepts and Applications**

Designed to develop a working knowledge of word processing software and hardware components and to apply these concepts to various software applications. The student will create, format, edit, store, retrieve, and print different types of documents as well as apply advanced features of the software to expand basic documents. Also an overview of the current operating system.

EUIS-1010 3 hours**Presentation Graphics Concepts and Applications—Sp**

Designed to explain basic concepts of graphics software, give detailed information about the types of graphics that are available and when to use each type, demonstrate how to create each of the major types of graphics, and teach basic design concepts.

EUIS-2010 3 hours**Spreadsheet and Database Concepts and Applications—Sp**

Designed to identify concepts and terminology used with electronic spreadsheets and to identify tasks that can be accomplished with spreadsheet software. The students will be able to use the computer to create, format, edit, store, retrieve, and print worksheets, graphs, and charts. The course will also introduce the student to database management systems. Fundamentals of database management concepts will be covered using a microcomputer database application package. Topics will include table design, query, maintenance, and reports. *Prerequisite: ITM-1510 Software Tools for Business.*

EUIS-2200 Desktop Publishing 2 hours

Writing, assembling, and designing publications commonly found in businesses, such as newsletters, brochures, reports, and promotional materials using PageMaker software.

Exercise and Sport Science Education (ESED)**ESED-2900 2 hours****Health and Movement Education for the Young Child–Fa, Sp**

An investigation of current trends, methods of instruction, and curriculum design in health and physical education for early childhood classrooms, including review of appropriate Ohio models. Emphasis is given to the importance of nutrition, safety, and movement education for the young child, including a look at basic nutritional, health, and safety management, especially in relationship to childhood illnesses and communicable diseases. *Prerequisite: EDUC-1000 The Education Profession.*

Earth Science (ESCI)

Except where noted, general education courses are designed to meet the general education requirements for graduation. These courses will not count toward graduation requirements for majors found in the department of science and mathematics unless they are specifically listed in the curriculum requirements for a major. A student majoring in science or mathematics may take these courses only as electives. However, any course listed for a science or mathematics major or minor may also count toward fulfilling general education requirements.

ESCI-2310 Introduction to Oceanography–Fa 4 hours

An introductory survey of the oceans and the processes that occur in and around them. Major topics will include ocean currents, coastlines, plate tectonics, marine sediments, waves, tides, composition of sea water, interaction of the ocean with the atmosphere, marine life forms, and their habitats. A field trip will visit a local aquarium. Lecture three times per week and one laboratory per week. This course satisfies the physical science requirement of the general education requirements. (Fee: \$100) (odd years)

ESCI-2410 General Meteorology–Fa 4 hours

A survey of basic meteorological principles and weather systems. Topics covered will include the vertical structure of the atmosphere, cloud development and precipitation, optical effects of the atmosphere, wind systems, air masses, fronts, and severe weather. Labs will be used to develop basic meteorological skills such as observation of local weather, decoding and interpretation of meteorological data, and introductory weather forecasting. The course and lab will be taught at a level which requires the use of algebra and trigonometry. Three weekly lectures and one two-hour laboratory per week. This course satisfies the physical science component of the general education requirements (Fee: \$100) (even years)

ESCI-2510 Introduction to Astronomy–Fa 4 hours

An introduction to the structure and composition of the universe. Topics covered will include measurement of celestial objects, structure of the solar system and galaxy, composition and history of the universe. Time will be spent in the discussion of various cosmological models and their implications. The course and lab will be taught at a level which requires the use of algebra and trigonometry. Three weekly lectures and one two-hour laboratory per week. Variations in the laboratory schedule will be made to accommodate field observations. This course satisfies the physical science requirement of the general education requirements. (Fee: \$100) (odd years)

Exercise and Sport Science (ESS)**ESS-1350 2 hours****Foundations of Exercise and Sport Science–Sp**

Orientation to the history, philosophy, and scope of modern exercise and sport science from a theistic perspective.

ESS-1400 First Aid and Safety Education–Fa, Sp 2 hours

American Red Cross Standard First Aid and C.P.R. certificate may be granted at the end of the course. (Fee: \$35)

ESS-1550 Athletic Training Essentials–Fa 2 hours

Principles of prevention, recognition, management, and rehabilitation of athletic injuries are presented for the student anticipating professional employment as a supervisor of individuals engaged in recreation and sport activities. (Fee: \$35)

ESS-2100 Leadership and Ethics in Sport–Fa 3 hours

This course will include the study of principles of biblical leadership and the ethics involved, various laws and theories of leadership, theories of ethics, and how the development of leadership relates to individuals and the domain of sport.

ESS-2380 Motor Learning and Development–Sp 3 hours

A study of the stages in motor development and the factors affecting the acquisition of motor skills and learning as it relates to motor skill acquisition. The course provides cognitive and psychomotor knowledge of fundamental locomotor, non-locomotor, and manipulative motor skills.

ESS-3800 Sport Psychology–Fa, Sp 3 hours

Surveys the concepts and issues related to the human psyche in the context of sports and from a biblical perspective. *Prerequisite: PSYCH-1600 General Psychology, junior status, or permission of instructor.*

ESS-3880 1–3 hours**Special Topics in Exercise and Sport Science**

Investigation of special topics in exercise science that have intrinsic worth and engage student interest. *Prerequisite: permission of instructor.*

ESS-3890 5 hours**Human Anatomy and Physiology for the Physical Educator–Fa**

This course is designed to be a study of the structure and function of the human body from a Christian theistic perspective with particular emphasis on applications and understanding for physical educators. *Prerequisite: GBIO-1000 Principles of Biology.* (Fee: \$25)

ESS-3900 Physiology of Exercise–Sp 3 hours

A study of the physiological processes of the body and how they are affected by and adapt to varying exercise conditions. *Prerequisite: GBIO-2010 Human Anatomy and Physiology I or ESS-3890 Human Anatomy and Physiology for the Physical Educator.* (Fee: \$25)

ESS-3920 Biomechanics–Fa, Sp 3 hours

Application of the facts and principles of basic physics to body movement, sports performance, and teaching of physical education skills. (Fee: \$25)

ESS-3940 Structural Kinesiology–Fa 3 hours

Application of physical laws and analysis of human movement with special reference to anatomical principles underlying human movement. *Prerequisites: GBIO-2010 Human Anatomy and Physiology I or ESS-3890 Human Anatomy and Physiology for the Physical Educator.* (Fee: \$25)

ESS-4600 2 hours**Research in Athletic Training and Exercise Science–Sp**

Designed to develop an appreciation for the importance of and need for quality research in athletic training and/or exercise science. Orientation to methods and procedures utilized, emphasizing basic principles of conducting research, and for interpreting and critically reviewing articles representative of the athletic training/exercise science domains.

ESS-4850 1–3 hours**Independent Study in Exercise and Sport Science–Fa, Sp**

Independent study in the area of exercise and sport science. *Prerequisite: Departmental approval is required.*

ESS-4900 1 hour each**Physical Education Senior Seminar–Fa, Sp**

A study of current issues in physical education and the implications of physical education and sport on society. Students will also study sport law and methods of research and evaluation.

Exercise and Sport Science Elective (ESSE)**ESSE-1350 Foundations of Sport Ministry–Sp 3 hours**

This introductory course will give an overview of sport ministry. It will explore the breadth of such a ministry as it attempts to establish a Biblical base for sports evangelism. It will also attempt to demonstrate the balance of a spirit-filled life and the impact it can have in reaching the world with the message of Christ through sports. (even years)

ESSE-2100 Wilderness Ministry–Su 3 hours

Preparation for and participation in a backpacking trip provides the backdrop for addressing the purpose, benefits, and effective use of the wilderness backpacking experience for maximum spiritual impact on both individuals and groups. Credit/no credit. *If prior arrangements are made for fulfilling the activity requirement, this course can fulfill the Physical Education General Education activity course requirement.* (Fee: \$340)

ESSE-2300 through ESSE-2320 Sports Officiating 2 hours

Lectures, reading, class discussions, and field experiences in officiating. Ohio High School Athletic Association certification may be earned in selected sports.

ESSE-2300 Basketball Officiating 2 hours**ESSE-2310 Volleyball Officiating 2 hours****ESSE-2320 Track and Field Officiating 2 hours****ESSE-2810 Introduction to Camping–Sp 2 hours**

The development and scope of camping including philosophies of centralized and decentralized camping, standards, administration, and basic campcraft skills. Special arrangement only. (Fee: \$40) (even years)

ESSE-2830 Recreational Leadership–Sp 2 hours

Survey of the recreational aspects of games and activities from a noncompetitive perspective. Small and large group activities are planned, such as new games and challenge initiatives to enhance individual and group development and recognize group process and dynamics. Practical work in planning, implementing, and evaluating recreational programs for all ages in schools, youth group outings, Bible clubs, and camps are provided. (odd years)

ESSE-3100 Strength and Conditioning–Sp 3 hours

This course includes the study of the varied aspects of strength training in a variety of sports. In addition to learning and practicing strength training techniques, students will design a conditioning program for preseason, in-season, off-season, and recovery modules. *Prerequisites: GBIO-1000 Principles of Biology, BIO-1110 Introduction to Biology, or permission of the instructor.*

ESSE-4850 Independent Study in Sport Ministry 1–3 hours

Independent study in the area of Sport Ministry by students pursuing the Sport Ministry minor. *Prerequisites: Departmental approval is required.*

Exercise Science (EXSC)**EXSC-2000 Worksite Observation–Fa, Sp, Su 0 hours**

Students are required to arrange a field experience for five consecutive full days (minimum of 30 contact hours) in an exercise science work setting approved by their advisor where they can observe and participate in exercise science worksite activities. *Prerequisites: Departmental approval and a follow-up report are required. Credit/no credit.*

EXSC-3000 Exercise Science Practicum–Fa, Sp 1 hour

This practicum is a minimum of 30 contact hours assisting or instructing in group aerobics, muscle strength conditioning instruction and workout supervision, muscle toning instruction and workout supervision, or personal training. *Departmental approval is required. Credit/no credit.*

EXSC-3010 Campus Exercise Science Practicum–Fa, Sp 1 hour

This practicum is a minimum of 30 contact hours assisting or instructing on-campus experiences such as group aerobics, strength conditioning, workout supervision and personal training. *Departmental approval is required. Credit/No Credit. Prerequisite: EXSC-2000 Worksite Observation.*

EXSC-3020 1 hour**Community Exercise Science Practicum–Fa, Sp**

This practicum is a minimum of 30 contact hours and is intended to provide a hands-on experience in either a sports enhancement facility, hospital cardiac rehabilitation center, or similar facility. *Departmental approval is required. Credit/No Credit. Prerequisite: EXSC-2000 Worksite Observation.*

EXSC-3180 Legal Issues in the Sport Industry–Sp 3 hours

This course will focus on the three major areas of law that have a direct impact on the management of sport: tort liability and risk management, contract law, and constitutional law. *Prerequisite: Junior status.* Crosslisted with SMGT-3180 Legal Issues in the Sport Industry.

EXSC-3810 3 hours**Organization and Administration of Exercise Science–Fa**

This course is designed to provide the knowledge and begin to develop the skills and abilities necessary to organize, administer, manage, promote, and deliver quality health/fitness programs effectively, safely, and efficiently, meeting the needs and desires of both the client and the employer. *Prerequisites: ESS-1350 Foundations of Exercise and Sport Science; EXSC-2000 Worksite Observation; EXSC-3860 Basic Exercise Testing; EXSC-3870 Basic Exercise Prescription; Junior status or permission of the instructor.*

EXSC-3860 Basic Exercise Testing–Fa 4 hours

This course includes guidelines and techniques of evaluation for basic fitness testing with emphasis on aerobic capacity, flexibility, strength, and body composition. Basic concepts of EKG interpretation, including electrode placement, arrhythmia, and electrophysiology, are introduced. The content is consistent with the skills necessary to prepare students for the American College of Sports Medicine health fitness instructor certification. *Prerequisite: GBIO-2010 Human Anatomy and Physiology I or ESS-3890 Human Anatomy and Physiology for the Physical Educator; GMTH-1020 College Algebra.* (Fee:\$100)

EXSC-3870 Basic Exercise Prescription–Sp 4 hours

This course stresses the scientific foundations of conditioning with specific attention to exercise programming using the components of frequency, duration, intensity, mode, and progression, for apparently healthy individuals. The content is consistent with the skills necessary to prepare students for the American College of Sports Medicine health fitness instructor certification. *Prerequisite: EXSC-3860 Basic Exercise Testing.* (Fee:\$100)

EXSC-4600 Research in Exercise Science–Sp 3 hours

Designed to develop an appreciation for the importance of and need for research in exercise science. Orientation to methods and procedures utilized in exercise science research, emphasizing basic principles of conducting research using the case study, literature review and typical outcomes measurement. *Prerequisite: Junior status or permission of the instructor.*

EXSC-4700 Senior Research–Fa 3 hours

Students will work with a faculty mentor to conduct a research project, write a paper, and present the project for peers and faculty. The opportunity to present at conferences and/or publish the paper exists for those interested. *Prerequisite: EXSC-4600 Research in Exercise Science.* (Fee: \$35)

EXSC-4850**1–3 hours****Independent Study in Exercise Science—Fa, Sp**

Independent study in the area of exercise science by students pursuing the exercise science major. *Prerequisite: Departmental approval is required.*

EXSC-4880**3 hours****Exercise Testing and Prescription for Special Populations—Fa**

This course will prepare exercise science students to do exercise testing and prescriptions for individuals who are either acutely or chronically distinct from the “apparently not at risk” adult population. These include individuals who are children, elderly, or pregnant, as well as those who have acute or chronic illness or disease conditions that might affect the testing protocol or details of the exercise prescription. *Prerequisites: ESS-1350 Foundations of Exercise and Sport Science; EXSC-3860 Basic Exercise Testing; EXSC-3870 Basic Exercise Prescription.* (Fee: \$100)

EXSC-4990 Internship in Exercise Science—Fa, Sp 6–12 hours

This is an actual work experience in an exercise science setting for a minimum of 300 work hours for 9 credit hours and up to 400 work hours for 12 credit hours with a minimum of 30 work hours per week. Capstone course for exercise science major. *Prerequisite: Senior status and departmental approval is required.*

F**Film (FILM)****FILM-2350 Christian Motifs in Film—Sp****3 hours**

Study of depictions of Christ and Christ-figures as well as other Christian motifs in film. This course will provide a detailed introduction to the characteristics of the Christ-figure and its most common manifestations in film. The course will focus on viewing and evaluating films containing Christian motifs such as redemption, sacrifice, sin, and faith.

Finance (FIN)**FIN-1710 Personal Finance—Fa, Sp****3 hours**

This course is designed to educate and inform the undergraduate student about personal finance, with the view towards practical application, both currently and upon graduation. The course integrates principles of personal finance with biblical principles. Topics include: biblical stewardship, work, financial planning, budgeting, giving, taxation, use of credit, investments, asset protection, retirement and estate planning. (This course is a general elective course.)

FIN-2730 Church Business Administration**3 hours**

A study of the principles and procedures of the financial management of the local church organization. (Credit not applicable to meet business elective requirements.) Crosslisted with BEPT-2730.

FIN-3310 Money and Financial Markets—Sp**3 hours**

A study of money, banking, and monetary theory, with particular emphasis on international financial markets. *Prerequisite: ECON-2340 Macroeconomics or permission of instructor.* Crosslisted with ECON-3310.

FIN-3710 Principles of Finance—Fa, Sp**3 hours**

A study of the theoretical and practical aspects of financial decision making. Topics include financial statement analysis, financial markets, risk and return, determinants of interest rates, time value of money, valuation of financial assets, cost of capital and capital budgeting, dividends, multi-national financial management, and financial planning and forecasting. *Prerequisites: ACCT-2110 Principles of Accounting I; BUS-2150 Statistics for Business.*

FIN-3730 Investments—Sp**3 hours**

A study of the various types of investments including stocks, bonds, mutual funds, commercial, paper, options, and commodities. Particular emphasis is given to return and risk in developing investment strategies. *Prerequisite: FIN-3710 Principles of Finance.* (Fee \$50)

FIN-3750 International Finance—Sp**3 hours**

Discussion and analysis of financial management within a global context. Topics include international financial markets, foreign exchange rates and risk, exchange risk management, and other financial management issues relative to the multinational firm. *Prerequisite: FIN-3710 Principles of Finance*

FIN-3760 Financial Planning—Fa**3 hours**

This course provides an introduction to the field of personal financial planning. The course includes an overview of investments, income taxation, insurance, estate planning, retirement planning, and employee benefits. *Prerequisite: FIN-3710 Principles of Finance*

FIN-3770**3 hours****Security Analysis and Portfolio Management—Fa**

The theory and practice of security analysis techniques and portfolio management objectives. Students research securities in order to make informed buy/sell recommendations and evaluate security and portfolio performance with a particular emphasis on common stocks. Students manage a funded portfolio. *Prerequisite: FIN-3730 Investments.* (Fee: \$50)

FIN-4700 Seminar in Finance**1 hour**

A forum to discuss contemporary topics and issues in finance and provide guidance in areas of student career interest. *Prerequisites: ACCT-3120 Intermediate Financial Accounting II; FIN-3310 Money and Financial Markets; FIN-3710 Principles of Finance; FIN-3730 Investments.*

FIN-4710**3 hours****Advanced Security Analysis and Portfolio Management Practicum—Sp**

An in-depth application of investment theory and techniques. Students research securities in order to make informed buy/sell recommendations and evaluate security and portfolio performance with a particular emphasis on common stocks. Students manage a funded portfolio. *Prerequisite: FIN-3770 Security Analysis and Portfolio Management.* Admission to this course is limited and requires instructor approval. (Fee: \$50)

FIN-4750 Financial Institution Management—Fa**3 hours**

This course takes an in-depth look at financial institution management and covers topics such as: types of financial institutions, asset and liability management, risks faced by financial institutions, ways of dealing with those risks, and the regulatory environment in which these institutions operate. This course is an elective course for Finance majors *Prerequisite: FIN-3710 Principles of Finance.* (Fee: \$20)

FIN-4770 Advanced Financial Management—Fa**3 hours**

An in-depth analysis of topics of concern to financial managers of modern corporations. Topics include capital budgeting, financial forecasting, working capital management, and valuation of merger and acquisition candidates. *Prerequisite: FIN 3710 Principles of Finance.*

Forensic Science (FORS)**FORS-3400 Forensic Science–Fa 4 hours**

This course will apply a student's knowledge of chemistry and biology to specific forensic analyses. Topics to be covered will include matching of paint and glass samples, use of GC/Mass Spectrometry and IR spectroscopy to identify controlled substances, analysis of explosives and fuel residues, DNA typing, fingerprint examination, document examination, and giving of expert testimony. *Prerequisites:* *BIO-2250 Cell Biology; CHEM-2220 Analytical Chemistry II; CHEM-3510 Organic Chemistry I; CRJU-3390 Criminal Evidence.* (Fee: \$100)

FORS-4800 Forensic Science Capstone–Sp 1 hour

Capstone course for the forensic science major. Students will research a specific forensic procedure and give a brief explanation of it. This will be followed by a series of detailed questions from a panel of faculty members, designed to simulate the examination of an expert witness. Students will be graded on their knowledge and professional presentation. *Prerequisites:* *BIO-3710 Biochemistry; CHEM-3520 Organic Chemistry II; FORS-3400 Forensic Science.*

French (FREN)**FREN-1910, 1920 Elementary French I and II 4 hours/sem**

Development of basic skills in reading, writing, speaking, and listening in French, along with an introduction to French culture.

FREN-2910, 2920 Intermediate French I and II–Fa 4/3 hours/sem

Development of all four language skills through grammar review, composition, conversation and readings in French literature and culture. *Prerequisite:* *FREN-1920 Elementary French II; instructor's approval or placement by exam.*

FREN-3910 French Conversation–Fa 3 hours

Designed to increase the student's aural comprehension and oral communication in French. Attention given to pronunciation, vocabulary building, communication strategies, and effective cross-cultural communication. *Prerequisite:* *FREN-2920 Intermediate French II; instructor's approval or placement by exam.*

FREN-3920 Contemporary French Culture–Sp 3 hours

Exploration of beliefs, behaviors, and values of Francophone cultures through a comparative approach that provides a framework for describing France and the French in relation to others and themselves. *Prerequisite:* *FREN-2920 Intermediate French II; instructor's approval or placement by exam.*

FREN-3930 Survey of French Literature–Sp 3 hours

This course focuses on a sampling of French literature selections set in historical context. The course includes readings from major French and Francophone authors. Students will gain knowledge of the literature, analyze the techniques used, and gain cultural background and understanding. *Prerequisite:* *FREN-2920 Contemporary French Culture or permission of instructor.*

G**General Biology (GBIO)**

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GBIO-1000 Principles of Biology–Fa, Sp, Su 3.5 hours

Emphasizes basic life processes and the principles by which these processes operate at the ecological, organismic, and cellular levels of organization with emphasis on human responsibility toward life at all levels. Three lectures each week and one two-hour, bi-weekly laboratory. (Fee: \$75)

GBIO-2010 Human Anatomy and Physiology I–Sp 4 hours

Survey of the anatomy and physiology of the human body with an emphasis on cell and human tissues and on the skeletal, muscular, nervous, and endocrine systems. Three lectures and one laboratory experience per week. *Prerequisite:* *GBIO-1000 Principles of Biology; or CHEM-1000 Principles of Chemistry.* (Fee: \$100)

GBIO-2015 Human Anatomy and Physiology II–Fa 4 hours

Survey of the anatomy and physiology of the human body with an emphasis on the cardiovascular, respiratory, immune, digestive, urinary, and reproductive systems. Three lectures and one two hour laboratory per week. *Prerequisites:* *GBIO-2010 Human Anatomy and Physiology I.* (Fee \$100)

GBIO-2020 4 hours**Human Anatomy, Physiology, and Pathophysiology–Sp**

Survey of the anatomy and physiology of the human body with an emphasis on the digestive, urinary, and reproductive systems, as well as metabolism and acid-base balance. The pathophysiology of disease is presented using a case-study format during the laboratory sessions. Three lectures and one two-hour laboratory per week. *Prerequisite:* *GBIO-2010 Human Anatomy and Physiology I.*

GBIO-2720 Bioethics and the Human Experience–Sp 3 hours

An integrative survey of bioethics, emphasizing human personhood, human sexuality and reproduction, end-of-life issues, and biomedical decision making. *Prerequisite:* *GBIO-1000 Principles of Biology.*

GBIO-4700 Bioethics Colloquium–Sp 1 hour

An integrative bioethics project, including a written paper and oral presentation. *Prerequisite:* *Completion of other elements of Bioethics minor.*

Graphic Design (GDES)**GDES-1150 Digital Image/Illustration–Fa, Sp 3 hours**

An introduction to media and professional techniques used in digital illustration. GD majors and minors only. (Fee: \$50)

GDES-1220 Digital Image/Photography–Fa, Sp 3 hours

An introduction to digital imaging technology and professional techniques for image editing and photo manipulation. The course will provide opportunities for becoming proficient with the tools and techniques associated with Adobe Photoshop, the industry-standard software for image editing, through classroom discussion, projects, tutorials, and studio assignments. GD majors and minors only. (Fee: \$50)

GDES-1300 Graphic Design for Non-Majors–Fa 3 hours

An introduction to graphic design, emphasizing the fundamentals of design and typography as applied to the development of effective print and web communication. (Fee: \$50)

GDES-2100 Typography–Fa 3 hours

An introduction to the study of typography and its role in the structuring of visual language and its relationship to the discipline of graphic design. The course will examine the history of letterforms, their sources, and their influences and will provide opportunities for learning principles and guidelines for the effective use of type in visual communications for a variety of media and messages. Students will learn to structure intelligent, creative type solutions through classroom discussion, reading, research, and studio assignments, including editorial, promotional, and informational applications of typography. *Prerequisites:* *ART-1230 Design I; GDES-1150 Digital Image/Illustration.* GD Majors and minors only. (Fee: \$50)

GDES-2601 Interactive Interface Design–Fa 3 hours

An in-depth study of the design principles and processes used to develop effective interactive interfaces for websites, mobile devices, or other consumer products. Through classroom discussion, research and studio assignments, students will learn the fundamentals of user-centric design as it relates to digital interfaces. Crosslisted as EMTC. *May not be counted as major hours for broadcasting and digital media majors.* (Fee: \$35)

GDES-3110 Portfolio–Fa, Sp 1 hour

This course will focus on developing professional presentation materials and communication skills required to present project work to design professionals and prospective employers. Previous project work will be refined along with additional project work necessary to emphasize interest in a particular area of specialization. Students will be required to develop a resumé and portfolio along with written communications for documenting their education, experience, and technical skills. Students are recommended to have completed or be concurrently taking GDES-3220 Graphic Design I to have adequate material for their portfolio. (Fee: \$145)

GDES-3220 Graphic Design I–Sp 3 hours

An introduction to the study of graphic design with emphasis on using the principles of design to communicate information and ideas in visual form. The course will provide opportunities to learn principles of visual communication and steps in the design process necessary to produce effective design solutions. Learning will be achieved through classroom discussion, reading, research, and studio assignments that center on producing concepts for both printed and electronic forms of information design.

Prerequisites: GDES-2100 Typography; GDES-1220 Digital Image/Photography. GD majors and minors only. (Fee: \$50)

GDES-3230 Production Design I–Fa 3 hours

An introduction to the technical processes required for the production of graphic design solutions in a variety of media. The course will provide opportunities to gain understanding of guidelines and requirements necessary for producing design documents in both conventional and electronic media. GD majors and minors only. (Fee: \$50)

GDES-3300 Web Design–Sp 3 hours

Students will learn to design websites, pages, and content while integrating creative visual design, layout, and usable navigation features to effectively guide users to content. Concepts in visual, user-centered design will be explored while students develop practical skills in HTML, CSS, and web-publishing applications such as Macromedia Dreamweaver. *Prerequisites: GDES-1220 Digital Image/Photography, GDES-3220 Graphic Design I, or permission of instructor.*

GDES-4220 Graphic Design II–Fa 3 hours

An in-depth study of visual communication design and its role in creating corporate and brand identity programs. *Prerequisites: GDES-1150 Digital Image/Illustration; GDES-1220 Digital Image/Photography; GDES-3220 Graphic Design I; GDES-3230 Production Design I; or permission of the instructor.* GD majors and minors only. (Fee: \$50)

GDES-4230 Production Design II–Sp 3 hours

An in-depth study of production methods and practices for application to 2-dimensional and 3-dimensional design concepts. *Prerequisites: GDES-1150 Digital Image/Illustration; GDES-1220 Digital Image/Photography; GDES-3220 Graphic Design I; GDES-3230 Production Design I; or permission of the instructor.* (Fee: \$50)

GDES-4300 Advanced Web Design–Fa 3 hours

Students will learn advanced concepts and techniques in web design including visual design, navigation, usability, grid layout, scripting, coding, and other skills necessary to produce professional, visually enhanced media for delivery via the web. Students will use industry standards, including software, to develop websites and digital media that integrate motion, sound, and interactivity to add value and enhance the user experience for web-based advertising, marketing, and other communication needs. *Prerequisites: EMTC-2601 Interactive interface Design; GDES-3300 Web Design.*

GDES-4310 Digital Portfolio–Sp 1 hour

This course will focus on developing a professional web-based digital portfolio and resumé that demonstrates your web design knowledge and abilities in addition to your academic and career achievements to prospective employers. Previous project work will be refined along with additional project work necessary to emphasize abilities in a particular area of specialization. Students will be required to develop a web-based digital portfolio and resumé documenting their education, experience, and technical skills. *Prerequisites: Previous or concurrent enrollment in GDES-4300 Advanced Web Design and senior status, or permission of instructor.*

GDES-4900 Graphic Design Internship–Fa, Sp, Su 2–3 hours

The graphic design internship will give the student an opportunity to gain actual on-the-job experience with professionals in the graphic design industry. This opportunity will allow students to gain insight into the professional practices and approaches to solving communication challenges for a variety of business models and client types. This experience will become a valuable asset in competing for an entry-level position upon graduation.

Geography (GEO)**GEO-3080 History of Russia and the Soviet Union–Fa 3 hours**

The course will cover not only Soviet history but also major events of Russian history up to the Bolshevik Revolution. Soviet history will be studied in detail, with attention given to the development of non-Russian peoples in the empire. The political, economic, social, and foreign policy aspects of Soviet history will all be covered, emphasizing Perestroika and the Soviet collapse. Crosslisted as GEO, HIST, INTL, or POLS

GEO-3200 History and Politics of Latin America–Fa 3 hours

Analysis of the major historical, political, geographical, social, and diplomatic developments that have shaped contemporary Latin America. Crosslisted as GEO, HIST, INTL, or POLS. (even years)

GEO-3210 History and Politics of Asia–Sp 3 hours

Study of the historical, political, geographical, social, and diplomatic developments of Asia from the 18th century to the present. Crosslisted as GEO, HIST, INTL, or POLS. (odd years)

GEO-3220 History and Politics of the Middle East–Sp 3 hours

Analysis of the major historical, political, geographical, and social forces, such as religion and nationalism, that have shaped the contemporary Middle Eastern states. Crosslisted as GEO, HIST, INTL, or POLS.

GEO-3230 History and Politics of Western Europe–Sp 3 hours

This course will cover the development of Western European history and politics from approximately the year 1900 to the present. Concentration will be on the great European powers, but will include the smaller states. The political, economic, and social histories of the nations of Europe will be covered, as well as several macro-European issues. Crosslisted as GEO, HIST, INTL, or POLS. (odd years)

- GEO-3510** **3 hours**
World Regional Geography — Western Hemisphere—Fa
 Spatial survey of various regions in the western hemisphere with an emphasis on the cultural, economic, and political developments in relation to the geographical environment.
- GEO-3520** **3 hours**
World Regional Geography — Eastern Hemisphere—Sp
 Survey of various regions in the eastern hemisphere with an emphasis on the cultural, economic, and political developments in relation to the geographical environment.
- GEO-4440 Special Topics-Geography** **1–3 hours**
 Investigation of specific topics in Social Science and History that have intrinsic worth and engage student interest.
- GEO-4920** **1–3 hours**
Independent Study in Geography
 Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*
- Geology (GEOL)**
- Except where noted, general education courses are designed to meet the general education requirements for graduation. These courses will not count toward graduation requirements for majors found in the department of science and mathematics unless they are specifically listed in the curriculum requirements for a major. A student majoring in science or mathematics may take these courses only as electives. However, any course listed for a science or mathematics major or minor may also count toward fulfilling general education requirements.
- GEOL-1110 Introduction to Physical Geology—Fa** **4 hours**
 An introductory study of the earth and its geological processes, including various alternative interpretations of earth history. Laboratory exercises will complement the lecture material and will include local field trips. Three weekly lectures and one weekly laboratory experience. This course satisfies the physical science requirement of the general education requirements. (Fee: \$100)
- GEOL-1120 Historical Geology—Sp** **4 hours**
 The earth's geological history from its beginning to the present. Topics of study include plate tectonics, biological evolution and the meaning of the fossil record, correlation, dating methods, and alternative views of earth history. Required field trips will study local fossils. Three lectures and one laboratory per week. *Prerequisites: GEOL-1110 Introduction to Physical Geology.* (Fee: \$100)
- GEOL-2100 Mineralogy—Fa** **4 hours**
 The student will study the occurrence, associations, characteristics, and crystal chemistry of common minerals. Laboratory work will emphasize identification and recognition of minerals. *Prerequisite: GEOL-1110 Introduction to Physical Geology; CHEM-1110 General Chemistry I (corequisite).* (Fee: \$150)
- GEOL-2030** **3.5 hours**
Geology of the National Parks for Geology Majors—Su
 This course will explore the geology of the national parks and surrounding areas in specific regions of the United States. It is a two week travel study course. Trip locations may vary from year to year. Six or more major areas will be explored on each trip. Students will be expected to complete a photographic atlas with appropriate geological descriptions of each stop and a term paper describing a particular feature of interest at one of the sites visited. Special emphasis will be placed on how geologic history is interpreted and placed into biblical and conventional frameworks. Students will learn how to make geological observations and take field notes. It is necessary for students to be in good physical shape for occasional hiking in rough terrain and at high altitudes, although requirements can be modified for students unable to do so. Special equipment may be required. *Prerequisite: Geology major and at least one previous GEOL course.* (Fee: will vary from year to year; will be used to cover lodging, car rental, gas and other expenses. Transportation to and from the trip starting location and food expenses will be covered by the students.)
- GEOL-2810 Geology Field Work and Research—Su** **1–4 hours**
 This course gives a student an opportunity to work alongside an active geologist in the field and/or the laboratory. The student must get approval from his advisor and submit a written description of the work to be performed before the experience begins. The student must submit notes and a summary of the work completed when the experience is over. Hours are variable depending on the length of the experience and the work completed. *Prerequisites: sophomore geology major and advisor approval of the proposal.*
- GEOL-3100 Geomorphology—Fa** **4 hours**
 The student will study the formation, development, and denudation of the earth's surface features as a function of rates, processes, and time. Landform analysis will be completed with topographic maps, aerial photographs, and stereo photographs. *Prerequisites: GEOL-1110 Introduction to Physical Geology; GEOL-1120 Historical Geology.* (Fee: \$150) (odd years)
- GEOL-3200 Invertebrate Paleontology—Fa** **4 hours**
 Many aspects of the fossil record will be studied including preservation, variation, and identification of fossils. Uses of invertebrate fossils including biostratigraphy, paleoecology, and biogeography will be discussed. Various evolutionary concepts will be presented, including baraminology. Laboratory experiences will include required field trips and identification and recognition of North American fossil species. *Prerequisites: BIO-1110 Introduction to Biology; GEOL-1120 Historical Geology.* (Fee: \$150) (odd years)
- GEOL-3300 Petrology—Sp** **4 hours**
 Students will study the occurrence and origin of sedimentary, igneous, and metamorphic rocks and learn how to identify them. Required field trip. *Prerequisite: GEOL-2100 Mineralogy; CHEM-1120 General Chemistry II (corequisite).* (Fee: \$150)
- GEOL-3400 Structural Geology—Fa** **4 hours**
 Mechanics of rock deformation and the study of various structures in all types of rocks. Required field trip. *Prerequisite: GEOL-3300 Petrology; GEOL-3100 Geomorphology and PHYS-2120 General Physics II (corequisites).* (Fee:\$150)
- GEOL-3600 Readings in Geology—Fa, Sp** **1 hour**
 Students will read and discuss a current text or series of papers. The purpose is to help the student become more familiar with the geological research and literature. Part of the course requirements may include attending a national or regional GSA conference. Course may be taken up to three times for credit. *Prerequisite: GEOL-1120 Historical Geology.* (Fee:\$150)

GEOL-3800 3 hours
Philosophy of Science and Research Methods in Geology–Sp

By its nature, geological research and its resultant interpretations are heavily paradigm-driven. This course will examine the scientific method and study the development of various scientific paradigms, especially those within geology. Students will learn productive ways to integrate their faith with science and how to apply that to a research method that arrives at conclusions without compromising data. The merits of various models of earth history will be critiqued. *Prerequisite: GEOL-1120 Historical Geology; 16 hours of geology courses and junior status.*

GEOL-4100 Environmental Geology–Fa 4 hours

Application of geology to environmental problems such as natural resource extraction, water supply, pollution, waste disposal, landslides, floods, and land use planning. Required field trip. *Prerequisites: BIO-1110 Introduction to Biology; GEOL-3100 Geomorphology. (Fee:\$150) (even years)*

GEOL-4200 Stratigraphy and Sedimentology–Sp 5 hours

The student will be introduced to principles of sedimentary rock correlation and structure. Emphasis will be placed on how to interpret past rates and processes using clues gained from sedimentary rocks. Required field trip(s). *Prerequisite: GEOL-1120 Historical Geology; GEOL-3300 Petrology. (Fee: \$150)*

GEOL-4400 Summer Field Camp–Su 6 hours

Five weeks of geologic mapping and problem solving in structural geology and stratigraphy. Selected course must be approved by the department chair (the course will be sponsored by another institution). The course will typically be taken following the student's junior or senior year. *Prerequisites: GEOL-3100 Geomorphology; GEOL-3300 Petrology; GEOL-3400 Structural Geology; and GEOL-4200 Stratigraphy and Sedimentology.*

GEOL-4800 Senior Project–Fa, Sp 2 hours

A capstone project including geological research, writing, and presentation of results. To be completed during one of the student's last two semesters of coursework. *Prerequisite: senior status; GEOL-3800 Philosophy of Science and Research Methods in Geology. (Fee: \$200)*

GEOL-4830 Research in Geology–Fa, Sp 2–3 hours

Investigation of a geologic research project and its culmination in a scholarly research report (oral and/or written). Submission and approval of a research proposal must precede registration. May be repeated once for credit. *Prerequisites: completion of 16 hours in geology; junior status; and permission of instructor. (Fee:\$200)*

GEOL-4880 Topics in Geology–Fa 1–3 hours

Topics of special geological interest that are not in the existing curriculum are selected by the faculty. The topic should provide a logical extension of the student's academic plan and enhance the student's educational experience. *Prerequisite: completion of 16 hours in geology; junior status; and permission of instructor.*

GEOL-4900 Independent Study in Geology–Fa, Sp 1–3 hours

Supervised independent study of a particular geologic phenomenon. Submission and approval of a research proposal must precede registration. *Prerequisite: major in geology; approval of research proposal.*

General Mathematics (GMTH)

Except where noted, general education courses are designed to meet the general education requirements for graduation. These courses will not count toward graduation requirements for majors found in the department of science and mathematics unless they are specifically listed in the curriculum requirements for a major. A student majoring in science or mathematics may take these courses only as electives. However, any course listed for a science or mathematics major or minor may also count toward fulfilling general education requirements.

GMTH-1010 Introduction to Mathematics–Fa, Sp 3 hours

Introduction to mathematical concepts including voting theory, apportionment and fair division, models of population growth, and graph theory. *Prerequisite: proficiency in mathematics.*

GMTH-1020 College Algebra–Fa 3 hours

Introduction to methods of algebraic analysis. Includes (but may not be limited to) many topics of intermediate algebra: the field axioms, linear functions, inequalities, systems of equations, determinants, and quadratic functions. This course, in conjunction with GMTH-1030 Precalculus, is designed to prepare the student for calculus. *Prerequisite: proficiency in mathematics; two years of high school mathematics; or permission of instructor.*

GMTH-1030 Precalculus–Fa, Sp 4 hours

Introduction to the principles of trigonometry and some advanced topics in algebra. Coverage includes, but may not be limited to, exponential, logarithmic, trigonometric, and circular functions, triangle problems, and vectors. This course, in conjunction with GMTH-1020 College Algebra, is designed to help prepare the student for calculus. *Prerequisites: proficiency in mathematics; GMTH-1020 College Algebra or equivalent; or permission of instructor.*

GMTH-1040 3 hours**Calculus for Business/Social Science–Fa, Sp**

Introduction to the concepts of differential and integral calculus for students of business. Numerous applications from these areas will be considered. Does not apply toward major in mathematics. *Prerequisite: proficiency in mathematics.*

GMTH-2110 Introduction to Biostatistics–Sp 3 hours

An introduction to statistical methods that are of particular interest to biologists for experimental design and interpretation. *Prerequisites: BIO-1120 General Zoology; BIO-2500 General Botany.*

GMTH-3010 Proof and Mathematical Modeling–Sp 3 hours

Proof by contradiction, contrapositive, and induction will be explored along with direct proof in the verification of conjectures and other mathematical propositions. Additionally, the formulation of discrete, statistical, and algebraic mathematical models, along with their use in solving problems, will be studied. Appropriate educational technology, including graphing calculators, spreadsheets, and geometric manipulation software will be used throughout. Does not count toward the B.A. or B.S. majors in mathematics or the B.A. in integrated mathematics education. *Prerequisites: EDUC-1800 Principles of Mathematics I; EDUC-2800 Principles of Mathematics II; GMTH-1020 College Algebra; MATH-1710 Calculus I.*

GMTH-3100 Theory of Interest–Sp 3 hours

Interest: simple and compound. Effective rate of interest. Time value of money; present and future. Cash flow calculations: loans, bonds, and investments. Annuities: due and immediate. Perpetuities. Yield. Amortization and sinking funds. Interest rate risk. Immunization. Financial derivatives. *Prerequisites: MATH-1720 Calculus II; corequisite: FIN-3710 Principles of Finance. (even years)*

General Music (GMUS)**GMUS-1000 Music Philosophy and Aesthetics–Fa 1 hour**

Philosophical and scriptural foundation for the Christian concepts of musical creativity, musical worship, and stewardship. Understanding the unique teacher-student relationship in music. A first attempt at codifying a coherent, personal, Christian philosophy of music.

GMUS-1030 Recital and Program Attendance–Fa, Sp 0 hours

Music majors and minors must attend a prescribed number of programs and recitals each semester. Majors must enroll each semester. For a music minor, students must enroll for two consecutive semesters.

GMUS-4980 Special Topics — General Music—Fa, Sp 1–3 hours
Study of selected topics in music.

German (GER)

GER-1810, 1820 Elementary German I and II 4 hours/sem

Development of basic skills in reading, writing, speaking, and listening in German, along with an introduction to German culture.

GER-2810, 2820 Intermediate German I and II 4/3 hours/sem

Development of all four language skills through grammar review, composition, conversation, and readings in German literature and culture. *Prerequisite: GER-1820 Elementary German II or equivalent.*

GER-3800 Directed Readings in German—Sp 1–3 hours

Topic chosen by the student and professor, based upon need and interests. *Prerequisite: GER-2820 Intermediate German II or equivalent.*

GER-3810 German Conversation—Fa 3 hours

Oral practice in German through speeches and oral reports along with a review of pronunciation. Designed to improve both day-to-day communication and academic communication. *Prerequisite: GER-2820 Intermediate German or equivalent. (even years)*

GER-3820 Germanic History and Culture—Fa, Su 3 hours

This course is designed to introduce students to the history and culture of Central Europe, specifically the region where German is the native language of the inhabitants and where present-day Germany, Austria and Switzerland are located. Students will also learn how Germanic History influenced and played a role in establishing modern-day western cultural norms. Course taught in English. (odd years).

GER-3830 Survey of German Literature—Sp 3 hours

A survey of German literature from the Middle Ages through the 20th century designed to provide the student with an understanding of the literature and its reflection of the culture. Readings in German and English. *Prerequisite: GER-2820 Intermediate German or equivalent.*

General Science (GSCI)

Except where noted, general education courses are designed to meet the general education requirements for graduation. These courses will not count toward graduation requirements for majors found in the department of science and mathematics unless they are specifically listed in the curriculum requirements for a major. A student majoring in science or mathematics may take these courses only as electives. However, any course listed for a science or mathematics major or minor may also count toward fulfilling general education requirements.

GSCI-1010 Principles of Earth Science—Fa, Sp 3.5 hours

A survey of the sciences of geology, oceanography, and meteorology. Major lecture topics include discussion of earth's geological history, minerals, rocks, dating, plate tectonics, glaciers, volcanoes, ocean currents, marine life, waves, the atmosphere, and weather systems. When appropriate, contrasting views of these subjects will be examined. Laboratory experiences include field trips to areas of local geological interest. Lecture three times per week and laboratory on alternate weeks. Satisfies the physical science requirement of the general education requirements. (Fee: \$75)

GSCI-1020 Principles of Physical Science—Fa, Sp 3.5 hours

A survey of the sciences of physics, chemistry, and astronomy. Major lecture topics include motion, force, energy, heat, waves, electricity, optics, quantum effects, periodic table, chemical bonds, chemical reactions, astronomical measurements, and the origin of the universe. Content of this course will be related to social and philosophical issues to emphasize a Christian's responsibility in a technological society. Lecture three times per week and laboratory on alternate weeks. This course satisfies the physical science requirement of the general education requirements. (Fee: \$75)

GSCI-1030 Geology of the National Parks—Su 3.5 hours

This course will explore the geology of the national parks and surrounding areas in specific regions of the United States. It is a two-week travel study course that fulfills the three and a half-hour laboratory physical science requirement. Trip locations may vary from year to year. Six or more major areas will be explored on each trip. Students will be expected to complete a photographic atlas with appropriate geological descriptions of each stop. Special emphasis will be placed on how geologic history is interpreted and placed into biblical and conventional frameworks. Students will learn how to make geological observations and take field notes. No previous geological knowledge is required. It is necessary for students to be in good physical shape for occasional hiking in rough terrain and at high altitudes, although requirements can be modified for students unable to do so. Special equipment may be required. Special course fees apply and will vary from year to year.

GSCI-2010 Physical Science for Teachers—Fa, Sp 4 hours

Introduction to a selection of core concepts of physics and chemistry for preservice elementary education teachers. Students will develop methods of learning science, with emphasis on inquiry, scientific method, and integrating common everyday objects and experiences with a view toward cultivating the excitement of studying God's creation. Three lectures with one weekly one-hour lab. Does not satisfy the physical science general education requirement. (Fee: \$75)

GSCI-3010 Concepts in Middle School Science—Sp 4 hours

This lab course highlights key concepts in middle school science by reviewing and extending concepts from previous science courses with an emphasis on the integration of earth sciences, physical sciences, and life sciences. Concepts addressed include the scientific process, theory of evolution, cell theory, and the concept of disease. *Prerequisites: GBIO-1000 Principles of Biology; CHEM-1000 Principles of Chemistry; GSCI-1010 Principles of Earth Science; GSCI-2010 Physical Science for Teachers.* (Fee: \$75)

GSCI-3060 4 hours

Environmental Science for Middle School Educators—Sp

Introduction to the study of the dynamic relationships that exist between the earth's organisms and their environment and how man affects these relationships. There will be an emphasis on the intricate design and resilience of God's creation. This course will include laboratory investigations, field trips, group work, review of environmental news, lecture-discussions, videos, small projects, and pertinent ideas for teaching the environment in a middle school setting. Three lectures and one laboratory session per week. This course does not satisfy the general education requirement for biology. *Prerequisites: GBIO-1000 Principles of Biology; middle childhood education major; or permission of instructor.* (Fee: \$100)

General Social Science (GSS)

GSS-1100 Politics and American Culture—Fa, Sp 3 hours

This course serves as an introductory study of America's constitution and political institutions, with emphases on political participation, political culture, and public policy.

GSS-3630**4 hours****Data Analysis and Research Methodology–Fa**

This course will train social science students in the use of statistical techniques that range from central tendency through bivariate regression, and it introduces students to the primary issues of research methodology, which includes levels of measurement, sampling, internal and external validity, and reliability. Students must also master the use of one piece of statistical software. *Prerequisite: students must have satisfied Cedarville's mathematics proficiency requirement before enrolling in GSS-3630.*

GSS-3810,3820**1 hour each****Clinical Teaching in the Social Sciences–Fa, Sp**

Practical, on-campus, one credit hour experience in which a student is assigned to assist a college instructor in the preparation of tests and quizzes, grading, research, and other teaching responsibilities. A student will be expected to participate for 30 clock hours for each semester hour of credit. A student may arrange to do either of the following with the director of this experience in their discipline:

1. One 30-hour experience for two different semesters.
2. A 60-hour experience for one semester.

Prerequisite: admission to the Teacher Education Program.

GSS-4990 Social Science/History Internship 1–16 hours

Majors who participate in government service, historical research, public administration, international studies, criminal justice, or other approved activities related to the social sciences may earn up to 12 hours of credit.

H**History (HIST)****HIST-1110 United States History I–Fa, Sp 3 hours****HIST-1120 United States History II–Fa, Sp 3 hours**

Analysis of the development of the United States from the colonial period to the present. Attention is given to the dominant Christian influences that have tended to mold the philosophy and ideology of our cultural, social, and political development.

HIST-2000 Introduction to History–Fa 3 hours

An introduction to the field of history as it pertains to both the academic and the public historian. Emphasis will be given to historical inquiry, source evaluation, analysis and synthesis, research methodology, formal historical writing, and career opportunities. Introduction to History should be taken in the sophomore year. This does not fulfill the general education requirement for a HIST course.

HIST-2010 History of Civilization I–Fa 3 hours**HIST-2020 History of Civilization II–Sp 3 hours**

This survey of human history begins at the advent of civilized life in the ancient Near East and continues into the 20th century. It presents the religious, social, political, and intellectual development of mankind from a Christian interpretive point of view.

HIST-2100 Ohio History for Educators–Sp 2 hours

A survey of the history of the State of Ohio from pre-Colonial background to the present. Examines the settlement of Ohio by various Native American tribes, the early exploration and settlement by European migration and the state's place in national development from the 19th through 21st centuries.

HIST-3000 Introduction to Historiography–Fa 3 hours

Introduction to the history of historical writing, methods of research, and the philosophy of history. Required of history majors. Should be taken in the junior year.

HIST-3030**3 hours****History of Christianity: Pre-Reformation–Sp**

Survey of ancient and medieval Church history with emphasis given to doctrinal and institutional developments. (even years)

HIST-3040 History of Modern Britain–Fa 3 hours

A survey of the events, major individuals, and ideas of modern Great Britain, including Scotland and Ireland, from the time just prior to the Reformation to the twentieth century. The course will focus on the influence of British ideas on American Culture and religion, the rise of classical liberalism and the free market system, the role of socialism, the age of colonialism, the common law, Reformed theology from Puritanism and Scottish Presbyterianism, and other movements and ideas. *Alternates with HIST-3050 Renaissance and Reformation Europe.* (odd years)

HIST-3050 Renaissance and Reformation Europe–Fa 3 hours

A survey of the period spanning the fourteenth through the seventeenth centuries, focusing on the origins, rise, nature, and waning of the Renaissance, especially humanism, and the origins, development, and influence of the Protestant Reformations and the Roman Catholic Counter-Reformation. A special emphasis will be placed on the continuities and discontinuities between the two movements. (even years)

HIST-3070**3 hours****Europe in the 18th and 19th Centuries: Continuity and Change–Sp**

A survey of the period spanning the mid-seventeenth century through about 1918, including the Enlightenment. The course will include the many political, social, and ideological changes of the eighteenth and nineteenth centuries. (even years)

HIST-3080 History of Russia and the Soviet Union–Fa 3 hours

This course will cover not only Soviet history but also the major events of Russian history up to the Bolshevik Revolution. Soviet history will be studied in detail, with attention given to the development of non-Russian peoples in the empire. The political, economic, social, and foreign policy aspects of Soviet history will all be covered, emphasizing Perestroika and the Soviet collapse. Crosslisted as GEO, HIST, INTL, or POLS.

HIST-3110 Early American History–Sp 3 hours

Analysis of the development of American civilization from colonization to 1820. Political, religious, social, economic, and cultural institutions will be examined. *Prerequisite: HIST-1110 United States History or permission of instructor.*

HIST-3120**3 hours****History of Recent and Contemporary America–Fa**

Intensive study of the domestic and foreign policies of the United States since 1945. Particular emphasis is given to American society in the 1950's, the Cold War, the Civil Rights Movement, the cultural revolution of the 1960's, American involvement in Vietnam, the Welfare State, Watergate, and the Reagan Revolution. *Prerequisite: HIST-1120 United States History or permission of instructor.*

HIST-3130 Civil War and Reconstruction–Sp 3 hours

Study of the sectional crisis, the military and nonmilitary aspects of the Civil War, and the social and political phases of Reconstruction. *Prerequisite: HIST-1110, 1120 United States History. Alternates with HIST-3400 History of American Foreign Policy.* (odd years)

HIST-3200 History and Politics of Latin America–Fa 3 hours

Analysis of the major historical, political, geographical, social, and diplomatic developments that have shaped contemporary Latin America. May be credited to geography, history, international studies, or political science. Crosslisted as GEO, HIST, INTL, or POLS. (even years)

HIST-3210 History and Politics of Asia–Fa 3 hours

Study of the historical, political, geographical, social, and diplomatic developments of Asia from the 18th century to the present. May be credited to geography, history, international studies, or political science. Crosslisted as GEO, HIST, INTL, or POLS. (odd years)

HIST-3220 History and Politics of the Middle East–Sp 3 hours

Analysis of the major historical, political, geographical, and social forces, such as religion and nationalism, that have shaped the contemporary Middle Eastern states. Crosslisted as GEO, HIST, INTL, or POLS.

HIST-3230 History and Politics of Western Europe–Sp 3 hours

This course will cover the development of Western European history and politics from approximately the year 1900 to the present. Concentration will be on the great European powers, but will include the smaller states. The political, economic, and social histories of the nations of Europe will be covered, as well as several macro-European issues. Crosslisted as GEO, HIST, INTL, or POLS. (odd years)

HIST-3300 3 hours**Modern Church History: Reformation to the Present–Sp**

This course examines the institutional, intellectual and external contextual aspects of the Church from the period immediately following the Reformation to the present. Specifically the course will study the external and internal developments of the Christian Church in this period. (odd years)

HIST-3310 American Church History–Sp 3 hours

A survey of major trends, ideas and individuals in the history of the Church in America from the 1600s to the present, including the theological roots of American theology. Special attention will be given to the Puritans, Jonathan Edwards, the rise of the Social Gospel and theological liberalism. (odd years)

HIST-3400 History of American Foreign Policy–Fa 3 hours

American statesmen have defended the principles of their government and the rights of American citizens in a world of empires and nation-states. This course provides an overview of controversies over independence and imperialism, modern tyranny and regime change, which have marked U.S. foreign policy from the founding to the present day. Crosslisted as INTL or POLS. *Prerequisite: GSS-1100 Politics in American Culture.* (even years)

HIST-3710 3 hours**History of Political Thought I: Ancient Through Medieval–Fa**

Study of the development of political thought in the ancient and early medieval era with special attention given to the works of Plato and Aristotle. Course may also explore topics in political philosophy. Crosslisted as HIST or POLS. *Prerequisite: major or minor in history or political science or permission of instructor.*

HIST-3720 3 hours**History of Political Thought II: Modern and Contemporary–Sp**

Study of the development of political thought in the late medieval era and modern era with special attention given to the works of Thomas Hobbes and Friedrich Nietzsche. Course may also explore topics in political philosophy. Crosslisted as HIST or POLS. *Prerequisite: major or minor in history or political science or permission of instructor.*

HIST-3730 American Political Thought–Fa 3 hours

Survey and examination of the course of political thought in the American colonies and the United States from the 1600s to current times. Includes special attention to American Founders and the rise of political liberalism in the thought of Woodrow Wilson. Crosslisted as POLS or HIST. (even years)

HIST-3750 Social Movements–Fa, Sp 3 hours

Study of the influence of ideas and institutions upon social movements in America. Crosslisted as HIST or SOC.

HIST-4050 3 hours**Issues in International Diplomacy–Sp**

Examines diplomatic relations among the world's most powerful nations, focusing on 20th century diplomacy and the future of international relations in the 21st century. Crosslisted as HIST, INTL, or POLS. *Prerequisite: POLS/INTL-3650 International Relations or permission of instructor.*

HIST-4110 Interpretations in American History–Fa 3 hours

Study of selected historical problems in America. Emphasis placed on new interpretations and their impact.

HIST-4300 Great Books in History and Politics–Sp 3 hours

This course will require the student to read a single classic work of history and political thought (or a limited number of related works) and with other students, to closely and critically analyze the argument of the work. Crosslisted as POLS, INTL, PUAD, or HIST. *Prerequisite: GSS-1100 Politics and American Culture* (odd years)

HIST-4440 Special Topics-History 1–3 hours

Investigation of specific topics in social science and history that have intrinsic worth and engage student interest.

HIST-4620 Church and State in America–Fa 3 hours

This course examines the historical, political, theoretical, and legal relationship between church and state in America. Particular attention will be paid to the American founding and changing perceptions of church and state over time. (odd years)

HIST-4700 Research in American History–Sp 3 hours**HIST-4710 Research in European History–Sp 3 hours****HIST-4720 Research in Asian History 3 hours**

All majors are required to take either HIST-4700, HIST-4710, or HIST-4720. Each student will prepare a formal monograph. *Prerequisite: major or minor in history.* (Fee: \$100)

HIST-4900 1–3 hours**Independent Study in History**

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*

Music History (HLMU)**HLMU-2100 2 hours****Jazz History: Music of the Multi-Culture–Fa**

Survey of jazz as an American art form, as a representative of both Western and non-Western practices, that now make up our American multi-culture, and as the primary vehicle for the realization of improvisation within that multi-culture. Acquaints the student of music with jazz styles and the major figures in jazz history and assists in the discovery of jazz influence upon all other American music, both classical and popular. *Prerequisites: THMU-1220 Music Theory II; THMU-1320 Aural Skills II.* (even years)

HLMU-2310 Introduction to Music Literature–Sp 3 hours

Study of music by genre and chronology. Focuses on art traditions in music. Students become familiar with a wide variety of music literature and learn to listen analytically. Serves as the introductory music history course for sophomore music majors.

HLMU-3310 Music History I–Fa 3 hours

Study of the music of Western civilization traced from its primitive sources and giving special attention to Medieval, Renaissance, and Baroque music as demonstrated through the vocal and instrumental music of composers from each period.

HLMU-3320 Music History II–Sp 3 hours

Study of the music of Western civilization traced from the 1580s to the present time.

HLMU-3400 Global Music—Fa**2 hours**

A socio-anthropological approach to the study of the world's music. Surveying music of cultures of Africa, the Americas, and Asia as well as European folk music. Music traditions are studied from a perspective that emphasizes music as an integral part of society and culture, helping students discover the influence of culture on music, and the subsequent role of music within the culture. (Fee: \$50) (odd years)

HLMU-3410 Traditional Irish Music—Fa**2 hours**

This course introduces students to the practice of traditional Irish music through study of primary tune forms, experience of the social context of Irish music-making, and acquaintance with leading performers within the tradition. The class culminates in an Irish music festival held at a local coffee shop. Crosslisted with CLMU-3410 Traditional Irish Music. *Prerequisite: permission of instructor.* (Fee: \$30)

HLMU-4110 Choral Literature—Sp**3 hours**

An historical overview of choral music from 1400 to the present. Attention is given to primary genres of choral composition: motet, madrigal, mass, anthem, oratorio, passion, cantata, and orchestral works with choir. This course will serve as an elective for majors in choral music education, church music, vocal performance, and composition. (even years)

HLMU-4990 Independent Study in Music History**1–3 hours**

Independent and intensive study in a particular area of music history for individual students who demonstrate special interests and abilities. *Prerequisites: HLMU-3310, 3320 Music History I and II.*

Honors (HON)**Freshman Humanities Sequence: HON-1010,1020****The Making of the Modern Mind****10 hours****HON-1010 The Classical and Medieval Ages****5 hours**

Explores those historical, religious, philosophical, and artistic beginnings that have shaped the modern mind or what some are now calling the "postmodern" mind. The story begins, naturally enough, at the beginning, in the mind of God and continues through the development of classical Greek and Roman culture. Concludes with a study of the rise of Christianity and its dominance of Western culture in the Middle Ages.

HON-1020**5 hours****Renaissance, Reformation, and Revolutions**

Explores the changing balance of power in Western culture: from church to state, from faith to reason, from religion to science, and from piety to humanism. Traces out the implications of these shifts for cultural expressions and revolutions in the arts, religion, science, and philosophy and culminates in a study of late twentieth century postmodernism.

Honors Seminars

(Seminar offerings vary from year to year.)

HON-3040 Gender, Politics, and Communication**2 hours**

Study of the places in which American women have found themselves since 1860, the expectations made upon them, and the influences they have had upon American society.

HON-3050 Communication in the Information Age**2 hours**

Survey of the "new media" in electronic communication with an emphasis on the structures of the new media, their use in such areas as politics, education, business, and health care, the resulting changes in communication patterns in society, and the social and ethical issues raised by their use.

HON-3060 Leadership**2 hours**

Leadership as a societal role is addressed through analysis of theory and observation of practitioners. A chronology of methodological approaches to the study of leadership is presented. Assigned reading and class processing of ideas and theories prepare the student for observation and evaluation of leaders in a variety of disciplines.

HON-3080 Creativity: The Birth of a Notion**2 hours**

Stimulates the participant to conscious creativity in every facet of life as an act of Christian stewardship. Creativity will be examined as one of the distinguishing marks of the image of God in man and as the essential ingredient in all artistic expression.

HON-3100**2 hours****Two Philosophies of Teaching and Learning**

Workshop in integrative thinking, exploring comparisons and contrasts between the philosophies of education implicit in Proverbs 1–9 and explicit in the writings of John Dewey.

HON-3120**2 hours****Reading and Writing the Literature of the Natural Environment—Fa, Sp**

A study in both the reading of and the writing of the literature surrounding "environmentalism." The course will combine a "workshop" approach to writing and an active engagement with both the history of "environmental writing" and current state of many environmental issues.

HON-3130**2 hours****Perspectives on Friendship, Love, and Romance**

Explores friendship, love, and romance from historical, theological, and philosophical perspectives.

HON-3140**2 hours****Body and Soul: Foundations for Human Personhood—Sp**

An interdisciplinary study of human valuing, from the perspectives of theology, philosophy, psychology, biology, and neuroscience. The course will analyze and contrast various secular and Christian theories to arrive at a Christian anthropology, with applications to contemporary issues in bioethics. *Prerequisite: HON-1010 The Classical and Medieval Ages; HON-1020 Renaissance, Reformation, and Revolutions.*

HON-3180 Aesthetics**2 hours**

Introduction to the study of aesthetics through an exploration of classical writings and the accounts of contemporary theorists, critics, and artists.

HON-3190 Postmodernism**2 hours**

An interdisciplinary analysis, critique, and response to postmodernism as it is reflected in contemporary culture.

HON-3200 Romanticism and Its Offspring**2 hours**

Study of the development of poetry and music from 1800 to the present postmodern pop culture.

HON-3210 Contemporary Global Issues—Sp**2 hours**

Designed to provoke critical thinking about a broad range of complicated, cross-disciplinary issues that confront the world today. Students will be introduced to issues that are truly global—planetary problems, global economy, environmental issues, human rights, and basic human needs.

HON-3220**2 hours****The Rhetoric of Faith in the Christian Tradition**

Study of primary documents written in the genres of Christian confession, prayer, and creedal statement. These documents will be treated in two ways. First, they will be studied as historical representations of believers' use of language to express messages of the development of a renewed mind and spirit in the Christian faith. Second, they will be used as models for encouraging contemporary believers to employ the power of the written word in the development of a Biblical practice of meditating on, praying for, and affirming those things that are holy, righteous, and pure. *Prerequisite: HON-1010 The Classical and Medieval Ages; HON-1020 Renaissance, Reformation, and Revolutions.*

HON-3230 Chance, Emergence, or Design—Sp**2 hours**

The origin of complexity and order in the universe is studied from three different perspectives: Neo-Darwinism (chance and necessity), Emergence, and Creation. Starting at the origin of the physical universe and ending with the origin of self-awareness, these perspectives are compared by their scientific value and their philosophical and religious implications. (odd years)

HON-3240 2 hours**Science and Religion: Middle Ages to Darwin–Sp**

A seminar centering on major primary sources in the history of science, exploring the historical relationship of science and religion, particularly Christian theology, from the late Middle Ages to the Darwinian Revolution. *Prerequisite:* HON-1010 *The Classical and Medieval Ages*; HON-1020 *Renaissance, Reformation, and Revolutions*.

HON-4155 Image and Word in a Visual Culture–Sp 3 hours

Inquiry into the tension between image and word in Jewish and Christian thought and the implications for Christians living in a visual culture. Traces this tension through the art of Judaism and the Medieval church, the iconoclastic controversies of early Byzantium and the English Civil Wars, and recent and contemporary religious thinkers. *Crosslisted as EMTC-4155*.

HON-4910 Honors Senior Colloquium I 1 hour

Development of a generic understanding of the integration of faith, learning, and life.

HON-4920 Honors Senior Colloquium II 1 hour

Development of a disciplinary understanding of the integration of faith, learning, and life.

HON-4950 Honors Senior Project 1–2 hours

The writing of an interdisciplinary research project.

Humanities (HUM)**HUM-1400 Introduction to the Humanities–Fa, Sp 3 hours**

Historical study of the relationship of music, art, and literature to the dominant cultural, religious, and philosophical trends and their relationship to Christian theism. (Fee: \$50)

HUM-2430 Enjoyment of Music–Fa 3 hours

This course is designed to present a study of music by genre and chronology. It will focus on the art traditions in music. Students will become familiar with a wide variety of music literature and will learn to listen analytically. The primary goal will be to bring students as far as possible along the road to being music lovers. (Fee: \$50) (even years)

HUM-4980 Special Topics – Humanities–Fa, Sp 1–3 hours

Study of selected topics in humanities.

Industrial and Innovative Design (IDES)**IDES-2000 History and Influences of Design–Sp 3 hours**

Survey of design from the 17th century to the present. The course highlights significant stages in the development and pivotal influences of design including technological advances, individual works, key movements, schools of thought, and approaches relative to time(s) and culture(s).

IDES-3110 Drawing in Dynamic Perspective I–Fa 3 hours

This hands-on course includes lecture, demonstration, progressive hand-generated drawing exercises, and project work, all designed to reveal the hidden keys to training our creativity to perceive space and the geometry of space with greater authority. The principles of one-point and two-point perspective and related visual systems will be presented in a bold problem-solving format ranging in scale from the simple to the complex in order to accurately express our conceptual capabilities. (Fee: \$250)

IDES-3120 Drawing in Dynamic Perspective II–Fa 3 hours

Building on the visual authority and refined hand-drawing skills developed in Drawing in Dynamic Perspective I, this course explores in greater depth the application of advanced perspective principles in problem-solving scenarios for a diverse range of “core content” industrial design exercises. *Prerequisite:* IDES-3110 *Drawing in Dynamic Perspective I*.

IDES-3210 Language of Line–Fa 4 hours

Rapid visualization (Power Drawing) skills will be presented in lecture, demonstration, progressive hand-generated drawing exercises, and project work in an in-depth study of the “language of line” and how it generates visual confidence. The course analyzes the three keys to drawing authority: form, position and texture. Further, the course will place these elements into a process that will produce and solve design problems ranging from understanding basic volumes to successfully illustrating complex volumes through study of applied science, ergonomics, and ethics. *Prerequisite:* IDES-3120 *Drawing in Dynamic Perspective II*.

IDES-3220 Innovative Media Systems–Fa 5 hours

This course will introduce and encompass the application of creative “mediums” to complete presentation graphic pieces. Design media such as marker, pastel, tempera, toned pencils, computer graphics, etc., will be utilized in demonstration and practical hands-on study to generate impactful presentation studies. *Prerequisite:* IDES-3210 *Language of Line*

IDES-3310 3 hours**Fundamentals of Surface Development I–Sp**

This study will introduce the principles of creating innovative shapes, forms, and volumes, and explore how they in turn influence manufacturing systems. Students will engage in using a variety of materials such as paper, structural foam, plastics, glass, wood, etc., to successfully convey a three-dimensional model interpretation. *Prerequisite:* IDES-3220 *Innovative Media Systems*. (Fee: \$250)

IDES-3320 4 hours**Fundamentals of Surface Development II–Sp**

The principles of this course will expand the model-building skill base by working with an advanced palette of materials to successfully illustrate a set of three-dimensional models. *Prerequisite:* IDES-3310 *Fundamentals of Surface Development I*.

IDES-3410 Three-Dimensional Composition–Sp 4 hours

This course will lay the foundations for “finishing techniques” for modeling and act as an overview for the various software, hardware, hand-crafted, and artisan techniques required to gain a deeper appreciation of the visual impact potential of a finished model and/or prototype, and various presentation practices. *Prerequisite:* IDES-3320 *Fundamentals of Surface Development II*.

IDES-3420 Three-Dimensional Presentation–Sp 4 hours

This course is the natural extension of three-dimensional composition. The course focuses on the critical importance of creating, defining, and implementing a series of two-dimensional sketch rendering ideas and converting those ideas into successful three-dimensional model series. *Prerequisite:* IDES-3410 *Three-Dimensional Composition*.

IDES-4010 Consumer Product Design–Fa 4 hours

This course is designed to focus on the development of the designer’s personal vision and preparation for careers in the area of product design. Completed solutions will be created by the candidates through concept sketches, renderings, layout studies, 3-D models, and a final, scale foam study. *Prerequisite:* IDES-3420 *Three-Dimensional Presentation*. (Fee: \$350)

IDES-4020 Interior Space Design–Fa 3 hours

This course is designed to focus on the development of the designer’s personal vision and preparation for careers in the area of interior design. Completed solutions will be created by the candidates through the understanding of human scale, consumer product trends, human interaction, interface, ergonomics, traffic patterns, interior design materials, etc. *Prerequisite:* IDES-3420 *Three-Dimensional Presentation*.

IDES-4030 Transportation Design–Fa 4 hours

This course is designed to focus on the development of the designer's personal and client visions and for preparation with the career choice of transportation design. Completed solutions will be created through concept sketches exploring the world of mobility (aircraft, watercraft, automobile, etc.) *Prerequisite: IDES-3420 Three-Dimensional Presentation.*

IDES-4040 Architectural/Exterior Space Design–Fa 4 hours

Architectural exterior space design concentrates on the discipline of developing the designer's expertise in utilizing structural materials to create the next generation of architectural design systems. Projects will include glass, metals, stone, and a diverse vocabulary of other materials that integrate the creative process to build confidence for this vocational choice. *Prerequisite: IDES-3420 Three-Dimensional Presentation.*

IDES-4200 4 hours**Professional and Ethical Practices in Design–Sp**

Based on the previous semester's exposure to various disciplines within the industrial and innovative design degree, the candidate will focus on an area of specialization and, with staff assistance, develop a thesis statement. Further, candidates will receive coaching from professionals and staff in the areas of design business ethics. *Prerequisite: IDES-4040 Architectural/Exterior Space Design.*

IDES-4300 3 hours**Design Project: Selection Statement, Research, and Scope–Sp**

With staff and professional support, the candidates will embark on a research journey to discover real-world, market-applicable design solution research within a selected area of specialization. *Prerequisite: IDES-4200 Professional and Ethical Practices in Design. (Fee: \$350)*

IDES-4400 Design Project and Presentation–Sp 11 hours

In this capstone course, candidates will be assisted in completing their portfolio presentation skills, business case development, professional practices, and receive a professional written and oral critique of their work. *Prerequisite: IDES-4300 Design Project: Selection Statement, Research, and Scope.*

International Studies (INTL)**INTL-3080 History of Russia and the Soviet Union–Fa 3 hours**

See course description for GEO-3080 History of Russia and the Soviet Union.

INTL-3190 Global Issues–Sp 3 hours

Analysis of the international issues that are shaping our contemporary and future world, ranging from terrorism, the environment, international crime, disease, and collapsing states to the digital revolution and the global economy. Crosslisted as INTL or POLS.

INTL-3200 History and Politics of Latin America–Fa 3 hours

See course description for GEO-3200 History and Politics of Latin America. (even years)

INTL-3210 History and Politics of Asia–Fa 3 hours

See course description for GEO-3210 History and Politics of Asia. (odd years)

INTL-3220 History and Politics of the Middle East–Sp 3 hours

See course description for GEO-3220 History and Politics of the Middle East.

INTL-3230 History and Politics of Western Europe–Sp 3 hours

See course description for GEO-3230 History and Politics of Western Europe. (odd years)

INTL-3400 History of American Foreign Policy–Fa 3 hours

American statesmen have defended the principles of their government and the rights of American citizens in a world of empires and nation-states. This course provides an overview of controversies over independence and imperialism, modern tyranny and regime change, which have marked U.S. foreign policy from the founding to the present day. Crosslisted as HIST or POLS. *Prerequisite: GSS-1100 Politics in American Culture. (even years)*

INTL-3650 International Relations–Fa 3 hours

A survey of contemporary international affairs and principles of interstate relations, focusing on forces that unite and divide our world. Crosslisted as INTL or POLS.

INTL-3790 Comparative Politics–Fa 3 hours

This course will familiarize students with major historical developments, political debates, and scholarly research in the subfield of comparative politics. Particular emphasis will be placed on topics of the modern state, nationalism, economic development, political culture and ideology, identity structure, regime types, regime transitions, and comparative political economy. Crosslisted as POLS or INTL. (odd years)

INTL-4050 3 hours**Issues in International Diplomacy–Sp**

See course description for HIST-4050 Issues in International Diplomacy. Crosslisted as HIST or POLS

INTL-4160 International and Domestic Terrorism–Sp 3 hours

In-depth study of terrorism, focusing worldwide and domestically. An intensive examination of ongoing international conflicts, narco-terrorism, eco-terrorism, cyber-terrorism, weapons of mass destruction, geographical trouble spots, enemies of the United States, terrorism-counter-terrorism theory and options, terrorism history, law, civil liberties, and Homeland Security. Crosslisted as CRJU and INTL.

INTL-4300 Great Books in History and Politics–Sp 3 hours

This course will require the student to read a single classic work of history and political thought (or a limited number of related works) and with other students, to closely and critically analyze the argument of the work. Crosslisted as POLS, INTL, PUAD or HIST. *Prerequisite: GSS-1100 Politics and American Culture (odd years)*

INTL-4440 Special Topics-International Studies 1–3 hours

Investigation of specific topics in Social Science and History that have intrinsic worth and engage student interest.

INTL-4800 Seminar in International Studies–Fa 3 hours

A seminar/readings course intended to prepare senior students for graduate study. Through readings and discussion, students explore classical writings on international relations and international issues that are shaping our contemporary and future world. Crosslisted as INTL or POLS.

INTL-4850 Research in International Studies–Sp 3 hours

Students will prepare and present a formal research project on a country, region, or significant international issue.

INTL-4980 1–3 hours**Independent Study in International Studies**

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*

Information Technology Management (ITM)**ITM-1500 2 hours****Information Technology for Business–Fa, Sp**

This course will focus on understanding the broad nature of information technology and how it fits in today's business world. Students will learn the nature of information technology, its application, and unique business models, as well as how to manage technology from a business value perspective. Fundamentals of the industry, technologies, and application of that technology are developed. Students will experience the IT industry through practical exploration of its breadth and depth.

ITM-1510 Software Tools for Business–Fa, Sp 2 hours

This course emphasizes the use of software in a business environment. Students will develop a working knowledge of spreadsheet, database, and other software packages appropriate to the current business environment. (Fee: \$10)

ITM-1900 Fundamentals of IT Management–Fa 3 hours

This course is an introduction to the field of Management Information Systems (MIS). It is a demanding course that takes students through the process of developing an information system. While working through this process, students will apply the primary topics and techniques used in project management in a hands-on, team project. Gateway course to the Information System major.

ITM-2100 Database Management–Sp 3 hours

This course teaches students database fundamentals while providing a broad survey of the field's major topics. Students learn about the critical nature of databases within Information Systems contexts. Topics include Structured Query Language (SQL), data modeling and normalization, logical and physical design, concurrency and security issues, stored procedures, triggers, data warehouses, and data mining. Students apply essentials by creating and managing databases in a SQL Server environment. *Prerequisite: ITM-1900 Fundamentals of IT Management.* (Fee: \$20)

ITM-2300 Introduction to Programming–Fa 3 hours

Intended as the first programming course for Information System majors, this course will introduce the student to the process of programming and to the syntax and usage of the C# programming language. The programming assignments will encourage students to analyze problems in a logical, intentional, and structured manner so that they can develop well constructed programs using structured and object-oriented programming techniques. *Prerequisite or Corequisite: ITM-1900 Fundamentals of IT Management* (Fee: \$20)

ITM-3300 3 hours**Advanced Topics in Programming Languages–Fa**

This course covers advanced concepts in programming and programming languages using one or more programming languages. Topics include theories of program design and implementation, distributed architectures, business object frameworks, generics, collections, reflection, data binding, and web services. Students will apply course topics in a team project through the development of a distributed information system. *Prerequisite: ITM-2300 Introduction to Programming.* (even years) (Fee: \$20)

ITM-3400 Data Communications and Networking–Fa 3 hours

This course provides a study of the basic concepts of data communications and current networking technology. Topics include discussion of physical-layer considerations, higher-layer implications, and network operating systems. The concepts will be applied through a hands-on project of network design, implementation, and documentation. *Prerequisite: ITM-1900 Fundamentals of IT Management or permission of instructor.* (odd years) (Fee: \$50)

ITM-3450 IT Security and Risk Management–Sp 3 hours

This course provides an introduction to the fundamental principles and topics of information technology security and risk management at the organizational level. Students will learn critical security principles that enable them to plan, develop, and perform security tasks. The course will address hardware, software, processes, communications, applications, and policies and procedures with respect to organizational IT security and risk management. *Prerequisites: ITM 3400 Data Communications and Networking.*

ITM-3500 Web Development–Sp 3 hours

This course will expose students to the process of developing information systems for the World Wide Web using the ASP.NET and C# programming languages. The focus will be on the creation of web applications to support business processes. Topics include server controls, state management, data sources, LINQ, AJAX, and web services. *Prerequisites: ITM-2300 Introduction to Programming.* (Fee: \$20)

ITM-3550 Enterprise Architecture–Sp 3 hours

This course explores the design, selection, implementation, and management of enterprise IT solutions. The focus is on applications and infrastructure and their fit within the business. Students learn frameworks and strategies for infrastructure management, data/information architecture, distributed computing, middleware, legacy system integration, and emerging technologies. *Prerequisites: ITM-2300 Introduction to Programming.*

ITM-3600 Business Process Management–Sp 3 hours

In this course students will be introduced to key concepts and approaches to business process management and improvement. The course focuses on both understanding and designing business processes. Students will learn how to identify, document, model, assess, and improve core business processes. Students will be introduced to process design principles. The way in which information technology can be used to manage, transform, and improve business processes is also discussed. *Prerequisites: ITM-1900 Fundamentals of IT Management*

ITM-3650 Enterprise Systems–Sp 3 hours

This course is designed to provide students with an understanding of the theoretic and practical issues related to the application of enterprise systems within organizations. The main focus of this course is to demonstrate how enterprise systems integrate information and organizational processes across functional areas with a unified system comprised of a single database and shared reporting tools. Example software will be used to illustrate how enterprise systems work. An integrated project, which requires the application of conceptual as well as technical (software) skills of students, will be required. *Prerequisite: ITM-3600 Business Process Management.* (Fee: \$50)

ITM-4100 Advanced Database Design–Sp 3 hours

This course is a systematic study of the use of databases in dynamically generated webpages in e-commerce systems. The course focuses on the integration of database management systems and other software such as CRM, ERP, and supply chain management systems in the design and development of scalable e-commerce systems. *Prerequisites: ITM-2100 Database Management; ITM-3500 Web Development.* (odd years) (Fee: \$20)

ITM-4300 Advanced Topics in IT Management–Sp 3 hours

This course heading covers a variety of Management Information Systems courses offered on a temporary basis. The dynamic nature of the field of MIS gives rise to the need to address recent changes in technologies, methods, and systems. (even years)

ITM-4400 Systems Analysis and Design–Fa 3 hours

Provides an understanding of the duties of the systems analyst together with a presentation of philosophies, terminology, and techniques used in the object-oriented, Rational Unified Process of systems analysis and design. The Unified Modeling Language (UML) will be used extensively as a basis for communication during the software analysis and design phases. Topics such as iterative development, design patterns, and user-interface design will be discussed and applied. This course is the first course in a two-course sequence that forms the senior capstone experience for Information Systems majors. *Prerequisite:* ITM-2100 Database Management.

ITM-4450 IT Audit and Controls–Fa 3 hours

This course introduces the fundamental concepts of the information technology audit and control function. The main focus of this course is on understanding information controls, the types of controls, and their impact on the organization, and how to manage and audit them. The concepts and techniques used in information technology audits will be presented. The challenge of dealing with best practices, standards, and regulatory requirements governing information and controls is addressed. *Prerequisite:* ITM-3400 Data Communications and Networking. (Fee: \$50).

ITM-4500 System Development–Sp 3 hours

Students hone their skills of analysis, design, and project management as they work in teams to develop IT projects that solve real-world problems proposed by end-users both inside the University and in outside organizations. The projects usually encompass aspects of system analysis, user-interface design, database development, web development, end-user training, documentation, and presentation to customers. Capstone course. *Prerequisites:* MIS 3500-Web Development; ITM-4400 System Analysis and Design.

ITM-4900 IT Strategy–Sp 3 hours

This course explores the issues and approaches in managing the information technology function in organizations and how the IT function integrates, supports, and enables various types of organizational capabilities. The course is focused on developing an intellectual framework that will allow leaders of organizations to critically assess existing IT infrastructures and emerging technologies as well as how these enabling technologies might affect organizational strategy. Critical analysis of the alignment between IT and organizational strategies is discussed. Open only to seniors in information technology management. Capstone course. *Prerequisites:* Open only to seniors in ITM who have completed all 1000-3000 level business courses.

J**Journalism (JOUR)****JOUR-1000 Introduction to Media Writing–Sp 3 hours**

This intensive writing course prepares students to write news copy for a variety of media. Students learn basic journalistic practices and writing formats. Priority given to majors.

JOUR-2000 Introduction to Reporting–Fa, Sp 3 hours

This course is designed to develop and enhance the primary journalistic skills presented in JOUR-1000. The objective for this course is to provide opportunity for students to polish their writing skills. Each student will have the opportunity to expand their abilities as a writer, to write more sophisticated stories, and to receive greater feedback on their reporting style and content. *Prerequisites:* JOUR-1000 Introduction to Media Writing.

JOUR-2500 Introduction to Public Relations–Sp 3 hours

This course acquaints students with the foundations of public relations as a profession. The course includes discussion of key individuals and events in its development. It provides an overview of the theoretical aspects of public relations practices and techniques. The media relationship of public relations practitioners to the mass media is examined. Codes of ethics for practitioners are also explored. *Prerequisites:* JOUR-2000 Introduction to Reporting, or by permission of instructor.

JOUR-3100 Media Law–Sp 3 hours

Examines the rights and responsibilities of journalists in American society. It explores and applies federal and state laws and regulations associated with the media. Topic areas will include the journalist and the first amendment, access to government information, libel, and privacy. Special attention will be given to legal issues related to new media. *Prerequisite:* junior or senior status.

JOUR-3150 Media Ethics–Fa 2 hours

This course examines the rights and responsibilities of the journalist in American society. It examines and applies federal and state laws and regulations associated with the media. Topic areas will include the journalist and the first amendment, access to government information, libel, and privacy. Special attention will be given to legal issues related to new media. Crosslisted with EMT-3150. *Prerequisite:* junior or senior status.

JOUR-3310 Advanced Newswriting and Reporting for Broadcasting–Fa, Sp 3 hours

Building on basics of newswriting, this course provides the opportunity to focus on reporting and writing techniques unique for broadcast media. Includes advanced skills in the organization and presentation of news stories. It provides in-depth broadcasting techniques in reporting and interviewing, as well as the use of computer-assisted reporting. *Prerequisite:* JOUR-2000 Introduction to Reporting.

JOUR-3320 Advanced Newswriting and Reporting for Print–Fa 3 hours

This course will provide students with the opportunity to develop in-depth newswriting skills for print media. Changing concepts of news will be discussed and appropriate writing methods for traditional and new media outlets will be presented. The student will apply reporting principles to a variety of news contexts including accidents, crime and the courts, sports, business, and local government. The techniques of computer-assisted journalism will also be presented and applied. The ethics of sound reporting will be an important instructional component of the course. The challenges of sound reporting after 9/11 will be discussed. *Prerequisite:* JOUR-2000 Introduction to Reporting.

JOUR-3350 Television News Production–Fa 3 hours

This course provides the basis for broadcast journalism students to understand the components of studio production of television news programs. Instruction focuses on the process and elements needed to produce a televised newscast. *Prerequisite:* JOUR-3310 Advanced Newswriting and Reporting for Broadcasting.

JOUR-3420 Editing and Design–Sp 3 hours

This course will teach students the methods to edit news stories for publication. In this course, students will learn the role of the editor in the news process and the editorial skills to prepare news stories for publication. The course will also cover the development of appropriate headlines and methods of designing story layout in ways that are clear and appealing to a target audience. Students will be taught to bring both a detailed and holistic approach to the development of the news story for printed media. Current developments in the field of editing and design will be applied to contemporary news events to facilitate application of the principles of the course. *Prerequisites: JOUR-3310 Advanced Newswriting and Reporting for Broadcasting; JOUR-3320 Advanced Newswriting and Reporting for Print.*

JOUR-3500 Public Relations Principles and Writing–Fa 3 hours

This course provides instruction in effective public relations communication both within organizations and to various media outlets. Students develop problem-solving approaches to PR challenges and apply appropriate written, visual, and spoken messages to audiences using different media of communication. *Prerequisite: JOUR-2500 Introduction to Public Relations.*

JOUR-3550 Advanced Public Relations Writing–Sp 3 hours

Building on the basics of public relations principles and writing, this course provides the opportunity to focus on particular writing techniques employed in specialized public relations contexts. This includes writing for internal publics in the form of reports, proposals, backgrounders, and position papers. In addition, students will learn to write for external publics in print, broadcasting, and online media contexts, developing proficiency in presentational and speech communication, news, feature and advertising copy. *Prerequisite: JOUR-3500 Public Relations Principles and Writing.*

JOUR-3600 Computer-Assisted Reporting–Sp 3 hours

This course teaches students the basic skills needed to use a computer to collect and analyze data necessary to write news stories. Students will learn how to gather background information, mine databases, analyze public records, study political and demographic trends with information system mapping, and conduct interviews by email. *Prerequisites: JOUR-3310 Advanced Newswriting and Reporting for Broadcasting; JOUR-3320 Advanced Newswriting and Reporting for Print.*

JOUR-3605 Writing and Design for Web and Mobile Media–Sp 3 hours

What is happening to the audience for media content and how is that likely to change over the next five years? That is the question that this course seeks to answer. Students will develop a framework for understanding the audience by looking at the intersection of a wide variety of factors that shape the media environment. The students will then project current trends to anticipate where the audience will be in the next five years. Crosslisted with EMTC.

JOUR-3650 Networked Audience–Fa 3 hours

What is happening to the audience for media content and how is that likely to change over the next five years? That is the question that this course seeks to answer. Students will develop a framework for understanding the audience by looking at the intersection of a wide variety of factors that shape the media environment. The students will then project current trends to anticipate where the audience will be in the next five years. Crosslisted as EMTC. (Fee:\$10)

JOUR-3900 Practicum in Journalism–Fa, Sp 1 hour

Development of news stories for transmission to print, broadcasting and online media outlets within the University (Cedars, In the Loop, Resound Radio, Cedars Online) either individually or as a member of a team under the supervision of a faculty mentor. The practicum is organized in a news agency format with a rotating editorial board. *Prerequisites: JOUR-3310 Advanced Newswriting and Reporting for Broadcasting; JOUR-3320 Advanced Newswriting and Reporting for Print.*

JOUR-4350 Advanced Television News Production–Fa 2 hours

Focuses on the studio production of television news programs, anchoring, and meeting broadcast news deadlines. Provides advanced techniques in reporting and field production, including live news reports and investigative reporting. *Prerequisite: JOUR-3350 Television News Production.*

JOUR-4420 Feature Writing–Sp 3 hours

Students will learn a variety of different forms of hard and soft feature writing styles. These will include personality profiles, trend stories, human interest stories, backgrounders, and in-depth stories. Exercises developing a narrative style of writing will be an important component of this course. *Prerequisite: JOUR-3320 Advanced Newswriting and Reporting for Print.*

JOUR-4500 Public Relation Campaigns–Sp 3 hours

Uses case studies to examine the role of public relations in organizational communication campaigns. Incorporates a problem-solving approach that enables students to apply various public relations techniques to real-world situations. *Prerequisite: JOUR-3550 Advanced Public Relations Writing.*

JOUR-4550 Practicum in Public Relations–Fa, Sp 1 hour

Development of public relations campaigns and products, such as brochures, videos, news releases, press kits, and feature stories either individually or as a member of a team under the supervision of a faculty mentor. *Prerequisite: JOUR-3550 Advanced Public Relations Writing.*

JOUR-4600 Magazine Writing–Fa 3 hours

This course covers the techniques of writing in-depth articles for mass circulation and specialized magazines. Students will learn the process of writing and submitting feature articles as well as analysis of markets for freelance magazine articles. Students will prepare and submit professional quality manuscripts for publication. *Prerequisite: JOUR-3320 Advanced Newswriting and Reporting for Print.*

JOUR-4610 Photojournalism–Sp 3 hours

This course focuses on the techniques and aesthetics of reporting the news as a photojournalist. It emphasizes recognition, development and creation of news photographs and the skills of the photo editor. As part of this course, students will gain experience in shooting, developing, printing, and editing the images for a variety of news media. The course will emphasize how public relations and journalism professionals can use photographs for publication in traditional media, websites, company brochures, and digital slide-show presentations. *Prerequisites: JOUR-3420 Editing and Design, or by permission of instructor.*

JOUR-4620 Investigative Reporting–Fa 3 hours

This course provides students with the tools and techniques to conduct contemporary in-depth reporting. The content is aimed at developing professional excellence in serving the public interest by acting as a watchdog on government, business, education, health, environment, safety, and other institutions. Students will develop strategies for gathering and analyzing information, and developing background and through the written assignments gain competence in the different narration techniques used in in-depth newswriting and reporting. *Prerequisites: JOUR-3310 Advanced Newswriting and Reporting for Broadcasting; JOUR-3320 Advanced Newswriting and Reporting for Print.*

JOUR-4650 3 hours
Designing Solutions for New Audiences–Fa

Because of the ongoing changes in the communication system, media companies and businesses are in constant reinvention of the ways in which they meet the needs of their audiences by innovations in programming, products and services. In this course students will be presented with a current problem in the use of new and emerging media to connect a client with its audience. Teams will then design a solution to meet the needs of both client and audience. Crosslisted with EMTC. *Prerequisite: JOUR/EMTC-3650 Networked Audience.*

JOUR-4810 Special Topics in Journalism–Sp 3 hours

Available to advanced students who desire in-depth study of special areas of journalism. Topics of current interest in the field of journalism will be offered to cover in-depth areas of specialization. Topics may include photojournalism, sports journalism, international news, news and religion, news media management, magazine, editing, opinion writing, and business and financial reporting. *Prerequisites: JOUR-3310 Advanced Newswriting and Reporting for Broadcasting; JOUR-3320 Advanced Newswriting and Reporting for Print; or permission of instructor.* (odd years)

JOUR-4820 Special Topics in Public Relations–Sp 3 hours

Available to advanced students who desire intense study of special areas of public relations. Topics of current interest in the field of public relations will be offered to cover in-depth areas of specialization. Topics may include crisis communication, agency management, event planning, and international public relations. *Prerequisites: JOUR-3550 Advanced Public Relations Writing; or permission of instructor.* (even years)

JOUR-4950 Internship–Fa, Sp 3–12 hour

Students are placed with professional organizations to apply their journalism training and gain experience in actual career situations. This should be discussed with an advisor one semester prior to the internship experience. Internship agreements must be signed by the student, the job supervisor, and the faculty mentor prior to the initiation of the internship. *Prerequisite: for print major, JOUR-3420 Editing and Design; for broadcasting major, JOUR-3350 Television News Production; for public relations major, JOUR-3550 Advanced Public Relations Writing.*

K**Keyboard Pedagogy (KPMU)****KPMU-2010 Keyboard Pedagogy I–Fa 3 hours**

Study of techniques and literature for the teaching of beginning and intermediate piano students both in private and class settings. Includes study of graded teaching materials and participation in a supervised teaching setting. *Prerequisites: THMU-1210, 1220 Music Theory I and II; THMU1310, 1320 Aural Skills I and II.*

KPMU-2020 Keyboard Pedagogy II–Sp 3 hours

Discussion of pedagogical problems involving intermediate students; evaluations of piano literature and investigation of specific aspects of piano pedagogy through readings and discussion. Survey of piano literature and its predecessors—clavichord, harpsichord, and pianoforte—from the early English virginal music to the present time. *Prerequisite: KPMU-2010 Keyboard Pedagogy I.*

KPMU-3110, 3120, 4110, 4120 1 hour each
Directed Teaching–Fa, Sp

Supervised teaching experience in a private or class format with beginning to intermediate-level piano students. *Prerequisites: KPMU-2010, 2020 Keyboard Pedagogy I and II.* (Fee: \$50)

KPMU-3150 Keyboard Pedagogy Seminar I–Fa 2 hours

Designed to develop critical and creative teaching approaches for students of varying personality and learning styles with application to theory, technique, and music concepts needed by primary and elementary-level piano students in both private and group settings. *Prerequisites: KPMU-2010, 2020 Keyboard Pedagogy I and II.*

KPMU-3160 Keyboard Pedagogy Seminar II–Sp 2 hours

Survey of representative Baroque through 20th century literature for the advanced pre-college pianist. The course is enhanced with videos, required readings, and discussion relative to topics such as performance anxiety, technique, and performance style. *Prerequisites: KPMU-2010, 2020 Keyboard Pedagogy I and II.*

KPMU-4150 Keyboard Pedagogy Seminar III–Fa 2 hours

Pedagogical methods and techniques using electronic studio in-class teaching. The course is enhanced with videos, required readings, and discussion relative to group teaching. *Prerequisites: KPMU-2010, 2020 Keyboard Pedagogy I and II.*

KPMU-4160 Keyboard Pedagogy Seminar IV–Sp 2 hours

Continued application of various learning styles with application to developing musical performance in intermediate and advanced-level piano students in both private and group settings. The course also includes an introduction to business practices for the independent piano teacher.

L**Liberal Arts (LART)****LART-1000 Introduction to Liberal Arts–Fa 1 hour**

An introduction to the liberal arts and the Liberal Arts program. (Fee: \$25)

LART-4950 Capstone Project in the Liberal Arts–Fa, Sp 3 hours

Students select a topic of interest and then research and write a paper under the direction of a research mentor. Students present findings before faculty and peers. *Prerequisites: Acceptance in the B.A. of Liberal Arts degree program and senior status.*

Linguistics (LING)**LING-3080 Linguistics for Language Learning–Fa 3 hours**

An analytical approach of language functioning applicable to learning any second language. Using theoretical-based approaches, the emphasis is on English language variations, phonology, morphology, and syntax. The student is also introduced to various theories of second (new) language acquisition at different age/grade levels. Second (new) language study as a means of personal development and the importance of second (new) language learning in modern society are addressed.

LING-3090 Sociolinguistics–Sp 3 hours

An overview of the relationship between language and society. Topics covered include ethnicity, social contact, change, and issues related to minority students such as education, immigration, migration, demographics, and historical and legal precedents. The student will also gain knowledge and cultural understanding of minority groups in Ohio. (even years)

LING-3500**2 hours****Methods of Teaching Foreign Language–Fa**

Examination of the purposes and objectives along with the methods used in the K–12 foreign language classroom instruction. The student studies the effect of cognitive, affective, and socio-cultural variables on second (new) language acquisition. The student is given the opportunity to establish goals and objectives and design curricula that reflect Ohio's grade-level learning outcomes in content areas, as well as to develop strategies that promote language-based English learning for K–12 grade-level students. *Open only to TESOL endorsement teacher candidates and TESOL minors.*

LING-3600**1 hour****Clinical Teaching of English as a Second Language–**

Fa, Sp, Su

A practical experience in assisting an ESL classroom teacher in a K–12 ESL program. Under the supervision of a qualified ESL teacher, the student will observe and participate in a formal classroom setting. During this experience, the student will be provided various opportunities to aid the classroom teacher in the development and execution of activities and assessments and to practice teaching on a limited basis. Ongoing during this experience, the student will analyze, evaluate, reflect on, and describe their field experience. The student is expected to participate in 30 clock hours. *Open only to TESOL endorsement teacher candidates. Prerequisite: LING-3500 Methods of Teaching Foreign Language. Credit/No Credit.*

LING-3610 Practicum–Fa, Sp, Su**2 hours**

Independent teaching of ESL students under the general supervision of a master teacher. In a K–12 placement under the supervision of a qualified ESL teacher, the student will practice teaching in a formal classroom situation. During this experience, the student will be provided opportunities to establish goals and objectives and design curricula that reflect Ohio's grade-level learning outcomes in content areas. The student will also be given opportunities to select, adapt, create, and use varied resources appropriate to age, cultural groups, and different learning styles. Activities should include integrating technology in planning and delivering instruction and strategies for creating and maintaining communication with families. Practicum will also provide the student with knowledge and skills in assessment. Ongoing during this experience, the student will analyze, evaluate, reflect on, and describe their field experience. *Prerequisite: LING-3500 Methods of Teaching Foreign Language. Credit/No Credit. (Fee: \$45)*

LING-3710**2 hours****TESOL Practicum for Non-Education Majors–Fa, Sp, Su**

Practice teaching of ESL under general supervision of master teacher for non-education majors who are completing TESOL minor requirements. May be satisfied by a satisfactory completion of LING-3600 and LING-3610. *Prerequisite: LING-3500 Methods of Teaching Foreign Language. Credit/No Credit. (Fee: \$45)*

Literature (LIT)**LIT-1990 First-Year Seminar****3 hours**

This course will provide instruction in the close reading of and the analytical writing about literary texts. *Prerequisites: ENG-1400 Composition.*

LIT-2090 Literary Analysis–Fa, Sp**3 hours**

Introductory study of basic textual analysis and traditional contextual analysis. This course is primarily intended for adolescent and young adult integrated language arts and English majors as preparation for upper-division literature courses. *Prerequisite: LIT-1990 First-Year Seminar*

LIT-2120 History of Literary Criticism–Sp**3 hours**

A study of the rich philosophic heritage of the West, this course is designed to familiarize students with the writers whose works have defined the critical canon as the result of the way they addressed three questions: What is the function of literature? What is the role of an author? How do we evaluate literature? Featured writers will range from Plato, Aristotle, and Augustine to Lewis, Eliot, and Bakhtin. *Prerequisite: ENG-1400 Composition.*

LIT-2130 Dramatic Literature–Sp**3 hours**

Survey of major dramatic works from Greek to modern day playwrights, emphasizing the relationships among themes and dramatic construction amid various cultural and historical contexts. Can be applied to meet English or media and applied communications requirements, but not both. *Prerequisite: major status or permission of instructor.*

LIT-2300 Introduction to Literature–Fa, Sp**3 hours**

Emphasis on developing the ability to read critically and analytically representative examples of literary genres through use of appropriate criteria. *Prerequisite: ENG-1400 Composition.*

LIT-2330 World Mythology–Fa**3 hours**

Study of mythologies, the theories of myth and myth making, and the incorporation of myth in selected literary works. *Prerequisite: ENG-1400 Composition.*

LIT-2340 Western Literature–Fa, Sp, Su**3 hours**

Survey of major works of Western literary tradition from Homer to T.S. Eliot. *Prerequisite: ENG-1400 Composition.*

LIT-2390**3 hours****Survey of American Literature to 1900–Fa, Sp**

Study of prominent American authors from colonial times to 1900. Although this course may be taken for general education credit, it is primarily designed for majors. *Prerequisite: ENG-1400 Composition*

LIT-2430 Survey of British Literature to 1800–Fa, Sp**3 hours**

Study of various English authors from the Anglo-Saxons to 1800. Although this course may be taken for general education credit, it is primarily designed for majors. *Prerequisite: ENG-1400 Composition.*

LIT-2440**3 hours****Survey of British Literature from 1800 to Present–Sp**

Study of noteworthy English authors from 1800 to the present. Although this course may be taken for general education credit, it is primarily designed for majors. *Prerequisite: ENG-1400 Composition.*

LIT-3170 American Literature: 1820–1865–Sp**3 hours**

Intensive study of American authors who are representative of the literary traditions of Romanticism and Transcendentalism and their influence on a period of history often called the American Renaissance. Authors may include Emerson, Thoreau, Fuller, Whitman, Dickinson, Douglass, Jacobs, Stowe, Poe, Hawthorne, Melville, and others. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2390 Survey of American Literature to 1900. (even years)*

LIT-3180 American Literature: 1865–1914–Sp**3 hours**

Intensive study of American authors who are representative of the literary traditions of Realism and Naturalism, with attention to their influence on developments in American history between the Civil War and World War I. Authors may include Twain, Howells, James, Wharton, Piatt, Jewett, Freeman, Chesnut, Crane, London, Dreiser, Norris, Alcott, and others. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2390 Survey of American Literature to 1900. (odd years)*

LIT-3200**3 hours****Methods of Teaching Integrated Language Arts–Sp**

This course is designed to explore the various methods and materials essential to teaching language arts in the secondary classroom. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: EDUC-2000 Introduction to Diverse Learners, currently enrolled in EDSE-3100 Principles of Teaching Adolescent and Young Adult, or permission of instructor.*

LIT-3230 Directed Readings–Fa, Sp**1–3 hours**

Selected readings designed to strengthen the major by providing primary and secondary material in preparation for an independent study of a major writer, literary genre, or literary period. Upper-level literature courses cannot be used as a substitution for the general education literature requirement.

LIT-3240 Directed Writings–Fa, Sp**1–3 hours**

Students will work in close consultation with a faculty member on the creation and production of a significant project in one of the following genres: poetry, fiction, creative nonfiction. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: any 3000-level creative writing workshop.*

LIT-3310 The English Novel–Fa**3 hours**

Reading and critical analysis of representative novels written in English. Authors include Fielding, Barnes, Rushdie, Gordimer, and Greene. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis and LIT-2430 Survey of British Literature to 1800 or LIT-2440 Survey of British Literature from 1800 to Present; or permission of instructor. (even years)*

LIT-3320 Renaissance Literature–Sp**3 hours**

A study of Metaphysicals, Milton, and other selected Renaissance writers. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis; LIT-2430 Survey of British Literature to 1800; or permission of instructor.*

LIT-3330 18th Century British Literature–Fa**3 hours**

Study of British writers from the Restoration through the Age of Johnson. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis; LIT-2440 Survey of British Literature from 1800 to Present; or permission of instructor.*

LIT-3340 British Romantic and Victorian Literature–Sp**3 hours**

Study of British romantic and Victorian literature and culture. Authors may include Wordsworth, Coleridge, Keats, Jane Austen, George Eliot, Charles Dickens, Charlotte Bronte, Wilkie Collins, Christina Rossetti, Bram Stoker, and others. *Prerequisite: LIT-2090 Literary Analysis, LIT-2440 Survey of British Literature from 1800 to Present, or permission of instructor. (odd years)*

LIT-3350 Shakespeare–Fa**3 hours**

Representative comedies, history plays, tragedies, and sonnets. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis; LIT-2430 Survey of British Literature to 1800; or permission of instructor.*

LIT-3380 Contemporary British Literature–Fa**3 hours**

Study of representative and significant 20th century British writers, especially those reflective of modern ideologies. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis; LIT-2440 Survey of British Literature from 1800 to Present; or permission of instructor.*

LIT-3400**3 hours****Contemporary Studies in World Literature–Sp**

Study of contemporary literature outside the American and British traditions. Writers may include Chinua Achebe, Nadine Gordimer, Duong Thu Huong, Gabriel Garcia Marquez, Haruki Murakami, V.S. Naipaul, Moniru Ravanipur, Jose Saramago, Tatyana Tolstoya, Luisa Valenzuela, Gao Xingjian, and others. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: major status or permission of the instructor. (even years)*

LIT-3420 American Novel–Fa**3 hours**

Study of the historical development of the American novel and an analysis of the writings of major American novelists from Cooper to Roth. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis; or permission of instructor; or major status. (odd years)*

LIT-3430 Literature of the American South–Sp**3 hours**

Study of the literature of the American South, covering its historical development, its major themes and authors, and its contemporary status. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisites: major status or permission of the instructor. (even years)*

LIT-3440 Multiethnic American Literature–Fa**3 hours**

A survey of literature produced by writers from diverse ethnic groups, including (but not limited to) Native American, African American, Chicano, Jewish, and Asian American. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisites: LIT-2090 Literary Analysis, LIT-2390 Survey of American Literature to 1900.*

LIT-3450 Contemporary Poetry–Fa**3 hours**

This course covers major poetry written by 21st century poets and poetry written in the second half of the 20th century. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisites: ENG-1400 Composition; LIT-2090 Literary Analysis.*

LIT-3460 Contemporary East Asian Literature–Sp**3 hours**

This course introduces students to contemporary literature from East Asia focusing primarily on works in translation from China, Japan, and Korea. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisites: major/minor status or permission of the instructor. (even years)*

LIT-3510 Modern American Literature–Sp**3 hours**

Study of major American authors of the 20th century. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis; LIT-2390 Survey of American Literature to 1900; or permission of instructor.*

LIT-3520 C.S. Lewis and The Inklings–Sp**3 hours**

Study of Lewis' contributions in the fields of literature, criticism, and apologetics. Special attention will be placed on understanding Lewis' personal and intellectual development, his relationships with contemporary scholars and writers, and his continuing influence. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: major status or permission of instructor. (even years)*

LIT-3530 Graphic Novel–Fa 3 hours

This course will focus on the emerging literary form of the graphic novel. Students will be introduced to the history and development of sequential art as well as the narrative techniques and conventions used in graphic novels, manga, bandes dessinées. Students will read a broad selection of representative works. Upper-level literature courses cannot be used as a substitution for the general education literature requirement.
Prerequisite: major status or permission of the instructor. (even years)

LIT-4220 English Seminar–Sp 3 hours

Designed to help the student synthesize their major areas of study. Required of all senior English majors. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. Capstone course.

LIT-4230 Independent Study in Literature–Fa, Sp 1–3 hours

Independent study in a selected field for students with special interests and demonstrated ability. Upper-level literature courses cannot be used as a substitution for the general education literature requirement.

LIT-4310 Literary Theory–Fa 3 hours

A study of theoretical literary contexts. Special consideration will be given to economic, political, psychological, linguistic and cultural contexts. Upper-level literature courses cannot be used as a substitution for the general education literature requirement.
Prerequisite: LIT-2090 Literary Analysis.

LIT-4420 European Novel–Fa 3 hours

Study of the 19th and 20th century influence on the novel from Balzac to Camus. Upper-level literature courses cannot be used as a substitution for the general education literature requirement.
Prerequisite: major status or permission of instructor.

LIT-4450 Milton: Poetry and Selected Prose–Fa 3 hours

A study of Milton's early poetry, *Paradise Lost*, *Paradise Regained*, *Samson Agonistes*, and selected prose works. Upper-level literature courses cannot be used as a substitution for the general education literature requirement. *Prerequisite: LIT-2090 Literary Analysis; LIT-2430 Survey of British Literature to 1800; or permission of instructor. (even years)*

LIT-4490 Special Topics–Fa, Sp 1–3 hours

Investigation of such literary phenomena that have intrinsic worth and engage student interest. Upper-level literature courses cannot be used as a substitution for the general education literature requirement.

LIT-4510 3 hours**Recent American Literature 1945–Present–Sp**

A study of the social, political, economic, and religious issues that defined the American experience in the last half of the 20th century. Diverse poetry, short stories, drama, novels, and films will be analyzed to give students an understanding of the myriad subjectivities that have shaped American values and attitudes since World War II. Upper-level literature courses cannot be used as a substitution for the general education literature requirement.
Prerequisite: any 2000-level literature course.

M**Multi-Age Health Education (MAHE)****MAHE-1350 Foundations of Health Education–Sp 2 hours**

Orientation to the history, philosophy, and scope of modern health education from a theistic perspective. (odd years)

MAHE-2100 Personal Health Issues–Fa 3 hours

This course will explore various health topics, including but not limited to emotional and mental well being, gerontological health issues, and death and dying. Course content may be revised to reflect changing health needs and priorities. (even years)

MAHE-3030 Nutrition–Fa 3 hours

A study of the science of nutrition, together with the study of eating habit formation and modification for optimal wellness, presented from a Christian perspective.

MAHE-3070 Current Issues in Health–Sp 1 hour

Designed to explore, from a Christian perspective, health-related issues that challenge our society. This course recognizes the reality that there are “no easy answers” as ethics, technology, and economics merge to generate new dilemmas of increasing complexity every day.

MAHE-3100 Drug Education–Sp 3 hours

Students will investigate the physical, social, emotional, intellectual, and spiritual factors influencing consumer health behavior with specific application to use/misuse of dietary supplements and herbal preparations, prescription drugs, over-the-counter drugs, alcohol, stimulants, opiates, hallucinogens, and steroids.

MAHE-3130 School Health Program–Sp 3 hours

Analysis of the scope of the school health program, including health services, healthful school living, and health instruction.

MAHE-3500 Community Health Concepts–Fa 2 hours

Analysis of current community health problems and how solutions can be achieved in and through existing community health programs.

MAHE-4400 Health Education In-Service–Fa, Sp 0 hours

Students are required to organize and conduct a health fair or make a presentation on a health-related issue to other health professionals, parents, faculty, or school personnel at the site of their student teaching experience or on campus to faculty, staff, and students. Students will prepare the information and materials for the health fair and/or presentation as part of the course Community Health Concepts. *Prerequisite: Departmental approval is required. MAHE-3500 Community Health Concepts. Credit/no credit.*

MAHE-4610 Teaching Health–Fa 5 hours

This course provides methods of instruction with emphasis on the teacher's role in comprehensive school health education, including an introduction to the health status of youth, at-risk students, objectives for A Healthy People 2010, components of comprehensive school health education, the role of the teacher in school health services, and special health concerns of today's preschool children through post-secondary youth, as well as curriculum development, behavioral objectives, life skills, scope and sequence of learning, teaching strategies, philosophy of wellness, and responsible decision making. *Prerequisite: admission to the Teacher Education Program. (Odd years)*

MAHE-4850 1–3 hours**Independent Study in Health Education–Fa, Sp**

Independent study in the area of health education by students pursuing multi-age health education teaching licensure or a health promotion minor. *Departmental approval is required.*

MAHE-4960 4 hours**Field Experience in Health Education–Fa, Sp**

An eight-week field experience, including the teaching of health. *Prerequisite: admission to the Teacher Education Program. Credit/no credit. (Fee: \$100)*

MAHE-4990 Internship in Health Promotion–Fa, Sp 3 hours

This is an actual work experience in a health promotion setting for a minimum of 10 hours per week for a minimum of ten weeks. *Departmental approval is required. Credit/no credit.*

Multi-Age Physical Education (MAPE)**MAPE-1210 Team Sports–Fa 2 hours**

Theory and practice in soccer, basketball, softball, baseball, volleyball, and novelty sports with attention given to various teaching methods, skills, and rules.

MAPE-2200 Individual and Dual Sports I–Fa 2 hours

Theory and practice in tennis, golf, archery, and bowling with attention to various teaching methods, skills, psychomotor skill development, and knowledge in rules, terminology, strategies, safety, and etiquette. (Fee: \$25)

MAPE-2210 Individual and Dual Sports II–Sp 2 hours

Theory and practice in badminton, racquetball, table tennis, and track and field with attention to various teaching methods, skills, psychomotor skill development, and knowledge in rules, terminology, strategies, safety, and etiquette. (Fee: \$25)

MAPE-3600 5 hours**Physical Education in the Elementary School–Sp**

An overview of the place of physical education in the elementary school curriculum with an emphasis on the study of current program content design, teaching techniques, and types of evaluations, as well as modifying activities for the purpose of inclusion for the physically challenged.

MAPE-4500 3 hours**Curriculum Development in Physical Education–Fa**

Overview of the curriculum process in physical education, specifically giving attention to the theoretical base, process of curriculum design, and curriculum development for elementary through high school educational programs.

MAPE-4850 1–3 hours**Independent Study in Physical Education–Fa, Sp**

Independent study by major students of advanced standing toward the understanding and appreciation of problems in physical education. This course gives students an opportunity to develop skills in the use of literature and in the appropriate techniques of problem solving. *Prerequisite: Departmental approval is required.*

MAPE-4950 3 hours**Methods of Teaching Secondary Physical Education–Fa**

This course provides the study of methods of instruction and practice and the study of planning and implementing units of instruction, as well as evaluating the effectiveness of various teaching strategies for teaching physical education at the secondary level. Also included is the study of understanding and developing assessment techniques in physical education and developing strategies for working with handicapped students. *Prerequisite: admission to the Teacher Education Program.*

MAPE-4960 Field Experience–Fa 4 hours

A field experience taken in conjunction with MAPE-4950 Methods of Teaching Physical Education. *Prerequisite: admission to the Teacher Education Program. Credit/no credit. (Fee: \$100)*

MAPE-4970 2 hours**Field Experience in Physical Education–Special****Populations–Fa, Sp**

An adapted physical education teaching field experience taken in conjunction with EDSE-4900 Student Teaching and Seminar: Adolescent/Young Adult that seeks to provide the opportunity for application of adapted physical education content and theory studied in MAPE-3600 Physical Education in the Elementary School and MAPE-4950 Methods of Teaching Physical Education. *Prerequisites: admission to the Teacher Education Program; MAPE-4950 Methods of Teaching Physical Education; MAPE-4960 Field Experience. (Fee: \$35)*

Mathematics (MATH)**MATH-1710 Calculus I–Fa, Sp 5 hours**

First course of a two-course sequence covering basic concepts of analytic geometry and single variable calculus. Includes limits, transcendental functions, derivatives, applications of the derivative, single variable integration with introduction to numeric integration techniques, applications of integration including some solutions of differential equations, and additional integration techniques. *Prerequisite: GMTH-1030 Precalculus or equivalent; or permission of instructor.*

MATH-1720 Calculus II–Fa, Sp 5 hours

The second course of a two-course sequence covering the basic concepts of analytic geometry and single variable calculus. Includes sequences, series, expansion of functions into Taylor and power series, conic sections, plane curves, parametric equations, polar coordinates, vectors and geometry in three-space, vectors, and vector calculus. *Prerequisite: MATH-1710 Calculus I or equivalent or permission of instructor.*

MATH-1880 Topics in Calculus–Fa, Sp, Su 1–3 hours

This course is for students who are attempting to transfer credit for MATH-1710 or MATH-1720 Calculus I and II when those transferred courses lack some of the topics contained in MATH-1710 or MATH-1720. It requires full participation in a MATH-1710 or MATH-1720 course during the sections in which the student's transferred course is found to be deficient or in a stand-alone course offered during Summer School I. *Prerequisite: GMTH-1030 Precalculus or equivalent; permission of instructor. Corequisite: partial transfer credit for MATH-1710 and/or MATH-1720 or approved transient credit for a Calculus I or II course that will provide less than full credit for MATH-1710 or MATH 1720.*

MATH-1990 3 hours**Beautiful Math Structures and Thinking–Fa**

This course introduces freshmen math majors to interesting mathematical ideas and applications beyond the usual scope of standard math courses. Topics include an introduction to propositional logic, function theory, and infinite sets. Other topics will be chosen from elementary number theory, modular arithmetic, error-correcting codes, Fibonacci numbers and the golden ratio, fractals, discrete dynamical systems and chaos, Euler and Hamilton Circuits, democracy and impossibility theorems, game theory, the Platonic solids, n-dimensional space, and other topics up to the discretion of the instructor.

MATH-2210 Logic and Methods of Proof–Fa 3 hours

Introduction to formal mathematical logic; emphasis on preparing students for the abstraction of upper-division courses. Special attention is given to the development of students' skills with a variety of methods of proof, using examples from numerous areas. *Prerequisites: MATH-1720 Calculus II; MATH-1990 Beautiful Math Structures and Thinking; or permission of instructor.*

MATH-2510 Discrete Math for Computer Science–Sp 3 hours

An introduction to mathematical foundations of computer science, including propositional and predicate calculus, methods of proof, sets and relations, recurrences, graphs and trees, and program correctness and proofs. This course does not satisfy any requirements for the B.A. or B.S. in mathematics or the B.A. in integrated mathematics education. *Prerequisite: MATH-1710 Calculus I.*

MATH-2710 Calculus III–Fa, Sp 3 hours

Introduction to differential and integral calculus of several variables, multiple integrals, vector analysis, line integrals, and surface integrals. *Prerequisite: MATH-1720 Calculus II or equivalent or permission of instructor.*

MATH-2740 Differential Equations–Fa, Sp 3 hours

Study of the standard techniques employed in the solution of differential equations with emphasis on those arising from physical problems. *Prerequisite: MATH-1720 Calculus II or equivalent.*

MATH-2800 LaTeX for Technical Documents–Sp 1 hour

In this course students will be introduced to the typesetting language of LaTeX through the use of tutorials, example documents, and homework assignments. They will learn to easily prepare professional-looking theses, conference papers, and journal papers. They will also learn how to create professional-looking presentations, homework, quizzes, examinations, syllabi, resumés, and curriculum vitae.

MATH-3050 Algebraic Structures for Secondary Education Majors–Fa 4 hours

An introduction to the basic ideas of number theory, abstract algebra, and linear algebra. Factorization of integers, congruence modulo m , Fermat's Theorem, groups, rings, integral domains, fields, vector spaces, systems of linear equations, determinants and inverses, linear transformations, eigenvalues, and eigenvectors. **Does not count toward B.A. or B.S. majors in mathematics.** *Prerequisites:* MATH-2210 *Logic and Methods of Proof*; MATH-1720 *Calculus II*.

MATH-3110 Probability and Statistics I–Fa 3 hours

Probability models, random variables, probability distributions, estimation, and hypothesis tests are studied from theoretical and practical viewpoints. *Prerequisite:* MATH-1720 *Calculus II*.

MATH-3240 Introduction to Operations Research–Fa 3 hours

Formulation and analysis of mathematical models for the optimal solution of decision making problems under certainty. Course content includes linear programming; the simplex method, duality and sensitivity analysis. This course applies probabilistic analysis to such nondeterministic models as queueing models, elements of dynamic programming, and Markov decision analysis. *Prerequisites:* MATH-3610 *Linear Algebra*; MATH-3110 *Probability and Statistics*; or permission of the instructor. (even years)

MATH-3500 Number Theory–Fa 3 hours

Introduction to most of the topics of elementary number theory such as modular arithmetic, prime factorizations, linear diophantine equations, the Chinese remainder theorem, quadratic reciprocity, Pythagorean triples, number theoretic functions, and related topics. Concrete examples will illustrate the concepts and abstract reasoning will develop the theories considered in the course. *Prerequisite:* MATH-2210 *Logic and Methods of Proof*. (odd years)

MATH-3550 Discrete Math: Graph Theory–Fa 3 hours

Introduction to the basic concepts of graph theory and discrete mathematics problem-solving. Topics covered include elements of graph theory, covering circuits, graph coloring, trees and searching, and network algorithms. *Prerequisite:* MATH-2210 *Logic and Methods of Proof*. (odd years)

MATH-3560 Discrete Math: Combinatorics–Sp 3 hours

Study of combinatorial reasoning, focusing on enumeration. Intended to develop a proficiency in methods of enumerative problem solving. Topics chosen from areas such as counting methods for arrangements and selections, permutations and combinations, generating functions, partitions, and recurrence relations. *Prerequisite:* MATH-2210 *Logic and Methods of Proof*. (odd years)

MATH-3610 Linear Algebra–Sp 3 hours

Introduction to the algebra of linear equations, including determinants, matrices, vector spaces, eigenvalues, eigenvectors, and linear mappings. *Prerequisite:* MATH-1720 *Calculus II* or equivalent.

MATH-3710 Advanced Calculus–Sp 3 hours

Topics in function theory, vector analysis, differential calculus of several variables, vector differential calculus of several variables, integral calculus of several variables, vector integral calculus of several variables, and infinite series. *Prerequisite:* MATH-2710 *Calculus III* or equivalent or permission of instructor. (even years)

MATH-3740 Complex Variables–Sp 3 hours

Introduction to complex arithmetic, differentiation: analytic functions, Cauchy-Riemann equations, harmonic functions, elementary functions and their mapping properties, integration: Cauchy's Theorem, Cauchy's Integral Formula, Taylor and Laurent series, poles, residues, and the residue theorem. *Prerequisite:* MATH-1720 *Calculus II*. (odd years)

MATH-3750 Introduction to Dynamical Systems–Sp 3 hours

Topics include one-dimensional flows and bifurcations, phase portraits, linearization and classification of equilibrium points, limit cycles, chaos, one-dimensional maps, and fractals. *Prerequisite:* MATH-2740 *Differential Equations*. (even years)

MATH-3760 Numerical Analysis–Sp 3 hours

Analysis of computational error, solutions of equations of one variable, interpolation, numerical differentiation and integration, finite difference methods for solving ordinary differential equations, solving linear algebraic systems, and least squares approximations. *Prerequisite:* CS-1210 *C++ Programming*; MATH-2710 *Calculus III*; MATH-2740 *Differential Equations*. (odd years)

MATH-3800 Research Methods–Sp 1 hour

This course will introduce the mathematics major to the various resources and methods available for researching topics in mathematics. This could include the use of library resources at Cedarville University, use of Internet resources, WWW searches, and a tour of the library at a larger university, where journals and indices of importance can be referenced. *Prerequisites:* MATH-2210 *Logic and Methods of Proof*; ENG-1400 *English Composition*. (Fee: \$50)

MATH-4110 Probability and Statistics II–Sp 3 hours

Second course of a two-course sequence covering basic concepts of statistics. Topics chosen from the following: hypothesis tests, regression analysis, quality control, and non-parametric statistics. *Prerequisites:* MATH-3110 *Probability and Statistics I*.

MATH-4210 Mathematical Methods for Physicists–Fa 3 hours

Advanced mathematical methods used in the solution of physics problems. Topics include curvilinear coordinates, vector analysis, and solutions to partial differential equations using Fourier, Bessel and Legendre functions. *Prerequisites:* MATH-2710 *Calculus III*; MATH-2740 *Differential Equations*. (even years)

MATH-4410 Euclidean and Non-Euclidean Geometry–Sp 3 hours

Rigorous treatment of the foundations of Euclidean geometry; an introduction to hyperbolic geometry with emphasis on its Euclidean models. *Prerequisites:* MATH-2210 *Logic and Methods of Proof*.

MATH-4450 Topology–Fa 3 hours

An introduction to elementary point set topology with emphasis on illustrating how the familiar concepts of closed and open intervals, continuity of functions, distances, and various geometrical properties have been generalized from classical mathematics. Topics include: metric spaces, topological space theory, separation axioms, covering properties, compactness, connectedness, metrizable, and complete metric spaces. *Prerequisite:* MATH-2210 *Logic and Methods of Proof*. (even years)

MATH-4610, 4620 Abstract Algebra I and II–Fa, Sp 3 hours/sem

Introduction to and development of the basic ideas of algebraic systems, groups, rings, integral domains, fields, and other advanced topics. *Prerequisite:* MATH-2210 *Logic and Methods of Proof*. (even years)

MATH-4710, 4720 Real Variables I and II–Fa, Sp 3 hours/sem

Introduction to the real number system's algebraic order, completeness, and cardinality properties, the topology of Cartesian spaces R^n and functions including continuity and uniform continuity, connectedness, convexity, compactness, various types of convergence, limits, differentiability, and Riemann integration, measurability, and L_n . *Prerequisites:* MATH-2210 *Logic and Methods of Proof*. (odd years)

MATH-4800 **3 hours**
Capstone Experience in Mathematics–Fa, Sp

The course will allow students to deeply research an important topic in mathematics, both individually and collectively, and to present their findings from library research as well as personal work. *Prerequisites: MATH-3800 Research Methods in Mathematics; 15 hours of courses beyond MATH-1720 Calculus II; permission of instructor.* (Fee: \$20)

MATH-4880 Topics in Mathematics–Fa, Sp **1–3 hours**

Some typical topics are linear programming, numerical analysis, stochastic calculus, non-parametric statistics, partial differential equations, or mathematical modeling. This course is intended to be a topic not in the current curriculum that is a logical extension and development of the student's academic plan. *Prerequisite: permission of instructor.*

MATH-4900 **1–3 hours**
Independent Study in Mathematics–Fa, Sp

Independent research in the various branches of mathematics and allied fields of application. Submission and approval of a research proposal must precede registration. *Prerequisite: major in mathematics or permission of research advisor.*

Management (MGMT)**MGMT-3500** **3 hours**
Principles of Organization and Management–Fa, Sp

An examination of the policies, principles, practices, and problems involved in the management of organizations as they are currently being applied in the United States and around the world to meet or exceed customer's expectations.

MGMT-3510 **3 hours**
Entrepreneurship and Small Business Management–Fa

This course will introduce students to business innovation and entrepreneurship in small and large organizations. The basics of envisioning, evaluating, starting, and running a brand new business and/or a new business unit within an existing organization will be explored. *Prerequisites: ACCT-2110 Principles of Accounting I; ECON-2330 Microeconomics; MGMT 3500 Principles of Organization and Management.*

MGMT-3511 **3 hours**
Entrepreneurship and Small Business Strategy–Fa

This course will focus on looking for, identifying, and evaluating business opportunities, then matching business models to take advantage of them. Content will include creativity, opportunity recognition, evaluation, cognitive processes of entrepreneurs, environmental scanning, entrepreneurial business models (strategy), and will introduce initial financial elements of opportunity evaluation. *Prerequisites: MGMT-3510 Entrepreneurship and Small Business Management*

MGMT-3512 **3 hours**
Entrepreneurship and Small Business Finance–Fa

This course will focus on the finance, accounting, and tax issues involved in operating a small business, entrepreneurial high growth firm, or family business. Content will include small business and high growth financial issues, managing cash flow, attracting financial resources, accounting issues such as the role of a forward-thinking accountant, setting up accounting systems that serve the firm strategy, and tax planning. It will also include financial elements of opportunity evaluation and exploitation as well. *Prerequisite: MGMT-3510 Entrepreneurship and Small Business Management.*

MGMT-3513 **3-12 hours**
Entrepreneurship and Small Business Practicum–Fa, Sp

This course will be a practicum for SB and E students to gain experience in a small business or entrepreneurial setting that is appropriate for their future goals. These experiences will be in the form of internships, shadowing entrepreneurs, working in a small business or entrepreneurial firm on significant projects or in significant roles, or consulting with these types of firms.

Due to the dynamic nature of opportunities provided by small business people and entrepreneurs, it can be taken, with the permission of the lead professor, at any time during the SB and E program. In addition, since each experience is unique, it can be taken more than once for up to 12 semester hours. *Prerequisite: Permission of instructor.*

MGMT-3520 **3 hours**
Production and Operations Management–Fa, Sp

Introduction to the concepts, methodologies, and application of production and operations management. Designed to develop problem-solving and decision-making skills to apply in the operations and production areas of the firm. Designed to develop an appreciation for the interaction of operations management with the management systems of organizations and the processes associated with "lean" thinking necessary to create value for the customer. *Prerequisites: ACCT-2120 Principles of Accounting II; BUS-2150 Statistics for Business; MGMT-3500 Principles of Organization and Management; or permission of instructor.* (Fee: \$50)

MGMT-3530 Human Resources Management–Sp **3 hours**

An analysis of the principle functions, processes, and problems involved in the management of personnel policies; selection, training, promotion, compensation, and discharge of personnel; labor turnover, safety, health, and recreation. *Prerequisite: MGMT-3500 Principles of Organization and Management or permission of instructor.*

MGMT-3550 Organizational Behavior–Fa **3 hours**

A study of the impact of human behavior within and upon the organizational structure. Emphasis is given to behavior as it relates to employment, absenteeism, employee turnover, productivity, human performance, and management. *Prerequisite: MGMT-3500 Principles of Organization and Management or permission of instructor.*

MGMT-3560 Project Management–Sp **3 hours**

This course will lay a foundation for an understanding of project management principles. It will examine principles, processes, and tools project managers have developed to effectively manage and lead projects.

MGMT-3570 International Management–Sp **3 hours**

Focuses on the principles of management in a global economy. Exporting and foreign direct investment are analyzed from the multinational perspective. Strategy, organizational structure, and control techniques are developed in a world environment. *Prerequisite: MGMT-3500 Principles of Organization and Management.*

MGMT-3580 **3 hours**
Compensation and Benefits Management–Fa

An introduction to the concepts, methodologies, and application of compensation and benefit programs within human resources. Designed to develop problem-solving and decision-making skills in the area of compensation and benefits. Students will also learn to develop "lean" thinking necessary to create value for stakeholders in organization through this human resources function. *Prerequisites: MGMT 3500 Principles of Organization and Management; MGMT 3530 Human Resources Management.* (odd years)

MGMT-4510 Strategic Management–Fa, Sp 3 hours

Strategic issues faced by organizations are analyzed in a comprehensive manner. Skills in strategic analysis are developed through lectures and from diverse industries, nonprofit, and quasi-public institutions. Open only to seniors in business administration within 2 semesters of graduation. Must be taken at Cedarville University; transfer or transient credit for this course will generally not be accepted. Capstone course. *Prerequisites: FIN-3710 Principles of Finance; MGMT-3500 Principles of Organization and Management; MRKT-3600 Principles of Marketing.*

MGMT-4520 Supply Chain Management–Fa 3 hours

Introduces students to key concepts in supply chain design, planning, and operations. Typical content includes the supply chain strategic environment, designing appropriate networks, forecasting demand and supply, planning and managing inventories, sourcing and transporting products, supply chain coordination, and the impact of technology on supply chain management. Course methodology emphasizes application of concepts through case study, plant tours, and presentations. *Prerequisites: BUS-2150 Statistics for Business; MGMT-3520 Production and Operations Management.* (Fee: \$50)

MGMT-4530 Industrial Relations Management–Sp 3 hours

The interplay between market forces and institutional rules that determine the employment relationship. Labor history, the effects of changing public policies, trade unions, and collective bargaining are viewed from various international perspectives. *Prerequisites: MGMT-3500 Principles of Organization and Management.*

MGMT-4540 Service Operations Management–Sp 3 hours

An introduction to the concepts, methodologies, and applications in service operations. Designed to develop problem-solving and decision-making skills to apply in service firms. Students will also learn to develop “lean” thinking necessary to create value for customers in the service sectors. *Prerequisites: ACCT-Principles of Accounting II, BUS-2150 Statistics for Business, MGMT-3500 Principles of Organization and Management.* (Fee: \$25) (odd years)

MGMT-4550 Advanced Organizational Behavior–Sp 3 hours

This is an advanced course about managing people and organizations at the dawn of the 21st century, intended for seniors who will soon face the challenge of leadership and influence in their respective workplaces. This course will integrate many of the most salient OB topics in today’s volatile workplace environment. *Prerequisite: MGMT-3550 Organizational Behavior or permission of instructor.*

MGMT-4560 Organizational Change and Development–Fa 3 hours

This course focuses on the theories, concepts, processes, and tools of leading successful organizational change, as changes involve sensitivity to issues that arise at the individual, interpersonal, and institutional levels as well as building the organization’s capacity to both adapt to change and generate innovation. *Prerequisite: MGMT-3500 Principles of Organization and Management or permission of instructor.*

MGMT-4570 Total Quality Management–Sp 3 hours

This course expands on critical topics in the field of operations management, including the operations management strategy and tools and contemporary topics such as “Lean” techniques, value-stream mapping, and Fundamentals of Six Sigma. *Prerequisite: MGMT-3520 Production and Operations Management or permission of instructor.* (Fee: \$50)

Army ROTC (MIL)**MIL-1000 Leadership Lab I 0 hours**

Applied Army ROTC training. Taken concurrently with 1000-level MIL courses.

MIL-1010,1020 Military Science I 2 hours/sem

Introduction to the history, role, and organization of the Army and ROTC, as well as the U.S. Army Reserve and U.S. Army National Guard, and the available career options. Introduces officership, military customs and traditions, map reading, land navigation, field training, first-aid procedures, and physical fitness training. Familiarize with rank structure, drill and ceremony, military courtesies, weapons, marksmanship, and communications equipment. Discuss styles and fundamentals of leadership and develop leadership skills.

MIL-2000 Leadership Lab II 0 hours

Applied Army ROTC training. Taken concurrently with 2000-level MIL courses.

MIL-2010,2020 Military Science II 2 hours/sem

Course of study includes emergency first-aid procedures, field survival practices, physical fitness, orienteering, and small-unit leadership training. Explores the various career management fields within the Army. Students will begin to receive leadership assignments and responsibility within the cadet battalion. Introduction to advanced course of study.

MIL-3000 Leadership Lab III 0 hours

Applied Army ROTC training. Taken concurrently with 3000-level MIL courses.

MIL-3010,3020 Military Science III 3 hours/sem

The junior year of military science is completely dedicated to developing leadership skills and preparing students for the six-week Advanced Camp in the summer of the junior year. Subjects covered are drill, leadership, marksmanship training, squad and team tactics with leadership exercises and advanced navigation training on day and night courses. Students learn to inspect soldiers’ equipment, draft and issue orders, and plan and conduct training as a small-unit leader. *Prerequisite: approval of professor of military science.*

MIL-4000 Leadership Lab IV 0 hours

Applied Army ROTC training. Taken concurrently with 4000-level MIL courses.

MIL-4010,4020 Military Science IV 3 hours/sem

The senior year of military science provides senior cadets with advanced managerial leadership skills. Army staff procedures and functions are taught. These staff skills are put into practice through the assignment of seniors to major leadership positions within the cadet battalion. Seniors learn to command, lead, manage, plan, and supervise as they prepare for commissioning as officers in the United States Army. Senior students will receive instruction on military professionalism and ethics. *Prerequisite: approval of professor of military science.*

Marketing (MRKT)**MRKT-3600 Principles of Marketing–Fa, Sp 3 hours**

This course examines the marketing processes of businesses and other types of organizations from an analytical perspective. Special attention is placed on the marketing environment and the needs and behaviors of market segments as key drivers of marketing planning for positioning, product, pricing, distribution, and communication strategies and tactics. *Prerequisite: junior status or permission of instructor.*

MRKT-3610 Sales/Sales Management Systems–Sp 3 hours

Principles employed in the development, administration, and strategy of a sales force. Professional selling from a Christian perspective along with training, managing, compensating, and motivating a sales force. *Prerequisites: MGMT-3500 Principles of Organization and Management; MRKT-3600 Principles of Marketing.*

MRKT-3630 Marketing Research–Sp 3 hours

This course examines marketing research methods to understand how they generate different types of information relevant to the identification and solution of problems in marketing. Students will complete a research project that will teach them how to formulate marketing problems, design relevant studies, collect and analyze data, draw appropriate conclusions, and make recommendations that lead to sound marketing actions. *Prerequisite: BUS-2150 Statistics for Business; MRKT-3600 Principles of Marketing.*

MRKT-3650 Consumer Behavior–Sp 3 hours

This course examines behavioral concepts and theories from psychology, sociology, anthropology, and economics. Primary focus is on identifying and/or creating consumer behavior models that inform marketing research and produce insights that guide appropriate marketing decision making and strategy development. *Prerequisite: MRKT-3600 Principles of Marketing.*

MRKT-3660 Integrated Marketing Communications–Fa 3 hours

This course represents the various ways in which an organization “voices” appropriate messages in response to the needs of the market. This course prepares students to create, implement, and assess effective communication strategies that coordinate traditional communication tools (advertising, sales, public relations, publicity, sales promotion, packaging) with more contemporary tools (electronic and social media) to accomplish specific communications and marketing objectives. *Prerequisite: MRKT-3600 Principles of Marketing.*

MRKT-3670 Business to Business Marketing–Fa 3 hours

This course represents a much larger sector of economy and a greater number of jobs than consumer marketing. This course prepares students to effectively manage the unique strategic challenges of marketing goods and services to businesses, governments, and institutions. *Prerequisite: MRKT-3600 Principles of Marketing.*

MRKT-3680 Nonprofit Marketing–Sp 3 hours

Designed to acquaint the student with skills, abilities, and attitudes necessary to effectively implement marketing practice in nonprofit organizations. *Prerequisite: MRKT-3600 Principles of Marketing or permission of instructor.*

MRKT-3690 Services Marketing–Sp 3 hours

The vast majority of the global economy is based on service organizations that perform tasks on behalf of their customers. As compared to physical goods, services are uniquely challenging to market because the product 1) is largely intangible, 2) varies more in quality, 3) often involves customers in the production process, and 4) cannot be inventoried for future sale. This class is designed to help students prepare to meet those challenges in the marketplace. *Prerequisites: MRKT-3600 Principles of Marketing*

MRKT-4610 Marketing Strategy–Sp 3 hours

This is the culminating course for marketing majors. Its purpose is to build on what has been learned in prior marketing and business coursework in order to form a comprehensive and integrated perspective of strategic marketing management. Students will apply their knowledge in broad-based contexts in order to deepen their ability to develop cohesive and effective strategic and tactical marketing plans. Must be taken at Cedarville University; transfer or transient credit for this course will generally not be accepted. *Prerequisites: senior status; twelve hours of marketing including MRKT-3600 Principles of Marketing, MRKT3630 Marketing Research, and MRKT-3650 Consumer Behavior.*

MRKT-4620 International Marketing–Fa 3 hours

The challenges of discovering and pursuing opportunities for effectively marketing goods and/or services globally are immense. This course involves an intensive investigation of the environmental factors (economic, financial, cultural, political and legal) that must be thoroughly understood and factored into the development of global marketing strategies. *Prerequisite: MRKT-3600 Principles of Marketing.*

Mathematics Education (MTED)**MTED-3110 Clinical Teaching in Mathematics–Fa, Sp 1 hour**

Students are assigned to assist a college instructor in classroom and laboratory teaching, evaluation, and related responsibilities. The student must complete 40 clock hours of clinical involvement in each teaching field for which licensure is desired. *Prerequisite: completion of Introduction to Education Block.*

MTED-3120 Teaching Mathematics–Fa 3 hours

Designed to introduce prospective secondary school mathematics teachers to the curriculum, materials, and methods of classroom teaching. *Prerequisite: admission to the Teacher Education Program.*

N**Nursing (NSG)****NSG-1000 Member of Nursing Profession–Fa, Sp, Su 2 hours**

An introduction to and application of professional nursing roles within the U.S. and global health care systems. Includes discussion of ways of thinking, professional ethics, Christian values, and factors that motivate and influence Christian nurses. As members of the profession, students are introduced to the use of information management skills, concepts of care, and the culture of the profession from a biblical and Christian framework. (Fee: \$100)

NSG-1050 Health Promotion and Wellness–Sp 4 hours

Theories of health and wellness are explored as foundational concepts of the professional nursing role. Students are introduced to the principles of nutrition, culture and diversity, development across the lifespan, and multi-dimensional nursing care. The development of a biblical worldview related to health and wholeness is emphasized. *Prerequisite: NSG-1000 Member of Nursing Profession or by permission of instructor.* (Fee: \$100)

NSG-2000 Nursing Roles in Disease Prevention–Fa 4 hours

Principles of disease prevention are explored as foundational concepts of the professional nursing role, emphasizing safety, communication, hygiene, physical activity, rest, and infection control. Focuses on the development of systematic approaches to individual health and physical assessment, and documentation of findings using appropriate terminology. *Prerequisite: GBIO-2010 Human Anatomy and Physiology or by permission of instructor.* (Fee: \$200)

NSG-2050 Nursing Roles in Disease Management–Sp 4 hours

An introduction to the concept of disease management as it is used to provide nursing care to patients across the lifespan. Focus is on the use of a broad range of psychomotor skills required to intervene on behalf of clients with basic imbalances in health. Students begin to develop the professional role of provider of care within the contexts of disease, ethics, diversity, evidence, personal values and critical thinking. *Prerequisite: BIO-2210 Microbiology; CHEM-1000 Principles of Chemistry; GBIO-2020 Anatomy, Physiology, and Pathophysiology; NSG-2000 Nursing Roles in Disease Prevention; or by permission of instructor.* (Fee: \$200)

NSG-2060 Clinical Immersion–Su**3 hours**

This course provides opportunities for the nursing student to apply knowledge and skills to actual client care in clinical settings under the supervision of nursing faculty. Students will gain confidence in their roles as providers of nursing care and as members of the nursing profession. *Prerequisite: GBIO-2020 Human Anatomy, Physiology, & Pathophysiology; NSG-2050 Nursing Roles in Disease Management; NSG-3110 Pharmacology; and acceptance to progress to junior year clinical courses.*

NSG-2200 Cross-Cultural Interactions–Fa, Sp**1 hour**

Cross-cultural interactions are planned and purposeful experiences designed to gain information and understanding of missions and/or cross-cultural nursing. *Prerequisite: permission of instructor.*

NSG-3000 Care of Ill Adults–Fa, Sp**6 hours**

Focus is on common physiological imbalances of adults and nursing care required to restore or promote health balances across the five dimensions. Critical thinking, assessment, and communication skills consistent with biblical principles will be utilized to manage information and provide culturally appropriate care. Students will demonstrate competency in technical skills and the professional nursing role within the clinical setting. *Prerequisite: Junior nursing major status. (Fee: \$200)*

NSG-3010 Care of Women and Newborns–Fa, Sp**6 hours**

Course content and clinical experiences provide the student with the opportunity to facilitate the health balance of women and the childbearing family across the five dimensions. Students interact to support family members in their changing roles as they manage resources in response to new demands. Cultural implications for care of the childbearing family are presented. *Prerequisite: Junior nursing major status. (Fee: \$200)*

NSG-3030 Care of Children–Fa, Sp**6 hours**

Focus is on common physiological imbalances of infants, children, and adolescents and the nursing care required to restore or promote physical, emotional, intellectual, social, and spiritual health. Special emphasis is given to the application of growth and developmental theories in the provision of developmentally appropriate care to the pediatric population. Students gain increasing independence in professional nursing role development as providers and coordinators of care. *Prerequisite: Junior nursing major status. (Fee: \$200)*

NSG-3050 Behavioral and Mental Health Care–Fa, Sp**6 hours**

Introduces aspects of developing therapeutic relationships involving one-to-one and group interactions to achieve client-focused and professional goals. Focus is on effective communication as a member of the profession and provider of care. Using a Christian worldview, students analyze frameworks for promoting and restoring healthy relationships. Students participate in integration of care with other members of the interdisciplinary health care team in a variety of settings. Emphasis is on imbalances in thinking, emotions, and behaviors that interfere with individual and group processes and require external intervention to promote balance. *Prerequisite: Junior nursing major status. (Fee: \$200)*

NSG-3110 Pharmacology–Sp**3 hours**

Pharmacokinetics, pharmacodynamics, and pharmacotherapeutics of major drug categories are discussed as they are used to restore health balance. Special emphasis is given to the ways in which pharmacological agents may create new health demands. Nursing actions to prevent or minimize these demands are discussed. *Prerequisites: BIO-2210 Microbiology; CHEM-1000 Principles of Chemistry; GBIO-2020 Human Anatomy, Physiology and Pathophysiology; NSG-2000 Nursing Roles in Disease Prevention; permission of instructor.*

NSG-3200**1–3 hours****Cross-Cultural Nursing Internship–Fa, Sp, Su**

Students actively participate in health-related activities in a facility established to provide care for persons in cultures different from theirs. The length of time involved in the internship may vary according to the student needs. *Prerequisites: NSG-3000 Care of ill Adults; permission of instructor.*

NSG-3800 Nursing Externship–Su**1–4 hours**

The focus is on exploration of nursing roles within precepted clinical experiences. Students apply critical thinking to promote and restore health using the Cedarville University School of Nursing Curricular Model. Emphasis is given to application of biblical truth in health care delivery and in addressing common ethical and legal issues encountered by nurses. *Prerequisites: Completion of all junior-level nursing courses.*

NSG-3930**3 hours****Nursing Research and Evidence-Based Practice–Fa**

The research process is studied as an information management tool applied to the investigation of health balances and imbalances. Basic elements of the research process, including ethical issues, are discussed and applied to published nursing research and student proposals. *Prerequisites: Junior nursing major status; PSYCH-2610 Statistics.*

NSG-4000 Care of Populations–Fa**6 hours**

Students focus on contemporary health issues of populations and communities using theoretical models of epidemiology, health promotion, primary health care, and public health practice. Students integrate knowledge from the health, social, and nursing sciences to population and community health nursing through targeted assessment, interventions, programs, and advocacy. *Prerequisite: senior nursing major status. (Fee: \$200)*

NSG-4020 Leadership and Management–Sp**6 hours**

The focus is on the development of leadership and management knowledge and behaviors required for the baccalaureate prepared nurse. Special emphasis is given to the biblical framework for leadership and management. Clinical experiences provide opportunities to apply leadership and management principles and theories as providers, managers, and coordinators of nursing care. *Prerequisite: senior nursing major status. (Fee: \$200)*

NSG-4030 Complex Care Management–Fa**6 hours**

Focuses on the nursing management of individuals or groups experiencing complex multidimensional health imbalances. Special emphasis is placed on the growth of personal and professional development with respect to biblical character qualities. Students assume professional nursing roles in a variety of critical care settings working under the supervision of faculty. *Prerequisite: senior nursing major status. (Fee: \$200)*

NSG-4060 Transition into Practice–Sp**6 hours**

Students assume professional nursing roles working under the supervision of faculty, RN preceptors, clinical specialists, and/or various levels of nurse managers in their clinical area of choice. Students work full time during the course following the preceptor's schedule and shift, including nights, weekends, and holidays. Students demonstrate successful application by meeting program objectives for using nursing as ministry. *Prerequisite: completion of all other clinical nursing courses. Capstone clinical.*

NSG-4200 Culture and Health–Fa**3 hours**

Situations in which cross-cultural dilemmas emerge from the interaction of culture and health are analyzed to derive models for resolution. *Prerequisite: junior/senior status or permission of instructor.*

NSG-4800 Independent Study in Nursing–Fa, Sp**1–3 hours**

Independent learning to secure an extensive background in a specialized area of nursing. May be repeated once. *Prerequisite: signed contract between student and instructor in which work to be completed is described.*

NSG-4950 Seminar in Nursing–Sp 3 hours

Focuses on trends in professional nursing. Students are challenged to integrate a Christian philosophy of nursing as they adopt the role of professional nurse. The political, legal, economic, social, and ethical factors that disrupt the balance of resources and demands in health care are debated. Capstone course.

Prerequisite: NSG-4030 Complex Care Management. Corequisite: NSG-4020 Leadership and Management, NSG-4060 Transition into Practice.

P**Physical Education Activity Courses (PEAX)****PEAF-1110 Personal Exercise Program: Men 1 hour
and PEAF-1290 Personal Exercise Program: Women 1 hour**

The personal exercise program courses are individually developed to meet the unique activity needs of students with physical disabilities or conditions that preclude them from being safely or effectively involved in physical education activity courses. Departmental approval is required.

PEA-1240 through PEA_-2100 Courses 1–2 hours each

Each course is designed to develop knowledge and skills in the respective activity area. Course requirements include examinations covering the activity subject, skills tests, class participation, and aerobics requirements. Grading options include letter grades or credit/no credit. These courses may be used by non-majors to satisfy the physical education component of the general education requirements. If taken for letter grades, majors may use these courses to satisfy specific curricular requirements.

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| PEAE-1240 Self Defense: Women–Fa, Sp | 1 hour |
| PEAE-1300 Contemporary Aerobics: Women–Fa, Sp | 1 hour |
| PEAE-1320 Aquaerobics: Women (Fee: \$60)–Sp | 1 hour |
| PEAE-1400 Weight Training: Coed–Fa, Sp | 1 hour |
| PEAE-1450 Intermediate Weight Training–Fa, Sp | 1 hour |
| <i>Prerequisite: PEAE-1400 Weight Training: Coed</i> | |
| PEAI-1430 Badminton: Coed–Sp | 1 hour |
| PEAI-1460 Bowling: Coed (Fee: \$70)–Fa, Sp | 1 hour |
| PEAI-1540 Golf: Coed (Fee: \$15)–Fa | 1 hour |
| PEAI-1550 Intermediate Golf: Coed (Fee: \$25)–Fa | 1 hour |
| PEAI-1600 Racquetball: Coed (Fee: \$15)–Fa, Sp | 1 hour |
| PEAI-1770 Tennis: Coed–Fa, Sp, Su | 1 hour |
| PEAI-1780 Advanced Tennis: Coed | 1 hour |
| PEAL-1420 Backpacking: Coed (Fee: \$30)–Fa, Sp | 1 hour |
| PEAL-1510 Cycling: Coed–Fa | 1 hour |
| PEAL-1610 Rock Climbing: Coed (Fee: \$25)–Fa, Sp | 1 hour |
| PEAL-1620 | 1 hour |

Intermediate Rock Climbing: Coed (Fee: \$125)–Sp
Prerequisite: PEAL-1610 Rock Climbing: Coed

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| PEAR-2100 Rhythmics: Coed–Fa | 1 hour |
| PEAS-1120 Tumbling: Coed–Sp | 1 hour |
| PEAT-1020 Basketball: Coed–Sp | 1 hour |
| PEAT-1050 Soccer: Coed–Fa, Sp | 1 hour |
| PEAT-1820 Volleyball: Coed–Fa, Sp | 1 hour |
| PEAT-1830 Advanced Volleyball: Coed | 1 hour |
| PEAS-1700 Swimming I – Beginners: Coed–Fa | 1 hour |

Designed for nonswimmers or swimmers with minimal swimming background; introduces and develops three strokes: front crawl, back crawl, and elementary back. (Fee: \$60)

PEAS-1720 Swimming II – Intermediate: Coed–Fa 1 hour

Focuses on refining the front crawl, back crawl, elementary backstroke, side stroke, and breast stroke. Emphasis on increased endurance and conditioning level. *Prerequisites: PEAS-1700 Swimming I; American Red Cross Level IV certificate.* (Fee: \$60)

PEAS-1730 Swimming III – Advanced: Coed–Sp 1 hour

Designed for swimmers who have gained experience through lessons or competitive swimming. Course develops stroke proficiency for all strokes including the butterfly. Includes an introduction to training regimen for lifetime fitness. (Fee: \$60)

PEAS-1740 Lifeguarding Today: Coed–Sp 2 hours

Provides lifeguards and lifeguard candidates with skills and knowledge necessary to keep the patron of an aquatic facility safe in and around the water. Teaching of lifeguarding skills and knowledge needed to prevent and respond to aquatic emergencies, preparing candidates to recognize emergencies, respond quickly and effectively to emergencies, and prevent drownings and other incidents. *Prerequisite: age 15 or older; swim 500 yards continuously using front crawl, breast stroke, and side stroke; surface dive and submerge to a minimum depth of seven feet, retrieve a 10 pound object and return with it to the surface; tread water for two minutes using legs only.* (Fee: \$120)

Physical Education Fitness (PEF)**PEF-1990 2 hours****Physical Activity and the Christian Life–Fa, Sp, Su**

Study of the role of physical activity in the Christian life from a scriptural, physiological, and psycho-sociological perspective. Emphasis is placed upon developing and continuing active, healthy, Christian life practices. Letter-graded course.

Music Performance (PFMU)**PFMU-3100 Piano Ensemble–Fa, Sp 0–1 hours**

The Piano Ensemble is an organization of advanced pianists that meets weekly to perform duet and duo piano literature. The Ensemble performs publicly on a regular basis.

PFMU-3210 Jubilate–Fa, Sp 0–1 hours

Ministry team of 40 select voices; open to all students by audition. Repertoire is selected from a wide spectrum of musical styles in evangelical traditions. Meets twice a week. Annual tour spring semester.

PFMU-3220 Worship Ensemble–Fa, Sp 0–1 hours

Ministry team of 8–10 singers, instrumentalists, and technicians; open to all students by audition. Repertoire is contemporary Christian and praise and worship music. Group will tour on behalf of the University throughout the school year and during breaks. *Prerequisite: admission by audition only.*

PFMU-3650 Chamber Ensemble–Fa, Sp 0–1 hours

The performance of representative literature in a variety of instrumental and vocal settings. Groups are normally student-formed and faculty-led and can be either homogenous (all strings, all brass, etc.) or heterogeneous. NOTE: An instructor must be designated for a group before any of its members register for this course. *Prerequisites: permission of instructor; approval of the chair.*

PFMU-3800 Concert Chorale–Fa, Sp 0–1 hours

The Concert Chorale is a group of 60 select voices. Repertoire is chosen from a wide spectrum of musical styles, including choral masterpieces, sacred classics, anthems, spirituals, and tasteful contemporary works. Numerous concerts are presented each year on campus as well as in churches, schools, and other venues.

PFMU-3840 Men's Glee Club–Fa, Sp 0–1 hours

The Men's Glee Club has a membership of 50 voices, selected by audition. Literature includes traditional sacred and secular music from the Renaissance throughout the 20th century. Several concerts are presented each year on campus as well as in churches, schools, and other venues.

PFMU-3840 Women's Choir—Fa, Sp 0–1 hours

The Women's Choir consists of 50 treble voices, selected by audition. Repertoire embraces all historical periods and styles with performances on campus, in schools, in churches, and in civic meetings.

PFMU-3850 Opera Ensemble—Fa 0–1 hours

The coaching, staging, and performance of operatic literature in scenes, recitals, or full-scale productions.

PFMU-3880 Brass Choir—Fa, Sp 0–1 hours

The Brass Choir of select instrumentation consists of 20 to 25 members. It serves the University and its constituency by performing concerts featuring the highest quality brass choir literature. Major concerts are performed each semester.

PFMU-3940 University Orchestra—Fa, Sp 0–1 hours

The Orchestra is composed of string, wind, brass, and percussion players selected by audition. The group performs challenging, high-quality literature in concerts on campus and has opportunities to minister in local churches.

PFMU-3970 Symphonic Band—Fa, Sp 0–1 hours

The Symphonic Band is composed of approximately 80 members, selected by audition. Performing quality band literature, the band has appeared before state and national conference audiences and in concert under the baton of such guest conductors as Jim Curnow, George Strombeck, and George Wilson. Several concerts are presented each year on campus, in churches, and in schools.

PFMU-3980 Jazz Band—Fa, Sp 0–1 hours

The Jazz Band has a membership of approximately 16 musicians, selected by audition. The group performs Big Band music and contemporary jazz standards. The band is active in both campus and off-campus activities.

Physics: General Education (PHYS)

Except where noted, general education courses are designed to meet the general education requirements for graduation. These courses will not count toward graduation requirements for majors found in the department of science and mathematics unless they are specifically listed in the curriculum requirements for a major. A student majoring in science or mathematics may take these courses only as electives. However, any course listed for a science or mathematics major or minor may also count toward fulfilling general education requirements.

PHYS-1010 College Physics I—Fa 5 hours

Basic concepts of mechanics and thermodynamics using algebra and trigonometry. This is the first of a two-course sequence intended for students in the life sciences and pre-professional programs. Topics include kinematics, motion in two dimensions, forces and motion, work and energy, momentum, circular motion, gravitation, waves, phases of matter, heat, and the laws of thermodynamics. Four lectures and one two-hour laboratory per week. *Prerequisite: high school trigonometry; or GMTH-1030 Precalculus or equivalent.* (Fee: \$100)

PHYS-1020 College Physics II—Sp 5 hours

Basic concepts of electricity and modern physics using algebra and trigonometry. This is the second of a two-course sequence intended for students in the life sciences and preprofessional programs. Topics include electricity, magnetism, AC circuits, geometrical and physical optics, relativity theory, quantum theory and other modern physics topics. Four lectures and one two-hour laboratory per week. *Prerequisite: PHYS-1010 College Physics I or equivalent.* (Fee: \$100)

Physics: Major (PHYS)**PHYS-2110 General Physics I**—Fa, Sp 4 hours

Basic concepts of mechanics using calculus. This is the first of a three-course sequence intended for students in the physical sciences and engineering programs. Topics include linear and rotational motion in three dimensions, oscillatory motion, gravitation, fluid mechanics, and basic concepts of wave motion. Three lectures and one two-hour laboratory per week. *Prerequisites: MATH-1710 Calculus I; MATH-1720 Calculus II; MATH-1720 may be co-enrolled with permission of instructor.* (Fee: \$100)

PHYS-2120 General Physics II—Fa, Sp 4 hours

Basic concepts of electricity and magnetism, light, and optics using calculus. This is the second of a three-course sequence intended for students in the physical sciences and engineering programs. Topics include electricity, magnetism, Maxwell's equations, DC and AC circuits, geometrical and physical optics. Three lectures and one two-hour laboratory per week. *Prerequisites: MATH-1720 Calculus II; PHYS-2110 General Physics I.* (Fee: \$100)

PHYS-2130 General Physics III—Fa 2 hours

Basic concepts of thermodynamics and modern physics using calculus. This is the third of a three-course sequence intended for students in the physical sciences programs. Topics include heat and thermodynamics, relativity theory, quantum theory, atomic and nuclear physics. *Prerequisites: MATH-1720 Calculus II; PHYS-2120 General Physics II; PHYS-2120 may be co-enrolled with permission of instructor.*

PHYS-3110 Intermediate Physics Laboratory—Fa 2 hours

Designed to reinforce concepts of the advanced physics courses and develop critical research and analysis skills. This course provides laboratory experience in such topics as oscillatory motion and waves, mechanics, electricity and magnetism, thermodynamics, and quantum mechanics. During this semester the student will develop their prospectus for their advanced laboratory project. Laboratory skills for planning, setup, documentation, and analysis using the scientific method will be emphasized. *Prerequisite: 3 hours of a 3000- or 4000-level physics course.* (Fee: \$100)

PHYS-3310 Theoretical Mechanics I—Sp 3 hours

Derivation of the motion of a point object through three-dimensional space. Topics include an advanced treatment of Newtonian mechanics in three dimensions, oscillatory motion, accelerated frames of reference, central forces, and an introduction to Lagrangian mechanics. *Prerequisites: PHYS-2120 General Physics II; MATH-2740 Differential Equations; MATH-2740 may be co-enrolled with permission of instructor.* (even years)

PHYS-3330 Acoustics—Fa 3 hours

This course will study the generation, transmission and reception of sound. Topics include wave propagation through the air, resonance conditions for strings, bars, membranes and air cavities, acoustic filters, measurement and human perception of sound. Applications will be made to musical instruments, room acoustics, microphones, and speakers. *Prerequisites: MATH-2710 Differential Equations; PHYS-2110 General Physics I.* (even years)

PHYS-3350 Thermal Physics—Fa 3 hours

Study of the relationship between energy and matter through the use of thermodynamics and statistical mechanics. Topics include the laws of thermodynamics, heat, work, entropy, phase transformations, statistical distributions, and kinetic theory. *Prerequisite: PHYS-2130 General Physics III.* (odd years)

PHYS-3410 Electromagnetic Theory I—Fa 3 hours

Electricity and magnetism from an advanced viewpoint using the methods of vector calculus. Includes electrostatics, Gauss' Law, Poisson's equation, Laplace's equation, dielectric media, electric currents, and magnetostatics. *Prerequisites: PHYS-2120 General Physics II; MATH-2710 Calculus III.* (odd years)

PHYS-3510 Modern Physics–Sp 3 hours

Introduction to relativity theory, quantum theory, including Schrodinger's Equation, and its basic applications, and atomic structure. *Prerequisite: PHYS-2130 General Physics III.*

PHYS-3800 Research Methods in Physics–Sp 1 hour

Reinforces concepts of the advanced physics courses and develops critical research and analysis skills. This course will focus on basic library, research, and laboratory skills for planning, setup, documentation, and analysis using the scientific method. Selected software will be introduced and used to collect data, analyze results, and document findings. There will be several laboratory sessions with experiments selected from oscillatory motion and waves, intermediate mechanics, intermediate electricity, intermediate magnetism, thermodynamics, or quantum mechanics. *Prerequisite: PHYS-2130 General Physics III.* (Fee: \$50)

PHYS-4110 Advanced Physics Laboratory–Sp 2 hours

The advanced laboratory experience is designed to reinforce concepts of the advanced physics courses and to develop critical research design, documentation, analysis, and presentation skills. The advanced laboratory provides additional experience in optical, radiation, wave, advanced mechanics, advanced electromagnetism, advanced thermodynamics, and quantum mechanics. During this semester the students will be conducting their advanced laboratory project, collecting data, and documenting results. Laboratory skills for planning, setup, documentation, analysis, and briefing using the scientific method will be emphasized. *Prerequisite: PHYS-3110 Intermediate Physics Lab.* (Fee: \$100)

PHYS-4210 Mathematical Methods for Physicists–Fa 3 hours

Advanced mathematical methods used in the solution of physics problems. Topics include curvilinear coordinates, vector analysis, and solutions to partial differential equations using Fourier, Bessel and Legendre functions. *Prerequisites: MATH-2710 Calculus III; MATH-2740 Differential Equations; 3 hours of a 3000 or 4000-level physics course.* (even years)

PHYS-4310 Theoretical Mechanics II–Fa 3 hours

Principles of mechanics applied to systems of particles. Topics include rigid body motion, Hamilton's equations, continuous media and nonlinear oscillators. *Prerequisites: PHYS-3310 Theoretical Mechanics I.* (odd years)

PHYS-4410 Electromagnetic Theory II–Sp 3 hours

Continuation of PHYS-3410. Includes magnetic properties of matter, electromagnetic induction, magnetic energy, slowly varying currents, Maxwell's equations and their applications, and introductory electrodynamics. *Prerequisite: PHYS-3410 Electromagnetic Theory I.* (odd years)

PHYS-4450 Optics–Fa 3 hours

Introduction to the study of classical and modern optics, including geometric optics, wave optics, and quantum optics. Topics include thin lenses, thick lenses and systems of lenses, mirrors, aberrations, lens design, interference, coherence, diffraction, polarization, and holography. *Prerequisites: PHYS-2120 General Physics II; MATH-2710 Calculus III.* (even years)

PHYS-4520 Quantum Mechanics I–Fa 3 hours

An introduction to the principles and theory of quantum mechanics including: the wave function, the time-independent Schrodinger's Equation, mathematical formalism of quantum mechanics, quantum mechanics in three dimensions, and systems of identical particles. *Prerequisite: PHYS-3510 Modern Physics.* (even years)

PHYS-4530 Quantum Mechanics II–Sp 3 hours

Continuation of Quantum Mechanics I. Topics treated include identical particles, spectral hyperfine structure, magnetic properties of matter, external fields, atomic spectroscopy of outer electrons, atomic spectroscopy of inner electrons, high-energy photon effects, molecular binding and spectra, emission and absorption of light, many particle system, W.K.B. approximation, angular momentum theory. *Prerequisite: PHYS-4520 Quantum Mechanics I.* (even years)

PHYS-4550 Solid State Physics–Sp 3 hours

Studies of basic concepts and important applications in solid physics; discussion topics include crystal structures, crystal dynamics, free electron model, energy bands in periodic potentials, semiconductor and semiconductor devices, magnetic order. *Prerequisite: PHYS-3350 Thermal Physics.* (odd years)

PHYS-4800 Senior Seminar–Physics–Fa, Sp 1 hour

A presentation of the basic principles of the major disciplines of the sciences with a focus on the interrelationships of the science disciplines to each other. Students present a paper from library or laboratory research in their area of physics with a focus on integration. Each student must obtain approval of the topic from their advisor and seminar instructor and must set the date of presentation before enrolling in the course. A paper and oral presentation are required that include the background, setup, data collection, analysis, and conclusions from their research. The student must also attend a minimum of 10 seminars during the senior year. Guest lecturers and faculty members may present papers at the invitation of the instructor. *Prerequisite: Senior status; PHYS-3110 Intermediate Physics Lab; attendance of a minimum of 10 seminars during the sophomore and junior years; permission of instructor.*

PHYS-4880 Topics in Physics 1–3 hours

Study of topics of interest from modern and classical physics such as quantum theory, relativity, statistical mechanics, lasers, solid state physics, advanced classical mechanics, and atmospheric physics. *Prerequisites: PHYS-2130 General Physics III; MATH-2710 Calculus III.*

PHYS-4900 Independent Study in Physics 1–3 hours

Independent research in the various branches of physics and allied fields of application. Submission and approval of a research proposal must precede registration. *Prerequisite: permission of instructor.* (Fee: \$25/hour)

Music Private Study (PLMU)

Private instruction for credit in piano, voice, guitar, orchestral and band instruments, and composition is available to all music majors. Students with majors outside of the department of music and worship need special approval from the department chair.

Credit in performance lessons is based on a minimum of six hours of practice and one half-hour lesson per week for one hour of credit. An audition is required for initial registration. Continued registration is based on satisfactory progress as determined each semester by the instructor. (Fees: private lesson fee \$300 and practice room fee \$100 per credit hour)

PLMU-1000, 2000, 3000, 4000 Organ 1–2 hours

PLMU-1100, 2100, 3100, 4100 Piano 1–2 hours

PLMU-1200, 2200, 3200, 4200 Voice 1–2 hours

PLMU-1300, 2300, 3300, 4300 Trumpet 1–2 hours

PLMU-1310, 2310, 3310, 4310 Trombone/Baritone Horn 1–2 hours

PLMU-1320, 2320, 3320, 4320 French Horn 1–2 hours

PLMU-1330, 2330, 3330, 4330 Tuba 1–2 hours

PLMU-1400, 2400, 3400, 4400 Clarinet 1–2 hours

PLMU-1410, 2410, 3410, 4410 Flute 1–2 hours

PLMU-1420, 2420, 3420, 4420 Saxophone 1–2 hours

PLMU-1430, 2430, 3430, 4430 Oboe 1–2 hours

PLMU-1440, 2440, 3440, 4440 Bassoon 1–2 hours

PLMU-1500, 2500, 3500, 4500 Violin 1–2 hours

PLMU-1510, 2510, 3510, 4510 Viola 1–2 hours

PLMU-1520, 2520, 3520, 4520 Cello 1–2 hours

PLMU-1530, 2530, 3530, 4530 Double Bass 1–2 hours

PLMU-1550, 2550, 3550, 4550 Harp 1–2 hours

PLMU-1600, 2600, 3600, 4600 Guitar 1–2 hours

PLMU-1700, 2700, 3700, 4700 Percussion 1–2 hours

PLMU-1800 Private Lessons in Composition–Fa, Sp 1 hour

Private instruction for credit in piano, voice, guitar, orchestral and band instruments, and composition is available to all music majors. Students with majors outside of the department of music and worship need special approval from the department chair.

Credit in performance lessons is based on a minimum of six hours of practice and on a half-hour lesson per week for one hour of credit. An audition is required for initial registration. Continued registration is based on satisfactory progress as determined each semester by the instructor. (Fees: private lesson fee is \$300 and practice room fee is \$100 per credit hour)

PLMU-1810, 2810, 3810, 4810 1–2 hours

Contemporary Piano–Fa, Sp

Prerequisites: music or worship student, or instructor approval.

PLMU-1820, 2820, 3830, 4840 1–2 hours

Contemporary Voice–Fa, Sp

Prerequisites: music or worship student, or instructor approval.

PLMU-1830, 2830, 3830, 4830 1–2 hours

Contemporary Guitar–Fa, Sp

Prerequisites: music or worship student, or instructor approval.

PLMU-2800, 3800, 4800 Music Composition 1–2 hours

PLMU-3900 Junior Recital 1 hour

Music major performance emphasis students should register for this course the semester they are ready to present their junior recital. Program is presented in a half recital format. (Fee: \$75)

PLMU-3910 Junior Seminar–Sp 1 hour

Group preparation for Senior project capstone presentation.

Prerequisite: junior status.

PLMU-4900 Senior Recital 1 hour

Music majors should register for this course the semester in which their recitals are to be presented. Capstone course. (Fee: \$75)

PLMU-4910 Senior Seminar–Fa, Sp 1 hour

One-on-one preparation for the senior project capstone presentation. *Prerequisite: PLMU-3910 Junior Seminar* (Fee: \$100)

PLMU-4920 Senior Project–Sp 1 hour

The capstone project for the B.A. in Music degree. Students may register for this course at the same time as Senior Seminar. (Fee: \$75)

Political Science (POLS)

POLS-2000 Introduction to Political Science–Fa 3 hours

This course offers students a window into the discipline of political science. Students will be exposed to basic methods of the discipline, the fundamental issues of biblical integration and political science, as well as the dominant sub-fields: American politics, comparative politics, international relations, and political philosophy.

POLS-2250 Popular Culture and Politics–Sp 3 hours

This course will consider the relationship and effects which various forms of popular culture have had with/upon social and political movements as well as public policy initiatives both in America and International politics. The class will listen to, consider, and analyze a variety of cultural-artistic genres and the sociopolitical movements these engendered and supported in the 19th, 20th, and 21st centuries. Attention will be given to any or all of the following: music, film, art, and literature as well as to the historical, political, and social context. Crosslisted as POLS and SOC. (odd years)

POLS-2620 American State and Local Government–Sp 3 hours

The organization and function of states and their political subdivisions form the basis of study in this course.

POLS-3080 3 hours

History of Russia and the Soviet Union–Fa

See course description for GEO-3080 History of Russia and the Soviet Union.

POLS-3100 Public Budgeting–Fa 3 hours

See course description for PUAD-3100 Public Budgeting. (odd years)

POLS-3190 Global Issues–Sp 3 hours

See course description for INTL-3190 Global Issues.

POLS-3200 History and Politics of Latin America–Fa 3 hours

See course description for GEO-3200 History and Politics of Latin America. (even years)

POLS-3210 History and Politics of Asia–Fa 3 hours

See course description for GEO-3210 History and Politics of Asia. (odd years)

POLS-3220 3 hours

History and Politics of the Middle East–Sp

See course description for GEO-3220 History and Politics of the Middle East.

POLS-3230 3 hours

History and Politics of Western Europe–Sp

See course description for GEO-3230 History and Politics of Western Europe. (odd years)

POLS-3360 American Judicial System–Fa 3 hours

Federal and state court systems, duties and responsibilities of the prosecutor, defense counsel, jury, and judge including related topics ranging from plea bargaining to sentencing. Crosslisted as CRJU or POLS. *Prerequisite: CRJU-1310 Introduction to Criminal Justice.*

POLS-3400 History of American Foreign Policy–Fa 3 hours

American statesmen have defended the principles of their government and the rights of American citizens in a world of empires and nation-states. This course provides an overview of controversies over independence and imperialism, modern tyranny and regime change, which have marked U.S. foreign policy from the founding to the present day. Crosslisted as HIST or INTL. *Prerequisite: GSS-1100 Politics in American Culture.* (even years)

POLS-3600 Public Administration–Fa 3 hours

See course description for PUAD-3600 Public Administration.

POLS-3610 Presidency–Sp 3 hours

This course analyzes the organization, behavior, and impact of the American presidency on American politics, policy, and culture. Attention is given to historical developments in the American presidency, the roles that presidents play in the American political system and the interaction of presidents with the public, interest groups, political parties, and the media. *Prerequisites: GSS-1100 Politics in American Culture.*

POLS-3630 Congress–Fa 3 hours

This course is a study of the legislative power in the American government. It focuses on the nature of the legislative power, and how that power was institutionalized in the Constitution. Emphasis is also placed upon the way our conceptions of Congress and the legislative power, have changed from the early national period to the present. The course also introduces the student to contemporary functions and procedures of Congress. *Prerequisites: GSS-1100 Politics in American Culture*

POLS-3640 Campaigns and Elections–Fa 3 hours

This course examines the fluid nature of political campaigns and elections in modern American politics. Students will study the strategies of political campaigns, including use of the media, fund raising, and resource allocation, as well as individual-level voting behavior as it is practiced in the context of campaigns. *Prerequisite: GSS-1100 Politics and American Culture.* (even years)

POLS-3650 International Relations–Fa 3 hours

A survey of contemporary international affairs and principles of interstate relations, focusing on forces that unite and divide our world. Crosslisted as INTL or POLS.

POLS-3690 Public Policy–Sp 3 hours

See course description for PUAD-3690 Public Policy. *Prerequisite: GSS-1100 Politics and American Culture*

POLS-3710 3 hours**History of Political Thought I: Ancient Through Medieval–Fa**

See course description for HIST-3710 History of Political Thought I: Ancient Through Medieval.

POLS-3720 3 hours**History of Political Thought II: Modern and Contemporary–Sp**

See course description for HIST-3720 History of Political Thought II: Modern and Contemporary.

POLS-3730 American Political Thought–Fa 3 hours

Survey and examination of the course of political thought in the American colonies and the United States from the 1600s to current times. Includes special attention to American founders and the rise of political liberalism in the thought of Woodrow Wilson. Crosslisted as POLS or HIST. (even years)

POLS-3760 Jurisprudence–Fa 3 hours

A survey of historical and contemporary theories of law, including natural law, Yoderian theories, Theonomy, positivism, critical legal studies, historical jurisprudence, and others, as well as crucial legal concepts such as justice, due process, and current issues. *Prerequisite: GSS-1100 Politics and American Culture.* (even years)

POLS-3790 Comparative Politics–Fa 3 hours

This course will familiarize students with major historical developments, political debates, and scholarly research in the subfield of comparative politics. Particular emphasis will be placed on topics of the modern state, nationalism, economic development, political culture and ideology, identity structure, regime types, regime transitions, and comparative political economy. Crosslisted as POLS or INTL. (odd years)

POLS-4050 3 hours**Issues in International Diplomacy–Sp**

See course description for HIST-4050 Issues in International Diplomacy.

POLS-4300 Great Books in History and Politics–Sp 3 hours

This course will require the student to read a single classic work of history and political thought (or a limited number of related works) and with other students, to closely and critically analyze the argument of the work. Crosslisted as POLS, INTL, PUAD, or HIST. *Prerequisite: GSS-1100 Politics and American Culture* (odd years)

POLS-4440 Special Topics–Political Science 1–3 hours

Investigation of specific topics in Social Science and History that have intrinsic worth and engage student interest.

POLS-4620 Church and State in America–Fa 3 hours

This course examines the historical, political, theoretical, and legal relationship between church and state in America. Particular attention will be paid to the American founding and changing perceptions of church and state over time. (odd years)

POLS-4630 3 hours**American Constitutional Law — Civil Liberties and Rights–Sp**

The United States Constitution defines the powers and scope of the American government and delineates the rights and liberties retained by the American people. This course focuses on the supreme Court's interpretation of those rights and liberties by examining the Court's decisions in their legal and historical contexts. Crosslisted as CRJU. *Prerequisites: GSS-1100 Politics and American Culture*

POLS-4640 3 hours**American Constitutional Law — Government Powers and Federalism–Fa**

This course provides an in-depth analysis of landmark Supreme Court decisions pertaining to the power struggles between the three branches of government at the national level and the power struggles between the national government and state governments. In addition, this course will analyze how Supreme Court Justices interpret the Constitution and construct their opinions. *Prerequisite: GSS-1100 Politics in American Culture* (even years)

POLS-4700 Prelaw Seminar–Sp 3 hours

Individual projects acquaint the student with legal procedures and research in areas such as briefs and contracts.

POLS-4800 Seminar in International Studies–Fa 3 hours

A seminar/readings course intended to prepare senior students for graduate study. Through readings and discussion, students explore classical writings on international relations and international issues that are shaping our contemporary and future world. Crosslisted as INTL or POLS.

POLS-4900 Research in Political Science–Sp 3 hours

Senior capstone thesis course in which students engage in original research and writing for the completion and defense of thesis before a committee of professors. Course emphasizes substantive cross-disciplinary and biblical integration within research topic. *Prerequisite: all political science major requirements or permission of instructor.* (Fee: \$100)

POLS-4930 1–3 hours**Independent Study in Political Science**

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*

Prepharmacy (PPHR)**PPHR-1011 1 hour****Profession of Pharmacy—History and Issues—Fa, Sp**

The profession of pharmacy has a long history, believed to have started in the 9th century around Baghdad, then spreading to Europe as alchemy. This course will explore the history of pharmacy as it diverged from the practice of medicine and how this impacts the practice of pharmacy today and the future of the profession. Projects will include using historical models and identify trends in pharmacy in order to predict future avenues of the profession as well as ethical and legal dilemmas that may ensue. *Prerequisite: admission to the prepharmacy program or permission of instructor.*

PPHR-1012 1 hour**Profession of Pharmacy—History and Issues—Fa, Sp**

The profession of pharmacy has a long history, believed to have started in the 9th century around Baghdad, then spreading to Europe as alchemy. This course will explore the history of pharmacy as it diverged from the practice of medicine and how this impacts the practice of pharmacy today and the future of the profession. Projects will include using historical models and identify trends in pharmacy in order to predict future avenues of the profession as well as ethical and legal dilemmas that may ensue. *Prerequisite: admission to the prepharmacy program or permission of instructor. (Fee: \$20)*

PPHR-2013 1 hour**Profession of Pharmacy—Careers—Fa, Sp**

The profession of pharmacy has experienced tremendous growth over the past twenty years, both in terms of numbers in the profession as well as opportunities. In this course, the student will learn of many career options available to the pharmacist. Practicing pharmacists within different career paths will be giving lectures regarding current opportunities as well as projected growth within their field of practice. *Prerequisites: admission to prepharmacy program; PPHR1011 Profession of Pharmacy-History and Issues; PPHR1012 Profession of Pharmacy-History and Issues; or permission of instructor. (Fee: \$50)*

PPHR-2014 1 hour**Profession of Pharmacy—Careers—Fa, Sp**

The profession of pharmacy has experienced tremendous growth over the past twenty years, both in terms of numbers in the profession as well as opportunities. In this course, the student will learn of many career options available to the pharmacist. Practicing pharmacists within different career paths will be giving lectures regarding current opportunities as well as projected growth within their field of practice. *Prerequisites: admission to the prepharmacy program; PPHR1011 Profession of Pharmacy-History and Issues; PPHR1012 Profession of Pharmacy-History and Issues; or permission of instructor. (Fee: \$50)*

PPHR-3300 3 hours**Biostatistics in Pharmacy and Medicine—Sp**

This is an introduction to the principles of statistics as it applies to the understanding and interpretation of the biomedical literature. The emphasis of this course is on the application of statistical tests commonly employed in biomedical research and the interpretation of the results. *Prerequisite: GMTH-1030 Precalculus, or equivalent or permission of instructor.*

PPHR-3200 Pharmacy Calculations—Fa 2 hours

In this course, skills will be developed to apply pharmaceutical mathematics to safely and accurately calculate dose, rate of infusion, and/or compound prescriptions. Basic elements will include conversion between units, understanding weights and measures, and methods of expressing concentration. *Prerequisites: third-year prepharmacy student; PPHR-1012 Profession of Pharmacy—History and Issues; PPHR-2014 Profession of Pharmacy—Careers.*

Psychology (PSYCH)**PSYCH-1000 Orientation to Psychology—Fa, Sp 1 hour**

Acquaints the psychology major with various areas and issues in the field of psychology. Included will be its specialties, graduate school information, vocational opportunities, and legal and ethical matters. Should be taken during the freshman year.

PSYCH-1010 Writing in APA—Fa, Sp 1 hour

Students in the course will learn and practice the standards of writing for the behavioral and social sciences as set forth by the American Psychological Association (APA) and the ethical standards for research and scholarship.

PSYCH-1020 1 hour**Graduate School and Career Preparation—Fa, Sp**

Information and guidance is provided for students to make informed decisions regarding postbaccalaureate career options in the human services. Students explore field options comparing non-graduate school, preprofessional jobs as well as professional career opportunities in psychology, counseling, and marriage and family therapy.

PSYCH-1600 General Psychology—Fa, Sp, Su 3 hours

Designed to provide a survey of modern scientific psychology. The course content centers on such topics as the foundations of psychology, development over the life span, how we experience the world, learning and thinking, motivation and emotion, personality, and social behavior. (Fee: \$5)

PSYCH-1800 Cross-Cultural Psychology—Fa, Sp 3 hours

A survey course designed to make students sensitive to the impact of culture on life.

PSYCH-2600 Human Development: Life Span—Fa, Sp 3 hours

An analysis of the physiological, social, and psychological development of the individual from conception through the total life span.

PSYCH-2610 Statistics—Fa, Sp, Su 3 hours

Designed to provide an elementary coverage of descriptive and sampling statistics commonly used in the behavioral sciences. Includes problems of measurement, measures of central tendency and dispersion, linear correlation, prediction, and simple tests of significance. (Fee: \$5)

PSYCH-2640 Abnormal Psychology—Fa, Sp 3 hours

Focus upon etiology, symptomatology, and prognosis of psychological disturbance. *Prerequisite: PSYCH-1600 General Psychology.*

PSYCH-2725 Child Development—Fa, Sp 2 hours

A study of the physiological, social, and spiritual growth of the child from conceptual through preadolescence. Emphasis on the developmental research on family systems theory, the importance of developmentally appropriate learning objectives including play, and the influence of cultural practice and beliefs on family systems.

PSYCH-2735 Child-Adolescent Development—Fa, Sp 3 hours

A study of the physiological, social, and spiritual growth of the child from conceptual through adolescence. Emphasis on the developmental research on family systems theory, the importance of developmentally appropriate learning objectives including play, and the influence of cultural practice and beliefs on family systems.

PSYCH-2750 The Parent and the Child 3 hours

Designed to explore the basic value requisites for effective family living. Basic concepts such as love, communication, and parental modeling will be stressed.

PSYCH-2840 Concepts of Chemical Dependency—Fa, Sp 3 hours

Available to all students. Designed to investigate the concept of chemical dependency. Course emphasis is on the various drugs of abuse and methods of assessment, intervention, and treatment. Crosslisted as CRJU, PSYCH, SOC, or SWK.

PYCH-2850 Psychology of Adjustment 3 hours

The systematic process of applying psychological principles to everyday issues of human life. Biblical perspectives are integrated into problem-solving paradigms for the development of a psychologically healthy personality.

PYCH-3000 Addictions–Sp 3 hours

This course examines a variety of addictions, including alcohol, drugs, food, sex, gambling, computer games, Internet (including pornography), and codependency. The course will focus on causes, symptoms, diagnosis, treatment, and impact on society. Students will be challenged to develop a biblical perspective.

PYCH-3130 Intimate Relationships–Fa 3 hours

Explores friendship, love, and romance from historical, theoretical, and philosophical perspectives. *Prerequisite: PSYCH-1600 General Psychology or permission of instructor.*

PYCH-3380 Health Psychology–Sp 3 hours

Designed to investigate the research and theory of many disciplines to understand how psychology and health are interconnected. The focus is on the major topics and problem areas in health psychology. (Fee: \$5)

PYCH-3420 Human Sexuality–Sp 3 hours

Study of biblical content regarding human sexuality and an analysis of contemporary concepts within a framework of Christian thought. Crosslisted with SOC-3420 Human Sexuality. *Prerequisite: PSYCH-1600 General Psychology or permission of instructor.*

PYCH-3520 Counseling and Mentoring Women–Fa, Sp 3 hours

Study of the distinctives of biblical counseling specifically applied to counseling women, the mandate and skill of mentoring woman to woman, and biblical responses to life struggles that are specific to women. Crosslisted as BECE.

PYCH-3610 3 hours**History and Systems of Psychology–Fa, Sp**

Major trends in the development of psychology from its beginning to the present. Emphasis is placed upon contemporary theory. *Prerequisite: PSYCH-1600 General Psychology or permission of instructor.*

PYCH-3620 Psychology and Christianity–Fa, Sp 3 hours

Students will examine the historical and contemporary discussions that have surrounded the boundaries and interface of psychology and Christianity.

PYCH-3630 Testing and Measurement–Fa 3 hours

Emphasis on measurement theory and its applications, including concepts of validity, reliability, and test construction and selection. *Prerequisite: PSYCH-2610 Statistics.* (Fee: \$20)

PYCH-3640 3 hours**Industrial/Organizational Psychology**

Psychology applied to the work world. Emphasis is on methodology and activities of industrial/organizational psychologists. *Prerequisite: PSYCH-1600 General Psychology or permission of instructor.*

PYCH-3650 Learning and Memory–Fa, Sp 3 hours

A survey of theories in the field of learning and memory. Emphasis will be placed on the relationship between brain and behavior. Computer laboratory exercises are used to enhance understanding of the concepts presented. *Prerequisite: PSYCH-1600 General Psychology.*

PYCH-3660 Professional Counseling–Fa, Sp 3 hours

An introductory course emphasizing the underlying philosophies, current theories, and accepted procedures of counseling. *Prerequisite: PSYCH-1600 General Psychology.*

PYCH-3670 Group Dynamics–Fa, Sp 3 hours

Group processes in a variety of group settings are the focus as this course explores the interaction of individuals and groups. Each student participates in a growth group as part of the course.

PYCH-3680 Counseling Couples and Families–Fa 3 hours

Students will explore the dynamics of marriage and family relationships, and the means to help couples and family members reconcile or enhance their relationships. Scriptural, psychological, and Christian-life issues spanning family life cycles are studied.

PYCH-3690 Social Psychology–Fa, Sp 3 hours

The study of the behavior of individuals as it is influenced by past and/or present interactions with social factors. *Prerequisite: PSYCH-1600 General Psychology, or permission of instructor.*

PYCH-3700 Adolescent Development 3 hours

Recent research dealing with adolescents will be emphasized. Emphasis is placed on the interaction of cultural, social, and personal family variables. Spiritual variables are integrated into the developmental process. *Prerequisite: PSYCH-1600 General Psychology, or permission of instructor.*

PYCH-3701 Counseling Adolescents–Sp 3 hours

This course introduces students to counseling interventions for helping adolescents who are struggling with common developmental and adjustment problems. *Prerequisite: PSYCH-1600 General Psychology, or permission of instructor.*

PYCH-3710 Adult Development and Aging–Fa 3 hours

The study of physical, psychological, social, and spiritual development and experience in the adult years. *Prerequisite: PSYCH-1600 General Psychology, or permission of instructor.*

PYCH-3720 Psychology of Personality–Fa, Sp 3 hours

Contemporary theories of the development, organization, and dynamics of personality. (Fee: \$5)

PYCH-3730 Research Methods–Fa, Sp 3 hours

An introduction to methods utilized in behavioral science research; emphasis upon experimental methodology and research design. *Prerequisite: PSYCH-2610 Statistics or permission of instructor.* (Fee: \$5)

PYCH-3740 Qualitative Research–Fa 3 hours

An investigation of a scientific method of inquiry utilizing qualitative rather than quantitative methodologies. Research methodologies such as participant observation and in-depth interviewing will be emphasized. A significant portion of the course will involve students actively engaging in qualitative research projects and preparing papers for potential presentation and publication. *Prerequisites: PSYCH-1010 Writing in APA or permission of instructor.*

PYCH-3750 Psychological Testing 3 hours

A survey of instruments frequently utilized in psychology. Assessments include intellectual, personality, and vocational interest inventories. Students have opportunities for self-assessment and are introduced to report writing and ethical principles of psychological testing. *Prerequisite: PSYCH-1600 General Psychology; PSYCH-2610 Statistics or permission of instructor.* (Fee: \$20)

PYCH-3760 Cognitive Neuroscience–Sp 3 hours

Equip students with a thorough understanding of theories and research in Cognitive Neuroscience. Emphasis will be placed on brain physiology and anatomy contributing to the various cognitive processes. Laboratory exercises will enable the students to concretize the concepts presented in class as well as those presented in the research papers and to apply it to themselves. *Prerequisites: PSYCH-1600 General Psychology or permission of instructor.*

PYCH-3900 Physiological Psychology–Fa, Sp 3 hours

Explores the physiological, biological, and anatomical mechanisms responsible for behavior. *Prerequisite: PSYCH-1600 General Psychology or permission of instructor.* (Fee: \$10)

PSYCH-3901 Medications and Behavior–Fa 3 hours

An overview of the major categories of psychotropic medications. Emphasis is on general understanding of how these medications affect behavior, their mechanism of action, and common side effects. *Prerequisite: PSYCH-1600 General Psychology or permission of instructor.*

PSYCH-4400 Counseling Skills–Sp 3 hours

Emphasis is on assisting individuals in ways of dealing with solving or transcending their problem situations. The methods and skills of helping others are investigated.

PSYCH-4640 3 hours**Psychology Comprehensive Review–Fa, Su**

Reports and discussions of research literature in psychology. Required of all psychology majors during their senior year. *Prerequisite: permission of instructor. (Fee: \$20)*

PSYCH-4650 Special Topics Seminar 1–3 hours

Various topics to be offered as interest demands. Available to students with special interests in psychology. *Prerequisite: permission of instructor.*

PSYCH-4700 Counseling Children–Fa 3 hours

An in-depth analysis of the effects of genetic, family, and environmental factors on the developmental patterns of children. A special emphasis will be placed on behavioral disorders of dysfunctional families.

PSYCH-4950 Psychology Thesis–Fa, Sp 3 hours

Provides opportunities for students to conduct an independent research project on a topic of interest and prepare a publishable paper under the supervision of an individual faculty advisor. (Fee: \$20)

PSYCH-4960 Independent Study in Psychology 1–3 hours

Independent research carried out by the advanced psychology student in an area of interest and usefulness to the student. *Prerequisite: permission of instructor.*

PSYCH-4990 Psychology Internship–Fa, Sp, Su 1–9 hours

Junior and senior psychology majors may, with approval of the department, engage in psychological activity at a human service setting. One member of the psychology department will supervise the student's internship. The department will determine the number of credit hours that will be given for individual work experience. Repeatable to nine hours. Capstone course. *Prerequisite: permission of instructor. (Fee: \$20)*

Public Administration (PUAD)**PUAD-3100 Public Budgeting–Fa 3 hours**

Analysis of public sector budgeting at all levels of government in the United States with an emphasis on budgets as reflectors of priority, power, and control. Crosslisted as POLS or PUAD. (odd years)

PUAD-3390 Public Finance–Fa 3 hours

A consideration of the financing of local, state, and federal governments. Much attention is given to three functions of government: stabilization, distribution, and allocation. All major taxes that are present in the United States are studied as to structure, revenue gained, and present status. Crosslisted as ECON. *Prerequisite: ECON-2340 Macroeconomics. (even years)*

PUAD-3600 Public Administration–Fa 3 hours

Introduction to public administration both as a discipline and profession, including organization theory, budgeting, public policy analysis and evaluation, and public sector administration. Crosslisted as POLS or PUAD.

PUAD-3690 Public Policy–Sp 3 hours

Focus on decision making, problem solving, and methods of program analysis. Crosslisted as POLS or PUAD. *Prerequisite: GSS-1100 Politics and American Culture*

PUAD-4300 Great Books in History and Politics–Sp 3 hours

This course will require the student to read a single classic work of history and political thought (or a limited number of related works) and with other students, to closely and critically analyze the argument of the work. Crosslisted as POLS, INTL, PUAD or HIST. *Prerequisite: GSS-1100 Politics and American Culture (odd years)*

PUAD-4440 Special Topics-Public Administration 1–3 hours

Investigation of specific topics in Social Science and History that have intrinsic worth and engage student interest.

PUAD-4640 Strategies for Public Administration–Fa 3 hours

Designed to acquaint the advanced student in public administration or international studies with some of the policy decisions facing American government. All three levels of American government, federal, state, and local, will be examined in light of their particular relationships with foreign governments. (odd years)

PUAD-4800 Applied Public Administration–Sp 3 hours

Capstone course for public administration majors, involving the research of issues related to public administration in the United States from a normative and/or empirical perspective. (Fee: \$100)

PUAD-4970 1–3 hours**Independent Study in Public Administration**

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*

S**Science Education (SCED)****SCED-3110 Clinical Teaching in Science–Sp 1 hour**

This course is designed to provide preservice science teachers clinical experiences within grad 7–12 classrooms. Students are assigned to assist cooperating science teachers in facilitating student learning in science content and process skills. Preservice science teachers will plan instructional outcomes, teaching strategies and assessments for the experience and implement them in the local school science classroom. *Prerequisites: teacher education core courses.*

SCED-3120 Teaching Science–Fa 3 hours

Introduces prospective secondary school science teachers to the curriculum, materials, and methods of classroom and laboratory science teaching. Attention will be given to the philosophy and education psychology theories that are currently influencing science education and the methods of instruction that arise from these theories. Teacher education students participate in activities and complete assignments designed to provide experience in science lesson planning, acquisition of classroom and laboratory resources, and strategies of maintaining science laboratory safety. *Prerequisite: admission to the Teacher Education Program. (Fee \$100)*

Sport and Exercise Studies (SES)**SES-4850 1–3 hours****Independent Study in Sport and Exercise Studies–Fa, Sp**

Independent Study in the area of sport and exercise studies by students pursuing the sport and exercise studies major. Departmental approval is required.

SES-4990 Internship in Sport and Exercise Studies–Fa, Sp 3–6 hours

This is a work experience in a sport and exercise studies setting for a minimum of 100 work hours for 3 credit hours and up to 200 work hours for 6 credit hours with a minimum of 20 work hours per week. Capstone course for sport and exercise studies major. *Prerequisite: Senior status and departmental approval are required.* Credit/no credit. (Fee \$35)

SES-4995 Senior Research Project in Sport and Exercise Studies–Fa, Sp 3–6 hours

The senior research project is recommended for those students planning to go to graduate school or those interested in doing a significant research project. The proposal for the Senior Project will be submitted no later than the mid-term of the semester prior to the term of attendance in this course and will be reviewed and challenged or approved by a committee consisting of the student's advisor, project coordinator, the department chair, and the school dean. The results of the project will be presented formally to student peers and department faculty. Capstone course for exercise and sport science major. *Prerequisites: ESS-4600 Research in Athletic Training and Exercise Science or a comparable research course in their minor; senior status and departmental approval is required.* Credit/no credit. (Fee \$35)

Sport Management (SMGT)**SMGT-1000 Sport Management Practicum–Fa, Sp 1 hour**

An on-campus sport management opportunity for students in the sport management major to be involved in a variety of activities compatible with athletic and recreational sporting events and experiences. A minimum of 30 hours is required for each practicum. *Prerequisites: SMGT-1350 Introduction to Sport Management; departmental approval.* Credit/no credit.

SMGT-1350 Introduction to Sport Management–Fa 3 hours

This course is designed to introduce the student to the dynamic nature of sport management and the potential for successful and satisfying career opportunities.

SMGT-2100 Sport in Society–Sp 3 hours

The purpose of this course is to expand the student's understanding of sport by investigating how sport and society interact. The relationship of sport to social variables, institutions, and social issues/problems will be examined. *Prerequisite: SMGT-1350 Introduction to Sport Management.*

SMGT-2500 Organizational Behavior in Sport–Fa, Sp 3 hours

This course will help students define and understand the concepts of management and leadership within sport organizations. There will be a focus upon the various skills, roles, and functions of sport managers. This course places sport organizations in the context of their environment and emphasizes the manager's role in adapting and reacting to changes in the environment.

SMGT-2910 Campus Sport Management Practicum–Fa, Sp 1 hour

This practicum provides the sport management major the opportunity to assist faculty members or staff on the Cedarville University campus with their sport management responsibilities for a required minimum of 30 hours total. *Prerequisite: Sophomore status or permission of the instructor.*

SMGT-2920 Recreation Management Practicum–Fa, Sp 1 hour

This practicum provides the sport management major the opportunity to assist a recreation management employee/volunteer with their responsibilities for a required minimum of 30 hours total. *Prerequisite: Sophomore status or permission of the instructor.* (Fee \$30)

SMGT-3180 Legal Issues in the Sport Industry–Sp 3 hours

This course will focus on the three major areas of law that have a direct impact on the management of sport: tort liability and risk management, contract law, and constitutional law. *Prerequisite: Junior status.* Crosslisted with EXSC-3180 Legal Issues in the Sport Industry.

SMGT-3200 Facility Design and Management–Fa 3 hours

This course includes planning and designing areas and facilities in sports and utilization of those facilities for sporting events. Topics will include maintenance, supervision, scheduling, planning, renovation, etc. *Prerequisite: Junior status or permission of the instructor.* (Fee \$35)

SMGT-3300 Event Planning and Production–Sp 3 hours

This course includes the process of planning for and organizing an event in sport. Organizing a plan for an event would include financial planning, risk management, scheduling, facility use, communication, promotions, registration, etc. *Prerequisite: Junior status or permission of the instructor.*

SMGT-3880 Special Topics in Sport Management–Su 1–3 hours

This course will be a means of exposing students to current issues and trends in the sport industry.

SMGT-4100 Marketing and Promotions in the Sport Industry–Fa 3 hours

This course applies the principles of promotion and marketing to the sport and fitness industry, including the area of professional sports, corporate fitness, college/high school athletics, clubs, and resorts. *Prerequisite: Senior status or permission of the instructor.*

SMGT-4200 Financing Sport Operations–Fa 3 hours

This course provides the student with an overview of the financial aspects of the sport industry.

SMGT-4850 Independent Study in Sport Management–Fa, Sp 1–3 hours

Independent study in the area of sport management by students pursuing the sport management major. *Departmental approval is required.*

SMGT-4910 Athletic Administration Practicum–Fa, Sp 1 hour

This practicum provides the sport management major the opportunity to assist a local athletic administrator with their responsibilities for a required minimum of 30 hours total. *Prerequisites: SMGT-3200 Facility Design and Management; SMGT-3300 Event Planning and Production.*

SMGT-4990 Internship in Sport Management–Fa, Sp 9–12 hours

This is an actual work experience in a sport management setting for a minimum of 40 hours per week for a minimum of twelve weeks. Capstone course for sport management major. *Departmental approval is required.* Credit/no credit. (Fee: \$35)

Sociology (SOC)**SOC-1300 Introduction to Sociology–Fa, Sp 3 hours**

Introduction to the concepts of sociology. The structure and processes of social life are studied.

SOC-2200 Criminology–Fa 3 hours

Introduction to the major criminological perspectives regarding crime causation. Selected notorious crimes are considered as case studies to enhance understanding of each perspective. Crosslisted as CRJU or SOC.

SOC-2250 Popular Culture and Politics–Sp 3 hours

This course will consider the relationship and effects which various forms of popular culture have had with/upon social and political movements as well as public policy initiatives both in America and International politics. The class will listen to, consider, and analyze a variety of cultural-artistic genres and the sociopolitical movements these engendered and supported in the 19th, 20th, and 21st centuries. Attention will be given to any or all of the following: music, film, art, and literature as well as to the historical, political, and social context. Crosslisted as POLS and SOC. (odd years)

SOC-2310 Juvenile Delinquency–Sp 3 hours

Study and assessment of casual theory and problems of correction and prevention of delinquency. Crosslisted as CRJU or SOC. (Fee: \$30)

SOC-2330 Introduction to Social Work–Fa, Sp 3 hours

See course description for SWK-2330 Introduction to Social Work.

SOC-2400 Marriage and the Family–Fa, Sp 3 hours

A biblical theology of marriage and the family is developed as a means by which to evaluate contemporary dating, marriage, and family arrangements. A major focus of the course is upon practical application related to such topics as dating/courtship, engagement, marital adjustment, in-law relations, communication and conflict resolution, family planning, and discipline.

SOC-2840 Concepts of Chemical Dependency–Fa, Sp 3 hours

See course description for SWK-2840. Crosslisted as CRJU, PSYCH, SOC, or SWK. Concepts of Chemical Dependency.

SOC-2900 Ethics in the Helping Professions–Sp 3 hours

This course is designed to introduce the student to current issues and ethical dilemmas confronting professional helpers. The course encourages development of critical thinking skills by looking at dilemmas from a multifaceted point of view. Codes of ethics for the various helping professions are reviewed and emphasis is placed on understanding these codes. The course strives to provide the student a foundation in basic concepts of ethics and values, an understanding of the complexity of ethical decision making, and a sense of how their own values affect practice. The primary focus of this course is ethics, critical thinking, decision making and self awareness. Crosslisted as SOC or SWK.

SOC-3330 Social Stratification–Fa 3 hours

Study of the class structure and its implications for American society. *Prerequisite:* SOC-1300 *Introduction to Sociology.*

SOC-3340 Sociology of Religion–Fa 3 hours

The relationship of religion to society with particular reference to contemporary movements. (even years)

SOC-3420 Human Sexuality 2 hours

Study of biblical content regarding human sexuality and an analysis of contemporary concepts within a framework of Christian thought. Crosslisted with PSYCH-3420 Human Sexuality. *Prerequisite:* PSYCH-1600 *General Psychology* or *permission of instructor.*

SOC-3710 Family and Society–Sp 3 hours

This sociological study of the family examines the scientific knowledge that exists about traditional and contemporary household arrangements. Research on alternative family forms is evaluated in light of public policy decisions and a biblical view of the family.

SOC-3730 Social Problems–Sp 3 hours

Study of selected social problems for the purpose of developing, understanding, and exploring approaches to the social treatment of these problems within a theistic framework.

SOC-3750 Social Movements–Fa, Sp 3 hours

See course description for HIST-3750 Social Movements.

SOC-4440 Special Topics-Sociology 1–3 hours

Investigation of specific topics in Social Science and History that have intrinsic worth and engage student interest.

SOC-4720 Social Theory–Fa 3 hours

Historical review of major sociological theorists and a critical examination of their theories from a theistic perspective.

SOC-4800 Research in Sociology–Sp 3 hours

Senior research paper in which each student focuses upon an issue or topic within the discipline of sociology. (Fee: \$125)

SOC-4910 1–3 hours**Independent Study in Sociology**

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite:* *permission of the instructor.*

SOC-4990 Sociology Internship–Fa, Sp, Su 3–12 hours

Sociology majors who participate in government service, human services, research, social service, or other approved activities related to the social sciences may earn up to 12 hours of credit. *Prerequisites:* ANTH-1800 *Cultural Anthropology*, PSYCH-1600 *General Psychology*, and SOC-1300 *Introduction to Sociology*

Spanish (SPAN)**SPAN-1710, 1720 4 hours/sem****Elementary Spanish I and II–Fa, Sp, Su**

Development of basic skills in reading, writing, speaking, and listening in Spanish to satisfy a broad variety of everyday, school, and work situations, along with an introduction to Hispanic cultures.

SPAN-1740 Intensive Spanish–Su 6 hours

This course is a six-credit, short-term course designed for students who wish to combine SPAN-1710 Elementary Spanish I and SPAN-1720 Elementary Spanish II. *Prerequisites:* *minimum GPA 2.0, high school Spanish highly recommended.*

SPAN-2710, 2720 4/3 hours/sem**Intermediate Spanish I and II–Fa, Sp**

Development of all four language skills through grammar review, composition, conversation, and readings in Spanish literature and culture. *Prerequisite:* SPAN-1720 *Elementary Spanish*, *instructor's approval*, or *placement by exam.*

SPAN-3350 2 hours**Elementary Education for Foreign Language Teachers–Sp**

An introduction to the teaching of reading, writing, and literacy development as developmental skills for the elementary age learner. Knowledge of elementary school curriculum with an emphasis on using the teaching of foreign language to reinforce the content of the elementary school curriculum. Emphasis on the use of children's literature as a means of teaching foreign language and culture to elementary students. The student will have knowledge of Ohio's model competency-based program and its four stages of language development to guide school foreign language programs. *Open to Multi-age Spanish Education Majors only. Credit/No Credit. (odd years)*

SPAN-3500**2 hours****Methods of Teaching Foreign Language–Fa**

Examination of the purposes and objectives along with the methods and curricular models used in the K–12 foreign language classroom. This course addresses the theories of first and second language acquisition, as well as topics such as the relationship of foreign language learning to other content areas. The student is given information regarding opportunities in planning lessons with appropriate materials, sequencing, and execution of learning activities. Evaluations of student learning, student behavior, and self-evaluation as integral parts of successful teaching are also stressed. The student will also gain insight into the importance of understanding one's own language and culture as a means to understanding the language and culture of the target peoples.

Open to Multi-age Spanish Education majors only.

SPAN-3600 Clinical Teaching in Spanish–Fa, Sp, Su 0–2 hours

A practical experience in which a student is assigned to assist a classroom teacher in preparation for classes, grading, and tutoring students. The student is expected to participate in 30 clock hours for each hour of credit divided among early childhood (20 hours), middle childhood (20 hours), and adolescent/young adult (20 hours) contexts. *Prerequisite: admission to the Teacher Education Program.*

SPAN-3610 Spanish Composition–Fa**3 hours**

Emphasis on development of clear, natural, and effective written communication in Spanish. Includes grammar review, vocabulary expansion, discussion of stylistic elements, and practice in writing narrative, descriptive, and several types of expository texts. *Prerequisite: SPAN-2720 Intermediate Spanish or permission of instructor.*

SPAN-3620 Spanish Conversation–Fa**3 hours**

Designed to sharpen the student's communication in oral Spanish and to increase aural comprehension of spoken Spanish. Attention given to pronunciation, vocabulary building, and practice on hearing and speaking through in-class presentations and other activities. Also emphasizes the development of culturally appropriate approaches to communication and comparative study of Anglo and Hispanic cultures. *Prerequisite: SPAN-2720 Intermediate Spanish or permission of instructor.*

SPAN-3640 Introduction to Hispanic Literature–Sp 3 hours

An introduction to basic concepts and vocabulary relating to literary theory through the study and analysis of representative works in Hispanic poetry, drama, and narrative, with emphasis on contemporary authors. *Prerequisite: SPAN-2720 Intermediate Spanish or permission of instructor.*

SPAN-3660 Spanish For Professionals–Sp**3 hours**

Development of practical Spanish vocabulary and conversational skills related to careers in criminal justice, social work, and health care professions. *Prerequisite: SPAN-2720 Intermediate Spanish or permission of instructor. (odd years)*

SPAN-3670 Introduction to Translation–Sp**2 hours**

An introduction to theory and practice related to bilingual translation and interpreting. Students will learn strategies for translating a variety of text types, as well as the fundamentals of interpreting. *Prerequisite: SPAN-3610 Spanish Composition; SPAN-3620 Spanish Conversation. (odd years)*

SPAN-3680 Understanding Hispanic Cultures–Sp 3 hours

Analysis of historical and contemporary issues that have shaped the Hispanic cultures in the US. Discussion of similarities and differences between Anglo and Latino worldviews. Course taught in English; counts for Global Awareness elective. (even years)

SPAN-3690 Hispanic Film–Sp**3 hours**

Explores the genres of Hispanic film and how these genres portray the cultural, social, and political environments in Spain and the Americas. *Prerequisites: SPAN-3640 Introduction to Hispanic Literature; permission of instructor. (even years)*

SPAN-4610 Advanced Spanish Grammar–Fa**3 hours**

Intensive review of high frequency grammatical structures problematic to non-native speakers of Spanish. Exploration of the history of the language as well as the theoretical aspects of the nature of language and the practical development of written and oral skills in Spanish. *Prerequisite: permission of instructor. (even years)*

SPAN-4640 Topics in Hispanic Culture–Fa**3 hours**

In-depth study of a particular topic of interest either through individual research or group discussion. Orientation may be interdisciplinary or author and genre specific. Capstone course. *Prerequisite: major or minor in Spanish; permission of instructor. (odd years)*

SPAN-4650**3 hours****Civilization and Literature of Latin America I–Fa**

A survey of the geography, history, culture, and literature of Latin America from the pre-Columbian period through the 19th century. Emphasis is on the diversity of Latin American society and the factors that have shaped it. Literary works will be studied for their literary significance within their socio-historical context. *Prerequisite: SPAN-3640 Introduction to Hispanic Literature. (odd years)*

SPAN-4670**3 hours****Civilization and Literature of Latin America II–Sp**

A survey of the history, culture, and literature of Latin America from the 19th century to the present. Emphasis will be on acquiring a greater awareness of current issues in Latin American society and understanding their contributing factors. Literary works will be studied for their literary significance within their socio-historical context. *Prerequisite: SPAN-2720 Intermediate Spanish. (odd years)*

SPAN-4680**2 hours****Advanced Conversation and Composition–Sp**

Development of oral and written communication skills at the advanced level as well as expansion of vocabulary dealing with a variety of contemporary topics. *Prerequisite: SPAN-3610 Spanish Composition, SPAN-3620 Spanish Conversation, or permission of instructor. (even years)*

SPAN-4700 Independent Study in Spanish–Fa, Sp 1–3 hours

Independent and intensive study in a particular area of the Spanish language, literature, or culture for individual students who demonstrate special interests and ability.

SPAN-4740 Civilization and Literature of Spain I–Fa 3 hours

A study of major literary works of Spain from the medieval and Renaissance periods to the 17th century, with emphasis placed on understanding works within their socio-historical context, as well as their literary significance. Geography, history, and culture of Spain from prehistoric civilizations to the 17th century. *Prerequisites: SPAN-3640 Introduction to Hispanic Literature; permission of instructor. (even years)*

SPAN-4750 Civilization and Literature of Spain II–Sp 3 hours

A study of major literary works of Spain from the 17th century to the present day, with emphasis placed on understanding works within their socio-historical context, as well as their literary significance. Geography, history, and culture of Spain from the 17th century to present. *Prerequisites: SPAN-4680 Advanced Conversation and Composition; permission of instructor. (even years)*

SPAN-4790 20th Century Spanish Theatre–Sp**3 hours**

Selected reading and analysis of outstanding Peninsular theatre from Benavente, García Lorca, and other post-Civil War period dramatists. *Prerequisites: SPAN-3640 Introduction to Hispanic Literature; permission of instructor. (even years)*

Social Work (SWK)**SWK-1100 Total Immersion Experience–Su 2 hours**

Available to all students. Preprofessional experience for students interested in social work. Participation with a social service agency, shadowing a social worker (who has a degree in social work or who is licensed as a social worker) for five full and consecutive days to better understand: (1) social work as a vocation; (2) the vulnerable populations social workers serve; (3) the professional helping relationship; and (4) the agency setting. Students must complete this course before applying for admission to the program. (Fee: \$60)

SWK-2330 Introduction to Social Work–Fa, Sp 3 hours

Available to all students. This course gives an introduction to the social work profession and a variety of fields of social work practice. It includes a study of the historical development and professionalization of social work. There will be an overview of the integration of faith and practice and the program's poverty focus. Crosslisted as SOC or SWK. (Fee: \$55)

SWK-2350 Field Survey–Fa, Sp 2 hours

Experiential learning through visitation and observation of social workers and interdisciplinary teams in agency settings. Course provides detailed exposure to fields of social work practice, the role of social work, and agency structure. There is a special emphasis on understanding the dynamics of the professional helping relationship given the client's membership in certain groups. Does not count toward social science elective for general education. (Fee: \$40)

SWK-2840 Concepts of Chemical Dependency–Fa, Sp 3 hours

Available to all students. This course presents an overview of the social, economic, political, legal, spiritual, and ethical considerations concerning the use and abuse of alcohol and other drugs in our culture. Various philosophies and perspectives on drugs and abuse as well as treatment and prevention options for individuals and families will be discussed. Crosslisted as CRJU, PSYCH, SOC, or SWK.

SWK-2900 Ethics in the Helping Professions–Sp 3 hours

This course is designed to introduce the student to current issues and ethical dilemmas confronting professional helpers. The course encourages development of critical thinking skills by looking at dilemmas from a multifaceted point of view. Codes of ethics for the various helping professions are reviewed and emphasis is placed on understanding these codes. The course strives to provide the student a foundation in basic concepts of ethics and values, an understanding of the complexity of ethical decision making, and a sense of how their own values affect practice. The primary focus of this course is ethics, critical thinking, decision making, and self awareness. Crosslisted as SOC or SWK.

SWK-3010 4 hours**Human Behavior and the Social Environment–Fa**

This course will provide an examination of the social systems approach to understanding human behavior with families, groups, organizations, and communities. Particular focus will be on the relationship among biological, social, psychological, and cultural systems as they affect and are affected by human behavior. *Prerequisite: admission to the social work program.*

SWK-3020 3 hours**Generalist Social Work Practice with Multicultural Groups–Fa, Sp**

This course teaches an understanding of the cultural values of diverse groups and their impact on the group process and the importance of being a culturally sensitive group leader. Emphasis is given to using a problem-solving and group decision-making process in practicing group work with multicultural, small groups, communities, and organizations. *Prerequisite: admission to the program or permission of the instructor.* (Fee: \$45)

SWK-3110 Social Welfare Programs and Policy–Fa 4 hours

Survey of the American social welfare system. Analysis of the history, purpose, programs, and assessment of this system from a biblical theistic point of reference. Examines social welfare policies and programs in relation to their effects on specific populations in need in U.S. society. Within a historical and political context, current social welfare programs and policies are further examined in terms of underlying assumptions and values, substance, implementation, and effectiveness. Considers major questions of social choice and the underlying criteria for the funding and delivery of social services. Policy analysis will be a major focus. Innovative programs and models that the churches could consider will be discussed and developed. *Prerequisite: admission to the social work program.*

SWK-3210 4 hours**Social Work Practice with Individuals and Families–Sp**

This 4-hour course is taken concurrently with 16 hours per week field experience designed to teach social intervention theory with practice. Emphasis will be given to the basic principles and values of practice in acquiring values, skills, theory, and principles of social work practice as well as the skill developments essential to beginning social work relationships. Intervention strategies for work with families and target groups are presented with an orientation toward problem-solving. The goal of this course is to assist the student in integrating theory with practice and in gaining awareness of the professional use of self interviewing. Professional writing skills are further developed. *Prerequisites: SWK-3010 Human Behavior and the Social Environment; admission to the social work program.*

SWK-3430 Junior Seminar I–Fa 1 hour**and SWK-3440 Jr Field Experience I–Fa 3 hours**

Junior Field Experience I is the placement of students in a poverty focused social service agency. The first four weeks will be one hour orientation sessions designed to inform and equip the student to complete all assignments required before entering their junior experience. Each student will be in field for a minimum of 75 hours, practicing eight hours weekly with clients and agency staff under the supervision of a qualified field instructor. Seminar class will meet once a week for one hour, where the student will receive input from peers and faculty. *Prerequisite: admission to the social work program. Corequisite: It is recommended that SWK-3430 and SWK-3440 be taken concurrently.* (Fee: \$150)

SWK-3450 Junior Seminar II–Sp 1 hour**and SWK-3460 Jr Field Experience II–Sp 3 hours**

Junior Field Experience II is the placement of students in a poverty-focused social service agency. Each student will be in field for a minimum of 75 hours, practicing eight hours weekly with clients and agency staff under the supervision of a qualified field instructor. Seminar class will meet once a week for one hour where the student will receive input from peers and faculty. The last four weeks will be one-hour orientation sessions designed to inform and equip the student to complete all assignments required before entering their senior field seminar. *Prerequisite: admission to the social work program. Corequisite: It is recommended that SWK-3450 and SWK-3460 be taken concurrently.* (Fee: \$150)

SWK-4210 3 hours**Social Work Practice with Special Populations–Fa**

This course is the second part of a three-course sequence in acquiring values, skills, and knowledge of generalist social work practice. Intervention strategies for practice with a wide variety of populations will be presented, including people of different religions; women; lesbian, gay, bi-sexual, and transgendered people; children and youth; the elderly; disabled; Appalachian; African Americans; Asian Americans and Pacific Islanders; American Indians; Mexican Americans; Hispanics and Puerto Ricans; and refugees and immigrants. *Prerequisite: admission to the social work program.* (Fee: \$15)

SWK-4220 Social Work Practice with Communities and Organizations–Sp **4 hours**

Designed to complete the undergraduate program and thus equip the student for beginning professional social work practice. Focus is on competency in social work practice in multiple macro settings as a generalist in problem solving and social change.

Prerequisites: admission to the social work program; SWK-4210 Social Work Practice with Special Populations. (Fee: \$65)

SWK-4440 Special Topics-Social Work **1–3 hours**

Investigation of specific topics in Social Science and History that have intrinsic worth and engage student interest.

SWK-4510 Senior Seminar I–Fa **2 hours****and SWK-4560 Senior Field Experience I–Fa** **7 hours**

This course offers students the opportunity to practice social work 16 hours weekly with professional supervision. A seminar is held two hours weekly in which students submit their own practice record for critical study and offer feedback to their peers. Emphasis is placed on the integration of students' social work theoretical knowledge and skills as they enter the profession. Students must complete a minimum of 225 hours in field. *Prerequisite: admission to the social work program. Corequisite: It is recommended that SWK-4510 and SWK-4560 be taken concurrently.* (Fee: \$150)

SWK-4520 Senior Seminar II–Sp **2 hours****and SWK-4570 Senior Field Experience II–Sp** **7 hours**

These courses offer students the opportunity to practice social work 16 hours weekly, with professional supervision. A seminar is held two hours weekly in which students submit their own practice record for critical study and offer criticism to their peers. Emphasis is placed on the integration of the students' social work theoretical knowledge and skills as they enter the profession. Students must complete a minimum of 225 hours in field. *Prerequisite: admission to the social work program. Corequisites: It is recommended that SWK-4520 and SWK-4570 be taken concurrently.* (Fee: \$150)

SWK-4610 Data Analysis–Fa **3 hours**

This course provides an introduction to the conceptual and quantitative tools used to describe and interpret data in the conduct of social work practice and research. Students learn how to select, calculate, analyze, and interpret statistics applicable to common social work situations related to direct practice, administration and planning, and policy making. Students will be able to recognize the statistical impact that race, gender, age, sexual orientation and other relevant variables have on many psycho-social-spiritual variables during computer labs using SPSS statistical software and current GSS database. *Prerequisite: admission to the social work program or permission of the instructor; students must have satisfied Cedarville's mathematics proficiency requirement before enrolling.*

SWK-4620 Social Work Research Methods–Sp **3 hours**

Designed to survey the basic process of research methods as practiced in the social sciences. Underlying principles of science and logic are emphasized and special attention is directed toward the recognition of common sources of error and bias in the implementation and interpretation of research studies as it affects the outcomes of research utilization. Students will be better prepared to recognize the impact of special population variables (age, race, gender, etc.) on the research process. *Prerequisite: admission to the social work program.*

SWK-4950 Independent Study in Social Work **1–3 hours**

Provides the means whereby gifted and interested students may explore, in a more in-depth and intensive manner, general information acquired in the major courses. Further, independent study provides a logical way to complete required hours not obtained in normal sequencing. *Prerequisite: permission of the instructor.*

T**Music Theory (THMU)****THMU-1010 Introduction to Music Theory and Aural Skills–Fa** **2 hours**

An intensive study of the rudiments of music: notation, pitch, and rhythm. These elements will be explored with aural and written components. These credits may not be substituted for any other music course. (Fee: \$30)

THMU-1210 Music Theory I–Fa **3 hours**

A foundational study of the essential building blocks of music including chord analysis, harmony, voice leading, and form.

Prerequisite: THMU-1010 Introduction to Theory or competency equivalency as shown by entrance examination. (Fee: \$30)

THMU-1220 Music Theory II–Sp **3 hours**

A continuation of Theory I with an in-depth exploration of part-writing, seventh chords, and elementary chromaticism.

Prerequisite: THMU-1210 Music Theory I. (Fee: \$30)

THMU-1250 Contemporary Musicianship I–Sp **2 hours**

This course is designed to help students understand the structure of contemporary music. The class will also continue to develop written and aural musicianship studied in Introduction to Music Theory and Aural Skills.

Prerequisites: THMU-1010 Introduction to Music Theory and Aural Skills. (Fee: \$30)

THMU-1310 Aural Skills I–Fa **2 hours**

Introduction to techniques of basic aural musicianship, including singing, recognizing, and dictating intervals and chords within the diatonic major and minor systems by "guide tone" numeric scale degree method. *Corequisite: THMU-1210 Music Theory I.*

THMU-1320 Aural Skills II–Sp **2 hours**

A continuation of Aural Skills I with an in-depth exploration of melodic and harmonic dictation along with an introduction to the techniques of transcribing select popular music recordings by ear.

Prerequisite: THMU 1310 Aural Skills I.

THMU-1500 Introduction to Music Technology–Fa **1 hour**

An introductory study of the use of computers and synthesizers in the production of printed musical scores. All students are expected to complete this course during their first year of study since the skills acquired in the course are used throughout their academic curriculum.

THMU-2140 Functional Keyboard Skills–Fa **1 hour**

Students will develop skills in harmonization at sight, transposition, playing by ear, and other keyboard harmony skills specifically designed to meet the piano proficiency requirements.

Prerequisite: permission of the instructor.

THMU-2210 Music Theory III–Fa **3 hours**

Critical study and analysis of the chromatic harmony, counterpoint and formal structure of 18th century music. Creative work in traditional compositional forms.

THMU-2220 Music Theory IV–Sp **3 hours**

Critical study and analysis of the chromatic harmony and formal structure of 19th-century music. Analytical study of 20th-century compositional techniques, including impressionistic, serial, neoclassical, and electronic practices: creative work in contemporary styles.

THMU-2250 Contemporary Musicianship II–Fa **2 hours**

This course is designed to help students understand the structure of contemporary music. The class will also continue to develop written and aural musicianship studied in Contemporary Musicianship I. *Prerequisites: THMU-1250 Contemporary Musicianship I.* (Fee: \$30)

THMU-2260 Contemporary Musicianship III–Sp 2 hours

This course is designed to help students understand the structure of contemporary music. The class will also continue to develop written and aural musicianship studied in Contemporary Musicianship II. *Prerequisites: THMU 2250 Contemporary Musicianship II.* (Fee: \$30)

THMU-2310 Aural Skills III–Fa 2 hours

Intermediate aural musicianship techniques: at-sight singing, melodic pattern recognition, and chord dictation within both diatonic and chromatic major and minor systems by including syncopated and irregular rhythmic patterns as well as four-voice harmonic dictation, including more advanced chromatic language. *Prerequisite: THMU-1320 Aural Skills II. Corequisite: THMU-2210 Music Theory III.*

THMU-2320 Aural Skills IV–Sp 2 hours

Advanced aural musicianship techniques: at-sight singing, melodic pattern recognition, and chord dictation within both diatonic and chromatic major and minor systems. More advanced melodic, rhythmic, and harmonic dictation, including all tonal language, as well as some extended chromatic possibilities and introduction to the non-tonal tendencies of the 20th century. *Prerequisite: THMU-2310 Aural Skills III. Corequisite: THMU-2220 Music Theory IV.*

THMU-3120 Jazz Theory and Improvisation I–Fa 2 hours

This course will introduce students to basic concepts of jazz theory and improvisation. Material will include harmonic structure and appropriate scales choice for improvisation. Students will learn to improvise over jazz standards. *Prerequisites: THMU-2210 Music Theory III, THMU-2310 Aural Skills III, and permission of instructor*

THMU-3130 Jazz Theory and Improvisation II–Sp 2 hours

This course will introduce students to advanced concepts of jazz theory and improvisation. Material will include harmonic structure and appropriate scales choice for improvisation. Students will further develop the ability to improvise over jazz standards. *Prerequisites: THMU-2210 Music Theory III, THMU-2310 Aural Skills III, and permission of instructor*

THMU-4100 Counterpoint–Sp 3 hours

A survey of polyphonic music from the 18th to the 21st centuries including analysis and composition of species counterpoint examples, canon, a fugal exposition, and a modern composition project. Additional focus upon contrapuntal techniques utilized in contemporary choral and orchestral music. *Prerequisite: THMU-2220 Music Theory IV or permission of instructor.* (odd years)

THMU-4110 Form and Analysis–Sp 3 hours

Theoretical study of the structure of musical forms presented by historical style period and corresponding analytical systems, continuation in Weber's traditional Roman numeral analysis, and introduction to Hindemith and Hanson's extended tonality techniques and 20th century methods, including atonal/serial designs of Schoenberg, Perle, and Forte. *Prerequisites: THMU-2220 Music Theory IV; THMU-2320 Aural Skills IV.* (even years)

THMU-4130 Orchestration–Fa 2 hours

Designed to develop skills in scoring music for various instrumental groups. *Prerequisite: THMU-2220 Music Theory IV.* (Fee: \$30) (odd years)

THMU-4140 Choral Arranging–Fa 2 hours

Study of arranging for the choral medium. Includes principles of arranging for children, youth, and adult choirs. Special attention given to arranging for large and small choral ensembles with a variety of forms of accompaniment. *Prerequisite: THMU-2220 Music Theory IV or permission of instructor.* (Fee: \$30) (even years)

**THMU-4990 1–3 hours
Independent Study in Theory/Composition**

Independent and intensive study in a particular area of music theory or composition for individual students who demonstrate special interests and ability. Repeatable up to three credits.

Theatre (THTR)**THTR-1230 Voice for the Performer–Fa 3 hours**

Practical approach to developing a healthy speaking voice for professional use. Voice physiology provides foundation for effective breathing, quality, projection, and articulation for performance. Stage dialects are explored briefly as application of the International Phonetic Alphabet (IPA). Appropriate for actors, singers, public speakers, and voice over artists. Crosslisted with COM-1230.

THTR-1410 Introduction to Theatre–Fa 3 hours

Study of the history and development of theatre. Dramatic literature is considered a reflection of man and culture during various periods, dealing with philosophy, religion, and sociopolitical thought. A brief look at acting skills is also offered.

THTR-1420 Introduction to Technical Theatre–Fa, Sp 3 hours

An overview course in all areas of technical theatre, including design. Intended to give the student a broad understanding of the basic principles and procedures used in the design of scenery, costuming, lighting, sound, and production management. Practicum required. (Fee \$45)

THTR-1430 Stage Movement–Fa 3 hours

A practicum in theatrical stage movement for performance with intensive studio sessions, starting with a foundation of anatomically sound knowledge of Alexander technique. Physical expressiveness is developed through exploration of industry-standard approaches such as Elements, Laban effort/shape movement, and Yakim's social selves. Specific applications develop technique for age demonstration and safe stage combat. Appropriate for students in all performing arts.

THTR-1440 Stagecraft I–Fa, Sp 1 hour

This course is designed to acquaint the student with selected elements of play production on a practical level. Students are assigned a project in an area of stagecraft such as properties, lighting, costuming, makeup, or set construction/decoration in relation to the mounting of a theatre production.

THTR-1450 Stagecraft II–Fa, Sp 1 hour

Designed to give the student a production staff supervisory experience. Students are assigned an area of stagecraft in relation to the mounting of a theatrical production. Skills learned in Stagecraft I are further developed, and leadership responsibilities required. *Prerequisite: THTR-1440 Stagecraft I.*

THTR-1460 Theatre Participation–Fa, Sp 1 hour

Students who participate in a theatre-directed play may receive one hour of credit. Participation must occur over a minimum of four weeks of the rehearsal process. Credit may be applied only to the semester in which the participation occurs or the semester immediately following. Repeatable up to four hours. Credit/no credit. *Prerequisite: permission of instructor.*

THTR-1480 Play Production–Sp 3 hours

Provides an overview of the elements of play production (including direction, dramaturgy, design, producing, stage management, promotion, etc.). Through lecture and experience the student will be introduced to the practical aspects of producing a play. Ideas will be explored from a director's involvement with these elements. Stage work required. (Fee: \$50)

- THTR-2130 Dramatic Literature–Sp** **3 hours**
Study of the historical development of dramatic styles, theory, criticism, and construction. Can be applied to meet English or speech requirements, but not both.
- THTR-2200 Introduction to Design–Fa, Sp** **3 hours**
This course is designed to introduce the student to philosophies of design by studying the work of theatrical designers: scenic, costume, and lighting. A number of projects will explore basic elements of design. (Fee: \$50)
- THTR-2350 Directing I–Fa** **3 hours**
Practical study of play directing methods, theories, and techniques applied through class projects. Students will direct scenes with complete artistic oversight, fulfilling every role and function of a director. This course is also helpful to education majors who will have to assist in educational theatre productions. *Prerequisite: THTR-1480 Play Production.*
- THTR-2410 Advanced Performance Techniques–Sp** **3 hours**
An advanced course in solo theatre performance where students learn performance techniques in monologues and monodrama. Special emphasis is placed on the solo presentation of multiple characters in both narrative and dramatic literature. *Prerequisite: THTR-2430 Acting I or permission of instructor.*
- THTR-2430 Acting I–Fa, Sp** **3 hours**
Study in the principle theories of realistic acting is balanced with practice in experiencing character creation. Principles of physical and emotional character development are explored.
- THTR-2440 Stagecraft III–Fa** **1 hour**
This course is designed to give the student an opportunity to work on the execution of an assigned design for the mainstage. The student may execute a set piece, costume, or lighting design. *Prerequisite: THTR-1450 Stagecraft II.*
- THTR-2460 Costume Design–Sp** **3 hours**
Designed to provide the student with both theoretical knowledge and practical skills for designing costumes for a theatrical production. Each student will develop this craft through individual projects and work on a mainstage production. *Prerequisite: THTR-1420 Introduction to Technical Theatre.* (Fee: \$50)
- THTR-2470 Makeup Design–Fa, Sp** **2 hours**
Designed to provide the student with both theoretical knowledge and practical skills for makeup design and execution for a theatrical production. Each student will develop this craft through individual projects and work on a mainstage production. (Fee: \$150)
- THTR-2510 Theatre of Social Change–Sp** **3 hours**
The nature of this course is to provide background in theory and practical work in areas of theatre that focus on efforts to work effectively on behalf of those who are politically, economically, behaviorally, or spiritually oppressed.
- THTR-3420 Theatre History I–Fa** **2 hours**
An analysis of performative modes of a given culture within a historical study, reinforcing appreciation of the past and strengthening the understanding of one's own culture as well as different cultures. General survey of theatre history from the pre-Greek era to the present. Focus will be on prevailing philosophical orientation, major dramatists, theatre architecture and staging practices, styles of performance, costume design, innovations, and development.
- THTR-3430 Theatre History II–Sp** **2 hours**
Survey of staging practices and innovations from mid-17th century to present, with study of representative plays from each era.
- THTR-3440 Stage Costume History–Fa** **3 hours**
A general survey of western costuming for the stage from pre-Grecian to late twentieth century. This course provides an overview of the evolution of fashion as well as the social and cultural history affecting fashion change. (Fee: \$40)
- THTR-3450 Stagecraft IV–Sp** **1 hour**
This course is designed to give the theatre major with a design concentration an opportunity to work in the chosen area of their senior theatre project. The student will execute a design for a mainstage production and may assist in the design process. *Prerequisite: THTR-2440 Stagecraft III.*
- THTR-3460 Acting II–Sp** **3 hours**
An advanced course which builds upon and expands realism to showcase performance of Greek playwrights, Moliere, Shakespeare, and post-modern styles. Intensive studio work includes exploration of the cultures surrounding styles, as well as audition skills. *Prerequisite: THTR-2430 Acting I*
- THTR-3470 Dramaturgy–Sp** **3 hours**
This course provides background in specialized theatre research for students interested in teaching theatre history, drama, dramatic literature, and directing productions at the secondary or college level.
- THTR-3490 Stage Lighting Design–Fa** **3 hours**
The study of stage lighting theory and practice. Students will complete exercises in lighting design. Material covered includes basic electricity, equipment, and instruments. Practicum and stage work required. *Prerequisite: THTR-1420 Introduction to Technical Theatre.* (Fee: \$35)
- THTR-3510 Directing II–Sp** **3 hours**
An advanced course exploring the direction of period plays and stylistic genres other than realism. Student projects might include one-act or full-length plays. Students will become familiar with influential contemporary directors and directing theories. *Prerequisite: THTR-2350 Directing I.*
- THTR-3520 Scenic Painting–Sp** **3 hours**
This course is designed to introduce students to scenic painting techniques. The student will hone painting skills through class projects. *Prerequisite: THTR-1420 Introduction to Technical Theatre.* (Fee: \$75)
- THTR-3530 Techniques of American Musical Theatre–Fa** **2 hours**
Structured as a studio dance class, basic steps and movements are taught for styles ranging from ballet, jazz, ballroom, and lyrical hip hop. Students gain skills from guest choreographers for performing in musical theatre. Appropriate for theatre and music students. (Fee: \$75)
- THTR-3610 Theatre for Young People–Fa,Su** **2 hours**
For integrated language arts majors and theatre students desiring a theatre elective. Provides background and experience in theatre games, improvisation techniques, and educational theatre productions for pre-K through grade 12. Includes role-playing, play therapy, and dramatherapy theory. *Prerequisite: admission to Teacher Education Program or theatre major or permission of instructor.* (Fee: \$60)
- THTR-3850 Seminar in Arts Administration and Arts Law–Sp** **2 hours**
A seminar course providing background in arts administration and arts law, with significant research and presentation responsibilities for students. An overview of issues involved in the operation of arts organizations. (Fee: \$75)
- THTR-4400 Professional Preparation Seminar–Fa** **2 hours**
Prepares the senior theatre arts student for entry into the professional arts community and/or graduate study. Topics include audition/portfolio preparation and presentation, resumé writing, interviewing techniques, graduate study/assistantship options, professional union affiliation, etc. (Fee: \$125)
- THTR-4500 Scenic Design–Sp** **3 hours**
A theatre course that emphasizes the analysis and interpretation of scripts, use of research material, and techniques of presentation. Includes an introduction to the practices of drafting and modeling. *Prerequisite: THTR-1420 Introduction to Technical Theatre.* (Fee: \$55)

THTR-4630 The Christian in Theatre—Sp 2 hours

The student will evaluate selected plays, both classic and contemporary, through a biblical perspective. The course addresses issues faced by the Christian artist regarding career choices and the challenges faced in contemporary theatre.

THTR-4640 Special Topics—Fa, Sp 3 hours

Topics of specialized theatrical interest are examined on an as-needed basis. Repeatable up to six credit hours.

THTR-4750 Independent Study: Theatre—Fa, Sp 1–2 hours

Independent study in a selected field for students with special interests and demonstrated ability. Repeatable up to eight credit hours.

THTR-4810 Internship: Theatre—Fa, Sp 3–12 hours

Students are placed with professional organizations to gain experience in actual career situations. Internships depend upon availability. Repeatable up to 15 hours.

THTR-4840 Senior Theatre Project—Fa, Sp 3 hours

The Senior Theatre Project (STP) has two goals: to culminate the student's work at Cedarville with a project presenting the student's highest caliber of work and to prepare the student to achieve personal and professional goals. The theatre major is given a variety of choices through which to fulfill the STP requirement: solo performance, directed production, theatre design, or dramaturgical study. Before determining the nature of the STP, the student must determine personal and professional goals. The theatre major begins shaping the STP immediately upon enrollment in the major. All theatre majors work with a theatre advisor. Capstone course. (Fee: \$50)

Technical and Professional Communication (TPC)**TPC-2000 3 hours****Production Tools for Technical Communication**

Students will learn to produce print and electronic media through hands-on introduction to various tools used by technical communicators.

TPC-3010 Style and Mechanics for Writers—Fa, Sp, Su 3 hours

Students will learn to apply reliable principles to make writing clear, concise, coherent, and cohesive. Crosslisted with ENG 3010 Style and Mechanics for Writers. *Prerequisite: ENG-1400 Composition.*

TPC-3020 Professional Portfolio Development I—Fa 1 hour

Students will develop a professional portfolio and learn to use it effectively as a tool to obtain an internship.

TPC-3090 Technical Marketing Communication—Fa 3 hours

Students will learn to create marketing materials for the technical industry, from design to completion. *Prerequisites: TPC-3010 Style and Mechanics for Writers; TPC-3100 Designing Visual Communication.*

TPC-3100 Designing Visual Communication—Fa 3 hours

Students will learn to integrate visual design concepts to enhance communication in various documents and media. Topics will focus on increasing usability of communication products by targeted audiences. *Corequisite: TPC-2000 Production Tools for Technical Communication.*

TPC-3130 Technical Communication—Fa 3 hours

Students will learn to design and produce various technical documents and communication solutions for targeted audiences while exploring the technical communication profession.

TPC-3170 2 hours**The Technical Communicator in a Corporate Culture—Sp**

Students will discuss issues beyond intellectual ability and technical know-how that are crucial to a successful career. They will discover guidelines to assist them in improving their emotional intelligence capabilities.

TPC-3180 Visual Rhetoric—Fa 2 hours

Students will be given an overview of visual design principles and practices related to the field of technical communication. During the course, students will build their design acumen by reading widely and by participating (and leading) coherent, comprehensive discussions. Students will also practice their growing design expertise by critiquing various visual treatments, by writing a treatise on the Christian approach to visual communication, and by analyzing visual communication through the lens of a Christian worldview. Crosslisted as ENG or TPC.

TPC-3210 Technical Editing—Sp 2 hours

Students will learn to develop style guides and edit technical documents or communication using conventional and electronic methods to ensure consistent grammar, style, visual design, and technical accuracy for end-users in targeted audiences.

TPC-3250 Documentation Design—Sp 3 hours

Students will learn to plan, design, and create user documentation through systematic user analysis, task identification, effective writing, and effective visual design.

TPC-3290 Proofreading—Su 2 hours

Students will learn to proofread using the techniques that professional proofreaders have found most practical and effective.

TPC-4010 Designing Technical Reports—Fa 3 hours

Students will learn to design and write effective technical reports and presentations that purposefully convey clear, concise, and accurate information to a targeted audience while using an appropriate level of technicality and supporting data or information.

TPC-4020 Professional Portfolio Development II—Fa 1 hour

Students will maintain a professional portfolio and learn to use it effectively to obtain employment after graduation. (Fee: \$25)

TPC-4050 Designing Online Information I—Fa 3 hours

Students will learn how to design and manage information on the World Wide Web.

TPC-4090 Designing Online Information II—Sp 3 hours

Students will learn to design and develop online help systems.

Prerequisites: TPC-4050 Designing Online Information I.

TPC-4130 Instructional Design I—Sp 3 hours

Teaches technical communicators how to employ technology and learning theory in developing adult training courses.

TPC-4140 Instructional Design II—Sp 3 hours

This course provides students with the opportunity to delve deeper into the art and science of instructional design by focusing on educational technology in general and e-learning tools, techniques, and practices specifically in use in today's corporate environment. The course also investigates the topics of knowledge management, performance support and human capital management in order to give students a well-rounded introduction to the contemporary practice of non-traditional instructional design. *Prerequisites: TPC-4130 Instructional Design I or permission of instructor.*

TPC-4160 5 hours**Technical and Professional Communication Internship—Su**

Students will participate in a work-study program approved and administered by the department in which advanced technical and professional communication students receive a variety of job-related experiences in a communication environment. *Prerequisite: permission of instructor.*

TPC-4170 Special Topics—Sp 3 hours

Students will study a selected topic(s) at the 4000-level. The flexibility of this course allows the faculty to meet the ever-changing nature of technical communication. Possible topics include project management, professional presentations, research methods, ethics in TPC, or other topics presented by faculty or requested by students. *Prerequisites: TPC-3130 Technical Communication; TPC-3010 Style and Mechanics for Writers Capstone course.*

TPC-4230 **1–3 hours**
Independent Study in Technical and Professional Communication–Fa, Sp, Su
 Independent study for junior and senior-level TPC majors with special interests and demonstrated ability.

Music Technology (TYMU)

TYMU-1251 Music Technology I–Sp **3 hours**
 This course is a survey of music technology tools and techniques including an introduction to the digital audio workstation, digital audio editing, MIDI editing and programming, and virtual instruments. *Prerequisites: THMU-1010 Introduction to Music Theory and Aural Skills or successful completion of the Music Theory Entrance Exam.* (Fee: \$45) (even years)

TYMU-2250 Music Technology II–Fa **3 hours**
 This course focuses on laptop recording and editing, giving students skills necessary to record and mix their own arrangements and compositions. Students will use a guerrilla recording approach to create singles and albums. *Prerequisites: TYMU-1251 Music Technology I.* (Fee: \$45) (even years)

TYMU-2251 Music Technology III–Sp **3 hours**
 This course focuses on a variety of synthesis techniques using Logic Pro's various synthesizers as well as the software synthesizer, Omnisphere. Additionally, this course will introduce students to live performance applications with Mainstage. *Prerequisites: TYMU-2250 Music Technology II.* (Fee: \$45) (even years)

TYMU-3250 Music Technology IV–Fa **3 hours**
 This course focuses on film-scoring techniques using live instruments and electronics. Students will create music for a variety of media including film, websites, and radio. *Prerequisites: TYMU-2251 Music Technology III.* (Fee: \$45) (odd years)

WSHP-3100 Worship Practicum–Fa, Sp **0–1 hours**
 This course is designed to help students refine their worship leadership abilities. Students will be given in-class and out-of-class worship leading assignments. Current trends and advanced worship leading topics will also be discussed. *Prerequisites: junior-level status; church music or worship major; or permission of instructor.*

WSHP-4900 Worship Internship–Fa, Sp **9 hours**
 Intensive field experience in worship leadership. Place of service is determined by student interest, recommendation of supervising faculty, and by sponsoring organization (typically a local church congregation). Students must apply for internships and receive endorsement from the advisor and the chair of the department one academic semester before period of service and prior to registering. Students should check with their advisor for complete internship requirements. *Prerequisites: senior-level standing as a worship major, approval by the advisor and department chair.*

WSHP-4980 Special Topics in Worship **1–3 hours**
 This is a workshop for students interested in worship leadership and will be offered on a periodic basis depending on instructor availability and student interest. Contact hours will determine the amount of credit given. *Prerequisite: topic dependent.*

W

Worship (WSHP)

WSHP-1010 Introduction to Worship Ministry–Fa **1 hour**
 This course is designed to be an introductory course to the field of worship ministry. It will provide the student with an examination of current practices in worship ministry, an overview of the worship degree at Cedarville, the character of a worshipper, the role of a worship leader, and career opportunities.

WSHP-1020 Introduction to Worship Technology–Sp **2 hours**
 This course is designed to be an introductory course to the field of worship technology. It will explore the basic technologies and concepts that are needed in worship ministry today, including audio, graphics, video, copyright, and ministry team building. (Fee: \$50)

WSHP-2100 Worship Forum–Fa, Sp **0 hour**
 A once-per-semester seminar designed to expose students to various aspects of worship ministry. The seminar may take the form of a lecture or masterclass. Crosslisted with CHMU-2100 Church Music Seminar. *Prerequisites: worship major or permission of instructor.*

WSHP-2200 Worship Field Experience–Fa, Sp, Su **1 hour**
 Initial field experience in a local church or parachurch organization. Students are responsible for finding a place of ministry involvement to begin developing music ministry skills. Supervision will be provided by an on-site staff member. *Prerequisites: worship major or permission of instructor.*

FINANCIAL INFORMATION

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Financial Information

University Financial Operation Policy

The University keeps the application fee, tuition, room, board, and other fees as low as possible to be consistent with responsible operation. The revenue from students does not cover the total cost of operation.

Individuals and churches who desire to share in the preparation of young people for effective Christian service in all walks of life partially support the University. Some funds are received from interested businesses, industries, and foundations. Student costs as stated are subject to change upon reasonable notification by the University.

Student Costs

Tuition — Undergraduate (enrolled between 07/01/07 and 05/01/10)

- Academy enrollment is not considered.
- Readmitted students who completed a full term prior to 1/1/10
- This billing option will cease to exist after 9/1/13.

| | |
|--|-------|
| Regular tuition per semester credit..... | \$780 |
| Audit tuition per semester credit..... | \$390 |
| Pharmacy courses (PPHR) tuition per semester credit..... | \$858 |
| Test-out fee per semester credit..... | \$390 |

Tuition — Undergraduate (enrolled after 05/01/10)

- Readmitted students who last completed a full term after 1/1/10

| | |
|--|----------|
| Block tuition (12–17 credits)..... | \$12,748 |
| Under block rate per credit (1–11.5 credits)..... | \$965 |
| Block overload rate per credit (17.5 credits and above)..... | \$660 |

Audit tuition

| | |
|--|----------------------|
| Within block..... | no additional charge |
| Under block or over block rate per credit..... | \$390 |
| Test-out fee per course..... | \$390 |

Fees

| | |
|--|-------|
| Application fee..... | \$30 |
| Board per semester | |
| Group A Meal Plans..... | 1,250 |
| Group B Meal Plans..... | 1,140 |
| Car registration fee per semester..... | 50 |
| Drop/add (course) fee..... | 5 |
| Late payment fee..... | 25 |
| Late registration..... | 50 |
| Non returned/Late/Lost room key..... | 75 |
| New student fee | |
| Commuting student – fall semester..... | 90 |
| Commuting student – spring semester..... | 70 |
| Resident student – fall semester..... | 120 |
| Resident student – spring semester..... | 80 |
| On-line course technology fee per credit..... | 35 |
| Returned item fee..... | 20 |
| Reservation deposit..... | 250 |
| Room deposit (refundable upon withdrawal)..... | 100 |
| Room per semester..... | 1,570 |
| Transcript fee..... | 10 |

*Senior citizens may enroll in courses for credit or no credit on an available space basis at no tuition charge. Senior citizens are those individuals 62 years of age or older who are considered to be retired according to the Social Security Administration.

Summary of Costs — Undergraduate (enrolled after 05/01/2010)

Institutional Costs

| | |
|---|-----------------|
| Estimated basic costs for the academic year of 2012–13 (excluding transportation, personal expenses, books, and laboratory fees): | |
| Tuition (based on an average of 32 semester hours)..... | \$25,496 |
| Board (Weighted average)..... | 2,400 |
| Room..... | 3,140 |
| Total Estimated Costs..... | \$31,036 |

Summary of Costs—Undergraduate enrolled between 07/01/07 and 01/31/2010 please refer to cost information on the Cedarville website.

Miscellaneous Costs

Other yearly expenses may be estimated as follows:

| | |
|--|---------|
| Books and supplies..... | \$1,100 |
| Personal expenses (including clothing, recreation, and personal items) Note: laundry included with room..... | 1,700 |
| Transportation (based on area of residency)..... | various |

Financial aid may be available to help defray costs. See the Financial Aid section of this catalog for additional information concerning available funds and application procedures.



Financial Registration Policy

To enable the University to be responsible in meeting its financial responsibilities, students must make provision for the payment of their bill on the due dates established by the University each semester. A student's registration for courses indicates a commitment to pay for related charges as stated in the University catalog.

The following payment plan schedule was established to help students care for this responsibility:

| | Fall 2012 | Spring 2013 |
|---------------------|-------------------|--------------------|
| First Payment Due: | August 4, 2012 | January 4, 2013 |
| Second Payment Due: | September 1, 2012 | February 1, 2013 |
| Third Payment Due: | October 1, 2012 | March 1, 2013 |
| Fourth Payment Due: | November 1, 2012 | April 1, 2013 |

A student is not considered financially registered until at least the first one-fourth payment has been received by the cashiers office. Students who do not make financial arrangements for the first payment due on their University bill will not be permitted to attend the University. Failure to make subsequent payments could result in the loss of dining hall and library privileges and the withholding of grades and online registration.

Making Payment

Students and parents may pay their University bill using several payment methods, including check, cash (in person), debit/credit card with a convenience fee, or online through our EZPAY system. For your protection, please do not mail cash.

Please send payments made payable to:
 Attn: Cashiers Office
 Cedarville University
 251 N. Main Street
 Cedarville, OH 45314

*Please remember to include your student ID# and student name on all checks. Payment by Internet, please visit: cedarville.edu/ezpay

For more information on payment options, visit the cashiers office website at cedarville.edu/cashiers.



Notification of the University Bill

Students who preregister will receive an invoice based on their preregistration schedule 20 to 30 days before the semester begins. Students are responsible for making their payments by the due dates. A statement of the student account is generated each month that the account has activity. Invoices and student statements are sent to students at their campus post office box unless directed otherwise in writing. Students wishing to have their invoices and statements sent to their home address may obtain a form from the cashiers office. You may view your student account history at any time by using CedarInfo and selecting "View your student account."

Invoices and Statements Online

Students may view their student account, current and previous invoices, and most recent transactions online using CedarInfo. Students may also assign their parents a password, giving them access to their student account and invoices. Parents can view this information by logging onto the campus homepage through their own Internet service provider.

Payment Penalties

Students who fail to make acceptable payment arrangements within a reasonable period of time will be denied access to the dining hall and library until such arrangements are made. Students who do not make payments by the stated due dates will be charged \$25. Students with unpaid balances at the end of the semester may be denied grade reports, transcripts, diploma, or enrollment in the next semester. Students with past due accounts will also be responsible for any fees incurred in the collection of their past due account.

Interest Rates

An annual interest rate of 13 percent (1.083 percent per month) will be charged during the academic year on accounts of current students. An annual interest rate of 15 percent (1.25 percent per month) will be charged during the academic year on accounts of students no longer enrolled and on all student accounts during the summer months.

Prepayment Incentive Credit Plan (PIC-Plan)

This plan enables a student to earn interest on a student account that has a credit balance of \$500 or more on the first day of the calendar month. The PIC-Plan account and the student account are one and the same. PIC-Plan interest is taxable and anyone earning \$10 or more in interest will receive a 1099-INT form. Please call 937-766-7665 for the maximum deposit amount and the current interest rate.



Withdrawals From a Student Account

Students may withdraw cash from their student account during the semester, provided they have a credit balance. Cash withdrawals may not exceed \$100 per week. No more than two cash withdrawals may be made per week. Withdrawals of amounts greater than \$100 are issued by direct deposit; requests can be made by using CedarInfo by selecting “Request a payment from your student account” under Financial Transactions. Refunds are issued within two to three business days of the request.

New Student Reservation Deposit Refund

A reservation deposit must be submitted by new students as an indication of the intention to enroll. The amount of the deposit is \$250. This money will be credited to the student’s account and used to cover first semester expenses. A student must submit a reservation deposit in order to be registered for courses.

The reservation deposit is fully refundable if the request for refund is received in writing before the reservation deposit deadline. No refunds are available after the deposit deadline date.

Reservation deposit deadlines are as follows:

| Term | Deadline |
|--------------------|----------|
| Fall Semester | May 1 |
| Spring Semester | Nov. 1 |
| Summer Session I | April 15 |
| Summer Session II | May 15 |
| Summer Session III | April 15 |
| Summer Session IV | June 1 |

Continuing Student Reservation Deposit Refund

Full (100 percent) refunds will be made to continuing students who notify the University by June 1 of their intent to withdraw. If a continuing student notifies the University between June 2 and July 1 of their intention not to return fall semester, \$150 of their deposit will be refunded. No refunds will be made after July 1.



Withdrawal Refunds

Tuition and Science Laboratory Fees

Students withdrawing from the University before the end of a semester may request a refund from the cashiers office. Refunds may be requested anytime after the beginning of a semester. The effective date of the withdrawal from the University is the last day of class attendance as determined by the office of the registrar.

Processing of refunds will begin the third week of the semester. Tuition and science laboratory fee refunds for withdrawal are granted on this schedule:

| Refund | Fall 2012 | Spring 2013 |
|-----------|----------------|--------------|
| 100% | thru Aug. 31 | thru Jan. 18 |
| 75% | thru Sept. 7 | thru Jan. 25 |
| 50% | thru Sept. 14 | thru Feb. 1 |
| 25% | thru Sept. 21 | thru Feb. 8 |
| No Refund | after Sept. 21 | after Feb. 8 |

Course offerings changed or deleted by the University entitle a student to a full refund of tuition and related course fees. Students withdrawing from a course or courses will be granted a full tuition refund to apply toward courses added. If the new total hours are fewer than the original total, the above refund schedule will apply.

Board

Board charges will be refunded on a prorated weekly basis. Board weeks begin on Sunday and end on Saturday. Board refunds are computed based on the last day of residency. Board contracts are required for all students living in the residence halls. Students may choose from six available meal-plan options.

Room

Rooms are reserved for each student for an entire semester. No refund of room rent is made except in cases of severe illness or incapacity. Written confirmation of the illness or incapacity must be provided by the director of University Medical Services or a physician. Room rent will then be refunded on a prorated basis.

Other Fees

No other fees are refundable except for withdrawal within the first calendar week of the semester.



Federal Refund Policy

Programs that are included:

1. Federal Pell Grant
2. Federal SEOG Grant
3. Federal Perkins Loan
4. Federal Stafford Loans
5. Federal Parents PLUS Loan
6. Federal TEACH Grant

A portion of Title IV grant or loan funds, but not FWS funds, must be returned to the Title IV programs upon a Title IV recipient's withdrawal from the school.

Withdrawal date

The day the student withdraws is the date (determined by the school):

- The student began the withdrawal process prescribed by the school;
- The student otherwise provided the school with official notification of the intent to withdraw; or
- For the student who does not begin the school's withdrawal process or notify the school of the intent to withdraw, the mid-point of the period of enrollment for which Title IV assistance was disbursed (unless the institution can document a later date).

If the school determines the student did not begin the withdrawal process or notify the school of the intent to withdraw due to illness, accident, grievous personal loss, or other such circumstances beyond the student's control, then the school may determine the appropriate withdrawal date.

Percentage of the payment period or period of enrollment completed

The percentage of the period of enrollment for which assistance was awarded that was completed is determined by dividing the total number of calendar days comprising the period of enrollment for which assistance is awarded into the number of calendar days completed in that period as of the day the student withdrew.

Calculation of Title IV assistance earned

To calculate the amount of Title IV assistance earned by a student, the school must first determine the percentage of Title IV assistance the student earned. Up through the 60% point of time, the percentage of assistance earned is equal to the percentage of the period of enrollment for which it was awarded that was completed as of the day the student withdrew. If the student withdrawal occurs after the 60% point, then the amount is 100%.

Calculation of Title IV assistance not earned

The amount of the Title IV grant and loan assistance not earned by the student is calculated by determining the complement of the percentage of assistance the student earned and applying it to the total amount of grant and loan assistance that was disbursed (or that could have been disbursed) to the student, or on the student's behalf, for the period of enrollment as of the day the student withdrew.

Difference between amounts earned and amounts received

The school will follow the regulations for late disbursement if the student received less grant or loan assistance than the amount earned. If the student has received more grant or loan assistance than the amount earned, then the unearned funds shall be returned by the school or the student or both.

Responsibility of the school

The school shall return the lesser of the unearned amount of Title IV assistance or an amount equal to the total institutional charges the student incurs for the period of enrollment of which the assistance was awarded, multiplied by the unearned percentage of awarded Title IV grant and loan assistance.

Responsibility of the student

Students shall return unearned Title IV assistance minus the amount the school returns.

Order of return of Title IV funds

Excess funds returned by the school or student are credited to outstanding Title IV loan balances for the student or made on the student's behalf for which a return of funds is required. Excess funds must be credited to outstanding balances in the following order:

1. Unsubsidized Stafford loans
2. Subsidized Stafford loans
3. Federal Perkins loans
4. Federal PLUS loans
5. Federal Pell grant
6. Federal SEOG grant
7. Federal TEACH Grant

Veterans Training Benefits and Dependents Educational Assistance

Cedarville University is approved under Title 38, Chapters 30, 31, 32, 33, 35, 1606 and 1607, U.S. Code for Education of Veterans and Their Dependents. Students under Chapters 30, 32, 35, 1606, and 1607 are required to pay the school for all charges. The Veterans Administration in turn pays them a monthly allowance based upon their training load. Veterans under Chapter 31 are paid a monthly allowance and the Veterans Administration pays the school for tuition, fees, books, and supplies. Cedarville University is a participant in the VA Yellow Ribbon Program. Those students eligible to receive Chapter 33 Post-9/11 benefits may qualify to receive benefits through the VA Yellow Ribbon program.

Inquiries concerning eligibility should be directed to the contact office of a Veterans Administration Regional Office. Students planning to study under one of the education laws should receive approval prior to enrolling. A Veterans Administration training officer will contact the University in the disabled cases to accomplish this requirement for the student.

Cedarville University students eligible for veterans benefits should contact the veterans benefits counselor in the office of the registrar.

Deferred Payment Plan for Veterans

For Option Deferred Payment Plan for Veterans (under Chapters 30, 31, 32, 33, and 35) receiving the Educational Assistance Allowances, consult the office of the registrar.

Payments by veterans receiving their Educational Assistance Allowance checks one month behind will be as follows:

| | |
|------------------|----------------------|
| Fall Semester: | 1st payment by 10/4 |
| | 2nd payment by 11/1 |
| | 3rd payment by 12/1 |
| | Final payment by 1/1 |
| Spring Semester: | 1st payment by 2/4 |
| | 2nd payment by 3/1 |
| | 3rd payment by 4/1 |
| | Final payment by 5/1 |

A late payment charge of \$25 is applicable for accounts unpaid after the payment due date.

Veterans receive eight monthly VA checks that must pay for eight deferred payments on the semester system.

Financial Aid

When completing the FAFSA, the Title IV Code for Cedarville University is **003025**.

General Information

Cedarville University offers a variety of financial aid programs to assist students with education-related expenses. Although Cedarville University supports the premise that the primary responsibility for financing a college education rests with the student and family, aid programs are available to supplement personal resources.

Some of the financial aid available at the University is considered to be *need-based aid*. Students are asked to complete the Free Application for Federal Student Aid (FAFSA) and submit the form to the Central Processing Center. The FAFSA should be submitted to the central processor by February 20, but not before January 1 preceding the academic year for which aid is being requested. It is not necessary to have filed your federal taxes before completing your FAFSA. Estimated data can be used. An analysis of the family's financial data is performed and the results are used to determine the eligibility for need-based assistance. For filing online, obtain a PIN number for **both** the parent and student at **pin.ed.gov** and complete the FAFSA at **fafsa.gov**.

In addition to *need-based aid*, the University also offers *merit-based aid* to students who demonstrate recognized achievement or talent. Merit scholarship categories include academic, leadership, athletic, music, forensics, theatre, and debate.

The financial aid office serves as a resource center to assist students and their families in exploring alternative sources of educational funding. The financial aid homepage has direct links to several scholarship databases. Students are encouraged to investigate privately-funded scholarships through the use of the Internet and accessing **cedarville.edu/finaid**.

Students should advise the financial aid office when they receive additional assistance from sources other than Cedarville University. This assistance will be considered when preparing award packages and at times may result in the revision of a previously prepared package.

A financial aid award notification will be provided to students after reviewing completed application data and after a student is accepted for admission to Cedarville University. Financial aid is applied for and awarded on a yearly basis. Aid applicants must continue to meet program qualifications in order to retain eligibility.

All questions may be directed to the financial aid office at 937-766-7866 or 1-800-444-2433. Visit Cedarville's financial aid website at **cedarville.edu/finaid** and the FAFSA website at **fafsa.gov**.

Institutional Grants and Scholarships

All awards are based on full-time enrollment (12 hours or more). Students who enroll for fewer than 12 hours will have their awards prorated.

Academic Scholarships

- Academic Excellence Award – Students who have ACT scores between 25–36 (SAT 1130–1600). Award amounts are \$6,500 or \$8,500 and renewable with a 3.2 or 3.5 cumulative Cedarville GPA.
- Cedarville Scholars – Nine students selected from each freshman class. 75 percent tuition award (\$19,122 in 2012–13), renewable with 3.5 GPA.
- National Scholar Award – Students selected as National Merit or National Achievement Finalist or Semi-Finalist. 50 percent tuition (\$12,748 in 2012–13), renewable with 3.5 GPA.

Other Grants

- CU Access Grant – Students who have financial need according to FAFSA. Award amounts vary from \$2,000 to \$5,000.
- Diversity Grant – Awarded to students who come from a diverse ethnic background as part of the ongoing effort to encourage increased campus diversity. Award amounts are \$4,000 per year.
- Transfer Student Awards – Students that have completed at least one college term with full-time enrollment after high school graduation and/or has earned 18 or more semester credits. If transfer GPA is 3.5 or higher, the student can receive an academic scholarship of \$3,500 or \$6,500. If need is determined by FAFSA, student can also receive additional grant of \$2,000. Transfer students can also receive the Diversity Grant of \$4,000.
- Student Government Grants – Grants for the elected officers of the student body government
- Future Generations Scholarship – One-time scholarship for new students whose parents or grandparents graduated from Cedarville University
- Church Matching Grant – Cedarville University will match up to \$500 for students enrolled full time at Cedarville University who receive a scholarship from their local church. The Church Matching Grant application must be received along with the church's scholarship check.

Department Grants

- Athletic – Contact the athletic department or coach
- Media and Applied Communications – Contact the department of media and applied communications.
- Music – Contact the department of music and worship
- Pharmacy – Contact the school of pharmacy
- Worship – Contact the department of music and worship

State Grant Programs

Ohio College Opportunity Grant

Students who are residents of Ohio and have an expected family contribution of less than \$2,190 as calculated on the FAFSA are eligible for the Ohio College Opportunity Grant. Application can only be made through the completion of the FAFSA. The filing deadline is October 1.

For the latest information please visit our website at **cedarville.edu/financialaid/Ohio+Programs**.

Specific information from the Ohio Board of Regents about the Ohio College Opportunity Grant is available at **regents.ohio.gov/sgs/ocog**.

For additional information about all the Ohio student aid programs visit the Ohio Board of Regents website at **regents.ohio.gov/sgs/index.php**.

Ohio National Guard Tuition Assistance Program

This program assists Ohio National Guard members who are full-time students, at least 17 years old, and enlisted for a period of six years. Up to eight semesters of instructional and general fees will be paid for the student. After basic and specialty training, guardsmen meet one weekend a month and two weeks during each summer. In addition to the tuition assistance, the time spent on duty is paid according to rank. Both men and women are accepted into this program, and proof of financial need is not a requirement. For more information, call collect 937-323-6704 or write to: Ohio National Guard, Educational Opportunities, 2825 West Granville Rd., Worthington, OH 43085.

Ohio War Orphans Scholarship

This scholarship is awarded to students who are children of deceased or disabled veterans. The student must be enrolled full-time and be making satisfactory academic progress. For more information, contact the Ohio Board of Regents, Student Assistance Office, Ohio War Orphans Scholarship, 3600 State Office Tower, 30 East Broad Street, Columbus, OH 43215.

State Grant Refund Policy

Students who qualify for state grant funds must be registered for at least 12 credit hours per semester in order to receive benefits. Students withdrawing or dropping below full-time status during the semester will have their grant payments adjusted according to grant refund policy. Questions pertaining to refund policy should be directed to the financial aid office.

Other State Grants

Students from the following states may be eligible for state grant programs. Contact your state's higher education authority for eligibility criteria. The first step in applying for a state grant is to complete the FAFSA.

- Pennsylvania – 1-800-692-7392
- Rhode Island – 1-800-736-1100
- Vermont – 1-800-642-3177
- Maryland – 1-800-974-1024
- Delaware – 1-800-292-7935
- Michigan – 1-888-95-MERIT

Federal Grants

Federal Pell Grant

A student who is a United States citizen, or who is in the United States for other than a temporary purpose and intends to become a permanent resident, or who is a permanent resident of the Trust Territories of the Pacific Islands or of the Northern Mariana Islands, may be eligible for a federal grant through the department of education. All students with financial need are encouraged to apply for this grant by using the FAFSA.

Students who meet the Pell eligibility requirements and have an expected family contribution of \$4,995 or less as calculated on the FAFSA are eligible for a Pell Grant. Grants currently range from \$555–\$5,550 per year.

All awards are based on full-time enrollment (12 hours or more). Students who enroll for fewer than 12 hours will have their awards prorated according to the following schedule:

- 12 hours or more = Full award
- 9–11 hours = 3/4 award
- 6–8 hours = 1/2 award
- 1–5 hours = Partial award – Federal Pell Grant only

Federal Supplemental Educational Opportunity Grant (SEOG)

A Federal grant for the Department of Education that is awarded to students with exceptional need. Exceptional need is described as being eligible to receive a Pell grant. However, due to limited funding, being Pell-eligible does not guarantee SEOG eligibility. The maximum SEOG grant at Cedarville University is \$1,000.

Teacher Education Assistance for College and Higher Education Grant (TEACH)

The TEACH Grant provides up to \$4,000 per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families. The TEACH Grant has conditions which must be met, otherwise the grant is converted into a direct unsubsidized Loan. The following websites provide the full details for the TEACH Grant: <http://studentaid.ed.gov/PORTALSWebApp/students/english/index.jsp>

United States Military Scholarships

Army Scholarships

Two, three, and three and one-half year scholarships are available for students who enroll in Army ROTC. These scholarships pay all tuition, fees, and textbooks, plus \$250–\$400 per month for 10 school months per year. For additional information, contact the professor of military science at Central State University, Wilberforce, OH 45384 (937-376-6657 or 937-376-6279), or call Adrian Davoli, assistant registrar at Cedarville University, at 937-766-7712.

Army National Guard Scholarships

These scholarships pay up to \$1,000 per school year and are available for those who qualify. Additional information pertaining to these scholarships is available from the professor of military science at Central State University, or from Adrian Davoli, assistant registrar at Cedarville University, at 937-766-7712.

Air Force Scholarships

Air Force ROTC scholarships are available, paying for the cost of tuition, fees, and textbooks, plus \$150 per month for 10 school months, to students who demonstrate academic and leadership potential. Students interested in Air Force ROTC should contact the Department of Aerospace Studies, Wright State University, Dayton, OH 45435 (937-775-2730), or call Adrian Davoli, assistant registrar at Cedarville University, at 937-766-7712.

Donor-Funded Scholarships

Through the generosity of alumni, faculty, staff, and friends, more than 250 donor-funded scholarships are available to Cedarville students. These scholarships are established and funded by individuals who create a scholarship and determine award criteria. Candidates must complete the Free Application for Federal Student Aid (FAFSA) and/or a scholarship application or essay to be considered for these awards. The department of financial aid or committees from academic and University departments typically select the recipients. Review the list of donor-funded scholarships online at cedarville.edu/scholarshiplist.

The personal connection between donors and the students they support plays a significant role in the continued funding of these scholarships. Recipients are asked to express their thanks to their donors in the following ways:

- Send a timely letter of appreciation to your donors.
- Attend the Honors Day luncheon in April (*if applicable*).
- Attend the scholarship reception and Legacy Banquet on Homecoming weekend.



William D. Ford Federal Direct Loans

Federal Subsidized Stafford Loan

Federal Stafford Student Loan funds are available to dependent and independent undergraduate students. Requests for loan assistance from this program may be made through the FAFSA. Cedarville University processes applications electronically through the Great Lakes Higher Education Corporation and its participating lenders. Applications will be mailed directly to the student from the guarantee agency. The federal government will subsidize (pay) the interest on loans while the student is in school and during a six month grace period following withdrawal or graduation if the student has demonstrated financial need as determined by the FAFSA calculations. Interest rate for the Subsidized Stafford loans will be 6.8 percent in 2012–13. Freshmen can borrow a maximum of \$3,500, sophomores \$4,500, and juniors and seniors \$5,500.

Federal Unsubsidized Stafford Loan

Federal Unsubsidized Stafford Student Loan funds are available to students who do not qualify for all or part of the need-based subsidized Stafford Loan. The annual loan limits are the same, as stated above, for the subsidized, unsubsidized, or any combination of the two programs. In this program, all the terms are the same as the subsidized Stafford; however, the federal government does not cover the interest expenses while the student is in school or during the six-month grace period. The student does have the option to defer interest payments during in-school and grace periods; however, the interest continues to accrue. Independent students are eligible to borrow additional funds through the Unsubsidized Stafford. Freshmen and sophomores may borrow an additional \$4,000 and juniors and seniors may borrow an additional \$5,000 per year. Interest rate for this loan is 6.8 percent.

Federal Additional Unsubsidized Stafford Loan

A new loan program that was started in the 2008–09 school year which allows students to borrow an additional \$2,000 for each academic year. This is in addition to the base Subsidized and Unsubsidized Stafford Loans that are previously described. Eligibility, repayment, cancellation, and deferment criteria are the same as for the original Stafford loans. Interest rate for this loan is 6.8 percent.

Federal Parent Loan to Undergraduate Students (PLUS)

Federal Parent Loan to Undergraduate Students (PLUS) funds are available for creditworthy parents to borrow on behalf of their students. This loan program is not based on financial need and may be used to replace all or part of the expected family contribution. Parents may borrow any amount up to the cost of education less any financial aid the student is receiving. The fixed interest rate is 7.9 percent. The lender will deduct 4 percent of the loan amount to cover the origination and insurance fee. Repayment does begin within 60 days following full disbursement of the loan funds. Further information and applications for this program may be obtained by contacting the financial aid office.

Students should be aware that funds awarded from these programs are considered to be awarded for the entire loan period requested by the borrower. Should the student withdraw before the end of the loan period, a proportionate refund of the loan funds may be returned to the lender. In addition, if a student is enrolled for less than a full academic year immediately preceding graduation, the annual loan limit may be pro-rated based on the number of credits remaining to complete the program of study. Specific questions relating to the federal regulations outlined above may be directed to the financial aid office.

Federal Perkins Loans

Federal Perkins Loans are available through the University to students who are citizens of the United States and who demonstrate exceptional financial need. Funds are awarded to Federal Pell Grant recipients first. Other applicants are awarded pending availability of funds.

The Federal Perkins Loan Fund was established to help students pursue their courses of study at their chosen institutions of higher education. Students are eligible if they are: (1) a citizen of the United States, in the United States for other than a temporary purpose and intend to become a permanent resident thereof, a permanent resident of the Trust Territory of the Pacific Islands, or the Northern Mariana Islands; (2) in need of the amount of the loan to pursue a course of study at an eligible institution; (3) capable, in the opinion of the institution, of maintaining good standing in such course of study; and (4) accepted for enrollment as at least a half-time undergraduate student. Continuing students must be in good standing and enrolled as at least a half-time undergraduate.

The standard Perkins Loan amount is \$1,500. However, the annual amount may be increased as funding allows.

Repayment begins nine months after graduation or when a student leaves school for other reasons. One may have up to 10 years to pay back the loan, depending upon the aggregate amount borrowed. During the repayment period, the borrower will be assessed 5% interest on the unpaid balance of the loan principle.

Exit interviews will be conducted for graduates and withdraws to explain loan deferment and cancellation provisions for borrowers who continue their education or go into certain fields of teaching or specified military duty.

Student Employment

Federal Work Study

This federally-funded program is designed to provide work opportunities for University students. Students in this program may qualify for up to 20 hours of work a week during the academic year, providing they show a demonstrated need based on their FAFSA. Actual hiring is done by the department supervisors who will employ the students. As with campus employment, actual job placement, number of hours worked, and total dollar amount earned cannot be guaranteed by the financial aid office. Community service positions are also available in this program. Visit cedarville.edu/studentemployment for more information.

Campus Employment

Although unable to guarantee actual job placement, the number of hours worked, or total dollar amount earned, Cedarville University assists needy students by recommending them for part-time employment. Students are employed in various part-time jobs on campus such as maintenance, dining hall, housekeeping, and others.

Part-time student employment is not restricted to upperclassmen and is encouraged at all levels.

Off-Campus Employment

Because of the University's reputation for attracting quality students, many area employers contact the career services office to employ students on a part-time basis. Though no formal restrictions pertain to this employment, students are encouraged to limit their working hours to approximately 20 hours per week to ensure sufficient time to study.

Standards of Satisfactory Academic Progress for Recipients of Financial Aid Policy

Financial aid recipients at Cedarville University are required to achieve satisfactory academic progress to be eligible to continue to receive federal financial assistance. The purpose of this policy is to define the requirements for satisfactory academic progress as it pertains to recipients of Title IV federal aid programs.

The University recognizes that conditions that create the need for financial assistance may also create other educational needs that require extra time and slower progress in achieving educational goals. Students who, because of exceptional educational needs, must make slower progress than outlined in the policy or who find themselves victims of unusual circumstances, are encouraged to discuss their situations with their academic advisors and the financial aid office. Where legally possible, because of mitigating circumstances, exceptions to this policy can be considered.

When the Congress of the United States enacted the Higher Education Amendments of 1976, eligible institutions were directed to define and enforce standards of progress for students receiving federal financial assistance.

The programs directly involved at Cedarville University are:

1. Unsubsidized Stafford Loans
2. Subsidized Stafford Loans
3. Federal Perkins Loans
4. Federal PLUS Loans
5. Federal Pell Grant
6. Federal SEOG Grant

Full-Time Students

To be eligible for full benefits of Federal Title IV funds, undergraduate recipients of financial aid must enroll for a minimum of 12 credit hours of courses during each semester that aid is received. All students are required to have a cumulative GPA of 2.0 (C) in order to graduate from Cedarville University. The following academic requirements would be appropriate in achieving this goal by “carrying to completion” the required credit hours. In order to meet academic progress standards, students must complete a minimum number of credit hours based on a percentage of work to be completed and maintain a minimum cumulative GPA consistent with the requirements for graduation. The following illustrates the academic progress policy:

| Hours attempted | 1–30 | 31–60 | 61–90 | 91–192 |
|------------------------|------|-------|-------|--------|
| Completed (percent) | 65% | 70% | 75% | 80% |
| Minimum cumulative GPA | 1.70 | 1.90 | 2.00 | 2.00 |

Satisfactory academic progress means that first-time students must, after a reasonable probationary period not to exceed one semester, have registered the minimum cumulative GPA each semester thereafter as indicated above. In addition, these students must complete 65% of attempted coursework the first academic year, 70% the second year, 75% the third year, and 80% the fourth year.

Note: *Academic progress is measured at the end of each academic term. (Satisfactory progress for summer coursework will be evaluated at the end of the fall semester when fall term academic progress is evaluated.) It is assumed that the majority of students will graduate in the normal time frame. However, no student may continue more than six years as a full-time student in order to complete their academic program. Regardless of the credit hours a full-time student attempts and received aid for, (which cannot exceed 192) they must complete the percentage of work attempted and have the appropriate cumulative GPA as stipulated above.*



Aid recipients who fail to complete the required percentage of work attempted as listed above during the applicable semester and/or do not meet the minimum cumulative grade point requirements each semester will be considered as not making satisfactory academic progress. These students will be subject to having their federal aid discontinued unless there are mitigating circumstances involved that may affect a student’s academic progress.

Students who withdraw from all courses during any semester will be encouraged to confer with the financial aid office. If permitted to continue, students who withdraw from all courses during each semester for two consecutive semesters will be considered as not making satisfactory academic progress and will be discontinued from receiving federal financial aid.

In conjunction and addition to the academic policy listed in the University catalog, the grading marks F, I, W, WF, and WP will not be considered as successful completion of courses attempted. The attempt of these courses will be considered in quantitative (percent completion) analysis of SAP but not the qualitative (GPA) analysis. The incomplete (I) grades will be considered into the qualitative (GPA) analysis when completed according to the provisions in the University catalog. When an incomplete grade changes to another grade notation, that change will be picked up in the next SAP review.

Repeat course credits earned are averaged into the cumulative GPAs; however, credit hours are counted only once towards the graduation requirement, but both attempts toward the percent of completion calculation.

Credit hours in which a “CR” has been earned count toward total graduation requirements but are not used in the computation of GPAs. Non-credit hours for which “NC” has been earned are not used in the computation of GPAs.

Audit (AU) courses do not constitute hours attempted or completed and are not used in the computation of GPAs.

Repeat course credits earned are averaged into the cumulative GPAs; however, credit hours are counted only once.

Summer school credit hours earned will be included in the academic year to which summer sessions are assigned. They will be evaluated the same as hours earned in regular semester sessions.

Part-time Students

Students who enroll for less than full-time (12 hours per semester) will receive proportionately less financial aid than a full-time student as dictated by lower school costs and federal regulations. Similar academic progress requirements for full-time apply to part-time enrollment on a proportional basis. Financial aid (except the Federal Pell Grant) will not be awarded to students who enroll for fewer than six credit hours per semester (half-time).

Transfer Students

Transfer students who have never attended Cedarville University will be treated as new students in regard to the probationary period (one semester). The transfer credits plus the credits received at Cedarville will be used for the percent of completion measurement; however, only the cumulative GPA earned at Cedarville will be the evaluating factor to determine if progress is being made, based on the current satisfactory academic progress policy.

Re-establishing Eligibility

When a student is denied aid because of lack of academic progress, additional courses at Cedarville University must be taken at the student's own expense. This will be necessary until the minimum cumulative GPA and the percentage of completion requirements meet the academic progress criteria. In all cases, each student, upon completion of these requirements, must schedule an appointment with the assistant director of financial aid to determine his or her future eligibility for federal assistance.

Method for Appeal

Students who have been denied federal aid due to unsatisfactory academic progress have the right to appeal and can do so by a written request to the assistant director of financial aid. All appeals must include substantive reasons for failure to comply with this policy.

The assistant director of financial aid along with the appeal committee will review the appeal and the assistant director will respond by letter with either an approval or rejection of the student's appeal. On an individual basis, future progress requirements may be placed on a student whose appeal is approved. If the appeal is approved, the student's financial aid will be reinstated for the term.

If necessary, further appeals may be made to the assistant vice president for enrollment management.

Student Rights

1. You have the right to know what financial aid programs are available at your school.
2. You have the right to know the deadlines for submitting applications for each of the financial aid programs available.
3. You have the right to know how financial aid will be distributed, how decisions on that distribution are made, and the basis for these decisions.
4. You have the right to know how your financial need was determined. This includes how costs for tuition and fees, room and board, travel, books and supplies, personal and miscellaneous expenses, etc., are considered in your budget.

5. You have the right to know what resources (such as parental contribution, other financial aid, your assets, etc.) were considered in the calculation of your need.
6. You have the right to know how much of your financial need as determined by the institution has been met.
7. You have the right to request an explanation of the various programs in your student aid package.
8. You have the right to know your school's refund policy.

Student Responsibilities

1. You must complete all application forms accurately and submit them on time to the right place.
2. You must provide correct information. In most instances, misreporting information on financial aid application forms is a violation of law and may be considered a criminal offense that could result in indictment under the U.S. Criminal Code.
3. You must return all additional documentation, verification, corrections, and/or new information requested by either the financial aid office or the agency to which you submitted your application.
4. You are responsible for reading and understanding all forms that you are asked to sign and for keeping copies of them.
5. You must accept responsibility for all agreements that you sign.
6. You must perform the work agreed upon in accepting a University employment award.
7. You must be aware of and comply with the deadlines for application or reapplication for aid.
8. You should be aware of your school's refund procedures.

All schools must provide information to prospective students about the school's programs and performance. You should consider this information carefully before deciding to attend a school.



APPENDIX

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Board of Trustees

Cedarville University is governed by an autonomous, self-perpetuating board of trustees. Board members are selected for three-year terms. One-third of the board members are eligible for re-election each year. The executive committee of the board consists of the chair, vice chair, secretary, treasurer, chairs of the standing committees, and the president of the University. The board meets in January, May, and October.

Officers

William Brown, President
Lorne Scharnberg (2015), Chair
Bill Bolthouse (2014), Vice Chair
Dominic McKinley (2013), Secretary
Jim DeVries (2013), Treasurer

Term of Office Ending June 2013

William Bernhard, Menomonee Falls, Wisconsin
Kezia McNeal Curry, Mililani, Hawaii
James DeVries, Ada, Michigan
David Gower, Elgin, Illinois
John Hays, Reynoldsburg, Ohio
Mary Howard, Northbrook, Illinois
Deforia Lane, Cleveland Heights, Ohio
David Lodwick, Portsmouth, Ohio
Michael Loftis, Lewisberry, Pennsylvania
Dominic McKinley, Greensboro, North Carolina
Deborah Stephens, Cedarville, Ohio

Term of Office Ending June 2014

Ronald Becker, Cresson, Texas
John Blodgett, Elkhart, Indiana
William Bolthouse, Avila Beach, California
David Graham, Erlanger, Kentucky
Randy Patten, Noblesville, Indiana
William Rudd, Muskegon, Michigan
David Warren, Cedarville, Ohio
Hayes Wicker, Naples, Florida
Randal Wilcox, Farmington, Connecticut
Christopher Williamson, Franklin, Tennessee

Term of Office Ending June 2015

David DyKema, Rochester Hills, Michigan
Kelly Miller, Traverse City, Michigan
Lorne Scharnberg, Des Moines, Iowa
Jeffory Willetts, Bellefontaine, Ohio
Bill Williams, Lewis Center, Ohio
Greg Winchester, Milton, Georgia
Robert Wynalda, Comstock Park, Michigan

Emeriti

Eugene Apple, Orange Village, Ohio
Francis Bresson, Menomonee Falls, Wisconsin
Gilbert Brueckner, Menomonee Falls, Wisconsin
James Carraher, N. Ft. Myers, Florida
Jack Cline, Rockbridge, Ohio
Joseph Godwin, Gallipolis, Ohio
Roy Guenin, Cordova, Tennessee
E. L. Hawkins, Northfield, Ohio
Ruth Kempton, Lititz, Pennsylvania
Irwin Olson, Mesa, Arizona
Lynn Rogers, Sagamore Hills, Ohio
Bill Smith, Allegan, Michigan
Al Stevens, Moorestown, New Jersey
Robert Sumner, Lynchburg, Virginia



Administration

Administrative Council

William E. Brown, President. B.A., University of South Florida, 1975; Th.M., Dallas Theological Seminary, 1981; Ph.D., Dallas Theological Seminary, 1984. At Cedarville since 2003.

Paul H. Dixon, Chancellor. B.A., Tennessee Temple University, 1961; M.Div., Temple Baptist Theological Seminary, 1964; D.D., Tennessee Temple University, 1978; LL.D., Liberty University, 1984; Ed.D., The University of Cincinnati, 1986. At Cedarville since 1978.

John S. Gredy, Provost. B.S., Albion College, 1973; M.S., Indiana University, 1976; Ed.D., Indiana University, 1987. At Cedarville since 2005.

William L. Bigham, Vice President for Advancement. B.S., Roberts Wesleyan College, 1995; M.A., The State University of New York, Brockport, 2001. At Cedarville since 2008.

Thomas Cornman, Academic Vice President, Chief Academic Officer. B.S., Philadelphia Biblical University, 1978; M.Div., Biola University, 1981; M.A., Temple University, 1982; Ph.D., University of Illinois, Chicago, 1998. At Cedarville since 2009.

Robert K. Rohm, Vice President for Christian Ministries. B.A., Cedarville University, 1968; M.R.E., Grand Rapids Baptist Seminary, 1981. At Cedarville since 1986.

Carl A. Ruby, Vice President for Student Life. B.A., Cedarville University, 1983; M.A., Wheaton College, 1988; Ph.D., Ohio University, 1996. At Cedarville since 1983.

Christopher E. Sohn, Sr. Vice President for Business and Chief Financial Officer. B.A., Purdue University, 1989; M.B.A., Indiana University, 1996. At Cedarville since 2012.

Janice L. Supplee, Vice President for Enrollment Management and Marketing. B.A., Cedarville University, 1986; M.B.A., Wright State University, 2001. At Cedarville since 1995.

Academic Council

- Lynn Brock**, *Dean of Library Services; Professor of Library Science*. B.A., Cedarville University, 1968; M.L.S., Indiana University, 1969. At Cedarville since 1969.
- Fran Campbell**, *Registrar*. B.A., Cedarville University, 1972; At Cedarville since 1981.
- Daniel Estes**, *Director, Center of Biblical Integration*. B.A., Cedarville University, 1974; Th.M., Dallas Theological Seminary, 1978; Ph.D., Cambridge University (England), 1988. At Cedarville since 1984.
- Pamela Diehl Johnson**, *Assistant Academic Vice President; College of Health Professions*. B.S., University of Dayton, 1970; M.A., The Ohio State University, 1971; Ph.D., The Ohio State University, 1974. At Cedarville since 1974.
- Michael Kane**, *Assistant Academic Vice President; Education Resources*. B.S., University of Central Missouri, 1975; Th.M., Dallas Theological Seminary, 1983; Ph.D., University of North Texas, 1990. At Cedarville since 2011.
- Mark McClain**, *Associate Academic Vice President; College of Professions*. B.A., Cedarville University, 1989; Ph.D., University of Michigan, 1994; Postdoctoral Fellow, Sandia National Laboratories, 1994–96; Summer Faculty Research Fellow, Air Force Research Laboratory, 1997, 1999, 2000, 2001, 2002; National Research Council Senior Research Associate, 2003–2004. At Cedarville since 1996.
- David Rotman**, *Associate Vice President for Technology/CIO*. B.S., Taylor University, 1968; M.A.T., Indiana University, 1972; C.D.P., Institute for Certification of Computer Professionals, 1980; Ph.D., Nova University, 1994. At Cedarville since 1984.
- Andrew A. Runyan**, *Senior Associate Academic Vice President and Dean, Graduate Studies*, B.M.E., University of Dayton, 1983; M.S.M.M., GMI Engineering and Management Institute, 1993; Ph.D., Nova Southeastern University, 2000. At Cedarville since 2006.
- Marc Sweeney**, *Dean: School of Pharmacy*. B.S. Pharm., Ohio Northern University, 1993; Pharm.D., The Ohio State University, 1997; M.Div., Southwest Bible College and Seminary, 2006. At Cedarville since 2009.
- Steven Winteregg**, *Associate Academic Vice President; College of Arts and Sciences*. B.M.E., University of Cincinnati College-Conservatory of Music, 1974; M.M., Wright State University, 1979; D.M.A., The Ohio State University, 1987. At Cedarville since 2004.

Other Faculty

Library

- Lynn Brock**, *Dean of Library Services; Professor of Library Science*. B.A., Cedarville University, 1968; M.L.S., Indiana University, 1969. At Cedarville since 1969.
- Janice Bosma**, *Associate Dean for Library Administration; Associate Professor of Library Science*. B.A., Grand Rapids Baptist College, 1975; M.L.S., Western Michigan University, 1978. At Cedarville since 1982.
- Carl Brandon**, *Director of Library Media Services; Associate Professor of Library Science*. B.S., Bob Jones University, 1969; M.A., Bob Jones University, 1970. At Cedarville since 1992.
- Julie Deardorff**, *Director of Library Collection Services; Associate Professor of Library Science*. B.A., Gettysburg College, 1990; M.L.I.S., The University of Rhode Island, 1993. At Cedarville since 1996.
- J. Brent Etzel**, *Director of Library Public Services; Assistant Professor of Library Science*. B.A., Franklin College, 1994; M.L.S., Indiana University, 1997; M.A., Illinois State University, 2006. At Cedarville since 2008.

- Joseph Fox**, *Instructional Services Librarian; Assistant Professor of Library Science*. B.A., Western Connecticut State University, 1992; M.L.I.S., San Jose State University, 2010. At Cedarville since 2011.
- Lynne Funtik**, *Reference Librarian; Assistant Professor of Library Science*. B.A., Wayne State University, 1981; M.L.I.S., Wayne State University, 1984. At Cedarville since 1994.
- Jeffery Gates**, *Information Services Librarian; Assistant Professor of Library Science*. B.S., Baptist Bible College, 1981; M.L.S., Kent State University, 1995; M.A., Faith Baptist Theological Seminary, 2002. At Cedarville since 2007.
- Sharon Kerestes**, *Curriculum Materials Center Librarian; Assistant Professor of Library Science*. B.A., University of Pittsburgh, 1991; M.Ed., Wright State University, 2004. At Cedarville since 2012.
- Gregory Martin**, *Collection Services Librarian; Assistant Professor of Library Science*. B.M., Wright State University, 1972; M.M., Wright State University, 1979; M.L.I.S., Kent State University, 2005. At Cedarville since 2002.

Student Life

- Kirsten Gibbs**, *Dean of Students*. B.A., Cedarville University, 1993; M.S.A., Central Michigan University, 2003. At Cedarville since 1993.
- John Potter**, *Director of Counseling*. B.A., Cedarville University, 1979; M.A., Dallas Theological Seminary, 1993; M.A., Amber University. At Cedarville from 1981–1984, since 1997.
- Jonathan M. Purple**, *Dean for Student Life Programs*. B.S., Tennessee Temple University, 1980; M.Ed., Liberty University, 1988. At Cedarville since 1991.
- Brad Smith**, *Associate Dean of Students*. B.S., Liberty University, 1984; M.A., Liberty University, 1990. At Cedarville since 2000.
- Rebecca Stowers**, *Associate Dean of Students*. B.S.N., Cedarville University, 2001. At Cedarville since 2002.

Correspondence

A complete listing of departments along with contact information can be obtained online at cedarville.edu/departments.

Written

Cedarville University
251 N. Main St.
Cedarville, OH 45314

Email

admissions@cedarville.edu

Phone

1-800-CEDARVILLE (233-2784)



Doctrinal Statement

All trustees, administrators, full-time faculty, and staff support and adhere to the doctrinal statement and lifestyle commitment of Cedarville University.

We believe in the Scriptures of the Old and New Testaments as verbally inspired by God and inerrant in the original writings, embracing all matters which the biblical authors address, and believe that they are of supreme and final authority in faith and life. II Timothy 3:16,17; II Peter 1:19–21.

We believe in one God—eternal, omnipotent, omniscient, and omnipresent existing as three Persons—Father, Son, and Holy Spirit, one in nature, attributes, power, and glory. Genesis 1:1,26; Proverbs 30:4; Mark 12:29; Matthew 28:19; II Corinthians 13:14; John 1:1–4, 14,18; Acts 5:3,4.

We believe that the Lord Jesus Christ was begotten by the Holy Spirit, born of the virgin Mary, and that He is both true God and true man. Matthew 1:18–25; Luke 1:26–35; Philipians 2:6–11; Isaiah 7:14; John 1:14.

We believe in the literal six-day account of Creation, that the creation of man lies in the special, immediate, and formative acts of God and not from previously existing forms of life. Genesis 1:26,27; 2:7–9,16,17; 3:1–19.

We believe that man was created perfect in the image of God, that he sinned and thereby incurred not only physical death, but also that spiritual and eternal death, which is separation from God, and that all human beings are born with a sinful nature and are sinners in thought, word, and deed. Genesis 3:1–6; Romans 1:18,32; 3:10–19; 5:12,19.

We believe that the Lord Jesus Christ died for our sins according to the Scriptures as a representative and substitutionary sacrifice and rose again for our justification; and that all who believe in Him are justified on the grounds of His shed blood and are saved by grace through faith wholly apart from human merit and works. Acts 13:39; 16:31; Romans 3:21–28; Ephesians 2:8–10; Titus 3:3–8.

We believe that all who receive by faith the Lord Jesus are born again by the Holy Spirit through the Word of God and thereby become the children of God forever and are eternally secure. John 1:12,13; 3:3–16; 5:24; 10:28,29; I Peter 1:23; II Peter 1:4–11.

We believe that the Holy Spirit is a divine Person, equal with God the Father and God the Son; that He was active in Creation; that He convicts of sin, righteousness, and judgment; that He is the Agent in the new birth; that He baptizes all believers into the body of Christ at conversion; that He indwells, seals, endues, guides, teaches, witnesses, sanctifies, and helps the believer. Psalm 139:7–12; John 14:16,17; 16:13,14; Romans 8:9; I Corinthians 6:19.

We believe that the sign gifts of the Holy Spirit are completed and are not applicable to the work of the Holy Spirit today. I Corinthians 12:8–10, 28–30; 14:1–40.

We believe in the imminent “Blessed Hope,” the Rapture of the church before the tribulation, when the “Lord shall descend from heaven” to catch up His bride to meet Him in the air and “so shall we ever be with the Lord.” John 14:1–3; I Thessalonians 4:13–18; I Corinthians 15:15–58.

We believe in the literal, bodily resurrection of the crucified Lord, His ascension into Heaven, His present life there as our High Priest and Advocate, and His personal, bodily, visible return to the earth at the end of the tribulation to establish His millennial Kingdom on earth, and to reign as the only Potentate, the King of Kings, and Lord of Lords. Luke 24:36–43; John 20:24–29; Acts 1:9–11; I Corinthians 15:25; Revelation 1:5–7; 19:11–16; 20:6.

We believe in the bodily resurrection of all the dead: the saved to a life of eternal glory and bliss in Heaven with God; the unsaved to eternal judgment of conscious suffering and woe in the lake of fire. John 5:28,29; Revelation 20:6,11–15; 21:1–8; Matthew 10:28; 18:8,9; 25:41,46; Mark 9:43–49; II Thessalonians 1:6–9.

We believe in personal separation from all practices and influences of the world which hinder a spirit-filled life. We believe in biblical separation from all forms of ecclesiastical apostasy. Romans 12:1; James 4:4; I John 2:15–17; II Corinthians 6:14; 7:1; Colossians 3:1–17; Romans 6:1–14; Galatians 5:16–25.

We believe that it is the privilege and responsibility of every believer to be a personal soul winner and to do his utmost to give the Gospel of Christ to the whole world. Mark 16:15; Acts 1:8; John 17:18; 20:21; II Corinthians 5:20.

We believe that the local church is an organized congregation of immersed believers, associated by covenant, observing the ordinances of Christ, having the offices of pastor and deacon, exercising the gifts, rights, privileges, and responsibilities given them by His Word, and that it has the absolute right of self-government. We believe that the Church which is His Body includes all New Testament believers. Matthew 18:15–17; I Corinthians 1:2; 7:17; 11:16; I Timothy 3:1–15; I Corinthians 12:28; Ephesians 1:22,23; 2:14,15; 5:23–32.

We believe that the Scriptural ordinances of the local church are Baptism and the Lord’s Supper; that Baptism, by immersion, should be administered to believers only, as an identifying symbol of their belief in the death, burial, and resurrection of our Lord and Savior Jesus Christ, and our death to sin and resurrection to a new walk in life, and that it is a prerequisite to local church membership; that the Lord’s Supper is a commemoration of His death and should be preceded by believer’s baptism and solemn self-examination. Matthew 28:19,20; Acts 8:36–39; 18:8; Romans 6:3–5; Colossians 2:12; I Corinthians 11:23–32.

| By State | <i>Men</i> | <i>Women</i> | <i>Totals</i> |
|----------------------|--------------|--------------|---------------|
| Alabama | 1 | 3 | 4 |
| Alaska | 2 | 4 | 6 |
| Arizona | 1 | 3 | 4 |
| Arkansas | 2 | 2 | 4 |
| California | 16 | 21 | 37 |
| Colorado | 16 | 24 | 40 |
| Connecticut | 19 | 13 | 32 |
| Delaware | 5 | 10 | 15 |
| Florida | 11 | 36 | 47 |
| Georgia | 8 | 10 | 18 |
| Hawaii | 1 | 0 | 1 |
| Idaho | 3 | 2 | 5 |
| Illinois | 53 | 59 | 112 |
| Indiana | 73 | 80 | 153 |
| Iowa | 17 | 23 | 40 |
| Kansas | 8 | 7 | 15 |
| Kentucky | 23 | 24 | 47 |
| Louisiana | 1 | 2 | 3 |
| Maine | 30 | 20 | 50 |
| Maryland | 35 | 39 | 74 |
| Massachusetts | 17 | 22 | 39 |
| Michigan | 112 | 119 | 231 |
| Minnesota | 11 | 19 | 30 |
| Mississippi | 1 | 0 | 1 |
| Missouri | 15 | 7 | 22 |
| Montana | 0 | 0 | 0 |
| Nebraska | 4 | 5 | 9 |
| Nevada | 3 | 1 | 4 |
| New Hampshire | 24 | 21 | 45 |
| New Jersey | 33 | 46 | 79 |
| New Mexico | 1 | 2 | 3 |
| New York | 74 | 65 | 139 |
| North Carolina | 20 | 13 | 33 |
| North Dakota | 0 | 0 | 0 |
| Ohio | 513 | 652 | 1,165 |
| Oklahoma | 2 | 2 | 4 |
| Oregon | 8 | 10 | 18 |
| Pennsylvania | 150 | 165 | 315 |
| Rhode Island | 3 | 4 | 7 |
| South Carolina | 6 | 7 | 13 |
| South Dakota | 2 | 3 | 5 |
| Tennessee | 11 | 13 | 24 |
| Texas | 11 | 20 | 31 |
| Utah | 5 | 1 | 6 |
| Vermont | 12 | 9 | 21 |
| Virginia | 35 | 44 | 79 |
| Washington | 16 | 8 | 24 |
| West Virginia | 18 | 20 | 38 |
| Wisconsin | 37 | 32 | 69 |
| Wyoming | 2 | 2 | 4 |
| District of Columbia | 0 | 0 | 0 |
| Guam | 0 | 1 | 1 |
| Puerto Rico | 0 | 0 | 0 |
| Foreign Residence | 23 | 31 | 54 |
| Totals | 1,494 | 1,726 | 3,220 |

**By Age – Men and Women**

| <i>Years</i> | <i>Men</i> | <i>Women</i> | <i>Totals</i> |
|---------------|--------------|--------------|---------------|
| under 18 | 60 | 90 | 150 |
| 18 | 340 | 409 | 749 |
| 19 | 366 | 416 | 782 |
| 20 | 303 | 365 | 668 |
| 21 | 272 | 325 | 597 |
| 22 | 106 | 59 | 165 |
| 23-24 | 25 | 32 | 57 |
| 25-29 | 9 | 13 | 22 |
| 30-34 | 3 | 5 | 8 |
| 35-39 | 2 | 3 | 5 |
| 40-49 | 3 | 6 | 9 |
| 50+ | 5 | 3 | 8 |
| Totals | 1,494 | 1,726 | 3,220 |

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ACADEMIC CALENDAR

Fall Semester 2012

August 2012

- 17 Residence Halls Open
- 17–19 Getting Started Weekend (*meal contract starts at 5 p.m. on Friday*)
- 20–23 Fall Bible Conference
- 22 Instruction Begins
- 27 Convocation (10 a.m.)

September 2012

- 3 Labor Day (*no classes*)

October 2012

- 5–6 Homecoming
- 18–19 Fall Break (*residence halls open; limited dining hours*)
- 22 Instruction Resumes
- 24 Majors Assemblies
- 23–24 Advising/Early Registration for Spring: Seniors
- 25–26 Advising/Early Registration for Spring: Juniors
- 30–31 Advising/Early Registration for Spring: Sophomores

November 2012

- 1 Advising/Early Registration for Spring: Sophomores
- 2 Grandparents Day
- 2–3 Parents Weekend
- 13–15 Advising/Early Registration for Spring: Freshmen
- 21–26 Thanksgiving Break Begins at 1 p.m. (*residence halls open; dining hall closed*)
- 27 Instruction Resumes

December 2012

- 11–14 Final Exams*
- 15 Christmas Break Begins (*residence halls close at 5 p.m.*)

Spring Semester 2013

January 2013

- 6 Residence Halls Open
- 7 New Student Orientation and Registration (*meal contract starts at 5 p.m.*)
- 8 Instruction Begins
- 8–10 Missions Conference

February 2013

- 7 Majors Assemblies

March 2013

- 4–8 Spring Break (*residence halls open; dining hall closed*)
- 11 Instruction Resumes
- 14–15 Advising/Early Registration for Fall: Seniors
- 18–19 Advising/Early Registration for Fall: Juniors
- 20–22 Advising/Early Registration for Fall: Sophomores
- 25–27 Advising/Early Registration for Fall: Freshmen
- 29 Easter Break (*residence halls open; limited dining hours*)

April 2013

- 1 Easter Break (*residence halls open; limited dining hours*)
- 2 Instruction Resumes
- 15 Academic Honors Day
- 30 Final Exams

May 2013

- 1–3 Final Exams*
- 4 117th Annual Commencement (*residence halls close at 5 p.m. for undergraduates, 8 p.m. for walking seniors*)

**Final exam schedules are published at the beginning of each semester. Please be sure that your travel arrangements do not conflict with your final exams.*

Summer Sessions 2013

Session I: May 7–June 21, 2013 (*residence halls open May 6 and close June 22 at 12 p.m.*)

Session II: July 1–26, 2013 (*residence halls open June 29 and close July 27 at 12 p.m.*)

Session III: May 28–August 16, 2013 (*online only*)

Session IV: July 8–August 16, 2013

CEDARVILLE

UNIVERSITY.

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Located in southwest Ohio, Cedarville University attracts 3,300 undergraduate, graduate, and online students to more than 100 areas of study. Celebrating 125 years of education excellence, Cedarville is a Christ-centered learning community recognized nationally for rigorous academic programs, strong graduation and retention rates, accredited professional and health science offerings, and leading student satisfaction ratings.