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# Dordt College 2015-16 Catalog 

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## DORDTCOLLEGE

## 2015-16 Catalog

This catalog is published for the faculty and students of Dordt College. We have made every effort to ensure the accuracy of information. However, the college reserves the right to make changes and apply them to registered and accepted students throughout the academic year.

## Undergraduate Academic Calendar

| 2015-16 | 2016-17 (Tentative) | Day | Activity |
| :--- | :--- | :--- | :--- |
| Aug 19-21 | Aug 17-19 | Wed-Fri | International Student Orientation |
| Aug 22-24 | Aug 20-22 | SatMon | Freshman Orientation |
| Aug 24 | Aug 22 | Monday | Transfer/Returning Student Orientation |
| Aug 25 | Aug 23 | Tuesday | Classes begin - 8 a.m. |
| Aug 28 | Aug 26 | Friday | Convocation - 11 a.m. |
| Oct 1, 2 | Oct 6, 7 | Thurs, Fri | Reading Days - Heartland Teachers' Conference, no classes |
| Oct 16 | Oct 14 | Friday | End of first set of half-courses |
| Oct 19 | Oct 17 | Monday | Beginning of second set of halfcourses |
| Nov 3-16 | Nov 1-14 |  | Registration for spring semester |
| Nov 25 | Nov 23 | Wednesday | Thanksgiving recess - 8 a.m. |
| Dec 1 | Nov 29 | Tuesday | Classes resume - 8 a.m. |
| Dec 11 | Dec 9 | Friday | Review Day, no classes |
| Dec 14-17 | Dec 12-15 | Mon-Thurs | Testing |
|  |  |  |  |
| Jan 11 | Jan 9 | Monday | New/Transfer/Returning Student Orientation |
| Jan 12 | Jan 10 | Tuesday | Spring semester begins - 8 a.m. |
|  | Feb 10 | Friday | Reading Day [no reading day in 2015-16] |
| Feb 29 | Feb 27 | Monday | End of first set of half-courses |
| Mar 1 | Feb 28 | Tuesday | Beginning of second set of half-courses |
| Mar 3 | Mar 3 | Thurs, Fri | Spring vacation - 5 p.m. |
| Call Thursday (2016) or Friday (2017) class periods meet] |  |  |  |
| Mar 15 | Mar 14 | Tuesday | Classes resume - 8 a.m. |
| Apr 5-18 | Apr 4-17 | Mpr 20 | Thursday |

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## Overview of Dordt College

## Principles and Purposes

Dordt College owes its existence to a community whose faith commitment demands obedience to biblical principles in all of life. This religious commitment, historically known as the Reformed faith, has always been the basis of education at Dordt College.

The Dordt College community confesses that the Scriptures are the Word of God. As God's infallibly and authoritatively inspired revelation, the Bible reveals the way of salvation in Jesus Christ, requires a life of obedience to the Lord, and provides the key to understanding, interpreting, and finding purpose in life.

In various documents, over its half-century of existence, Dordt has articulated its mission as an institution in the Reformed theological tradition, committed to promoting student learning for life-long Christian service. From the early statements of Dordt's founders to the college's current statement of purpose, each has consistently sounded the same theme. That theme is described most concisely in our mission statement, which guides the work of the institutional planning committee:

Dordt College is an institution of higher education committed to the Reformed Christian perspective. Its mission is to equip students, alumni, and the broader community to work effectively toward Christ-centered renewal in all aspects of contemporary life. We carry out our educational task by:

- developing a biblical understanding of creation and culture
- discerning the pervasive effects of sin throughout our world
- celebrating and proclaiming the redemptive rule of Christ over all of life and creation
- nurturing a commitment to challenging the forces that distort God's good creation and all human activity
- offering academic programs, maintaining institutional practices, and conducting social activities in a visionary, integrated, biblically informed manner
- fostering a climate in which discipleship becomes a practiced way of life both on and off campus.

A Kingdom Perspective Scripture and creation reveal to us a sovereign God. Nothing exists without him; all things are under his control and find their goal and purpose in his glory. The creation is God's kingdom. The Bible also tells us that God created humankind in his image. People are covenantally bound to their creator by his law that calls for loving obedience.

After Adam and Eve's fall into sin, humankind, though called to develop and care for God's world, began to treat creation as an object of exploitation. Rather than serving the King, people abandoned themselves and the rest of creation to division and strife, misery, and death. But God came to us with his Word of grace. Through the death and resurrection of Jesus Christ, God has reclaimed what was deformed and distorted by sin. Even though the effect of the fall continues, Christ has rescued creation from the curse of sin and reigns as King over all. He summons those he has redeemed to work for the expression of his kingdom everywhere.

Serviceable Insight Our mandate to be busy in Christ's kingdom requires that we study, examine, and understand his world. Christian educational institutions must work to gain and transmit insights into the created order.

The Christian's understanding of God's handiwork is distorted by centuries of secularization. Dordt College is faced with the challenge of developing genuine Christian insight - an understanding of the creation illumined by the liberating light of the Scriptures.

Christians in a technological and secular civilization need the ability to distinguish sharply, to think critically, and to judge wisely. Dordt College must provide the kind of insight that enables Christians to carry out their tasks effectively in a complicated world.

Such insight is not merely theoretical. While Christian insight reflects an understanding of the structure and workings of God's created order, it includes other dimensions as well: the practical ability to carry out one's task in loving obedience and service and the desire to function effectively as a kingdom citizen.

A Christian Curriculum The curriculum is central to the implementation of the educational task of Dordt College. It functions as a basic means for encouraging student learning and transmitting serviceable insight. Those fields of investigation form the backbone of education at Dordt College. A curriculum of various academic disciplines, such as language, natural science, and social science, make up the foundation of every student's education at Dordt.

Students at Dordt are also required to study history, philosophy, and contemporary issues in order to gain insight into how mankind has responded to God's call to service within his creation. Through this requirement, students are challenged to discern the spirits of the age and to work for genuine reformation in culture and society.

Dordt seeks to provide insight into the nature and demands of the various vocations and professions. Majors and preprofessional programs form another essential part of the curriculum.

Throughout the curriculum, students are helped to develop the analytic, communicative, artistic, and physical skills that are essential for effective Christian service.

Education for the Whole Person The co-curricular aspects of Dordt College also play a vital role in the implementation of the educational task of Dordt College. Therefore, Dordt seeks to provide a wide range of opportunities that develop and enhance serviceable insight.

Dordt College cannot count itself truly successful if its graduates possess knowledge and skill yet lack the desire to carry out their tasks in service and loving obedience. The college works to foster this attitude by promoting social and devotional activities. Such activities are not considered mere additions to the academic task; Dordt College attempts to integrate them into a total pattern of curricular and co-curricular activity, all of which provide students with serviceable insight.

## History

Dordt College had its beginning in 1937 with the circulation of proposals and recommendations among midwestern Christian Reformed Churches regarding the establishment of a Christian college. World War II put an end to these discussions; however, after the war, the movement gained new impetus due to the critical shortage of qualified teachers for Christian schools in the area.

The college was organized in 1953 as the Midwest Christian Junior College. Under this name, instruction began in September 1955 with 35 students and five faculty members. In 1956, the name of the college was changed to Dordt College.

In 1961, the decision was made to expand to a four-year college. In 1963, the junior class was added, and in 1965, the first class of students received the B.A. degree.

Dordt College grew rapidly in the 1960 s and 1970s. By 1965, enrollment had topped 500 and continued growing steadily to an enrollment of 1,218 by 1978. In the same period, the campus grew from one to more than a dozen buildings. Today, Dordt enrolls approximately 1,400 students and occupies a well-equipped, 150 -acre campus.

Dordt also has expanded its offerings over the years. Founded primarily to train teachers, Dordt was graduating students in a number of the liberal arts by the late 1960s. In 1969, the first courses in business administration were offered, marking a move toward combining a "liberal" education with "practical" instruction. Others that followed this precedent were agriculture, engineering, nursing, and social work. In 1993, Dordt College added a master of education degree to its associate's and bachelor's degree offerings. The current curriculum includes more than 90 programs, taught by more than 70 faculty members.

## Accreditation

Dordt College is accredited by The Higher Learning Commission (HLC) as a four-year, bachelor degree granting institution. Dordt's HLC accreditation dates from 1971, with the most recent renewal in 2012. The college also gained HLC approval in 1994 to offer a graduate program leading to the master of education degree.

The Iowa Department of Education has approved Dordt's program of teacher preparation. Graduates of the Teacher Preparation Program are recommended for the first level of licensure granted by the state of Iowa. Approval has also been granted to offer a master of education degree.

The Dordt College social work program has been accredited since 1986 by the Council on Social Work Education.
The Dordt College engineering program has been accredited since 1991 by the Engineering Accreditation Commission of ABET, http://www.abet.org. The applied science and technology major and engineering science major have not been examined or accredited by ABET.

The Dordt College nursing major has been accredited since 2007 by the Commission on College Nursing Education (CCNE).
The college is also approved to train veterans under Public Law 550, war orphans under Public Law 634, and is authorized under Federal law to enroll non-immigrant students.

The Higher Learning Commission
30 North LaSalle Street, Suite 2400
Chicago, IL 60602-2504
Ph. (312) 263-0456
(800) $621-7440$

Fax (312) 263-7462
www.ncacihe.org
State of Iowa
Board of Educational Examiners Licensure
Grimes State Office Building
Des Moines, IA 50319-0146
Ph. (515) 281-3245
Council on Social Work Education
1725 Duke Street, Suite 500
Alexandria, VA 22314
Ph. (703) 683-8080
Fax (703) 683-8099

## ABET

111 Market Pl., Suite 1050
Baltimore, MD 21202
Ph. (410) $347-7700$
Fax (410) 625-2238
Commission on Collegiate Nursing Education
One Dupont Circle NW, Suite 530
Washington, D.C. 20036-1120
Ph. (202) 887-6791
Fax (202) 887-8476
www.aacn.nche.edu

## Policy of Nondiscrimination

The commitment of Dordt College to nondiscrimination on the basis of age, color, disability, gender, national or ethnic origin, or race in the administration of its admissions, education, and employment policies is consistent with the requirements of the Age Discrimination in Employment Act of 1967, Title VI of the Civil Rights Act of 1964, Title IX of the 1972 Education Amendments, Section 504 of the Vocational Rehabilitation Act of 1973, and the Iowa Civil Rights Act of 1965. Inquiries concerning compliance should be directed to the vice president for business affairs at the Business Office, 712-722-6010.

## Accessibility for Students with Disabilities

Dordt College is committed to offering equal access to people with disabilities. The college has established the position of coordinator of services for students with disabilities (CSSD) in order to assist students with disabilities desiring to enroll at the college. A student with a disability should contact the coordinator approximately six months before the start of the semester of admission or as early as possible to ensure the accessibility of classrooms and housing and the availability of auxiliary aids. The student will be asked to provide appropriate documentation of the disability that is no more than three years old so that the current impact of the disability is addressed. The coordinator uses the documentation to develop an individual plan with each student, implementing necessary services and accommodations. Accommodations may not lower course standards or alter degree requirements but provide students with disabilities an equal opportunity to learn and demonstrate their abilities.

Certain facilities on campus are not fully accessible to people with disabilities, but Dordt College does adhere to the accessibility standards of Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 by ensuring the student's program and learning environment, when viewed in their entirety, are accessible to people with physical disabilities.

## Campus Life

As a Christian institution, Dordt College strives to be a community of faculty and students committed to learning in the light of the Bible. The life of this community is social and academic, and in both areas all members of the Dordt College community seek to glorify God.

In accordance with the Christian aim of Dordt College, students are expected to express the Christian faith positively in their general conduct and lifestyle. It is not the purpose or intention of Dordt College to lay down minute regulations for the daily conduct of its students. By their applications for admission and their decision to attend Dordt College, students certify that they intend to live according to the Christian aims and policies of the college. Though admission to Dordt College is the rightful privilege of its constituency, that privilege may be readily withdrawn should the student fail to maintain proper standards of conduct or scholarship.

Students are expected to attend church services each Sunday. Students who are not able to attend their home church are asked to select one of the local churches as their church home.

All students are expected to attend chapel regularly, not out of compulsion, but out of recognition of the need for spiritual nourishment and refreshment. Chapel is held once a week to provide opportunity for students, faculty, and staff to join in meditation upon the Word of God.

Each school year begins with the college retreat at Lake Okoboji. This is followed throughout the year by Bible study groups, lecture series, mid-week praise and worship, residence hall devotions, etc. Recognizing the importance of spirituality as part of student life, the college also provides pastoral counseling for students. Members of the Student Services staff meet with and help students with questions and problems that may be troubling them. The college seeks to maintain and develop a vibrant spiritual climate on campus in the context of which the work of Christian scholarship may be effectively carried on.

## Student Activities

Student Government Student Symposium is the student government organization on the Dordt College campus, consisting of 18 students who represent the student body. Each of these students serves on a college committee and participates in the major decisionmaking processes of Dordt College. Student Symposium meets regularly to discuss issues that concern the Dordt College community.

Athletics Dordt College is a member of the National Association of Inter-collegiate Athletics (NAIA) and the Great Plains Athletic Conference (GPAC). As a member of the NAIA, Dordt College teams are eligible for post-season tournament play. Dordt plays a full
schedule of games with colleges in Iowa, Nebraska, Minnesota, and South Dakota. Intercollegiate competition for men is scheduled in baseball, basketball, cross country, football, golf, soccer, track, and volleyball. Competition for women is scheduled in basketball, cross country, golf, soccer, softball, track, and volleyball.

Club Sports Students have organized a number of sports clubs that supplement the regular program; some allow for intercollegiate competition. Soccer, hockey, volleyball, men's and women's lacrosse, and wrestling are examples of the types of club sports that have been organized in previous years. Additional clubs may be organized as student interest demands. The club sports program is supervised by the Health and Human Performance Department.

Clubs A number of clubs are organized to provide outlets for students with special interests. Student groups apply for club status and club funding by submitting applications to Student Symposium. Examples of recent clubs include:

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Agriculture Club
American Society of Civil Engineers (ASCE)
American Society of Mechanical Engineers (ASME)
A Mission OutReach (AMOR)
Comedy League
Community Outreach Program (COP)
Computer Club
Creation Care Club
Defender Capital Management Club
Dordt College Business Club (DCBC)
Dordt Political Action Committee (DPAC)
Future Active Christian Teachers Club (FACT)
Faith and Film Club
Future Physician's Club (Pre-Med Club)
Institute of Electronic and Electrical Engineers (IEEE)
Justice Matters Club
Monday Morning Coffee Club
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Dordt Political Action Committee (DPAC)
Future Active Christian Teachers Club (FACT)
Faith and Film Club
Future Physician's Club (Pre-Med Club)
Institute of Electronic and Electrical Engineers (IEEE)

Monday Morning Coffee Club

Mu Kappa Club (Missionary Kid Club)
Nursing Club
Ping-Pong Club
Pre-Law Club
Pre-Physical Therapy Club
Pre-Vet Club
Presbyterian Student Fellowship
Psychology Club
Putting Love Into Action (PLIA)
Sioux Falls Prison Ministry Club
Social Work Club (SSWA)
Students Without Borders (Cross-Cultural Club)
Swing Dance Club
Theology Club
WISE Club
Wrestling Club

Intramurals A year-round program of intramural sports gives all students an opportunity to take part in recreational activities. The intramural program is planned and supervised by the student intramural council. Recreation is provided through activities such as badminton, basketball, bowling, floor hockey, golf, racquetball, sand volleyball, soccer, softball, volleyball, and water sports.

Social/Cultural Activities The college schedules a variety of activities throughout the year. Students are encouraged to participate in campus events as an important part of college life.

In addition to previously listed activities, various groups plan a number of social events. Students are encouraged to attend the fine arts festivals, the college-sponsored First Mondays Speaker Series, the annual music festival, the Talent Extravaganza, the All-Campus Fiesta, the All-Campus Block Party, or many of the other school activities organized by student representatives.

Drama Several theatrical productions are performed each year. All Dordt students have the opportunity to audition for the mainstage productions, be involved in student-directed one-acts, or work on senior student productions. Opportunities also include technical aspects of theatre.

Musical Activities Music majors and non-majors participate in a variety of ensemble, community, and church performances, in addition to those provided by Dordt ensembles. Instrumental and vocal ensembles welcome students of all ability levels.

Bella Voce-Membership is open by audition. The women's chorus presents several local concerts each year.
Campus Community Band-All new students, as well as upperclassmen, may audition for membership in the Campus-Community Band, an organization that studies representative symphonic band literature and performs several local concerts each year.

Chamber Orchestra-The Chamber Orchestra consists of string players who study chamber music literature, perform several local concerts each year, and tour extensively. Membership is by audition.

Chorale-All new students, as well as upperclassmen, may audition for membership in the Chorale, a group that studies representative choral literature and performs several local concerts each year.

Concert Band-Band members, chosen by audition, study representative symphonic band literature, perform several local concerts each year, and tour extensively.

Concert Choir-Each year the Concert Choir presents a number of local concerts and tours extensively. Membership in the choir is open by audition.

Ensembles-Various small ensembles are organized each year to perform small ensemble literature. A variety of performance opportunities is available.

Jazz Band-Membership is by audition. Unless other arrangements are made, all players must also be members of the CampusCommunity Band or Concert Band.

Northwest Iowa Symphony Orchestra-Chamber Orchestra members have automatic membership in this large full symphony orchestra; membership is open to wind and percussion students by audition. NISO performs three concerts each year.

## Student Publications

The Diamond, the college student newspaper, published on a biweekly basis.
The Signet, an annual student publication, issued in the summer.
The Canon, the creative literary publication in the arts.

## Career Development Center

The Career Development Center equips students and alumni to develop the professional tools they need to succeed in the workplace and beyond. Offering critique services for résumés, LinkedIn profiles, cover letters, graduate school materials, and more, the Career Development Center also plans events and workshops including a seven-course dining etiquette meal and a job and internship fair throughout the academic year. On HireDefenders (www.hiredefenders.com), the Career Development Center staff posts full-time job and internship opportunities for both Dordt alumni and students. Find out more about the Career Development Center at www. dordt.edu/cdc.

## Student Services

Campus Health Services Campus Health Services provides on-campus health care for all full-time Dordt College students. It is available for ill visits, minor injuries, first aid, immunization records, prescriptions for medication refills, medical information, and referrals. A registered nurse is on staff daily to care for students. A nurse practitioner is available for a limited number of hours each week. The office is open Monday through Friday. Students may use walk-in services from 9 a.m.-noon or call extension 6990 to schedule an appointment between 12:30-3 p.m. Visits are free of charge. A fee is incurred for immunizations, purchase of medications, or when the services of an outside laboratory are utilized.

Campus Ministries Each week, a variety of worship venues are offered, including campus-wide chapel every Wednesday, Praise and Worship every Thursday, and alternating GIFT and Wellspring worship services every Sunday. International and domestic shortterm mission projects are offered over Christmas and spring break through programs like AMOR (A Mission OutReach) and PLIA (Putting Love Into Action). Pastoral care and guidance is always available. Plus, numerous opportunities for growth and learning are offered through Bible studies and small groups.

Counseling The Dordt College counselors seek to support students who are facing emotional and relational distress by providing quality mental health care from a Christian perspective. The counselors' goal is to help students be successful in life, in their relationships, and in their callings. Dordt's licensed therapists strive to provide services with respect for the unique needs of each client in a safe, confidential environment, seeking to glorify God in all that they do. Appointments can be made by contacting Campus Health Services by calling extension 6990 or sending an email to counseling@dordt.edu. Referral services to off-campus agencies are also available through the counseling staff.

## Housing

All unmarried students who are not 22 years old by September 1, 2015, are required to live in Dordt College housing unless they live at home with a parent or guardian. Students must be 17 years of age by August 1 of the current academic year to be eligible for

Dordt College housing. Those students who wish to live with other relatives must receive approval from the dean for campus life prior to making other arrangements for housing. The Student Life Committee may grant exceptions to this general policy where circumstances make it advisable. All requests for exceptions must be presented in writing to the dean for campus life prior to the academic year. Mid-year requests will not be considered unless extenuating circumstances exist. Dordt/St. Luke's students in their first and second years in the St. Luke's program are considered full-time students with regard to the residency policy.

Rooms for incoming freshmen and transfer students are reserved in advance upon receipt of the $\$ 200$ enrollment deposit that all first-time students must pay. Rooms for returning upperclassmen are reserved in advance upon receipt of a $\$ 150$ security/damage deposit. These deposits are non-refundable and non-transferable. The security deposit will be refunded or credited to a student's account in August 2016, if no fines have been levied, such as parking, overdue library books, room damage, and there are no outstanding bills such as tuition due the college.

While the college is responsible for housing all unmarried students, such students do have a measure of choice in regard to roommates. However, the college reserves the right to make housing adjustments when necessary. Married students are expected to make their own housing arrangements. Information about available apartments for married students can be obtained from Student Services.

Housing Regulations Rooms are furnished with beds, mattresses, desks, chairs, and dressers. Students provide their own bedding and bath supplies. Every room has a telephone connection, and all residence halls are equipped with network and wireless Internet connections in individual rooms. Computers and telephones are not provided.

All students who apply for a room and pay the security/damage deposit are obligated to residency in college housing while in attendance at Dordt. Room contracts terminate at 8 a.m. on Friday, December 18, 2015, at the end of the fall semester and at 1 p.m. on Friday, May 6, 2016, at the end of the spring semester. Students must be out of their residence by that time. Graduating seniors must be out of their residence by 7 p.m. on Saturday, May 7, 2016.

The charges set by the college do not include Christmas and spring vacation periods, when the dining hall and the residence halls are closed. The college encourages students to either go home or to a friend's home during these vacation periods. Students who do not live in or near Sioux Center may make arrangements to pay an extra fee to stay in college housing over break.

Rooms of students in any college owned residence are open for college inspection at any time. The student is held responsible for any damage to his or her room, residence complex, or furnishings. Each residence hall is under the supervision of an area coordinator and resident assistants. Students are responsible to the residence life staff, and they are expected to abide by all college-determined housing regulations in addition to those listed in this catalog. For a more complete statement of policies regarding student housing and student conduct, see the student handbook, www.dordt.edu/campus_life/student_handbook.

Meals All students living on campus, except third- and fourth-year students assigned to apartment-style residences, are required to have a meal plan through the college food service unless exempted by the college. Regular cooking is not permitted in the college residence halls.

## Admissions

## Freshman Admission

Dordt College seeks applicants who want to attend a Christian college and who have demonstrated the desire to learn. All students exhibiting these characteristics will be considered for admission. Previous academic experience is a large, but not the only, factor in evaluating applications.

The executive director of admissions determines admission for all freshman students after the following items have been received:

1. A completed Dordt College application for admission
2. A final high school transcript
3. ACT or SAT test results

Regular Admission Applicants are normally granted regular admission status if their academic record demonstrates the following:

1. A minimum of 17 units of high school credit. A subject pursued for one school year of 36 weeks with five class periods per week is considered one unit. At least 10 units must be from the subjects listed under the "recommended high school program" below.
2. A college-preparatory course of study with:

- English, a minimum of three years
- Mathematics (algebra and/or geometry), a minimum of two years
- Foreign language, two years in a single language with grades no lower than C in the second year. International and English as a Second Language (ESL) students meet this requirement if they receive a passing score on the Entrance Interview.

3. A cumulative high school GPA of 2.25
4. ACT or SAT I test score as follows:

ACT: English - 18 Math - 18 Composite - 19
SAT I: Critical Reading - 460 Math - 460 Writing - 460 Composite - 1330
Admission with Special Provision Applicants with incomplete admissions records or applicants with high school records or test scores that do not meet all regular admission standards may be granted admission with special provision. In the case of incomplete records, receipt of the complete record may result in a change of admission status. Students who were unable to take the ACT or SAT I prior to enrollment will be required to take the ACT after arrival on campus. The results of this test may affect the student's status.

All students admitted who have not had at least two years of high school foreign language will be required to study foreign language at the 100 -level at Dordt. Students pursuing a bachelor's degree must complete the foreign language requirement prior to fulfilling the cross-cultural requirement.

Students admitted who do not meet the specified score on the ACT or SAT I test will be required to take additional preparatory courses either during the summer prior to the freshman year or during freshman year. These courses give the necessary background in English and mathematics to do college-level work. (See page 100 for English 100; see page 116 for Mathematics 100.)

Students who are admitted with a high school GPA below 2.25 or a composite ACT score below 19 (SAT I combined score below 1330) may be admitted to Dordt through the Aspire Program. This program includes diagnostic testing, academic counseling, and other services designed to help students adjust to college life. (See page 12 for the Aspire Program.)

Applicants being considered for admission with a composite ACT score below 17 (SAT I combined score below 1215) or low English ACT or SAT scores may be required to write an essay for the Provisional Admissions Committee.

Other background deficiencies, not specifically listed here, will be handled on a case-by-case basis.

## Recommended High School Program

The courses and programs that students select in high school will affect how well they adjust to college work. Ideally they should take the following:

English/Language Arts ................. 4 years
Mathematics.................................. 3 years
One year of algebra, one year of geometry, one year of advanced algebra or advanced mathematics; four years of mathematics are recommended for students considering majors in mathematics, computer science, engineering, physics, or other science programs.
Science........................................... 2 years
Including biology, chemistry, or physics; nursing and agriculture students should take chemistry; three years of science is recommended for students considering majors in science. Students considering engineering should take both chemistry and physics.
Social Science. .. 2 years
Foreign Language .......................... 2 years
Three or more years of a single foreign language, with grades no lower than C in the final year of study, may satisfy Dordt's crosscultural requirement, provided that the student can show evidence of an appropriate cross-cultural experience. (See page 24, CrossCultural Studies.)
Electives $\qquad$ .4 years
College preparatory courses from areas listed above.

## Nondiscrimination Policy

Dordt College's commitment to nondiscrimination on the basis of age, color, disability, gender, national or ethnic origin, or race includes nondiscriminatory access to college programs and activities and treatment therein. Inquiries should be directed to the Provost's Office.

## Making Application

Application for admission should be made well in advance of the semester a student wishes to enter Dordt College. To make a formal application for admission, candidates are requested to go to www.dordt.edu and fill out the online application or write to the
executive director of admissions requesting application forms.
Students will be considered for admission after they have submitted the following official forms:

1. Application for admission
2. Transcript of high school record
3. ACT or SAT results

Accepted students are to pay a $\$ 200$ enrollment deposit within 21 days of the acceptance date. The enrollment deposit serves as a declaration of intent to enroll and reserves housing. If requested in writing, it is refundable until May 1 . This enrollment deposit becomes the student's security deposit when fully enrolled. This deposit will be refunded when the student terminates attendance at Dordt if no fines have been levied, such as overdue library books, room damage, and no outstanding bills, such as tuition, are due to the college.

## Entrance Test

Applicants for admission are also required to submit the results of the ACT or SAT. Applicants who are not able to take the ACT or SAT may be considered for admission but will be required to take the ACT after enrollment.

## Notification of Admission

As soon as the required forms have been received the office of admissions will evaluate them. Admission will be granted as follows:
General Admission- Students whose records indicate that they are able to pursue college work are granted general admission. Admission with Special Provision- Students whose records indicate that they might have serious difficulty pursuing college work or who have not met all admission requirements are granted special admission.

## Readmission

Former students who seek readmission must initially contact the office of admission. Students who have been away from college for more than one semester must meet the requirements stated in the current catalog.

## Transfer Admission

Students who have attended another accredited institution of collegiate rank may be considered for admission with advanced standing. College credits presented by transfer students will be evaluated in terms of the quality of the student's work and the relationship of the subject matter to the Dordt curriculum. A minimum grade of C is required in each course to receive credit.

Students who plan to transfer to Dordt College are encouraged to contact the registrar as soon as possible so that course planning may take place and optimal use of courses and credits will occur. A maximum of 30 semester hours of credit (two semesters) may be granted for CLEP, AP, International Baccalaureate (IB) higher-level exams, Cambridge A-level exams, or other college level courses earned prior to receiving a high school diploma. A maximum of 61 semester hours of academic credit (four semesters) is granted to graduates of community colleges. (See also page 39, Residence Requirement.) The registrar evaluates transfer credits. Admission to advanced standing does not exempt a student from meeting the specified requirements for graduation from Dordt College.

After the application materials have been evaluated, students will receive notification of credits accepted, student classification, and academic status. Student classification and academic status are assigned following the policies governing all students at Dordt College.

Regular General Admission The director of admissions determines regular general admission for transfer students after the following items have been received:

1. A completed Dordt College application for admission and a non-refundable $\$ 25$ (U.S. funds) application fee
2. An official high school transcript
3. An official college transcript. Transfer candidates must request that the registrar at each collegiate institution attended forward an official transcript; transcripts submitted by the candidate are not acceptable. The college transcript must show a cumulative GPA of 2.00 or above for regular general admission.
4. ACT or SAT results

Admission with Special Provision Students who do not meet the minimum academic requirements for admission may be granted admission with special provisions if warranted by the total academic record of the student. Special admission may require the following:

1. A contract approved by the Academic Skills Center director that may include developmental courses or workshops.
2. A limit of 15 credits for the first semester of attendance.
3. A minimum GPA requirement for the first two semesters of attendance.

Approval for and status of admission is decided by the Provisional Admissions Committee.

## Special Students

Students who do not plan to follow a prescribed course of study leading to a degree may register as special students for courses they wish to pursue on the basis of their qualifications.

Permission to register as a special student must be obtained from the registrar.

## Admission of International and ESL Students

An official score of at least 550 on the paper-based TOEFL (PBT) or 79 on the internet-based TOEFL (iBT); or a 6.5 on the IELTS is required for admission for all non-native English-speaking students. Non-native English speakers who have lived and have been schooled in English speaking countries for seven years or more or who have taken either the ACT or SAT may be exempt from this requirement. With the exception of Canadians, all international and ESL students are required to take the Entrance Interview for International Students administered during International Student Orientation (ISO). This interview serves to evaluate students' previous educational experience and to ensure their successful introduction to Dordt's educational program. The results of this interview also will determine whether or not an International student will be required to take English for Academic Purposes (EAP) courses. For native speakers of a language other than English, a passing score on the Entrance Interview will meet the general admissions foreign language requirement (see page 9, Regular Admission) and the cross-cultural requirement (see page 24). Students who do not receive a passing score on the Entrance Interview for International Students must successfully complete the English for Academic Purposes courses, EAP 101 and EAP 102, during the first semester of attendance at Dordt to satisfy these requirements.

In addition to participating in the freshman orientation days at the beginning of the fall semester (see page 13), International students participate in the International Student Orientation (ISO), which takes place Wednesday, August 20, at noon through Friday, August 22, 2014, preceding the freshman orientation days. ISO creates an opportunity for International students to experience fellowship, establish community, and gain successful entrance to the Dordt College community.

## Academic Support Services

Aspire Program The Aspire Program provides an opportunity for motivated students, who have the potential to be successful at Dordt but do not meet the regular admission standards, to benefit from a Dordt education. Inclusion in the program is determined by the Provisional Admissions Committee and is based on high school grades, courses, and ACT/SAT scores. A personal essay may also be requested and be considered by the committee in making their decision.

Students admitted to the Aspire Program are offered the following aids to academic success:

- a mandatory one-day Aspire Program Orientation immediately preceding the Week of Welcome for incoming freshmen
- automatic enrollment in the ASK 099 seminar Essential Strategies for Academic Success
- a maximum of 12-15 credits in the first semester (including credits for athletics, music ensembles and lessons, or involvement in theatre arts)
- assessment in reading and learning skills during orientation
- Campus Toolkit, an interactive web-based resource for students which provides help $24 / 7$ on concerns common for college students
- an individualized academic success contract
- weekly conferences with an academic coach, either an ASK Center professional or a learning community assistant
- tutorial assistance
- placement in one or more college competency courses for students whose ACT/SAT scores in English/Writing and/or Mathematics are below the 18/460 required for general admission

Students with Special Needs Dordt College makes available academic support for students with special learning needs such as sensory impairments, physical and health problems, and learning disabilities. For more information contact the coordinator of services for students with disabilities (CSSD).

Students who believe that they need academic support should notify the CSSD as soon as possible. Ideally, this should occur during the application process. Accepted applicants will be asked to provide relevant assessment information so that appropriate academic support can be planned. If prior assessment information is not available or is more than three years old, the applicant will
be encouraged to have such an assessment done. This type of assessment can usually be obtained in the student's school district, at no cost, if the student is currently enrolled in a K-12 school. Once applicants are moved to student, those seeking accommodations will need to submit the Student Accommodations Request (SAR) form to the office of the CSSD.

Current students enrolled at Dordt College can request academic accommodations also. They will be asked to provide assessment information that confirms the existence of the special need, such as a learning disability and to submit a completed SAR form to the CSSD. The student will be encouraged to have appropriate assessment performed if assessment information is not available.

## Freshman Orientation

The freshman orientation program introduces incoming freshman to the Dordt College community and informs them about everything they need to know to succeed, including information on goal-setting, self-assessment, advising, campus life, learning skills and abilities, institutional expectations, available resources, and building community. In addition to week of welcome at the beginning of the fall semester, freshman orientation includes peer counseling and targeted academic skills support during the first semester of college. Freshman students must plan to arrive on campus on Saturday, August 22, 2015, for the freshman orientation program.

## Registration

Registration takes place at the beginning of each semester. Students will be sent instructions and appointments several weeks prior to the registration dates.

Registration is not completed until tuition and fees have been partially paid. A late registration fee is charged if registration is not completed on the designated registration day each semester.

## Finances

## Expenses

The cost of attending Dordt College is kept as reasonable as possible. Tuition covers only a part of the cost of education. Each student receives the benefit of finances obtained from individual gifts, church offerings, and denominational ministry shares.

| Tuition | Per Semester | Per Year |
| :--- | ---: | ---: |
| Full time | $\$ 13,900$ | $\$ 27,800$ |
| Part time, per credit ${ }^{*}$ | 1,160 |  |
| Overload fee per credit over 18.5 credits per semester | 380 |  |
| Summer tuition rate, per credit (1-6) | 285 |  |
| Auditing, per credit | 380 |  |
| Visitor, per credit | 75 |  |

*Students taking 8 credits or less will receive a part-time student grant of $\$ 465$ per credit hour.

| Room and Board | Per Semester | Per Year |
| :--- | ---: | ---: |
| Residence hall room (semi-private) with value meal plan | 4,175 | 8,350 |
| Residence hall room (semi-private) with reduced meal plan | 4,050 | 8,100 |
| Apartment-style residence | 2,950 | 5,900 |

All room and board plans at Dordt College include the Defender Dollar flexible spending account that can be used at any on-campus dining location. Residence hall rooms include a $\$ 100$ per semester Defender Dollar account, and apartment-style residences include a $\$ 200$ per semester allocation.

| Fees | Per Semester | Per Year |
| :---: | :---: | :---: |
| Student activity fee* | 240 | 480 |
| Late registration | 50 |  |
| Enrollment deposit** |  | 200 |
| Application fee |  | 25 |
| Aspire program fee |  | 50 |
| Off-campus program administrative fee | 240 |  |
| Music lessons, individual*** | 380 |  |
| Music lessons, group*** | 190 |  |
| Service charge for returned checks |  |  |
| U.S. checks |  | 20 |
| Canadian checks |  | 30 |

*Activity Fee Items included: athletic events, co-curricular activities, game room, intramurals, access to student health services, movies, music rentals (tux, formals, instruments), placement fee, yearbook, student teaching, technology fee, transcripts, vehicle registration, recreation complex use, and access to the All-Seasons Center.
**Enrollment Deposit All students who register for the first time at Dordt must pay an enrollment deposit. This deposit serves as a declaration of intent to enroll and reserves housing. If requested in writing, it is refundable until May 1 . This enrollment deposit becomes the student's security deposit when enrolled. The security deposit will be refunded when the student terminates attendance at Dordt College if no fines have been levied, such as parking, overdue library books, room damage, and no outstanding bills, such as tuition, are due to the college.
***Music Lessons The following students qualify for individual lessons priced at half the normal fee*:

- music majors who have successfully completed 54 college academic credits and passed Music 203
- music minors whose program requires more than four semesters of lessons and who have completed four discrete semesters of lessons.


## *Half fees do not apply to group lessons or piano proficiency lessons.

Payment of Accounts Charges for tuition, room and board, and fees are due and payable at the beginning of each semester. A finance charge of .75 percent per month ( 9 percent annual percentage rate, accrued monthly) is charged on all unpaid accounts. A deferred payment plan is offered for the convenience of students and parents wishing to pay their college expenses in installments.

Accounts must be paid in full by November 1 for fall semester and April 1 for spring semester. Students may not validate their registration for a new academic term if their account balance is not paid in full. The college will withhold diplomas, transcripts, and grade reports until accounts are paid in full.

Related Expenses When determining the amount of financial assistance necessary, Dordt College includes the average cost of books, travel, and personal expenses. Depending on the student's grade level and chosen major, the cost of books ranges from $\$ 600$ to $\$ 1,140$ per year. Travel expenses vary from $\$ 500$ to $\$ 2,400$, depending on the number of times the student goes home, the distance of the student's home from the college, and the mode of transportation used. Personal expenses range from $\$ 700$ to $\$ 2,100$, depending on the student's lifestyle.

Part-Time Adult Learner Program Dordt College has established a special financial aid program for the adult learner. To be eligible for the program, students must be 25 years old prior to the first day of classes and classified as a part-time student. This program
is not available to persons who have attained a bachelor's degree. The adult learner must not have taken a college course in the last 10 years. The Financial Aid for Part-Time Students/Adult Learner Students Form must be completed.

Students eligible to participate in the Adult Learner Program receive their first course at no cost. Per credit charges for subsequent classes are at the regular part-time student rate with the applicable part-time learner grant if taking eight credits or fewer per semester. Adult learners may also be eligible for state or federal loans and financial aid. Students should consult admissions to determine eligibility for the program and consult the registrar for evaluation of transfer credit.

Student Medical Insurance All international students, except those from Canada, are required to purchase medical insurance. Additional information is available from the director of international programs.

Refund/Repayment Policy If a student completely terminates enrollment (i.e., cancels his/her registration, withdraws, or is dismissed) during the semester, the student's refundable charges and financial aid will be prorated if the student has been enrolled for 60 percent of the semester or less. If a student has been enrolled for more than 60 percent of the semester, the student is not eligible for a reduction in charges. The following costs are refundable by the terms of this policy: tuition, room, board, and student activity fee. Credits provided for the Defender Dollar program and all other charges are nonrefundable.

The withdrawal date is the later of (1) the date the student begins the withdrawal process by providing official notification (oral or written) of the intent to withdraw; or (2) the student's last date of attendance at an academically related activity. A student who wishes to withdraw must contact the Office of Student Services to initiate and complete the appropriate paperwork.

The percentage of the semester completed is calculated by dividing the number of days enrolled by the number of calendar days in the semester, including weekends and holidays, but excluding breaks of five or more consecutive days. For example, if there are 107 calendar days in a semester and a student's withdrawal date is on the 50th day, the student's refundable charges and financial aid will be prorated to reflect enrollment for 46.7 percent of the semester ( 50 days divided by 107 days).

Recipients of Federal Title IV Financial Aid If the withdrawing student is a recipient of Federal Title IV financial aid, the amount of Title IV assistance the student earned must be compared with the amount disbursed.

The amount of Title IV assistance earned is calculated as follows: Percentage of Title IV financial aid earned (percentage of semester completed) multiplied by the amount of Title IV aid disbursed (or that could have been disbursed) as of the withdrawal date equals amount of Title IV funds earned.

If the withdrawing student received less Title IV financial aid than the amount earned, the college will make a post-withdrawal disbursement as specified by the Department of Education.

If the withdrawing student received more Title IV financial aid than the amount earned, the college, or the student, or both, must return the unearned funds, as required, in the following order: Unsubsidized Stafford Loan, Subsidized Stafford Loan, Perkins Loan, PLUS Loan, Pell Grant, SEOG Grant, and LEAP funds.

If the student is required to return federal grant funds, the student will have 45 days from the date of notification to pay the amount in full or to make satisfactory arrangements for repayment with the college or the Department of Education. Failure to repay or make arrangements within this time will result in a loss of eligibility for all federal aid for attendance at any college until amount is paid in full.

When a student withdraws, a copy of worksheets, showing details of the required treatment of Title IV funds, and examples of the application of withdrawal refund/repayment policy are available upon request.

## Financial Aid

In addition to the extensive scholarship program that is based on superior academic potential and performance, Dordt College has a complete program of financial assistance for students demonstrating financial need. Types of financial assistance available include grants, loans, work, and other special programs outlined below.

At Dordt, 98 percent of the student body receives some type of financial aid. Regardless of income, the only way for a student to know if they qualify for financial aid is to apply. Financial aid applications may be obtained by writing or calling the Financial Aid Office.

All United States citizens who wish to apply for financial aid must submit the Free Application for Federal Student Aid (FAFSA). We also prefer that students complete the Dordt College Supplemental Data Form. Other supplementary information may be requested from the student through additional forms. All Canadian citizens who wish to apply for financial aid must submit the Canadian Financial Aid Form from Dordt College. All necessary forms may be obtained by checking online or by writing or calling the Financial Aid Office at Dordt College.

Dordt College Grants Dordt College makes grants available to students in the following groups. In most cases, no financial aid application is necessary.

Alumni Grant This grant is available to students attending full time whose mother and/or father are alumni (attended Dordt the equivalent of at least two semesters full time).

Canadian Grant Dordt College provides a grant to Canadian students in an effort to make Dordt more affordable. For all other expenses (books, personal spending, etc.) students may exchange money through the Business Office at the current college exchange rate.

Distance Grant All full-time students who are not from Iowa are eligible for this grant, which is based on the student's state of permanent residence. Two semesters of continuous local residence will change the distance grant status unless the student regularly returns to his or her former residence for summer employment or continues to be legally dependent on his or her parents.

Institutional Grant All full-time students who are members of supporting churches and denominations or who are graduates of Christian high schools receive this annual grant.

International Tuition Grant Students from countries other than the United States and Canada may be eligible to receive this grant from Dordt College to help defray costs. The Foreign Student Financial Aid Application must be completed in order to determine need and be considered for this grant.

## Grants

Federal Pell Grant The Federal Pell Grant Program makes funds available to the most needy students. Grants range from $\$ 626$ to $\$ 5,775$ and application is made by completing the FAFSA. This program is available to United States citizens.

Federal Supplemental Educational Opportunity Grant The purpose of this program is to provide non-repayable grants to students who would not be able to attend college without such assistance because of exceptional financial need on the part of their family. Grants range from $\$ 200$ to $\$ 4,000$ per year. This program is available to United States citizens.

Heritage 21 Grant This grant is provided by the college to all students, regardless of citizenship, who have financial need that cannot be met with other grant programs. Grants range from $\$ 200$ to $\$ 6,000$ per year.

Century Need-Based Scholarship This aid is a combination grant/scholarship program. Two criteria must be met: good grades and financial need. This scholarship ranges from $\$ 200$ to $\$ 2,000$. Because of limited funds under this program, the money will be disbursed very selectively. Not every good student with high need will receive these funds.

## Loans

Perkins Loan This program provides long-term loans to students who are citizens of the United States. Applicants must show financial need to be eligible. No interest is charged on the loan while the student is in college. The loan may be repaid over a period of 10 years with a minimum repayment of $\$ 40$ per month required. Interest is at the rate of five percent per year. Repayment may be deferred for as long as a borrower is serving in the Armed Forces, with the Peace Corps, or VISTA. Repayment is also deferred for as long as a borrower is enrolled at an institution of higher education and is carrying at least a half-time courseload.

Heritage 21 Loan This loan is provided by the college to all students with need, regardless of citizenship. No interest is charged while the student is enrolled as a full-time student at Dordt College or at another recognized college or university. Interest and principal payments will begin four months after the last month of attendance at Dordt or at another recognized college or university, with a maximum deferment of five years allowed for attendance at another institution. Interest rates on funds borrowed will vary according to the number of years of study completed at Dordt. For a student who has completed four years of study the interest will be three percent; three years, four percent; two years, five percent; and one year, seven percent. All loans must be repaid within 10 years from the time of the last month of attendance as described above. Minimum payments will be $\$ 50$ per month and will be payable to the business office at Dordt College.

Federal Direct Stafford Loan (Subsidized) Allows students who demonstrate federal financial need and who are enrolled for at least six credits each term to borrow up to $\$ 3,500$ for the first year of undergraduate study, $\$ 4,500$ for the second year, and $\$ 5,500$ per year for subsequent undergraduate study. Interest rates are determined on July 1 for the upcoming school year. Repayment does not begin on subsidized Direct Loans until termination of college enrollment on at least a half-time basis. Interest accrued during the in-school period is paid by the federal government. The standard repayment period is up to 10 years. New borrowers
must complete a Federal Direct Loan electronic master promissory note and complete an online Entrance Counseling Session to borrow funds through this program.

Federal Direct Stafford Loan (Unsubsidized) Allows all students regardless of federal financial need and who are enrolled for at least six credits per term to borrow up to $\$ 5,500$ for the first year of undergraduate study, $\$ 6,500$ for the second year, and $\$ 7,500$ per year for subsequent undergraduate study less the amount of any subsidized Direct Loan received by the student. New borrowers must complete a Federal Direct Loan electronic master promissory note to borrow funds through this program. The interest rate is fixed at 4.66 percent and the origination fee is the same as specified above under the description of the subsidized Direct Student Loan. Interest accrual begins immediately during in-school and deferment periods. Interest accruing during these periods may be paid or capitalized. Independent students may borrow up to an additional $\$ 6,000$ per year for the first and second years of undergraduate study and up to an additional $\$ 7,000$ per year for subsequent undergraduate study through the unsubsidized Direct Loan Program. Dependent students may borrow up to the same additional amounts through this program but only if the student's parent is denied eligibility to borrow funds through the Federal PLUS Loan Program.

Federal Direct PLUS Loan Allows parents of dependent students to apply for as much as the difference between the cost of attendance and the student's financial aid. This loan is not need based, but the parent's credit history may be reviewed to determine eligibility. The current interest rate on a Federal Direct PLUS Loan is 7.21 percent. The PLUS loan should be used only after all other resources have been considered since interest begins 60 days after the first disbursement. Repayment normally begins 60 days after disbursement of the full amount borrowed for an academic year.

Private/Alternative Loans Students who find they still need additional financial aid after other aid has been applied, or students whose families do not demonstrate need, may find an alternative loan a viable option. Many private loans are available with varying terms and conditions varying. Most do require proof of credit worthiness. You may wish to contact your local lender to see if they participate in a private or alternative loan program.

Canada Student Loan The provincial governments have loan programs that may be used by Dordt students. Information and application forms may be secured through your high school or local bank or by writing to your home province department of education. Contact information as follows.

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ALBERTA
Student Aid Alberta Service Centre
PO Box 28000, Station Main
Edmonton, Alberta T5J 4R4
Telephone: 780-427-3722 or 1-855-606-2096
Fax: 780-422-4516
studentaid.alberta.ca/
BRITISH COLUMBIA
Ministry of Advanced Education
StudentAid BC
PO Box 9180, Stn Prov Gov't
Victoria, British Columbia V8W 9H9
Telephone: 250-387-6100 or 1-800-561-1818
Fax: 250-356-9455
studentaidbc.ca/
MANITOBA
Manitoba Student Aid
401-1181 Portage Ave
Winnipeg, Manitoba R3G OT3
Telephone: 204-945-6321
Fax: 204-948-3421
edu.gov.mb.ca/
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NEWFOUNDLAND
Department of Adv. Education and Skills PO Box 8700
St. John's, Newfoundland A1B 4J6
Telephone: 709-729-5849 or 1-888-657-0800
Fax: 709-729-2298
edu.gov.nf.ca/studentaid
NOVA SCOTIA
Department of Education Student Assistance Office
PO Box 2290, Halifax Central
Halifax, Nova Scotia B3J 3C8
Telephone: 902-424-8420 or 1-800-565-8420
Fax: 902-424-0540
studentloans.ednet.ns.ca/
ONTARIO
Student Financial Assistance Branch Ministry of Training, Colleges and Universities PO Box 4500, 189 Red River Road, 4th Floor Thunder Bay, Ontario P7B 6G9
Telephone: 807-343-7260
Fax: 807-343-7278
osap.gov.on.ca

## PRINCE EDWARD ISLAND

Student Financial Services
Atlantic Technology Centre
Suite 212, 90 University Ave
PO Box 2000
Charlottetown, Prince Edward Island C1A 7N8
Telephone: 902-368-4640
Fax: 902-368-6144
studentloan.pe.ca/

## SASKATCHEWAN

Student Service Centre
1120-2010 12th Ave
Regina, Saskatchewan S4P 0M3
Telephone: 306-787-5620 or 1-800-597-8278
Fax: 306-787-1608
ae.gov.sk.ca/student-loans/

## Student Employment

College Work-Study Program Dordt College participates in the Work-Study Program that creates part-time job opportunities for students with financial need. These jobs average seven hours per week. Students qualify for participation in the Work-Study

Program if they are: 1) United States citizens; 2) able to meet job qualifications; 3) in need of financial aid; and 4) capable of doing good academic work in college; 5) accepted for admission as full-time students in good academic standing. Students with required skills and experiences may qualify for jobs in the following fields: clerical assistant; library assistant; typist; custodial work; instructional assistant; kitchen help; agricultural help; and other miscellaneous campus positions. Work-Study Program applications are due June 1.

Work for Institution Program The college provides employment for students who may not qualify for the federal Work-Study Program but need employment to assist them to pay for college expenses. Application forms must be completed by June 1.

## Special Programs

Veterans' Education Benefits Dordt College is approved to offer education to students who are eligible for benefits under the terms of the Veterans' Post 9/11 GI Bill. Eligible students should write to their regional Veterans' Administration Office to obtain the application information. Dordt College also participates in the Yellow Ribbon Program.

Vocational Rehabilitation Benefits Students who, by reason of physical disabilities, are eligible for benefits under vocational rehabilitation programs should write to the Division of Rehabilitation Education and Service in their state.

State of Iowa Tuition Grant Program The Iowa Legislature has established a state tuition grant program for the benefit of Iowa residents attending private colleges within the state. These grants are based on financial need and may be used only for educational expenses. (Application is made by filing the FAFSA.)

Scholarship and Loan Programs-Other States Several states have scholarships or loan programs that may be used at Dordt College. Information on such programs may be obtained from high school counselors.

## Eligibility for Financial Aid

All freshmen and transfer students who are admitted to Dordt College in good academic standing are eligible for financial aid. Continued eligibility for financial aid is dependent on good academic standing and satisfactory progress toward graduation. Eligibility is monitored at the end of each semester. If either good academic standing or satisfactory progress toward graduation is not attained, a student may be limited to one more semester of financial aid. However, a student who receives less than a 1.00 GPA in any given semester is subject to suspension.

Likewise, students who are admitted on academic probation, including students readmitted after a period of academic suspension, will be limited to one semester of financial aid. Students so limited may receive additional semesters of financial aid if they make satisfactory progress toward graduation and meet a minimum semester GPA specified by the Financial Aid Office.

Academic Standing A student is expected to maintain a minimum cumulative GPA of 2.00 to graduate. Students needing extra assistance in the form of individual tutors, study skills, time management, etc. should contact the staff of the Academic Skills Center, located in the lower level of the library. Students will be notified when they are not meeting the graduation minimum and will be expected to seek the necessary assistance. Academic standing is determined by the following:

|  | Academic Alert | Academic Probation | Academic Suspension |
| :--- | :---: | :---: | :---: |
| Total Credits Earned | Cumulative GPA is below | Cumulative GPA is below | Cumulative GPA is below |
| 0 to 24 | 2.00 | 1.60 | 1.00 |
| 24 to 54 | 2.00 | 1.80 | 1.40 |
| 54 to 84 | - | 2.00 | 1.60 |
| 84 or more | - | 2.00 | 1.80 |

For a description of the various academic standings shown above, see the Academic Policies section of the catalog (page 36).

Satisfactory Progress Federal regulations require that students maintain satisfactory progress in order to continue to receive financial aid. Dordt College also requires satisfactory progress for most institutionally controlled financial aid. Poor grades can impinge on a student's financial resources.

Satisfactory progress toward graduation is defined in terms of successfully completing 12 credits (excluding repeated courses) or 70 percent of the credits for which a student is enrolled in a given semester. The minimum percentage of successful completion is calculated by dividing the number of successfully completed hours (i.e., those with a grade of $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}$, or P ) by the sum of cumulative hours enrolled (including those courses with W or F grades and late grades) and multiplying that number by 100.

Students receiving financial aid must complete their program within the equivalent of six years of full-time enrollment. If a student transfers to Dordt and has transfer hours applied to a program he or she plans to complete at Dordt, progress will be monitored from the point he or she begins at Dordt. For example, assume a student has 62 hours transferred to Dordt. He or she must still earn 70 percent of each semester's earned hours to continue to be eligible for federal and state aid. If the student were enrolling full time (at least 12 hours), this would indicate that the student must complete his or her degree within two and a half years.

If a student loses financial aid eligibility due to consecutive semesters of not making satisfactory progress, the Financial Aid Office will notify the student in writing of the specific procedures and minimum requirements necessary for reinstatement of his or her financial aid for the next semester. In some instances a student (if allowed to remain in school by the academic standing committee) will receive no financial aid for a semester until grades can prove that once again the student is making satisfactory academic progress. There may also be a situation where a student is in good academic standing or on academic probation, but will not meet the criteria for financial aid (e.g., a student who received three A's and two F's will not meet the 70 percent completion requirement even with a cumulative GPA of 2.40 and being considered in good academic standing).

Students may appeal the loss of financial aid to the director of financial aid when there are special circumstances such as illness or death in the family. The director may grant the appeal after consultation with at least two other staff members from the Admissions, Student Services, or Academic Offices. Students should be aware that only truly extraordinary circumstances will be considered. Appeal requests must be in writing and must include a statement from a member of the Admissions, Student Services, or Academic Affairs Office, or a faculty advisor. The written appeal documents will be kept in the student's financial aid file. Should an appeal be granted, the student will be allowed to continue with financial aid for the semester but will remain in a probation category. There may be instances where the school requires that, before an appeal may be granted, the school and the student together develop an academic plan which ensures that the student will be making satisfactory academic progress prior to graduation.

## Scholarships

Dordt College provides scholarship programs to encourage and recognize students for merit based abilities and talents. Donorfunded endowed and annually funded scholarships are also available and growing in number every year. These scholarships financially support students who have specific career goals, are involved in leadership roles, are from specific geographical areas, or have significant financial need. Scholarships are awarded to full-time students only. One half of the scholarship funds are applied to the recipients' tuition account each semester. Incoming freshman scholarship applications are due January 15 , unless otherwise noted. Continuing students have a February 15 deadline for scholarship application, unless otherwise noted.

## Dordt College Scholarships

Distinguished Scholar Awards Distinguished Scholar Awards are the most prestigious scholarships offered by Dordt College. Each year 12 students are selected to receive this honor. These $\$ 14,000$ academic scholarships replace a previously awarded $\$ 11,000$ Presidential Scholarship. Students accepted by the Dordt College Office of Admissions, who have a 3.75 cumulative GPA and a 30 ACT (or 1980 SAT) composite score, will be invited to a Dordt College Distinguished Scholar Day in February during which a variety of activities related to academic interests will be presented. A written response to an essay question will be a required activity that day. Students who find it difficult to schedule this visit may write the essay under the supervision of their high school guidance counselor. Distinguished Scholar Awards are renewable for an additional three consecutive years, provided the recipient maintains a minimum 3.50 cumulative GPA.

Dordt College Challenge, Honors, and Presidential Scholarships Dordt College Challenge, Honors, and Presidential Scholarships are academic scholarships awarded on the basis of a student's cumulative GPA and ACT/SAT composite scores. There is no application process and the January 15 deadline date does not apply to these scholarships. Eligibility requirements are a 2.80 cumulative GPA and a 19 ACT (or 1330 SAT) composite score. Dollar amounts range from $\$ 1,000$ to $\$ 11,000$ and will be named Challenge Scholarships, Honors Scholarships, or Presidential Scholarships based on the dollar amount awarded.

Students who received Challenge, Honors, or Presidential Scholarships as incoming freshmen will have their scholarship automatically renewed if they maintain a cumulative 3.00 GPA in their Dordt College courses. Students who lose a Presidential, Honors, or Challenge Scholarship because they were not able to maintain the minimum 3.00 GPA requirement may have their scholarship reinstated at the end of any following academic year, upon regaining the required GPA. Students who did not meet the minimum GPA or ACT/SAT requirements for a scholarship when they enrolled at Dordt College will be eligible for a first-time scholarship at the end of any academic year, provided they have a Dordt College minimum cumulative 3.00 GPA. The student's Dordt College GPA will determine the scholarship dollar amount.

Dordt College Athletic Scholarships Athletic scholarships for various sports are available to students who contributed significantly to a high school athletic program and intend to actively participate in a Dordt College Athletic Program. Athletes can be awarded $\$ 1,000$ to $\$ 12,000$. Students interested in athletic scholarships should contact a sports coach through the Office of Admissions. Athletic scholarships are renewable provided the student maintains the minimum cumulative GPA required by the NAIA and continues to successfully contribute to the athletic program as determined by the Athletic Department coaches.

Dordt College Music Scholarships Music scholarships of $\$ 1,000$ to $\$ 6,000$ are available for students who have contributed significantly to their high school or community music programs and intend to actively participate in one or more of the following Dordt College music areas: vocal, instrumental, or keyboard. Applicants need not be music majors; however, they must submit an application form and a music instructor's recommendation. Applicants must also audition in their chosen music area(s), following the criteria listed on the Music Scholarship Application. The audition can be accomplished in one of three ways: attending the annual on-campus Music Audition Days; scheduling an appointment with the Admissions Office to audition in person on a Dordt College Campus Visit Day; or by submitting a recorded audition. The application and recommendation forms must be completed by January 15. Music scholarships are renewable provided the recipient maintains a minimum 2.00 cumulative GPA and successfully contributes to the music program as determined by the Music Department directors.

Dordt College Theatre Arts Scholarships Theatre arts scholarships of $\$ 1,000$ to $\$ 4,000$ are available for students who have contributed significantly to their high school or community theatre arts programs and intend to actively participate in the Dordt College Theatre Arts program through acting and/or technical work. Applicants must submit an application form, audition materials, and a recommendation letter from a person familiar with their talents and skills in theatre arts. Scholarships are available for theatre majors, minors, and non-majors and are renewable provided the recipient maintains a minimum cumulative GPA of 2.00 and completes the theatre scholarship requirements. Requirements include taking one theatre course each year and completing required hours in two of the following areas: backstage crew, acting, costume crew, makeup crew, box office crew, and set construction or design.

Dordt College Student Publications Scholarships Student publications scholarships of $\$ 1,000$ to $\$ 2,500$ are available for students who contributed significantly to the publication of their high school newspaper or to any other publication project. Recipients need not be communication majors; however, they will be asked to enroll in Communication 241, Introduction to Journalism, in the fall of their first semester at Dordt. An application form and a recommendation from a person who can attest to the applicant's abilities in the area of student publications are required. Recipients are expected to participate in the publication of The Diamond, a biweekly college student newspaper. These scholarships are renewable provided the recipient maintains a 2.00 cumulative GPA and is an active staff member of the The Diamond, as determined by the newspaper's faculty advisors.

Kuyper Scholarships Dordt College Kuyper Scholars are automatically awarded a $\$ 2,000$ scholarship. Acceptance into the Kuyper Scholars Program requires a 3.50 cumulative GPA, a 28 ACT (or 1860 SAT) composite score, a completed application form with an entrance essay, and letters of recommendation. Application materials are available from the Dordt College Admissions Office or the Dordt College website. Kuyper Scholarships are renewed if recipients maintain a 3.25 cumulative GPA and successfully participate in the Kuyper Scholar Program as defined by the program advisors.

Transfer Student Scholarships Admitted transfer students are eligible for the following scholarships as previously described for incoming freshman students.

- Dordt College Honors and Presidential Scholarships
- Dordt College Athletic Scholarships
- Dordt College Music Scholarships
- Dordt College Theatre Arts Scholarships
- Dordt College Student Publication Scholarships
- Kuyper Scholarships


## Dordt College Donor-Funded Endowed and Annual Scholarships

Individual donors, corporations, or foundations with an interest in supporting Dordt College have established over 200 scholarship programs benefiting more than 375 students each year. These scholarships are a vital part of making Dordt College an affordable Christian higher education institution for incoming freshmen as well as continuing students. Donor-funded scholarships vary in dollar amounts and in recipient selection criteria. Typically, the application process includes an application form and recommendation, and a scholarship committee that selects the recipients. Sometimes the donors request simply that the Office of Financial Aid and the Office of Scholarships select the most worthy recipient.

Scholarship descriptions and application instructions can be found online at www.dordt.edu/admissions/financial_aid. Scholarships are conveniently categorized in the Scholarships for Freshmen section or the Scholarships for Upperclassmen section. Incoming freshmen scholarships requiring an application are due January 15, unless otherwise noted. Continuing students have until February 15 for scholarship application, unless otherwise noted.

## The Academic Program

Dordt College offers a wide variety of programs and majors for students wishing to earn a bachelor's degree. Dordt College also awards associate of arts degrees. These two-year programs offer a wide range of educational options through professionally and occupationally designed programs, or through a flexibly designed two-year sequence of relevant courses and educational experiences. A master of education degree is also available.

## Advising

An academic advisor is assigned to each student. Because of the variety of educational opportunities available at Dordt College and alternative ways of achieving graduation requirements, students must confer with their advisor regularly to plan their academic program. The Academic Coordinator for International and Minority Students will make contact with international, ESL, and minority students so that these students can benefit from ongoing advising concerning their academic progress and so that the Dordt community can benefit from these students' unique experiences and insights. Career planning assistance from qualified personnel is available to help students select courses that will prepare them for service, vocations, or further schooling.

## Associate of Arts Degrees

The formal requirements for graduation with an associate's degree are:

1. A minimum of 60 credits. In meeting this requirement, A.A. students must take Core Program requirements, complete requirements for an area of concentration, and may also take elective courses.
2. A minimum GPA of 2.00 ( 4.00 scale) in courses taken at Dordt College.
3. A minimum of 30 credits earned at Dordt College. A student may not receive both the A.A. and B.A. degrees at the same commencement. However, credits earned in obtaining the A.A. degree may be applied toward the B.A. degree at any time.
4. Participation in the freshman orientation and student assessment programs.

Core Program Requirements for Associate's Degrees The Core Program for all students pursuing associate's degrees consists of pre-disciplinary foundational studies and selected coursework in contextual and interdisciplinary studies. The Core Program for associate's degrees is designed to allow students to easily transition to a bachelor's degree program at any point during their program.

## 1. Pre-Disciplinary Foundational (14-26 credits)

Academic Competencies ( 3 - 15 credits) All academic competencies must be satisfied by the end of the freshman year. Options for satisfying the academic competency requirements depend on a student's academic background and include the following:

- Strong high school preparation (demonstrated by high school record)
- ACT scores
- Pre-testing
- Completing a college-level course that meets the goals of each requirement.

Mathematics Competency ( 0.4 credits)

- A score of 22 or higher on the mathematics portion of the ACT ( 0 credits)
- Students with a score of $18-21$ on the mathematics portion of the ACT will be required to complete a mathematics course numbered 101-119 (3 credits) - Students with a score below 18 on the mathematics portion of the ACT will be required to successfully complete Mathematics 100 and 100L - Mathematics for College ( 4 credits)
English Competency (3-4 credits)
- Completion of CORE 120: English Composition (3 credits)
- Students with a score below 18 on the English portion of the ACT will be required to successfully complete English 100 Basic Writing for College Students (4 credits)
Communication Competency ( 0.3 credits)
- Completion of two or more communication courses in high school with grades of B or better ( 0 credits)
- Completion of CORE 110: Communication and Culture (3 credits)
- Active participation in Communication 051: Forensics for an entire academic year. (. 5 credits)

Foreign Language Competency ( $0-4$ credits)

- Completion of two years of a single foreign language with a grade no lower than a C in the second year. ( 0 credits)
- Completion of Foreign Language 101 (4 credits)

Historical-Redemptive Outlook (11 credits)

Kingdom, Identity and Calling: CORE 100 (2 credits)
Roots of Western Culture and Worldview: CORE 140 (3 credits)
Western Culture in Global Context: CORE 145 (3 credits)
Biblical Foundations: CORE 150 (3 credits)
2. Contextual Inter-disciplinary (4-6 credits)

Health, Sport, and the Body: CORE 130 ( 1.5 credits)
Introduction to Lifetime Activities: CORE 135 (.5 credits)
Distribution Elective ( $2-4$ credits) - one additional course from outside the student's division of study from the following:
Introduction to the Arts: CORE 160 (3 credits)
Responding to Literature: CORE 180 (3 credits)
Introduction to Christian Philosophy: CORE 200 (3 credits)
Natural Science: One lab-based science course (3-4 credits)
Quantitative Reasoning: Any mathematics or statistics course numbered 120 or higher (2-4 credits)
Persons in Community: CORE 250-259 (3 credits)
Justice and Stewardship: CORE 260-269 (3 credits)
Cross-Cultural Studies*: CORE 270-289 (0-3 credits)

* See page 24, Cross-Cultural Studies.

Area of Concentration (6-12 courses) Each student must choose an approved area of concentration. Course sequences for the various areas of concentration may be found as follows:

Administrative Assistant (see page 52)
Agriculture (see page 42)
Computer Networking (see page 65)
General Studies (see page 106)
Paraeducator Certification Options (see page 85)
Elective Courses (0-6 courses) These courses are to be selected by the student to meet individual needs and goals.

- A second area of concentration may be worked out.
- Cognate courses may be selected to support the area of concentration.
- Additional courses in the area of concentration may be selected.
- Courses that explore alternate career options may be selected.
- A wide distribution of courses may be chosen to provide a broad general background.


## Bachelor's Degrees

Degree Types Bachelor's degree recipients will earn one of the following degrees:

## Bachelor of Arts <br> Bachelor of Science in Engineering <br> Bachelor of Social Work

Graduation Requirements The formal requirements for graduation with a bachelor's degree are the following:

1. A minimum GPA of $2.00(4.00$ scale $)$ in courses taken at Dordt College.
2. A minimum of 124 credits. In meeting this requirement, students must fulfill the Core Program requirements, complete a major, and in many cases, take elective or professional courses.
3. Eight semesters of full-time study or its equivalent. (See page 39, Residence Requirement.)
4. Participation in freshman orientation and the freshman, junior, and senior assessment program.

Core Program The Core Program is required of all Dordt College students. Its central purpose is to prepare students for faithful Christian discipleship in the areas and responsibilities of life that we all share in common across our various specialized academic majors and vocations.

The core curriculum articulates and helps students to develop a broad and firmly-rooted Christian perspective on life and learning; it helps them to develop their understanding of who we are and how we are called to live in our relationships and in our historical development and context; and it equips them with competencies, critical thinking, understanding, and connections needed for both
their specialized programs and for life-long learning and service to God's kingdom in all areas of their lives in the contemporary world.
Core Program Requirements for Bachelor's Degrees (42.5-64 credits) For all students pursuing a bachelor's degree, the Core Program consists of pre-disciplinary foundational studies, contextual and interdisciplinary studies, and post-disciplinary integrative studies. Typically, students will begin pre-disciplinary coursework their freshman year and most will complete it by the end of their sophomore year. Beginning with their sophomore year, students will move on to contextual and interdisciplinary coursework and then finish their academic careers with the post-disciplinary integrative coursework.

## 1. Pre-disciplinary Foundational (14-29 credits)

Academic Competencies (3-18 credits) All academic competencies must be satisfied by the end of the freshman year unless otherwise noted. Options for satisfying the academic competency requirements depend on a student's academic background and include the following:

- Strong high school preparation (demonstrated by high school record)
- ACT scores
- Pre-testing
- Completing a college-level course that meets the goals of each requirement.

Mathematics Competency ( $0-4$ credits)

- A score of 22 or higher on the mathematics portion of the ACT ( 0 credits)
- Students with a score of 18-21 on the mathematics portion of the ACT will be required to complete a math course numbered 101-119. This course must be completed prior to taking the quantitative reasoning course. ( 3 credits)
- Students with a score below 18 on the mathematics portion of the ACT will be required to successfully complete Mathematics 100 and 100L - Mathematics for College during their first year of study and prior to taking the quantitative reasoning course. (4 credits)
English Competency* (3-4 credits)
- A score of 24 or higher on the English portion of the ACT and completion of a writing-intensive college course (English 220, 305, 306, English 301/Communication 301, English 302/Communication 302, History 280, Psychology 366, Theatre Arts 365). Approved courses are designated as writing-intensive in the course description. Students in this category need not complete the writing-intensive course during their freshman year. (3-4 credits)
- Completion of CORE 120: English Composition (3 credits)
- Students with a score below 18 on the English portion of the ACT will be required to successfully complete English 100 Basic Writing for College Students (4 credits)
Communication Competency ( $0-3$ credits)
- Completion of two or more communication courses in high school with grades of B or better (0 credits)
- Completion of CORE 110: Communication and Culture (3 credits)
- Active participation in Communication 051: Forensics for an entire academic year (. 5 credits)

Foreign Language Competency (0-7 credits)

- Completion of two years of a single foreign language in high school with a grade no lower than a C in the second year ( 0 credits)
- Completion of Foreign Language 101 (if required) and 102. Any required foreign language study must be completed prior to completing the Cross-Cultural Studies requirement below, and should be completed by the end of the sophomore year (3-7 credits)


## Historical-Redemptive Outlook (11 credits)

Kingdom, Identity, and Calling: CORE 100 (2 credits)
Roots of Western Culture and Worldviews: CORE 140 (3 credits)
Western Culture in Global Context: CORE 145 (3 credits)
Biblical Foundations: CORE 150 (3 credits)
2. Contextual Inter-disciplinary (22.5-29 credits)

Health, Sport, and the Body: CORE 130 (1.5 credits)
Three Activity Components from the following: (1-1.5 credits)
Introduction to Lifetime Activities: CORE 135 (.5 credits per activity - may complete up to 3)
Participation in one season of intercollegiate athletics at Dordt College: HHP 011 (.5 credits)
Completion of one activity course: HHP 012-019 (. 5 credits)
Participation in two seasons of JV or Varsity athletics in high school with documentation from the high school ( 0 credits)

Introduction to the Arts: CORE 160 (3 credits)
Responding to Literature: CORE 180 (3 credits)
Introduction to Christian Philosophy: CORE 200 (3 credits)
Natural Science*: One lab-based science course. CORE 211-229 recommended for non-science majors. (3-4 credits)
Quantitative Reasoning*: Any mathematics or statistics course numbered 120 or higher (2-4 credits)
(No single course can meet both the natural science and quantitative reasoning requirements.)
Persons in Community*: CORE 250-259 (3 credits)
Justice and Stewardship*: CORE 260-269 (3 credits)
Cross-Cultural Studies*: (0-3 credits)
The cross-cultural requirement may be met in one of the following ways:
A. Students who have completed fewer than three years of high school foreign language are required to complete one of the following for a minimum of three college credits:

- One course from CORE 270-289, Dutch, French, or Spanish 201, 204, 206
- A pre-approved semester-long, cross-culture program (e.g., see page 30, SPICE)
- A pre-approved cross-cultural experience of no less than two weeks fully immersed in the culture
B. Students who have completed three or more years of high school foreign language with grades no lower than C in the final year are required to complete one of the following:
- One of the options listed in section A
- A pre-approved cross-cultural experience sometime during college that may be less than two weeks (e.g. AMOR). This experience is not required to be taken for college credit.
C. Students who have lived in another non-English speaking culture for at least one semester in their high school years may petition to have the cross-cultural requirement waived.

3. Post-Disciplinary Integrative ( 6 credits)

Advanced Reformed Thought*: CORE 310-329 (3 credits)
Calling, Task, and Culture: CORE 399 (3 credits)

* Denotes requirements that could be satisfied via courses in a student's major area of study.

Majors To earn a bachelor's degree from Dordt College, a graduate must complete one major-a sequence of at least 10 courses in a subject area. A complete list of majors available at Dordt College, along with their applicable degree (B.A., B.S., B.S.E., B.S.N., B.S.W.), is on page 25. In addition, majors that are available in the Teacher Preparation Program are designated as elementary (E) or secondary (S).

Electives, Minors, and Professional Courses Students may choose elective courses that complement their majors or that arise out of special interest. Students earning a bachelor's degree must take as many elective credits as needed to meet the 124 -credit requirement, after meeting the Core Program and major requirements. In certain subject areas a minor of 18 to 24 credits may be earned. A complete list of minors available at Dordt College is on page 26. Minors that are available in the Teacher Preparation Program are designated as elementary (E) or secondary (S).

Policy Regarding Transcription of Majors and Minors A major or minor is transcribed if the student meets all of the catalog requirements for the major or minor and the student meets the following minimum credit requirements:

- Minimum credits for a major: 30
- Minimum credits for a minor: 18
- Minimum credits for a major and minor: 48
- Minimum credits for each additional major: 24
- Minimum credits for each additional emphasis or minor: 15
- Students may not major and minor in the same discipline


## Majors

Accounting (BA)
Actuarial Science (BA)
Agriculture (BA) (BS) (S)
Agri-Business Emphasis (BA)
Animal Science Emphasis (BS)
Biotechnology Emphasis (BS)
Missions Emphasis (BA)
Plant Science Emphasis (BS)
Applied Science and Technology
Computerized Manufacturing Emphasis (BA)
Electrical Technology Emphasis (BA)
Industrial Instrumentation, Control Emphasis (BA)
Manufacturing Engineering Emphasis (BA)
Art
Art (E) (S)
Art History Emphasis (BA)
Fine Arts Studio Emphasis (BA)
Graphic Design Emphasis (BA)
Prearchitectural Design Emphasis (BA)
Biology (BA) (BS) (S)
Business Administration (BA)
Construction Management Emphasis (BA)
Finance Emphasis (BA)
Human Resource Management Emphasis (BA)
Information Systems Emphasis (BA)
International Business Emphasis (BA)
Marketing Emphasis (BA)
Public Administration Emphasis (BA)
Business Education (S)
Chemistry (BA) (BS) (S)
Christianity and Popular Culture (BA)
Communication (BA)
Digital Media Production (BA)
Public Relations Emphasis (BA)
Community Development (BA)
Computer Science
Hardware Systems Emphasis (BA)
Information Systems Emphasis (BA)
Systems Administration Emphasis (BA)
Computer Science/Mathematics (BA)
Criminal Justice (BA)
Dutch (BA)
Earth Science (S)
Education (BA) (E) (S)
Engineering
Biomedical Emphasis (BSE)
Chemical Emphasis (BSE)
Civil Emphasis (BSE)
Electrical Emphasis (BSE)
Mechanical Emphasis (BSE)
Engineering Science (BA)
Architecture Emphasis (BA)
Construction Management (BA)

English
Literature Emphasis (BA)
Writing Emphasis (BA)
English/Language Arts (S)
English/Language Arts-All (S)
Environmental Studies
Environmental Science Emphasis (BA)
Natural Resource Management Emphasis (BA)
Policy and Management Emphasis (BA)
Foreign Language
French Emphasis (E) (S)
Spanish Emphasis (E) (S)
Health and Human Performance (BA)
Exercise Science Emphasis (BA)
Physical Education (E) (S)
Sports Management Emphasis (BA)
History (BA)
Museum Studies Emphasis (BA)
United States \& World (S)
World (S)
Individual Studies (BA)
Mathematics (BA) (S)
Medical Technology (BS)
Music (BA) (E)
Church Music (BA)
Music Management Emphasis (BA)
Performance and Pedagogy Emphasis (BA)
Choral Music Education (S)
Instrumental Music Education (S)
Choral/Instrumental Music Education (S)
Nursing (BSN)
Philosophy (BA)
Physics (BA) (S)
Political Science (BA)
Psychology (BA)
Clinical Emphasis (BA)
Social Science (S)
Social Work (BSW)
Spanish (BA)
Theatre Arts
Acting/Directing Emphasis (BA)
Design and Technical Theatre Emphasis (BA)
Drama Ministry Emphasis (BA)
Dramaturgy/Playwriting Emphasis (BA)
Theatre Management Emphasis (BA)
Theology
Biblical Studies Emphasis (BA)
Christian Ministry Leadership (BA)
Historical/Systematic Emphasis (BA)
Missions and Evangelism Emphasis (BA)
Youth Ministry Emphasis (BA)
Worship Arts (BA)

## Minors

Accounting (G)
Actuarial Science (G)
Agriculture (G)
American Government (S)
American Studies (G)
$\operatorname{Art}(\mathrm{G})(\mathrm{E})(\mathrm{S})$
Biology (G) (S)
Biomedical Sciences (G)
Business Administration (G) Human Resource Management (G)
Chemistry (G) (S)
Christianity and Popular Culture (G)
Communication (G)
Digital Media Production (G)
Journalism (G)
Speech Communication/Theatre (E) (S)
Community Development (G)
Computer Science (G)
Web Software Development (G)
Criminal Justice (G)
Dutch (G)

Early Childhood (E)
Economics (G)
English (G)
Writing (G)
English/Language Arts (E) (S)
Environmental Studies (G)
Environmental Science (G)
French (G)
Health and Human Performance (G)
Health (E) (S)
Physical Education (E) (S)
History-World (S)
Kuyper Scholars Program (G)
Linguistics-Interdisciplinary (G)
Mathematics (E) (G) (S)
Applied Mathematics (G)
Middle School (E) (S)
Music (E) (G)
Music Performance (G)
Philosophy (G)
Physics (G) (S)

Political Science (G)
International Politics (G)
Public Policy and Administration (G)
Psychology (G)
Reading (E)
Science - Basic (E)
Social Studies (E)
Sociology (G)
Spanish (E) (G) (S)
Special Education (E) (S)
Statistics - Applied (G)
Theatre Arts (G)
Theology
Bible (S)
Bible Education (G)
Biblical Studies (G)
Historical/Systematic (G)
Mission and Evangelism (G)
Worship Arts (G)

## Master's Degree

Dordt College offers a graduate program in education with concentrations in teacher and school leadership that leads to a master of education degree. The program is a 10 -course sequence that can be completed in as few as two calendar years. Additional information on the master's program is contained in the graduate academic bulletin that can be obtained from the Graduate Education Office.

## Preprofessional Programs

Preparation for Graduate Study Through its major departments, Dordt College prepares students for graduate-level work. Students who plan to do graduate work should consult faculty members in the major department when selecting courses in the major field of study or in related supporting subjects. Courses should be carefully selected to meet the specific requirements of the graduate school that the student plans to enter.

Preprofessional Programs Students wishing to prepare for professional schooling may enter one of the following programs:

| Prearchitecture | Prechiropractic | Predentistry | Prelegal |
| :--- | :--- | :--- | :--- |
| Premedical | Preoccupational Therapy | Preoptometry | Prepharmacy |
| Prephysical Therapy | Preseminary | Preveterinary |  |

All of these programs lead to the B.A. degree and prepare the student for graduate-level studies. Students in preprofessional programs normally complete one major at Dordt. Preprofessional programs do not mandate any specific major. Students should work closely with the program advisor to plan a course of study and select a major that will adequately prepare them for the professional school(s) of their choice.

## Prearchitecture Program

David Versluis, Program Advisor
Architects work alongside engineers to design buildings and other public structures that meet the needs of individuals and communities. Architects must concern themselves with the aesthetic normativity of a structural design, while working to create structures that are environmentally responsible and culturally appropriate. Along with a team of engineers and construction managers, an architect is responsible for designing a structure that is both safe and ergonomic. Architects serve communities by designing buildings and landscapes that reflect responsible use of spatial, material, environmental, and economic resources.

There are multiple educational paths that lead to a career in architecture. One of the common academic paths into the profession of architecture is to first complete an interdisciplinary B.A. or B.S. degree in a prearchitectural program at a liberal
arts college. To be eligible for professional licensure as an architect, a student will then complete a three- to four-year masters of architecture degree at an institution that offers an accredited architecture graduate program. While the entrance requirements for architectural graduate programs vary, most programs prefer students to have completed an interdisciplinary liberal arts bachelor's degree that includes courses from art, graphic design, physics, mathematics, engineering, economics, history, environmental studies, philosophy, or psychology. Demonstrating proficient writing and communication skills is essential for admission into professional architectural programs.

While a variety of general bachelor degree programs can provide an adequate foundation for further architectural studies, Dordt has two preprofessional major options specifically designed to guide students through an undergraduate program of study that will meet the requirements of many graduate programs in architecture; a B.A. degree in art with an architectural design emphasis, and a B.A. degree in engineering science with an architecture emphasis.

## Prechiropractic Program

Dr. Tony Jelsma, Program Advisor
Chiropractic care concerns the relationship between the nervous system and the rest of the body to maintain optimal health, and it focuses on allowing the body to heal itself without the use of drugs or surgery. Maintaining the proper structure of the spine will allow the nervous system to function as it should to regulate the rest of the body.

The prechiropractic program at Dordt College prepares students for admission to a school of chiropractic. At least three years of study at Dordt are required, which will provide the necessary background in the sciences, including biology, chemistry, and physics courses, as well as courses in the humanities and social sciences. Since required courses may vary between chiropractic graduate schools, students are advised to check requirements of specific schools early in their college career.

## Predentistry Program

Dr. Darren Stoub, Program Advisor
A career in dentistry involves diagnosis, treatment, and prevention of problems affecting teeth and mouth tissue, aesthetic improvement, detection of diseases, surgical restoration, and public education and prevention. Most dental schools require three or four years of college before admission to the dental school. Prerequisite courses for admission typically include general chemistry, organic chemistry, biochemistry, physics, English, biology, and psychology.

Since required courses for admission may vary between dentistry graduate schools, students are advised to check requirements of specific schools early in their college career.

## Prelegal Program

Donald Roth, Program Advisor
Law schools look for college graduates who demonstrate leadership, exemplify strong character, and possess well-developed writing and analytical skills. The Prelegal Program is designed as an advisory tool to assist students who are considering or planning to attend law school. Since law schools do not have any specific academic course requirements for admission, a broad liberal arts program, including major and selected electives, provides the most appropriate preparation.

At Dordt, prelaw students receive a B.A. degree with a major in political science, history, English, social work, psychology, philosophy, business administration, or criminal justice, depending on their interests. In addition, many students participate in an off-campus program that enables them to serve as an intern and gain experience in legal practice. They are also advised on a range of electives to help prepare them for the Law School Admission Test (LSAT), required for entrance to an accredited law school, and expand their critical thinking, writing, and analytical perspective.

Although they are not required prelaw courses, American constitutional law, business law, criminal law, and criminal procedure are courses that provide a beneficial context for the later pursuit of legal studies.

## Premedical Program

Dr. Carl Fictorie, Program Advisor
A medical profession may be demanding but also very rewarding as it offers numerous opportunities to serve and care for people. The undergraduate premedical program provides the required background and skills in the basic sciences and communication to succeed in medical school. However, medical schools seek out students with broad interests and abilities. Excellent performance in Dordt College's Core Program curriculum is important.

Each medical school has a unique set of admission requirements, but most schools require courses in biology, chemistry, physics, advanced writing, calculus, and/or statistics. Additional coursework in human anatomy and physiology, biochemistry, genetics, cell biology, and microbiology are strongly recommended. Medical schools seek a diverse cohort, so any academic major may be completed in conjunction with the above requirements. Students should have a cumulative GPA of 3.50 or higher, particularly in the required courses above.

In the spring of the junior year, students are required to take the Medical College Admissions Test (MCAT), the scores of which are used by many medical schools in admission decisions. The MCAT is based on the material covered in the required coursework in biology, chemistry, physics, English, psychology, and sociology.

In addition to academic excellence, students should demonstrate a commitment to and passion for helping people through volunteering, extracurricular activities, and employment. Good communication skills, leadership abilities, dedication, and selfmotivation are all important qualities medical schools seek in applicants. The Future Physicians Club exists to provide a means
by which premedical students can get to know each other and help each other with planning, MCAT preparation, medical school applications, volunteering activities, and co-curricular activities.

The premedical program, while designed specifically for students interested in medical school, also serves as a good background for entry into most postgraduate professional medical programs. Additional information about the premedical program is available at: www.dordt.edu/academics under Preprofessional Programs.

## Preoccupational Therapy Program

Dr. Mark Christians, Program Advisor
Occupational therapy is the health profession that uses everyday activities as the means of helping people achieve independence. A variety of rehabilitative, educational, social, and vocational activities are used to treat adults and children with disabilities resulting from physical injury, disease, developmental delays, aging, and psychological dysfunctions. Occupational therapists help individuals adapt or improve performance in areas of work, school, independent living, and play. The goal for all patients is to attain the maximum level of independence and productivity possible.

Although Dordt does not offer a professional degree or major in occupational therapy, an excellent preprofessional program is available that prepares the student for subsequent professional education. A student may complete a B.A. degree at Dordt along with the preoccupational therapy program of study and then apply for admission to an occupational therapy program. Information is available in the career development office relating to specific requirements of graduate schools. Certification as an occupational therapist is based on graduation from an approved occupational therapy program and acceptable performance on the American Occupational Therapy examination.

Appropriate majors for students interested in a career in occupational therapy include psychology, biology, or health and human performance. A foundation in biology and psychology is required. Since required courses for admission may vary between occupational therapy graduate schools, students are advised to check requirements of specific schools early in their college career.

## Preoptometry Program

Dr. Darren Stoub, Program Advisor
Doctors of optometry provide vision care. As independent primary health care providers, they examine, diagnose, treat, and manage diseases and disorders of not only the eyes but also the entire visual system. Optometrists work with other health professionals in co-managing a patient's care. Most optometry schools require four years of college before admission to the optometry school. Courses generally required for admission include general chemistry, organic chemistry, calculus, physics, biochemistry, anatomy, microbiology, statistics, and psychology. Since required courses for admission may vary between optometry graduate schools, students are advised to check requirements of specific schools early in their college career.

## Prepharmacy Program

Dr. Darren Stoub, Program Advisor
Pharmacy is a profession that cares for patients' drug-related needs in community pharmacies, hospitals, long-term care facilities, and home health care settings. Many pharmacy programs include two years of prepharmacy college courses followed by four more years of a pharmacy program, leading to a doctor of pharmacy degree.

Courses generally required for admission include general chemistry, organic chemistry, physics, general biology, microbiology, anatomy, economics, calculus, communication, English composition. Some schools also require the Pharmacy College Admissions Test (PCAT) to be taken. Since required courses for admission may vary between pharmacy graduate schools, students are advised to check requirements of specific schools early in their college career.

## Prephysical Therapy Program

Chad Hanson, Program Advisor
Physical therapy is a health profession with a primary purpose of promoting of optimal human health and function through the application of scientific principles to prevent, identify, assess, correct, or alleviate acute or prolonged movement dysfunction.

Although Dordt does not offer a professional degree or major in physical therapy, an excellent preprofessional program is available that prepares the student for subsequent professional education. A student may complete a B.A. degree at Dordt along with the prephysical therapy program of study and then apply for admission to a physical therapy program. Information is available in the Career Development Center on specific requirements for graduate schools. Licensure as a physical therapist is based on graduation from an approved physical therapy program and passing a licensure examination.

A student may select any major, but the following preprofessional courses must be completed: biology, chemistry, physics, psychology, abnormal psychology, and mathematics. Since required courses for admission may vary between physical therapy graduate schools, students are advised to check requirements of specific schools early in their college career.

## Preseminary Program

Dr. Wayne A. Kobes, Program Advisor
Statistically, nearly half of seminarians complete their B.A. degree before making the decision to seek ordination into church ministry. College plays a critical role in this decision, either confirming a call to the Gospel ministry or encouraging a search in a different direction. Dordt College offers classes that are meant "to develop and implement an understanding of the entire creation in the liberating light of the Scripture."

Although Dordt does not offer a professional degree or major in seminary, an excellent preprofessional program is available that prepares the student for subsequent professional education. Individually assigned personal advisors, the camaraderie with fellow preseminarians, as well as connecting with students with different life goals, all contribute to the breadth of the Dordt College preseminary program. Courses in history, English, philosophy, communication, psychology, the arts and science - all taught in the light of God's Word - will help preseminary students see how they can bring glory to God in almost any topic of study. Also, courses in the language of the Bible, as well as modern foreign languages, equip the prospective minister to handle the biblical text and read current and classical theological works in their original form. Since required courses for admission may vary between seminary graduate schools, students are advised to check requirements of specific schools early in their college career.

## Preveterinary Program

Dr. Duane Bajema, Program Advisor
Veterinary medicine is an animal health profession that is dedicated to protecting the health and welfare of people and animals. Veterinarians are highly educated and skilled in preventing, diagnosing, and treating animal health problems. They work in private practice with both large and small animals, or in research, public health, the military, regulatory agencies, and zoos.

Although Dordt does not offer a professional degree or major in veterinary medicine, an excellent preprofessional program is available that prepares the student for subsequent professional education. Students can major in biology, animal science, chemistry, or agriculture. Dordt also works with many local veterinarians, pharmaceutical companies, and professionals involved with animal health to provide students with professional experience that is often required by schools of veterinary medicine. Since required courses for admission may vary between veterinary graduate schools, students are advised to check requirements of specific schools early in their college career.

## Off-Campus Study

Students should contact the coordinator of off-campus programs for information and application forms. The coordinator will also help students identify courses in these programs that meet Core Program requirements.

## Off-Campus Policies

1. Students must be in good academic, financial, and behavioral standing to participate in off-campus programs and courses. (See Student Handbook for Off-Campus Behavioral Expectations.)
2. The pass-fail option is not available for off-campus programs and courses.
3. Cancellation Policy

- Dordt College may cancel college-run off-campus programs, courses, or service projects when, prior to departure for the program, the U.S. State Department issues a travel warning for the location of the program, course, or project. In addition, the college may choose not to participate in or provide student financial assistance for off-campus programs offered by partner colleges or organizations for locations under the U.S. State Department travel warning.
- If a U.S. State Department travel warning is issued once a program is in progress for a country in which Dordt is currently operating an off-campus program, course, or project, the coordinator for off-campus programs will notify the crisis management coordinator, who may implement the crisis management plan.
- If a U.S. State Department travel warning is issued once a program is in progress for a country in which Dordt students are participating in an off-campus program offered by a partner college or organization, the coordinator for off-campus programs will consult with the partner organization's designated director and their on-site staff and may implement a crisis plan that carefully follows the State Department's advice.

4. Refund Policy

- If Dordt College cancels the program prior to departure, students will receive a full refund of any tuition or program fees paid. Any portion of a non-refundable deposit not encumbered (e.g. travel arrangements, housing deposits) will also be returned.
- If a student withdraws from a program prior to departure, he/she is responsible for any expenses incurred on his/ her behalf by Dordt College (or the sponsoring organization) in preparation for the program.
- If it becomes necessary to cancel a program in progress, Dordt's refund policies will be followed (see page 15). Additional expenses incurred for an early departure may need to be deducted from any refund provided.
- If a student withdraws from a program after the program has begun, Dordt's refund policies or the policies of the sponsoring organization will be followed. Students are responsible for any other costs incurred by an early departure. (Early withdrawals for medical reasons are covered by a separate policy.)
- Students dismissed from a program for behavioral reasons will be charged the full fee and are responsible for any other costs incurred by an early departure.


## Dordt College Semester Programs: SPICE, SPIN, Semester in Kenya, Semester in Korea, and Semester in Zambia

Minimum requirements: sophomore status and a 2.50 cumulative GPA.

* Denotes programs that satisfy the Core Program cross-cultural requirement.

Studies Program In Contemporary Europe* (SPICE) Dordt College, in cooperation with the Gereformeerde Hogeschool in Zwolle, offers students the opportunity to study in the Netherlands every spring semester. Students live with host families and choose to study in one of four tracks: Western European Culture, International Business, Nursing, or International Education. All tracks include a week-long trip to Rome, where students will gain insights into historical, religious, and cultural developments through presentations and excursions.

Students must select one of four SPICE track options:
SPICE: Western European Culture Track: SPCE 160, 270, 271; SPCE 148 and one course from SPCE 100, 102, 201. SPCE 310 may be taken as an elective.
SPICE: International Business Track: SPCE 160, 270, 271, 371; possible elective options include SPCE 100, 102, 201, 148, 310. SPICE: Nursing Track: one or two electives from SPCE 160, 270, 271; Nursing 352, 330, 390; possible elective from SPCE 100, 102, 201, 148, 310.
SPICE: International Education Track: SPCE 160, 270, 271; Education 239(a), 349(a); Individual Studies 391 (Comparative Education); possible elective from SPCE 100, 102, 201, 148, 310.

## Studies Program In Contemporary Europe (SPICE) Academic Offerings

100 Beginning Dutch (3)
A beginner's course on the language and culture of Dutch-speaking people, designed to develop listening and reading comprehension skills and speaking and writing skills in Dutch through exercises, listening, interviews of native Dutch speakers, and small group conversations.

102 Elementary Dutch (3).

## .Spring

 This course on the language and the culture of Dutch-speaking people is designed to develop listening and reading comprehension, spoken and written Dutch in a communicative context. The course includes interviews of native Dutch speakers, sessions with native students, and various other language activities. Prerequisite: Dutch 101 or its equivalent.201 Intermediate Dutch (3)
. Spring
An intermediate course that continues the study of the language in a communicative context with emphasis on precision and expansion of linguistic skills. Emphasis is also put on the development of cultural understanding and sensitivity, studying people's values and beliefs as expressed in their economic, political, and religious systems. Prerequisite: Dutch 102 or its equivalent.

148 History of the Low Countries (3).............................................................................................................................................................................................. This course will focus on the history of the Netherlands from 1815 until the present, with special attention on the history of religion and the church. The course will be in chronological order generally; some aspects of the Dutch society will be explored in themes.

160 Dutch Art and Architecture (3)
.Spring
An introduction to the history of Dutch art and architecture from the Middle Ages to the present day. There will be many excursions to view various artworks "live." Students will develop insight into how to understand art and how the Dutch identity is reflected in its art and architecture. They will also develop some understanding of the importance of the works in culture and history. This will be achieved by presentations of classmates, lectures, readings, and field trips.

270 Cross-Cultural Explorations: Conversation, Reflection, and Travel (Portfolio) (3). Spring Living and studying in a different culture brings new information, experiences, and perceptions. This course helps students take the time to observe and reflect on the similarities and differences between this culture and the culture of one's home through structured and systematic observation and reflection. Students develop their own portfolio (a reflective journal) in preparation for a presentation at the end of the semester.

271 Dutch Culture and Society (3).
Spring This course focuses on contemporary issues in the Netherlands as an urbanized society. By studying the culture that gets lived out in the heart of the Netherlands, students become part of the "social experiment" that Dutch society is-a society that is in a constant process of evolving and adapting new forms as it enters a new era of economic and political affiliations within a larger European community.

This course will survey several important theologians and theological trends from the 20th century, including liberation theology and other significant schools of thought, and will compare them with Reformed theology.

341 Special Topics in Dutch Literature or Composition (3) ................................................................................................................................Spring
Offered on the basis of student interest and instructor availability.

371 Cross-Cultural Exploration and Practicum in Dutch Businesses (3) .Spring
This course is organized as a cross-cultural exploration and practicum in business that helps students to understand the Dutch business context and culture from different perspectives. Special attention will be given to different production concepts and Christian ethics in business. During the course, students will carry out real-time assignments and deal with real-life consultancy cases for Dutch businesses.

392- Individual Studies (2-3) Spring
393 Open to qualified juniors and seniors on a limited basis with permission from the coordinator of off-campus programs and the registrar. (See page 38 for procedures and policies.) Note: SPCE 392-3 proposals must be submitted before November 1.

Studies Program In Nicaragua* (SPIN) This fall semester program is offered in cooperation with The Nehemiah Center in Managua, Nicaragua. The goal of SPIN is to immerse students in Nicaraguan life and culture, with an eye to better understanding cultural diversity and the shaping power of differing worldviews. Students will live with host families in Leon. All participants will study Spanish at their level and will take a course on Nicaraguan History and Culture.

## Studies Program In Nicaragua (SPIN) Academic Offerings

1/300 Spanish Language (at least 3 credits) Fall
Tutored development of communicative skills in Spanish at the student's own level of expertise - from beginner to advanced.
270 Cross-Cultural Explorations: Conversation, Reflection, and Travel (2)...................................................................................................................................
Living and studying each day in Nicaragua will likely bring new information, experiences, values, traditions, and ideas. This course offers the means to take time to observe and reflect on cultural differences and one's reactions and responses to new situations. Visits to significant historical, political, ecclesiastical, and cultural sites in Nicaragua provide important perspectives to the course.

271 Nicaraguan History and Culture (3) Fall
This course addresses the social, religious, political, and economic factors that continually shape Nicaragua, by focusing on pivotal historical events and the principal worldview perspectives that are at the root of current Nicaraguan culture and society. The course also examines some of the contemporary challenges facing Nicaraguan society: youth gangs, immigration, and economic globalization.

282 Service Learning (2) Fall
This course is designed to provide students with hands-on experiences serving in the Nicaraguan context that relate to their academic and/ or professional goals. Students choose from a number of site options, where they will apply their academic knowledge and skills while learning about the needs associated with a specific area of Nicaraguan society.

289 Agriculture in the Developing World (3)
This course addresses the complexities of the global food system from a Nicaraguan perspective, focusing on justice issues of land ownership and the impact of large- and small-scale farming on the land, economy, and society.

310 Worldview and Societal Transformation (3). .Fall
Latin American community development and culture are analyzed with a biblical worldview, given the context of the country itself. This course examines a variety of strategies employed by government and non-governmental organizations, including the local church, to eradicate extreme poverty in Nicaragua.

SPIN Track Options (3 credits each)

- Spanish Language Track: Options for specialized courses such as Nicaragua: The Land of Poets or Ruben Dario: Father of Modernism.
- Nicaraguan Area Studies Track: Options for specialized study in such areas as history, political science, communication, or theology/ missions.
- Agriculture Practicum Track: Options for specialized practicum experiences for agriculture students.

Semester in Kenya* The Semester in Kenya offers students the opportunity to spend a semester experiencing life in Eastern Africa. In cooperation with Daystar University, a premier Christian university in Kenya, students will take a variety of courses, enjoy practical experiences related to their area of study, and grow to understand this dynamic land as they build relationships and travel to new locations. The Semester in Kenya is available to qualified sophomores, juniors, and seniors from all majors, with unique opportunities for students in digital media production and communication.

Semester in Korea* In cooperation with Handong University, a Christian, English-speaking university, Dordt College students may spend a semester living and studying in South Korea. Students live in the international dormitory with Koreans and other international students, and may take courses from a broad array of options, including engineering, business, and the humanities. In addition to their coursework, students can get involved with a variety of groups and ministries on campus as well as travel within Korea and the surrounding region. This program is open to all qualified sophomores, juniors, and seniors.

Semester in Zambia* The Semester in Zambia offers a unique opportunity for students to experience life as a student in Africa. Students will study at Northrise University, a Christian institution in Ndola, Zambia. Choose from coursework in business, information technology, theology, or agriculture while building relationships with students in sub-Saharan Africa. This program, open to sophomores, juniors, and seniors, gives a first-hand view into the struggles and joys of life in Zambia.

## Shared Sponsorship Program

Chicago Semester Selected juniors and seniors may register for a semester of living, learning, and working in a major urban center. The Chicago Semester is co-sponsored by Calvin, Central, Dordt, Hope, Northwestern, and Trinity Christian Colleges and is a fully accredited, educational program under the supervision of Trinity Christian College. Students spend four days a week in an internship related to their academic major and career interest. They also participate in seminars one day per week. To achieve 15 hours of academic credit, students must take the internship course plus two of the three seminars offered. The Metropolitan Seminar on Ethnic and Racial Diversity can be used to meet the cross-cultural requirement. Minimum requirements are junior status and a 2.50 cumulative GPA.

## Calvin College Programs

Calvin College offers several off-campus programs that Dordt students may attend on a room-available basis. Minimum requirements are sophomore status and a 2.50 cumulative GPA.

Study in China* (STCH) Study traditional and modern China while experiencing life in its capital, Beijing, and exploring other areas of this fascinating country. Living and studying at the Capital Normal University allows for interaction with Chinese and foreign students and gives access to the National Library, sports facilities, and parks. Visit important cultural and historical sites such as the Great Wall and China's most holy mountain Taishan. Tackle the Chinese language and be immersed in Chinese history and contemporary issues. (Fall semester)

Study in Britain* (STBR) Narrow, winding streets, ancient timbered houses, and no cars - this is the center of York, the host city for Calvin's semester in Britain. The city's layers of history will be a constant source of intrigue as students study at York St. John University, located right in the heart of it all. Students live and study together as a Christian community in the midst of one of the world's busiest and most multicultural cities, York, England, with its rich history and a society markedly more "post-Christian" than North America. Students take two courses taught by the Calvin professor in residence and other courses at York St. John University. (Spring semester)

Study in France* (STFR) Live with French families in Grenoble, nestled in the French Alps, and study the French language with other foreign students from around the world. Become acquainted with the wide variety of historical, natural, and cultural forces that have shaped contemporary France by going on excursions offered by the Centre Universitaire d'Études Françaises (CUEF) and by taking classes about French history, politics, literature, and art. During free time, enjoy hiking and skiing in the mountains or travel to destinations such as Paris, Geneva, the French Riviera, or Italy. (Fall semester)

Study in Ghana* (STGH) Enter into dialogue with Ghanaians, study the history and peoples of the country, and encounter worldviews different from those prevalent in North America. The semester in Ghana program strives for understanding the emerging theological, historical, and social perspectives within Ghana and throughout sub-Saharan Africa. Reflection and discussion is encouraged on the implication of common humanity and different understandings as Christians in God's world. Live in a university residence, study the Twi language, and interact with Africans to experience a part of this rich country. (Fall semester)

Development Study in Honduras* (STHO) Study development theory and Honduran history. Live with a Honduran third-world family. Improve Spanish language skills, and visit urban squatters' camps, remote rural villages, and tropical rain forests. For added experience, excursions include trips to banana plantations, shrimp farms, and development organizations involved in health and literacy projects. At these different locations, students can talk with national leaders about Honduras' problems and future. The director leads discussions to encourage thinking and living as Christians in God's world. Wrap up the whole experience by evaluating a specific development program. (Spring semester)

Spanish Studies in Honduras* (SPHO) Become acquainted with the world of Honduras by immersion in the Spanish language and Latin American literature and culture. The Spanish Studies program provides an opportunity to be confronted with many situations that enable exploration of the meaning of faith in a third-world country. Intensive study and living with a Honduran family grants necessary skills for building relationships with people of another language and culture. An emphasis on poverty and development aids understanding the connection between North American lives and lives of the poor. (Fall semester)

Study in Hungary* (STHU) Witness the exhilarating changes of the 20th century from the vantage point of Budapest, one of Europe's most beautiful capital cities. Live and study together as a Christian academic community at the Technical University of Budapest in the midst of a society engaged in intense conversation about the formation of culture. Develop and mature by experiencing a situation different from the familiar, by learning under a variety of teaching styles, by encountering a new set of behaviors and beliefs, and by drawing from course offerings and academic expertise unavailable elsewhere. Live in a university residence in Budapest; and visit the Krakow and Auschwitz concentration camps, Transylvania (Romania), Croatia, and the Ukraine. (Fall semester)

Study in New Mexico* (STNM) Native American society in the Southwest provides an exceptional opportunity to encounter the most culturally diverse area of the United States. Through interaction with Native Americans and their rich history, art forms, life styles, culture, and stark landscape, achieve a degree of liberation from the insularity of familiar culture and forcefully challenge stereotypical patterns of thinking. Arrive at a deeper self-understanding and a greater respect for other cultures while studying at Rehoboth Christian School. (Fall semester)

Study in Spain at Universidad Nacional de Educación a Distancia in Denia, Spain* (STSP) Includes both a foundation program and an advanced program. If accepted, preparatory courses in Spanish language, grammar, and culture at Calvin during the Interim term are required. In the foundation program, earn 16 hours of credit in Spanish language. Live in Spain during the spring semester, and take four classes per day, four days per week, for 14 weeks. The classes are in Spanish grammar, conversation, reading, writing, culture, and civilization. In the advanced program, take 12 to 14 semester hours of coursework beyond Spanish 204. (Spring semester)

## Council for Christian Colleges and Universities Programs

CCCU programs are offered in the fall and spring semesters for junior and senior students with a minimum GPA of 2.75, unless otherwise noted. Participating students earn 16 credits.

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

Australia Studies Centre* (ASC) Since Spring 2004, the CCCU has partnered with the Wesley Institute for Ministry and the Arts in Sydney, Australia, to offer the Australian Studies Centre. Every student is required to take the courses Indigenous History, Culture, and Identity; and The View from Australia: Issues in Religion, Politics, Economics, and Cultural Values. Additionally, students choose from electives in theology/ministry, music, drawing/graphic design, dance and/or drama. Home stays, service learning, and travel around Australia are important components of ASC. Students also come to know the traditions of Aboriginal people during an Outback excursion and spend the last week of each semester traveling to New Zealand to meet with Maori people, explore the beautiful terrain, and compare and contrast the two cultures of their off-campus semester. ASC students receive 16 credits.

China Studies Program* (CSP) The China Studies Program enables students to engage in this large and intriguing country from the inside. While living in and experiencing Chinese civilization firsthand, students participate in seminar courses on the historical, cultural, religious, geographical, and economic realities of this strategic and populous nation. Students choose between completing a broad Chinese Studies Concentration or a Business Concentration, which includes an internship in an international business in China. In addition to the study of standard Chinese, students are given opportunities such as assisting Chinese students to learn English or working in an orphanage, allowing for one-on-one interaction. The program introduces students to the diversity of China, including Beijing, Shanghai, Xi'an, and Xiamen. This interdisciplinary, cross-cultural program enables students to deal with this increasingly important part of the world in an informed, Christ-centered way. Students earn 16-17 credits.

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

India Studies Program* (ISP) Since the fall of 2011, the CCCU has partnered with the Bishop Appasamy College of Arts and Sciences in southern India to offer the India Studies Program. The ISP is structured to provide students with immersion in a local community and broad exposure to a variety of peoples, places, and customs in India, including an extensive two-week travel portion of the program to provide students a close-up look at India's diversity. Students will participate in courses designed to provide a broad overview of the historical, religious, geographical, and economic landscape of India. Building on their basic understanding of India's past and contemporary realities, students will have opportunities to explore a variety of issues like poverty, social justice, rapid social change, and religious pluralism through the eyes and experiences of Indian Christians. Students will also be able to choose elective courses in literature, cuisine, art, or business. Ninety-hour practicum experiences may also be available in education, social work, business, or communication. Students earn 16 credits.

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

Los Angeles Film Studies Center (LAFSC) Founded in 1991, the Los Angeles Film Studies Center is designed to train students to serve in various aspects of the film industry with both professional skill and Christian integrity. Each semester, students live, learn, and work in L.A. The curriculum consists of two required seminars, Hollywood Production Workshop and Theology in Hollywood, focusing on the role of film in culture and the relationship of faith to work in this very influential industry. Students also choose one elective course from a variety of offerings in film studies, and a film industry internship provides hands-on experience. The combination of the internship and seminars allows students to explore the film industry within a Christian context from a liberal arts perspective. Students earn 16 credits: six from the internship and 10 from seminar study.

Middle East Studies Program* (MESP) This program, based in Cairo, Egypt, engages students in complex and strategic world of the modern Middle East. The interdisciplinary seminars give students the opportunity to explore the diverse religious, social, cultural, and political traditions of Middle Eastern people. In addition to seminars, students study the Arabic language and work as volunteers with various organizations in Cairo. Through travel in the region (typically Israel, Palestine, Jordan, Syria, and Turkey), students experience the diversity and dynamics of the region. MESP encourages and equips students to relate to the Muslim world in an informed, constructive, and Christ-centered manner at a time of tension and change. Students earn 16 credits.

Oxford Summer Programme (OSP) This program of the CCCU and Wycliffe Hall, Oxford, is designed for students wishing to gain a comprehensive understanding of the relationship between Christianity and the development of the West and those who wish to do specialized work under expert Oxford academics in the areas of history, religious studies, political theory, philosophy, English, and history of science. The program is structured for rising college sophomores, juniors, and seniors, graduate and seminary students, nontraditional students, teachers, and those enrolled in continuing education programs. Minimum GPA of 2.90 required.

The Scholars' Semester in Oxford* (SSO) This program, based in Oxford, England, is designed for students interested in doing intensive scholarship in this historic seat of learning. Working with academic tutors, students hone their skills and delve into the areas that interest them most. As Visiting Students of Oxford University and members of Wycliffe Hall, students have the privilege to study and learn in one of the university's historic halls. The SSO is designed for students interested in the fields of theology, biblical studies, education, science, pre-med, psychology, business, and the humanities. Applicants are generally honors and other very high-achieving students; minimum GPA of 3.50 required. Students earn 17 credits.

Uganda Studies Program* (USP) Uganda has become an economic and public health model in its region. The USP offers students the opportunity to get a personal look at the country's function and influence. Uganda Christian University (UCU) serves as the base of study for students in the USP. Set on the outskirts of the capital city, Kampala, this rapidly growing institution brings USP students together with the UCU Honours College. A variety of courses taught by local faculty in the English tutorial tradition will immerse students in a uniquely African education and present many insights into African life. Home stays, travel, service learning, and daily interaction with Honours College students form the backbone of the USP experience. Students choose either the Uganda Studies Emphasis or the Intercultural Ministry and Missions Emphasis. In addition to the foundation experiential course, students will choose from an approved selection of courses from the UCU Honours College to earn up to 16 credits.

## Other Approved Programs

Au Sable Institute of Environmental Studies The Au Sable Institute offers field-based courses at two primary campuses, one in the Great Lakes Forest near the middle of the North American Continent; the other on the Puget Sound on the edge of the Pacific ocean north of Seattle, Washington. The Institute also has a program at ECHO in North Fort Myers, Florida. There are three-week and five-week summer sessions. Courses can be applied toward meeting Dordt College graduation requirements in several majors. Au Sable courses and Dordt courses can also be used to meet requirements for certificates issued by Au Sable Institute in the following areas: naturalist, land resources analyst, water resources analyst, and environmental analyst. Au Sable fellowships and grant-in-aid are available to Dordt students. (Summer)

Creation Care Studies Program* (CCSP) A field-based education that explores Christian responsibility in a fragmented world, a world marked by poverty, hostility, environmental demise, opportunism, and social disintegration. While living in Belize, students talk with community leaders, work with non-government organizations, interact with the Belizean people, and explore the remarkable natural resources, including the second largest barrier reef in the world and the rich diversity of a tropical rainforest. A similar program is offered in the South Pacific. The semester curriculum is guided by a view that the world is an integrated web of systems and philosophies that cannot be separated from each other. (Fall and spring semesters)

Jerusalem University College* (JUC) Study for a semester at Jerusalem University College, an independent Christian institution of higher education formerly known as the Institute of Holy Land Studies. Courses in the history, geography, cultures, religions, and languages of ancient biblical times and the modern Middle East provide rich insights into the past and a meaningful cross-cultural experience. The university is located on Mount Zion, overlooking the Hinnom Valley, and serves as an extension campus for more than 100 universities, colleges, and seminaries around the world. (Fall and spring semesters)

Semester in Oman* (SIO) The Semester in Oman offers an experiential learning environment in which students can love and worship God, engage new ideas, and respond to God's call. The unique environment in Oman affords students the opportunity to build relationships with Omanis, learn about the Middle East and Islam, and to cultivate an appreciation and sensitivity to the cultural surrounding. Students who engage the Muslim world will be better equipped to join efforts for peace and understanding.

Trinity's Semester in Spain* (TSIS) A semester study program, located in Seville, Spain, offers beginning, intermediate, and advanced courses in Spanish studies. Students live with a Spanish family for the entire semester and may choose to engage in optional service-learning experiences. Two summer terms are also offered. (Fall, spring, summer)

Trinity Western University's Laurentian Leadership Center (TLLC) This program located in Ottawa, Canada, is geared toward third- and fourth-year students who plan to pursue a career in business, communications, history, international or political science. The fully accredited program includes nine hours of interdisciplinary courses and a six-hour internship in Canada's capital city. (Fall and spring semesters)

World Journalism Institute (WJI) The World Journalism Institute in Asheville, North Carolina, was established to help train a cadre of young Christians who can write well, observe keenly, and think biblically. WJI holds its journalism courses in New York City, Washington, D.C., Los Angeles, and Asheville. Drawing its faculty from the ranks of working journalists as well as academic journalists, WJI offers summer courses with two to three weeks of classroom instruction and field-based writing assignments. The WJI summer courses offer 3-4 credits. Students apply directly to WJI to participate in this program.

Special Topics Off-Campus Program In addition to the above list of approved programs, students may apply to participate in other off-campus programs to meet specifically defined learning objectives. Interested students must submit a written request that clearly indicates their learning goals and how this particular program meets these goals more effectively than any of the existing approved programs. In addition, the student's advisor and/or major department must recommend their participation in this off-campus program. The coordinator for off-campus programs and the registrar will grant approval for participation on a case-by-case basis.

## Academic Policies

Academic Standing A student is expected to maintain a minimum cumulative GPA of 2.00 to graduate. Students needing extra assistance in the form of individual tutors, study skills, time management, etc. should contact the staff of the Academic Skills Center, located in the lower level of the library. Students will be notified when they are not meeting the graduation minimum and will be expected to seek the necessary assistance. Academic standing is determined by the following:

|  | Academic Alert | Academic Probation | Academic Suspension |
| :--- | :---: | :---: | :---: |
| Total Credits Earned | Cumulative GPA is below | Cumulative GPA is below | Cumulative GPA is below |
| 0 to 24 | 2.00 | 1.60 | 1.00 |
| 24 to 54 | 2.00 | 1.80 | 1.40 |
| 54 to 84 | - | 2.00 | 1.60 |
| 84 or more | - | 2.00 | 1.80 |

Academic Alert Students who finish a semester with a cumulative GPA below the graduation requirement will be alerted to their academic status at the beginning of the following semester. Students will be informed of the support services available and encouraged to make use of them. Academic alerts may also be issued during a semester when an instructor reports that a student is in danger of failing his or her course. Academic alerts do not result in any additional restrictions of activity or loss of financial aid but are intended to inform students of their current situation so they can take action to correct it.

Academic Probation Students who finish a semester with a cumulative GPA below the specified standard will be placed on academic probation. Students are notified by letter when placed on probation. The academic standing committee will set certain requirements for a student on probation, including a minimum GPA to be attained in the following semester. A student who has been placed on academic probation and fails to meet the requirements established by the committee the following semester will be subject to academic suspension. Probation may result in the loss of athletic eligibility and certain financial aid.

Academic Suspension Students who finish a semester with a cumulative GPA below the specified standard are subject to academic suspension from the college for a period of one semester. Students suspended from the college will be notified of their suspension immediately in writing and may be given an opportunity to file a letter of appeal prior to the start of the next semester. Students filing an appeal must do so in writing to the registrar by the time indicated in the notification of suspension. The letter of appeal should explain the situation leading up to the suspension, including extraordinary circumstances such as serious illness, injury, or family crisis, and include a specific plan for correcting the problems. Students allowed to return on the basis of an appeal will be placed on academic probation as described above. Students allowed to return on appeal will be subject to suspension without appeal or dismissal if they ever fail to meet the terms established by the academic standing committee. Students who do not file a letter of appeal or whose appeal is not granted may apply for readmission after a lapse of one semester. Readmission is not automatic but is based on evidence that the circumstances leading up to the suspension have been resolved. Any student, regardless of prior academic standing, who receives less than a 1.00 GPA in any given semester is subject to academic suspension at the end of the semester.

Academic Dismissal Students who have been suspended and readmitted and who fail to meet the requirements specified by the academic standing committee will be subject to permanent academic dismissal. Any full-time student who earns no grade points in any given semester is subject to permanent academic dismissal.

Audit and Institutional Visitor Policies Full-time students may audit a course at no additional charge provided they do not go into an overload. Part-time students and students who will go into an overload may audit courses at the overload tuition rate. Students auditing a class are expected to attend lectures, do the readings, and participate in all in-class activities, and may participate in other activities. No credit will be given for audits, but an official record with grade of AU will be recorded for audited courses.

On a space-available basis, members of the community are welcome to visit classes at the visitor rate. Registration is subject to approval by the course instructor and registrar, and no official academic record will be kept. A maximum of one course per semester may be visited; applied courses (such as music lessons and ensembles or labs) may not be visited.

Class Attendance All students are expected to attend all class and laboratory periods. Penalties for absence are left to the individual instructors. The instructor may lower a student's grade if there have been excessive unexcused absences. No allowed number of skips is permitted.

Credits All credit at Dordt College is given in semester hours and, unless noted differently in the course description, will count toward graduation. Each semester hour requires one period per week of class work and approximately two hours per week of preparation.

Dropping Courses Changes in registration must be completed during the add/drop period (within one week after the opening of a fall or spring semester, within the first three days of a summer session). Courses dropped during the add/drop period do not appear on the student's transcript. After the add/drop period, a student may withdraw from a course with permission of the instructor and registrar until the two-thirds point of the semester is reached. Withdrawn courses appear on a transcript with a grade of W. All courses dropped after the two-thirds point of the semester will be recorded as F.

Enrollment in Other Schools Students who are enrolled at Dordt College will not be permitted to take work for academic credit in the same semester in other schools without permission from the registrar. In no case will students be permitted to carry an academic load greater than that stated in the catalog. The registrar must approve in advance all courses taken at other institutions.

Dordt College does not offer undergraduate correspondence courses. However, if students plan to enroll in a correspondence course offered by another college or university, they must have the course approved by the Office of the Registrar in advance.

Grade Point Average Students must have a minimum cumulative GPA of 2.00 in courses taken at Dordt College to meet graduation requirements. The GPA is determined by dividing the total number of grade points by the total number of hours attempted.

A grade of F in a course will be computed in the student's GPA (this refers to both regular courses and pass/fail courses); a student who withdraws from a course prior to the expiration of 10 weeks will not have the $W$ computed in his/her GPA.

Grade Reports First semester mid-term grades are reported to new students. These are not part of the permanent record but serve as an indicator of student progress. Mid-term grades are obtained from the student's advisor. Final grades are released by the Registrar's Office as soon as possible after the close of each semester.

Grading System The following grading system is in effect at Dordt College:

| Grade | Points Per Hour | Description |
| :--- | :--- | :--- |
| A | 4.00 | Exceptional |
| A- | 3.67 |  |
| B + | 3.33 | Good |
| B | 3.00 |  |
| B- | 2.67 |  |
| C+ | 2.33 |  |
| C | 2.00 | Graduation level |
| C- | 1.67 |  |
| D + | 1.33 | Unsatisfactory |
| D | 1.00 |  |
| D- | 0.67 | Pailure |
| F | 0 | Withdrawn |
| P | 0 | Audit |
| W | 0 |  |
| WM | 0 | Withdrawn - Medical Withdrawal |
| AU | 0 |  |

Graduation Students must make application for graduation the semester prior to their graduation. Commencement exercises are held only at the end of the spring semester. In order to participate in the commencement exercises, the student must have completed all coursework for the degree. Requests for exceptions must be brought to the curriculum and academic policies committee via the registrar prior to February 1. There are no exceptions for the A.A. degree.

Individual Studies Courses Individual Studies 391, 392, and 393 courses are offered by many departments to provide properly qualified students the opportunity to do intensive work in a subject not normally included in the regular course offerings, or to pursue in depth a topic encountered as part of previous studies, or to engage in experiential education projects. The individual studies courses allow for greater flexibility of program as well as greater responsibility for the student in the learning process. Options within the individual studies concept include research, practicum, independent study, service-learning, readings, and performance. It is understood that the responsibility for learning will be on the student-it is not a tutorial program.

Students who wish to enroll in an individual studies course must complete a course proposal form that may be obtained from the Registrar's Office. In the written proposal the student will describe in some detail the object or goal of the study, the procedures to be followed, the materials to be used, a projected product or outcome, and the method of evaluation. The faculty project supervisor must sign the proposal. Completed proposals must be returned to the registrar for approval by the deadline for adding courses.

If a proposed individual studies project is interdepartmental or falls within a department that does not have an individual studies option, the student may consult the registrar for permission to register for Individual Studies 391, 392, or 393. (See page 39 for individual studies policies.)

Official Transcripts Requests for transcripts should be submitted well in advance of the time they are required by the student. Transcripts will not be made during the week of registration or at the time semester grades and reports are being processed. A transcript will be released only if all accounts have been settled with the college. Transcripts are released only with the written permission of the student. Transcripts will not be sent to employers or other agencies without the permission of the student. Dordt College recognizes and desires to protect student rights of privacy, rights of access to educational data, and the right of challenging the contents of records for inaccurate or misleading information. Most records pertaining to the education of an enrolled student are open to the student upon request. Records may be released to specified persons by written consent of the student. College policies for the privacy rights of students and parents are in compliance with the Family Educational Rights and Privacy Act of 1974. Inquiries concerning compliance should be directed to the provost.

Participation in the Assessment Program Dordt College has a comprehensive assessment program to evaluate student learning. Assessment activities are an important part of the total educational program. They are scheduled into the academic calendar and embedded in academic programs. The various facets of assessment involve academic skills, programs, and majors, and the educational goals of the Core Program. Dordt College and its faculty are dedicated to evaluating the quality and effectiveness of all facets of its educational program. The purpose of assessment is to help make improvements in curriculum, student learning, and teaching.

Students will be required to participate in assessment activities. Baseline data will be collected at the freshman level, and additional assessment will occur throughout the student's academic career. The number and type of assessment activities may vary from student to student.

Pass/Fail Option Sophomores, juniors, and seniors have the option of selecting elective courses on a pass/fail (P/F) basis. The pass/fail option was adopted to provide flexibility in program planning and to encourage students to explore many interests outside of their normal program without the worry of overload or about the effect of the grade on their GPA. The following polices govern pass/fail courses:

1. A maximum of 15 credits of $\mathrm{P} / \mathrm{F}$ work will apply to the 124 credits required for a bachelor's degree; a maximum of 8 credits of $\mathrm{P} / \mathrm{F}$ work will apply to the 60 credits required for an associate's degree.
2. Students successfully completing a $P / F$ course will have a grade of $P$ recorded on their transcript. They will receive credit for the course, but no grade points. Thus, a grade of P will have no effect on the student's GPA.
3. Students failing a $\mathrm{P} / \mathrm{F}$ course will have a grade of F recorded on their transcript. This F will be calculated the same way as an F under the normal grading system. Thus, a failing grade in a $\mathrm{P} / \mathrm{F}$ course will affect the student's GPA.
4. Students taking a course $P / F$ are expected to fully participate in the course. Instructors are not explicitly notified of the students taking the course pass/fail, but that information is available to them upon request.
5. Students who receive a $P$ in a $P / F$ course may not repeat the course on a graded basis.
6. Only elective courses may be taken $\mathrm{P} / \mathrm{F}$. Courses required for a student's Core Program, major, or minor may not be taken $\mathrm{P} / \mathrm{F}$.
7. Departments have the prerogative to identify courses that should not be $\mathrm{P} / \mathrm{F}$.
8. Changes from A-F to P/F grading and from P/F to A-F grading may be made on forms supplied by the Registrar's Office as follows:

- P/F to A-F grading - any time prior to the last full week of classes
- A-F to P/F grading - any time during the first two weeks of the semester

9. Students must petition the Registrar's Office to have a course revert to the original grade earned when, due to a change in major, a course previously taken $\mathrm{P} / \mathrm{F}$ becomes part of the student's major.

Repeating Courses Any course with a grade of B- or lower may be repeated. The original grade remains on the transcript with a reference to the repeated course. Only the last instance of the course on the transcript is factored into the cumulative GPA.

Residence Requirement A minimum of eight semesters of full-time college study is required for the bachelor's degree and four semesters for the associate's degree. A maximum of eight credits (half of a typical full-time semester) of overload work will be applied toward the residence requirement (see page 40, Student Load). Requests for an accelerated program are based upon equivalent residency for approved transfer or summer study and must be submitted to the registrar at least one year prior to graduation.

A minimum of 30 credits shall be earned in residence at Dordt College. A minimum of six credits from upper-level courses in the major and nine credits from the Core Program curriculum must be completed in residence at Dordt College. If only 30 credits are earned at Dordt College, the credits normally shall be earned in full-time residence during the final academic year. The curriculum and academic policies committee may grant nontraditional students exception to the full-time residency requirement.

Under normal circumstances, the final 30 credits toward the Dordt College degree shall be completed at Dordt College or in an off-campus program sponsored by Dordt College. Students may request special permission from the registrar to complete final credits at another college. Up to 30 credits may be granted if a minimum of 90 Dordt College credits has been completed; up to 15 credits may be granted if a minimum of 60 Dordt College credits has been completed. These credits normally are taken at four-year colleges or universities. Permission is not automatic but is contingent upon the rationale of the request. A maximum of 12 of the final 30 credits or six of the final 15 credits earned off campus may be applied to the student's major requirements with written approval from the major department. Appeals may be submitted to the curriculum and academic policies committee.

Service-Learning Courses Service-Learning 281, 282, and 283 courses may be directly connected to courses in and across departments, or students may choose to participate independently in service activities with a select community organization under the supervision of a faculty/staff member. Service-Learning courses allow for greater flexibility of program as well as greater responsibility for the student in the learning process.

Service-Learning is an educational method and experience:

- through which students learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs
- that is integrated into the student's academic curriculum or provides structured time for a student to think, talk, or write about what the student did and saw during the service activity
- that provides students with opportunities to use newly acquired skills and knowledge in real-life, problem-solving situations in the community
- that enhances student learning beyond the classroom and fosters a clearer sense of servanthood and living as kingdom citizens.

Students who wish to enroll in a service-learning course must complete a course proposal form obtained from the Registrar's Office. In the written proposal, the student will describe in detail the community setting for the project, the student's learning goals, the service activities provided, the plan for reflection activities, and the method of evaluation. The faculty project supervisor must sign the proposal. Completed proposals must be returned to the coordinator of community-based learning and the registrar for approval by the deadline for adding courses.

If a proposed service-learning is interdepartmental or falls within a department without an individual studies option, the student may consult the registrar for permission to register for individual studies.

Individual studies courses and service-learning courses are governed by the following policies:

1. They may have $1-3$ credits as follows: 281 and 391, one credit; 282 and 392, two credits; and 283 and 393, three credits.
2. Individual Studies: Second semester freshmen and sophomores may take 391 courses; juniors and seniors 391, 392, and 393 courses. The registrar may grant exceptions.
Service-Learning: First semester freshmen may take 281 courses; second semester freshmen, sophomores, juniors and seniors may take 281, 282, and 283 courses (the registrar may grant exceptions).
3. A student must have a minimum 2.00 cumulative GPA to enroll in 281 and 391 ; and 2.25 for 282, 283, 392, and 393.
4. A maximum of nine individual studies/service-learning credits may be applied to the B.A. degree; a maximum of four credits to the A.A. degree.
5. Students may enroll in a course more than once. For example, a student may enroll in Business Administration 391 or 392 or 393 more than once. Not more than four individual studies/service-learning credits may be taken in a semester.
6. Normally, an individual studies/service-learning course should be completed in the semester of enrollment, but with advance notice, the course may be spread over the first and second semesters of the year. Register for the course only in the semester that the course will be completed.
7. Individual studies courses 392 and 393 and service-learning courses 282 and 283 are open to students who have had extensive previous course-work in the department.

Student Classification Classification is made at the end of every semester and is determined by the number of credits successfully earned:

Sophomore ......... 24 credits
Junior ................. 54 credits
Senior................. 84 credits
Student Load Since 124 credits are required for bachelor's degrees and 60 credits are required for associate's degrees, students who plan to complete these degrees in the standard amount of time must average 15 to 16 credits per semester. Students must be enrolled in a minimum of 12 credits per semester to be considered full-time. Students registering for more than 15 credits should consult their academic advisor.

The following policies, monitored by the registrar, govern the maximum student load:

1. The normal maximum student load for all students is 18.5 credits.
2. First semester freshmen admitted with a high school GPA below 2.25 or a composite ACT score below 19 (SAT I score below 920) are limited to 14 credits.
3. Second semester freshmen, sophomores, juniors, and seniors with a college GPA of 3.00 or better may register for an overload with the permission of their academic advisor and the registrar. Only under rare circumstances will a student be allowed to register for 22 or more credits.
4. No more than a total of eight credits earned in excess of 16 credits per semester will be applied to the residence requirement.

Withdrawal From School A full-time student who wishes to withdraw from school must obtain the necessary withdrawal form from the Student Services Office. The form must be signed by representatives from the Student Services, Financial Aid, Registrar, and Business Offices. Refunds are based upon the date of approval. Students who withdraw before the end of the semester will receive a grade of W in each course. Students who withdraw without obtaining signatures on the withdrawal form and turning it in to the Business Office will receive a letter grade of F for all courses. Part-time students must notify the registrar of their withdrawal. Be advised that withdrawing may affect your financial aid.

## Academic Offerings

This section contains descriptions of programs, majors, minors, areas of concentration, fields of specialization, and courses. Semesters following course titles indicate when each course is normally offered. On rare occasions, a course may not be available when indicated because of low enrollment or unexpected staffing changes.

Courses listed as Fall Odd and Spring Even are scheduled to be offered during the 2015-16 academic year. i.e., fall 2015-16 is Fall Odd, spring 201516 is Spring Even.

## Accounting

| General Major- | Business Administration 100, 201, 202, 301, 302, 305, 310, 311, 312, 313, 314, 315, 316, 320, 351; one elective course in <br> business administration; Economics 202, 203; one elective course in economics; Statistics 131. |
| :--- | :--- |
| General Minor- | Business Administration 201, 202, 310, 311, 313; Business Administration 307 or 316. |

## Actuarial Science

General Major- Mathematics 152, 153, 201; Statistics 131 or 132, 148, 202, 215, 216, 218, 351, 352; Economics 202, 203; Business Administration 201, 305, 325, 326; Computer Science 111; one course from Business Administration 327, Computer Science 211, English 305 (all three courses are strongly recommended).

General Minor- $\quad$ Mathematics 151 or 152; Statistics 148, 215, 216, 218.
Students must complete two of the following three tracks (Society of Actuaries Certified Validation by Education Experience Tracks):
A. Statistics 131 or 132, 202.
B. Economics 202, 203.
C. Business Administration 305, 325. (Note: Business Administration 201 is a prerequisite for Business Administration 325.)

## Agriculture

The objectives of the course requirements in agriculture, and the other majors as well, are to enable students to develop a basic understanding of the discipline, to learn skills that will equip them to serve in God's kingdom in this area, and to prepare them for future learning experiences.

General Major- $\quad$ Foundation (common to all emphases): Agriculture 101, 105, 111, 290, 361, 370, 380, 381.
Students must select one of the following emphases:
Agri-business: Foundation; Chemistry 101 or 111; Agriculture 221, 312, 321; one course from Agriculture 201, 232, 233, 234, 235, 238, 251, 255; Business Administration 201, 202, 205, 206; Economics 202, 203; business administration or economics elective 200 level or above. Agriculture 373 recommended.

Animal Science: Foundation; Chemistry 101, 122 or *Chemistry 111, 225; Biology 125, *302, 324; Agriculture 221, 232, 234, 291; one course from Agriculture 233, 235, 238; two courses from Agriculture 331, 332, 334, 336. Agriculture 321 and 373 recommended. *Those considering graduate school should take Biology 310 instead of Biology 302 and Chemistry 111, 225 instead of Chemistry 101, 122. Pre-vet students should take Biology 310 instead of Biology 302 and Chemistry 111, 212, 225.

Biotechnology: Foundation; Chemistry 111, 225, 261, 321 or 322, 323, 361; Biology 125, 310, 324, 335; three credits from Agriculture 201, $232,234,291,315,316,332,334$, Biology 319. Students in the biotechnology emphasis must have a biotechnology component in Agriculture 361 and may substitute Agriculture 373 for Agriculture 380 and 381 in the foundation requirements.

General: Foundation; Chemistry 101, 122 or *Chemistry 111, 225; Agriculture 201, 221, 232; six credits from Agriculture 233, 234, $235,238,291,331,332,334,336$, Biology 302, 324; six credits from Agriculture 251, 255, 311, 315, 316, 350, Biology 125, 215, 319. Agriculture 321 and 373 recommended. *Those considering graduate school should take Chemistry 111, 225 instead of Chemistry 101, 122.

| Missions: | Foundation; Chemistry 101 or 111; Agriculture 221; nine credits from Agriculture 201, 232, 233, 234, 235, 238, 251, 255, <br> 311, 350, BY 291 Sustainable Tropical Agriculture (Gordon College); Theology 231, 331, 332; Theology 322 or 323; one <br> course from Theology 211-217; CORE 270 or one course from CORE 281-286 or participation in an off-campus program. <br> The department encourages students to consider a community development minor. |
| :--- | :--- |
| Plant Science: | Foundation; Chemistry 101, 122 or *Chemistry 111, 225; Biology 125, 319, 324; Agriculture 201, 221, 311; Agriculture <br> 251 or 255; Agriculture 315 or 316; one course from Agriculture 341-350. Agriculture 321 and 373 recommended. *Those <br> considering graduate school should take Chemistry 111, 225 instead of Chemistry 101, 122. |

General Minor- $\quad$ Agriculture 101, 105, 111, 221, 290; Chemistry 101 or 111; CORE 266 or Economics 202.
Associate of Arts Degree Options Area of Concentration (Associate of Arts in Agriculture)
See the "Academic Program" section for the Core Program for all A.A. programs (pages 21-22).
Agriculture 101, 105, 111, 221, 290; Agriculture 201 or 232; three elective credits of agriculture; Chemistry 101 or 111; CORE 266 or Economics 202; CORE 200 (fulfills Core Program distribution elective).

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

## 101 Biology, Care, and Production of Domestic Animals (4) ................................................................................................................Spring

History, management, physiology, breeding, lactation, feeding, health, and products of cattle, swine, sheep, poultry, companion animals, and other species as they relate to humans and the creation. Three lectures and one three-hour laboratory period per week.

105 Orientation and Agricultural Safety (1.5)
Fall, Spring
Classroom discussion, lecture, and practical experience are used to familiarize the students with the Agriculture Department, Agricultural Stewardship Center (ASC), and the greenhouse to develop understanding and competency in operating equipment at the ASC and classroom labs. Students will receive instruction in agricultural safety to develop an understanding and competency in the areas of current agricultural production practices and safety procedures. Students will be certified in CPR and complete first aid training. The course meets for seven weeks. Two lectures and one three-hour laboratory per week.

106 Agricultural Operation and Experience (1.5). Fall, Spring Designed to give students the opportunity to develop additional skills and proficiencies in agricultural operations. Prior permission from the instructor(s) is required for enrollment. Prerequisite: Agriculture 105.

111 Introduction to Plant Science (4) Fall
Students will study plants, their care and use within agroecosystems, as well as their role in creation. Students will be introduced to how agriculture both influences and is influenced by human cultural development, how humankind's understanding of stewardship influences creation care, and how plants serve as sources of food, fiber, fuel, and fascination. Plant biology concepts including plant structure and function, growth, development and reproduction, and plant/environment interactions will be introduced. The course will demonstrate how these biotic and environmental factors integrate with plant biotechnology, crop breeding and propagation, protection, cropping systems, and crop economics and utilization. Three lectures and one three-hour laboratory per week.

201 Nature and Properties of Soils (3) .Spring
A comprehensive introduction to the field of soil science with an emphasis on scientific principles and their application in solutions to practical soil management problems. Two lectures and one three-hour laboratory per week. Prerequisites: Agriculture 111 or Biology 215; Chemistry 101 or 111.

221 Introduction to Farm Management and Accounting (3) $\qquad$ .Spring The study of decision-making in the operation of an agricultural business using financial information and other criteria. Topics include current agricultural policy, goal setting, planning, organization of the farm business, systems management, record keeping, budgeting, balance sheets, income statements, cash flow statements, investment analysis, tax planning, and risk analysis. Two lectures and one three-hour laboratory per week. Prerequisite: CORE 266 or Economics 202.

232 Feeds and Feeding (3) Fall
The evaluation, composition, and values of feedstuffs as they relate to animal nutrient requirements will be considered. The basics of ration formulation and feeding management will be covered for the major livestock species. Two lectures and one three-hour laboratory per week. Prerequisites: Agriculture 101; Chemistry 101 or 111.

233 Principles of Dairy Science (3). Spring Even Dairy reproduction, physiology, lactation, breeding, nutrition, and genetics will be discussed with an emphasis on scientific principles and their application to dairy science. Two lectures and one three-hour laboratory period per week. Prerequisites: Agriculture 101; Chemistry 101 or 111. Agriculture 232 recommended.

Animal care and facility sanitation will be discussed, focusing on care, disease prevention, disease detection, animal treatment, pharmacology, and health programs. Three lectures per week. Prerequisites: Agriculture 101, 232; Chemistry 101 or 111. Biology 302 or 310 recommended.

235 Principles of Swine Science (3) ...................................................................................................................................................Fall Even
A study of swine care and management, physiology, diseases, equipment, reproduction, and nutrition. Two lectures and one three-hour laboratory per week. Prerequisites: Agriculture 101; Chemistry 101 or 111. Agriculture 232 recommended.

238 Beef and Sheep Science (3).
Fall Odd
A study of beef and sheep management, production, physiology, nutrition, reproduction, diseases, equipment, facilities, and care. Two lectures and one three-hour laboratory per week. Prerequisites: Agriculture 101; Chemistry 101 or 111. Agriculture 232 recommended.

251 Horticultural Plants (3) .Spring
The study of greenhouse, vegetable, and ornamental plants. The aesthetics, culture, physiology, and propagation of horticultural plants will be examined. Two lectures and one three-hour laboratory per week. Prerequisite: Agriculture 111 or Biology 215.

252 Planning Agriculture Education Programs (3)
Occasional
This course will cover the responsibilities of an agricultural education teacher, curriculum development, experiential learning opportunities including FFA and SAE, and assessment and maintenance of program quality. The course will emphasize the development of a distinctively Christian approach to teaching agricultural education. Students participate in an extensive, 40 -clock hour, practicum experience in a local agriculture classroom, prepare a CDE team, and analyze and prepare components of a complete agriculture education program. Prerequisite: admission to the Teacher Preparation Program; or permission of instructor.

255 Forage Crop Management (3)
Fall Even
The production and management of crops for livestock feed are considered, and the establishment, growth, harvesting, preservation, and quality of these crops are examined. Primary emphasis is given to the value of major temperate region grasses and legumes as livestock feed, and the energy, protein, and other nutritional components they supply. The identification of common and alternative forage species is an important component of the course. Two lectures and one three-hour laboratory per week. Prerequisites: Agriculture 101, 111.

281- Service-Learning (1-3).................................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies

290 Perspectives on Agricultural Economics, History, and Policy (3).
Fall, Spring The historical changes in food production, management, and processing systems are examined, and the impacts of past philosophies, religions, and worldviews on contemporary agricultural systems are discussed. Domestic and international agricultural policy is also studied. Several views on these topics are examined, and a Reformed perspective is developed. Two lectures and a one-hour small group discussion period per week. Prerequisites: CORE 140; sophomore standing. CORE 266, Economics 202 or Political Science 201 recommended.

291 Anatomy and Physiology of Animals (4) $\qquad$ Fall Even
The structures and functions of the major body systems will be studied as they work together in the life processes of an animal. The nervous, skeletal, muscle, circulatory, endocrine, digestive, and reproductive systems will be examined. Three lectures and one three-hour laboratory per week. Prerequisites: Agriculture 101 or Biology 125; Chemistry 122 or 212.

302 Methods of Teaching Agricultural Mechanics (3) $\qquad$ Occasional Students will practice methods and management techniques in agricultural mechanics laboratories. Emphasis will be on safety, mechanical skills development, and management of students, facilities, equipment, and materials. Students participate in an extensive, 60 -clock hour, practicum experience in a local agriculture classroom and laboratory to practice skills necessary to successfully teach agricultural mechanics. Prerequisite: admission to the Teacher Preparation Program; or permission of instructor.

303 Geographic Information Systems and Surveying (4).
Fall Even
An introduction to the acquisition, analysis, display, manipulation, and management of geographic information. Course topics will include geographical data input, storage, maintenance, analysis, and retrieval. Students will utilize common GIS software and associated hardware. An overview of survey methods used to gather and quantify features of physical geography will be included. The course will meet in two studio lab classes to provide an integral learn-by-doing experience applying GPS technology, survey methods, and GIS applications. Application of GIS to agriculture, business, environmental management, and other disciplines will be provided in this course. Prerequisite: sophomore standing or above. [Cross-listed: Business Administration 303, Construction Management 207, Environmental Studies 303]

311 Soil Fertility (3)
Spring Even
An integrated discussion of soil-crop yields relationships with emphasis on the soil as a source of mineral nutrients for crops and the role of fertilizers and manure in crop production. Three lectures per week. Prerequisites: Agriculture 111, 201; Chemistry 101 or 111.

312 Marketing of Agricultural Products (3) Fall
An analysis of agricultural marketing systems, factors determining agricultural prices, and farmer marketing management. Topics include setting marketing goals, government price institutions, contract and futures markets, and marketing under risk and uncertainty. Three lectures per week. Prerequisite: Agriculture 221 or Business Administration 205, 206.

315 Entomology and Pest Management (3)
Fall Odd
An introduction to entomology and insect-pest management including insect biology, taxonomy, ecology, life cycles, and integrated pest management. Three lectures per week. Prerequisites: Agriculture 111 or Biology 215; Chemistry 101 or 111; junior standing.

316 Plant Protection - Weed Science and Plant Pathology (3)

## (3) ..

 ..Spring OddA study of the major weed and plant pathology principles and theories and their application to the field of pest management. The course will include identification, physiology, ecology, life cycles, and stewardly management practices for important pest species. Prerequisites: Agriculture 111 or Biology 215; Chemistry 101 or 111 ; junior standing.

321 Advanced Farm Management (3) Fall
Christian concepts of stewardship and justice in agriculture, advanced planning techniques, investment analysis, agricultural finance, decision-making under risk and uncertainty, intergenerational transfer of the family business, governmental regulation and promotion of agriculture. Three lectures per week. Prerequisites: Agriculture 221 or Business Administration 100; Business Administration 201, 205; CORE 266 or Economics 202.

331 Reproductive Physiology (1.5). ..Spring Even
A study of the principles of reproductive physiology and lactation focusing on the major classes of livestock. Students will use these principles to develop an understanding of reproductive management techniques and will examine the ethics of reproductive technologies. Two lectures and one three-hour laboratory per week for seven weeks. Prerequisites: Agriculture 291; Chemistry 101 or 111.

332 Advanced Animal Nutrition (1.5).
.Spring Odd
A problem-solving approach will be taken to examine the nutrient requirements of animals in different production systems. Methods that can be used to meet those requirements will be evaluated. Ration formulation will be discussed as it relates to the different digestive systems and production requirements. Two lectures and one three-hour laboratory per week for seven weeks. Prerequisites: Agriculture 232; Chemistry 122.

334 Applied Animal Breeding (1.5)
.Spring Even
Quantitative genetic principles will be applied to livestock production systems. Improvement programs utilizing selection practices and mating systems will be discussed. Two lectures and one three-hour laboratory per week for seven weeks. Prerequisites: Agriculture 101; Chemistry 101 or 111. Biology 324 recommended.

336 Meat Science (1.5). ...Spring Odd
The processes of converting muscle tissue into meat and factors affecting meat quality will be studied. The role of the producer, packer, USDA, and consumer in quality and safety issues will be examined. Two lectures and one three-hour laboratory per week for seven weeks. Prerequisites: Agriculture 101; Chemistry 101 or 111.

337 ECHO Agricultural Conference (1). .Spring
Participation in the major agricultural development conference held in December in Fort Myers, Florida. The Educational Concerns Hunger Organization hosts this international conference, which focuses on agricultural development, cross-cultural issues, and community development. Prerequisite: sophomore standing. [Cross-listed: Theology 337]

341- Special Topics (3) .Occasional
348 Courses vary from year to year and are designed to meet special student interests and utilize staff strengths and the talents of experts in the community. Each course covers material not usually treated in regularly scheduled courses.

350 Field Crop Production and Management (3). Fall
Grain and forage production in the North Central Region of the U.S. is investigated using lectures, group projects, field trips, and production and research experiences at the ASC. The role of grains in world food production is examined, and students are challenged to find solutions to the problems frequently associated with grain production. Students collect and analyze field crop data and explore sustainable crop production methods and systems. The investigation of new and innovative crop production strategies is an important component of the course. Two lectures and one three-hour laboratory per week. Prerequisites: Agriculture 105, 111, 221; one course from Agriculture 201, 251, 255, 311, 315, 316.

361 Agriculture Senior Seminar (3). $\qquad$ .Spring
An integration of departmental courses, research, and analysis of current topics with emphasis on Christian perspective for persons involved in agriculture. Issues will include government policies, world hunger, the family farm, meat production, and others. Three lectures per week. Prerequisites: CORE 200; junior or senior standing in the agriculture department; or permission of instructor. [Cross-listed: CORE 311]

Agroecology (3)
An introduction to the principles of agricultural ecology with an emphasis on Christian stewardship of God's world. Topics include the development and characteristics of agroecosystems, ecological disturbance and succession, diversity, pest management, nutrient cycling, environmental quality, energy use, climate change, social capital, conservation practices, and global food production. The interaction of agroecosystems with surrounding ecosystems is studied, and the utilization of ecological principles in agroecosystem design and management are examined. Two lectures and one three-hour laboratory per week. Prerequisites: Agriculture 101, 111 or Biology 122, 125, 215; Chemistry 101 or 111 ; junior or senior standing.

373 Internship (1-3)
Fall, Spring, Summer
Students are given the opportunity to apply the principles of agriculture and business in an off-campus assignment. Prerequisite: sophomore, junior or senior standing.

380 Directed Study-Class Component (.5) Fall, Spring Students will receive instruction and guidance for the development of a group agriculture capstone project. Student groups will identify a relevant problem, review background information, develop a project with an advisor, and gain its approval prior to implementation. A Capstone Agriculture Project Handbook will provide guidance for project expectations. Graded on a pass/no record basis. Prerequisites: Agriculture 101, 105, 111; Agriculture 290 or 370; junior or senior standing.

381 Directed Study-Project Component (3)
Arranged A continuation of Agriculture 380. The student groups will implement an approved capstone project, report the results of the project in writing, and give a public oral presentation of their work. A Capstone Agriculture Project Handbook will provide guidance for project expectations. Prerequisite: Agriculture 380.

391- Individual Studies (1-3) $\qquad$ Fall, Spring, Summer
See page 113, Individual Studies

## American Studies

General Minor- History 201; Art 209; one course from English 201, 202, 203, 321; one course outside the student's major discipline from Economics 309, Political Science 202, 322, Social Work 216; two additional courses outside the student's major discipline from English 201, 202, 203, 321, History 301, 306, 307, 308, Economics 309, Political Science 202, 322, Social Work 216.

## Applied Science and Technology

The Applied Science and Technology major is a cooperative arrangement with Northwest Iowa Community College (NCC). Students who have completed programs at NCC leading to an Associate of Applied Science degree in Computerized Manufacturing Technology, Electrical Technology, Industrial Instrumentation and Control, or the former NCC program in Manufacturing Engineering Technology, may enroll in the Applied Science and Technology program at Dordt College to obtain a Bachelor of Arts degree in Applied Science and Technology. (The Applied Science and Technology major has not been examined nor accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.)

General Major- Foundation (common to all emphases): The Dordt College Core Program requirements; Mathematics 151 or 152; Engineering 112, 114, 115, 116, 117, 310; Applied Science and Technology 279, 280.

Students must select one of the following emphases:

| Computerized Manufacturing: | Foundation; Computer Science 131, 145; Engineering 204; Physics 215 or Chemistry 101; Physics 216 <br> or Environmental Studies 151. |
| :--- | :--- |
| Electrical Technology: | Foundation; Chemistry 101; Computer Science 111; Engineering 202; Environmental Studies 151. |
| Industrial Instrumentation and Control: | Foundation; Physics 215 or Chemistry 101; Physics 216 or Environmental Studies 151; two technical <br> electives chosen with the approval of an engineering advisor. |
| Manufacturing Engineering: | Foundation; Chemistry 101; Computer Science 111; Engineering 202, 204; Environmental Studies 151. |

## 271 Applied Science and Technology Internship (3)

$\qquad$ Fall, Spring, Summer
An off-campus experience that is intended to provide the applied science and technology major with the opportunity to apply knowledge, principles, and skills gained in the classroom in an applied science and technology workplace environment. Written and oral summary
reports by participants bring reflection on the technical experience into subsequent classes. Graded on a pass/fail basis. Prerequisites: completion of Engineering 114, 115, 116, 117 and an Associate of Applied Science degree.


#### Abstract

279 Senior Design I (1) Fall The first of two project courses providing students with the opportunity to use, in an integrated manner, the knowledge and skills that have been acquired to this point in their education. This laboratory course is devoted entirely to the research, planning, analysis, and report writing required in the first phase of the senior design project. Students work in teams of two or three on a project of their mutual interest. Prerequisites: completion of Engineering 114, 115, 116, 117 and an Associate of Applied Science degree. (Applied Science and Technology 279 and Engineering 379 meet together.)

280 Senior Design II (4) Spring The second course devoted to senior design project activities. In-class topics will include general topics relating to engineering design such as engineering economics, technical writing, design aesthetics, project planning, engineering statistics, technical literature research, safety, ergonomics, and practical finite element analysis. The lab portion of the course requires students to complete the design, experimentation, analysis, and communication components of their project. Work on the project, while culminating in this course, starts in Applied Science and Technology 279 the previous semester. Teams confer weekly with members of the engineering department staff. Prerequisite: Applied Science and Technology 279. (Applied Science and Technology 280 and Engineering 380 meet together.)


Art

General Major- Art History: Art 201, 202, 207, 208, 209, 210, 216, 370; two courses from Art 218, 225, 228, 230, 240; two courses from Art 302, 316, 318, 325, 328, 330, 340.

Fine Arts Studio: Art 201, 202, 209, 216, 302, 370; two courses from Art 207, 208, 210; two courses from Art 218, 225, 228, 230, 240; two courses from Art 316, 318, 325, 328, 330, 340; one course from Art 295, 352, 366, 368, 375, 378, 380, 390; Philosophy 206.

Graphic Design: Art 201, 202, 209, 228, 230, 240, 250, 295, 340, 370, 390; Art 225 or 302; Business Administration 206.
Pre-architectural Design: Art 201, 202, 207, 208, 209, 240, 340, 370, 390; three courses from Art 225, 228, 230, 295, 302; Business Administration 206; Chemistry 109 or 111; Environmental Studies 151, 152; Mathematics 151 or 152; Physics 201 or 215; Construction Management 101, 102; Engineering 310, 390; a minimum of nine credits from Construction Management 207, 213, 214, 220, 240, 270, 280, 318, Engineering 112, 114, 115, 116, 117, 202.

General Minor- Art 201, 202; two courses from Art 207, 208, 209, 210; two courses from Art 216, 218, 225, 228, 230, 240; one course from Art 302, 316, 318, 325, 328, 330, 340.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

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201 Design Theory (3).
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Manipulation of two-dimensional design through the use of the basic art elements: line, shape, value, color, texture, and space. The course
``` is intended to develop a visual vocabulary and an imaginative approach to design. Required of all art majors and minors.

202 Drawing I (3)
Fall, Spring
Acquiring the basic skills of drawing through an objective investigation of reality. Common media and tools are used. Required of all art majors and minors.

207 Art History: Ancient and Medieval (3)
Fall Odd This course is the first of a three-semester survey of the history of the visual arts. It investigates the role of the visual arts in the historical and cultural development of world civilization between prehistory and the 14th century.

208 Art History: 14th to 19th Centuries (3).
Spring Even This course is the second of a three-semester survey of the history of art. It covers the history of architecture, painting, and sculpture from the 14th century through the 19th century.

209 Art History: Contemporary Art and Architecture (3). Fall Even This is the third course in a historical survey of art and architecture. The course will begin with the foundations of modernism in the last half of the 19th century and then cover the plurality of styles in the 20th century.

210 Non-Western Art History (3)
.Spring Odd
This course studies non-European art and culture including Islamic, Japanese, and Chinese art.
211 Teaching Art in the Elementary School (3). ..... Fall
A course for art majors and minors designed to provide a detailed study of methods, materials, and techniques of art education in theelementary school.
216 Sculpture I (3) ..... Spring
An introductory course emphasizing 3-D design and utilizing a variety of materials including clay, wood, plaster, stone, and mixed media.
218 Ceramics I (3) ..... Fall
An introduction to clay and the basic process of slab, pinch, coil, and wheel-thrown constructions. Class size is limited.
225 Painting I (3) ..... Fall
An introduction to painting, emphasizing techniques and methods of communicating ideas visually. Class size is limited. Prerequisite: Art201 or 202 ; or permission of instructor.
228 Printmaking I (3) ..... Spring
An introduction to some basic printmaking methods including serigraphy, linocuts, collographs, and intaglio. Class size is limited. Prereq- uisite: Art 201 or 202.
230 Photography I (3) ..... SpringAn exploration of black and white photography as an art form. Students must provide their own 35 mm camera. Class size is limited.
240 Graphic Design I (3) ..... Fall
An introductory class in the use of the Macintosh computer, covering basic layout software, object-oriented drawing software, and a paint program for scanning, image manipulation, and their use in graphic design. Through assignments that address the functional and experi- mental aspects of typography, students explore the interaction of form and meaning in typographic design. This course provides an initial exploration of visual communication issues and applications along with design methodology. Prerequisites: Art 201, 202; or permission of instructor.
250 Web Design (3) ..... Fall
Using projects that simulate real-world web design situations, learn the basics of organizing, designing, and constructing web-based inter- faces common to the professional web design process by using Adobe applications, specifically Dreamweaver. A basic knowledge of Adobe Photoshop is advised and a working knowledge of the Internet and web browsers is recommended. Prerequisites: Art 240; Computer Sci- ence 111; or permission of instructor.
281- Service-Learning (1-3) Fall, Spring, Summer
283 See page 113, Individual Studies
295 Motion Graphics (3)This course is an introduction to the art of 2-D and 3-D digital graphics animation and interactivity for video, Web, and DVD. Studentswill gain knowledge of digital animation and its history. Projects are centered on getting hands-on experience and will integrate learningwith real-world video production. The course also focuses on planning, design, and production using lectures, demonstrations, workshops,and screenings. Students will focus on using the most popular software programs. Prerequisites: Art 240; permission of instructor.
Note: Courses 302-340 are continuations of the introductory media courses. Each 300-level media course has a corresponding 200-level media course as its prereq-uisite. Permission of instructor is also required.
302 Drawing II (3) ..... Fall
316 Sculpture II (3) ..... Spring
318 Ceramics II (3). ..... Spring
325 Painting II (3) ..... Spring
328 Printmaking II (3) ..... Fall
330 Photography II (3) ..... Fall
340 Graphic Design II (3) ..... SpringA continuation of Art 240, students apply their growing knowledge of the interaction between typography and visual form to specific designsituations. Type/image relationships are important aspects of this course. Typographic syntax and arrangement are stressed. Design meth-odology, research, the development of a variety of ideas, and print production technology is emphasized. Prerequisite: Art 240.
341- Special Topics (3) ..... Occasional
348 These courses vary each year and are intended to utilize various staff talents and communal expertise while involving the student in in-depth studies of art and art history.
352 Drawing III (3) ..... Fall
Prerequisites: Art 202, 302; permission of instructor.
366 Sculpture III (3) ..... SpringPrerequisites: Art 216, 316; permission of instructor.
368 Ceramics III (3) ..... SpringPrerequisites: Art 218, 318; permission of instructor.
370 Senior Seminar in Art (3) ..... FallA critical examination of contemporary problems and trends in the field of art. The course will include readings, discussions, a paper orpresentation, critique of current exhibitions, and a senior art show.
371 Art Internship (1) ..... Fall, SpringA professional opportunity for the art major to apply the knowledge, principles, and skills gained in the classroom in an actual workplaceenvironment. Prerequisites: level I art course in area of internship (Art 202, 216, 225, 228, 230, 240 or one of the following: Art 207, 208,209, 210); permission of instructor.
372 Art Internship (2) ..... Fall, SpringA professional opportunity for the art major to apply the knowledge, principles, and skills gained in the classroom in an actual workplaceenvironment. Prerequisites: level II art course in area of internship (Art 302, 316, 325, 328, 330, 340 or two of the following: Art 207, 208,209, 210); permission of instructor.
373 Art Internship (3) Fall, Spring
A professional opportunity for the art major to apply the knowledge, principles, and skills gained in the classroom in an actual workplace environment. Prerequisites: level III art course in area of internship (Art 352, 366, 375, 378, 380, 390 or three of the following: Art 207, 208, 209, 210); permission of instructor.
374 Art Internship (4) Fall, SpringA professional opportunity for the art major to apply the knowledge, principles, and skills gained in the classroom in an actual workplaceenvironment. Prerequisites: level III art course in area of internship (Art 352, 366, 375, 378, 380, 390 or three of the following: Art 207, 208,209, 210); permission of instructor.
375 Painting III (3) ..... Fall, SpringPrerequisites: Art 225, 325; permission of instructor.
378 Printmaking III (3). ..... SpringPrerequisites: Art 228, 328; permission of instructor.
380 Photography III (3) ..... FallPrerequisites: Art 230, 330; permission of instructor.
390 Graphic Design III (3) ..... FallA continuation of Art 340, this advanced course presents complex design situations. Students are involved in extended projects such asidentity systems with various components including website design, families of package design, utilitarian design or poster designs devel-oped in a series. Students are expected to cultivate and demonstrate a high level of comprehension about the interrelationship betweenvisual form and meaning. Prerequisites: Art 240, 340; permission of instructor.
391- Individual Studies (1-3)

\(\qquad\)
Fall, Spring, Summer
See page 113, Individual Studies
Astronomy4) ...Fall OddAn introduction to the structure and diversity of the solar system, focusing on both the historical development of understanding of our cosmic"neighborhood" from the ancient Greeks to Einstein, as well as recent discoveries and their implications for an improved understanding ofour Earth. Students will obtain hands-on experience observing the heavens with naked eye, binoculars, and telescopes. The course involves
three lecture hours and three observation/laboratory hours per week. Prerequisite: completion of Core Program mathematics requirement. [Cross-listed: CORE 224, Earth Science 121]

122 Stellar and Galactic Astronomy (4)
Fall Even
An introduction to stellar and galactic astronomy, focusing on the historical development of understanding of the cosmos as well as recent discoveries and their implications. Topics include the classification and explanation of stars, stellar life-cycles, remnants of stellar collapse (white dwarfs, neutron stars, black holes), galaxies, and cosmology (the study of the universe as a whole). Students will examine origins in light of Scripture and modern scientific evidence. Students will also obtain hands-on experience observing the heavens with naked eye, binoculars, and telescopes. The course involves three lecture hours and three observation/laboratory hours per week. Prerequisite: completion of Core Program mathematics requirement. [Cross-listed: CORE 225]

\section*{Biology}

The biology department offers several options for students with different career goals. Integrative threads in biblical perspective, biological structure, unity and diversity, historical context, environmental stewardship, and the practice of science are treated throughout. The Bachelor of Science provides excellent preparation for graduate or professional schools and is divided into a three-tier curriculum including foundational principles, distribution/ exploration, and directed research. Five cognate support courses in chemistry, mathematics and/or statistics are included. The Bachelor of Arts major is smaller and has three cognate courses and no senior directed research requirement. It is intended for students who plan to enter the work force after graduation or who would like the option of a double major. General biology and biomedical science minors are also available for students in other majors who need significant biological coursework for their intended profession.

\section*{Bachelor of Science}

\section*{General Major-}

Biology \(122,125,180,200,215,358,380\); *six 3 - or 4 -credit courses including at least two biology courses from the following: biology courses numbered above 215, Agriculture 251, 315, 316, Environmental Studies 270.

Students must complete the following chemistry cognates: Chemistry 111, 225, 261 ; two chemistry courses with lab numbered 200 or above (Statistics 201 can replace of one of the chemistry courses); Statistics 131 or 132.
*Courses may be used from off-campus study sites such as the Au Sable Institute or the Latin American Studies Program, if appropriate and approved.

\section*{Bachelor of Arts}

General Major -
Biology \(122,125,180,200,215\); *six 3- or 4-credit courses including at least two biology courses from the following: biology courses numbered above 215, Agriculture 251, 315, 316, Environmental Studies 270.

Students must complete the following chemistry cognates: Chemistry 111, 225 ; one chemistry course with lab numbered 200 or above.
*Courses may be used from off-campus study sites such as the Au Sable Institute or the Latin American Studies Program, if appropriate and approved.

\section*{General Minors-}

Biology: Biology 122, 125, 200, 215; two semesters of college chemistry.
Biomedical Sciences: Two courses from Biology 203, 204, 225, 226; Biology 357; one college chemistry course; two courses from Biology 125, \(210,301,302,304,335\), second college chemistry course.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\section*{122 General Zoology (4) \\ \(\qquad\) .Spring \\ A study of the anatomy, physiology, ecology, taxonomy, and economic importance of the invertebrate and chordate animals. Three lectures and one laboratory period of three hours per week. Prerequisite: Biology 125 .}

125 Cell and Molecular Biology I (4).
Fall
An introduction to molecular mechanisms in living organisms. Topics include structure and functions of cellular components, gene structure and expression, and recombinant DNA technology. Concepts of reductionism and evolutionary theory will be addressed. Three lectures and one laboratory period of three hours per week.

\section*{ACADEMIC OFFERINGS: BIOLOGY}

180 First Semester Seminar (1)
Fall
An introduction to scientific inquiry and the skills necessary to flourish in the sciences. Students will learn to think like scientists, read and evaluate scientific writing, consider how their faith informs their science, and learn about contemporary science/faith issues as they begin to participate in the community of learning and research on Dordt's campus. [Cross-listed: Chemistry 180]

200 Principles of Ecology and Field Biology (4). Fall
An introduction to ecological studies including topics in ecosystem and community structure, nutrient cycling, energy flow, limiting factors, and population interrelationships. The laboratory will emphasize study of local flora and fauna via field work. Three lectures and one laboratory period of three hours per week, plus one or two Saturday field trips. Prerequisite: one year of college biology.

203 Human Biology I (4)
Fall, Spring
An overview of the structure and function of the human body, using an experimental approach. Addresses how worldview impacts the use of one's own body and guides ethical decision-making. Three lectures and one laboratory per week. For nursing, HHP, and other nonbiology majors. [Cross-listed: CORE 212]

204 Human Biology II (4)...........................................................................................................................................................................Fall A study of human anatomy and physiology in the context of common diseases and disorders, integrating core knowledge of structure and function with clinical correlations. The complex connections of the human body are investigated with applied lab exercises and activities. Three lectures and one laboratory per week. For nursing majors. Prerequisites: Biology 203; Chemistry 101 or 102; or permission of instructor.

210 Nutrition (3).
.Fall, Spring
This course will focus on the basic science of foods and their components including relationships to health and disease. The implications of personal decision making and behavior change, as well as social, economic, and cultural influences, will be discussed. Does not count toward the biology major. [Cross-listed: HHP 211]

215 General Botany (4)
Fall
An introductory study of the anatomy, physiology, taxonomy, and ecology of the major plant groups. Three lectures and one three-hour laboratory per week. Prerequisite: Biology 125.

225 Human Anatomy (4)
Fall
A detailed study of the organ systems of the human body, with an emphasis on dissections, including cadaver dissections. Three lectures and one laboratory per week. Prerequisite: Biology 122 or 203; or permission of instructor.

226 Human Physiology (4)
Spring Odd
An advanced study of the functions of the human body and how it responds to stress and disease. Three lectures and one laboratory per week. Prerequisites: Biology 125; one college chemistry course; or permission of instructor. Biology 203 or 225 strongly recommended.

227 Paleontology (3)
Occasional
An introduction to the major fossil plants and animals, and the environments (paleoecology) in which they are found. Three lectures, or two lectures and one two-hour laboratory per week. The course includes several Saturday field trips and one weekend field trip to the Pella area. Prerequisite: Biology 122; or permission of instructor. [Cross-listed: Earth Science 227]

251 Perspectives on Origins (3).
.Spring Odd
A study of the philosophical, theological, and scientific aspects of evolutionary theory and the creation-evolution debate. The course will use a seminar format in which students will be required to articulate and critically analyze the different positions on origins. Not open to freshmen. Prerequisites: one college science course; CORE 200. [Cross-listed: CORE 321]

281- Service-Learning (1-3)..............................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
300 Conservation Biology (3)
.Occasional
An upper-level course emphasizing principles of applied population and community ecology, including the biology of endangered and threatened species, their conservation, and restoration. The course will be developed in the context of Christian environmental stewardship principles. The class will meet in seminar/discussion format. Occasional field trips. Prerequisite: Biology 200.

301 Developmental Biology (3)
Fall Even
A study of the development of representative vertebrates and invertebrates including fruit fly, sea urchin, frog, fish, and chick. Two lectures and one laboratory period of three hours per week. Prerequisite: Biology 125 ; or permission of instructor.

302 Microbiology (4).
Fall, Spring
A study of the form, structure, and classification of microorganisms, including an introduction to viruses. The course will emphasize bacteria, general laboratory techniques, culturing and control of microbial growth. A substantial portion of the course will deal with
immunologic processes: antibodies and antigens, host-antigen reactions, T \& B cell response mechanisms, and non-specific host defense mechanisms. Three lectures and one laboratory period per week. Prerequisite: second year student in the BSN program; or permission of instructor. Does not count toward the biology major.

A study of the microscopic anatomy of animal tissues and organs, emphasizing the relationship between structure and function. Three lectures and one laboratory period per week. Prerequisite: Biology 203 or 225; or permission of instructor.

310 Advanced Microbiology (4) Spring
An upper-level course in the study of microbes, their history, their cell biology, and inter-organism (symbiotic) processes. Topics will include and build on pro- and eu-karyotic distinctions, in-depth study of viruses and plasmids, anaerobic metabolism, biofilms, endosymbiosis, antibiosis, antibiotic resistance, disease mechanisms, how host immune responses develop and adapt. Laboratory work will include basic microscopic observation, culturing, and identification. Isolation and characterization of bacteria, viruses, and potential antibiosis will be featured as "unknown" work. Intended for biology majors and premedical students. Students cannot receive credit for both Biology 302 and 310. Three lectures and one three-hour laboratory per week. Prerequisite: Biology 125; or permission of instructor.

316 Flora of North America (3). Fall
Welcome to the flora of North America! This is a course in field biology and taxonomy of vascular plants. Our study will focus on the native vegetation of the tall-grass prairie landscape with its associated gallery forests and wetlands. We will be comparing local studies to plant complexes from other geographic locations. Two lectures and one laboratory period per week. This course includes extensive field work and potentially several weekend field trips. Prerequisite: Biology 215.

319 Plant Physiology (3)
.Spring Odd
A study of the basic functional aspects of plant growth, development, and reproduction. Lecture topics will include water relations, nutrient relations, translocation, photosynthesis, flowering, fruiting, seed germination, growth, development, and phytohormones. Two or three lectures and/or one three-hour laboratory period per week. Prerequisites: Biology 125; Agriculture 111 or Biology 215; Chemistry 101, 122 or Chemistry 111.

\section*{320 Wildlife Ecology and Stewardship (3).}
.Spring Odd
Advanced examination of animal (especially terrestrial vertebrate) populations, communities, and habitats, particularly as such analysis is applied to the manipulation and exploitation of animal populations and communities to regulate their abundance and distribution and/or to restore them. Considerable exploration and critique of the development and practice of wildlife management, particularly as it compares to biblical principles for creation stewardship. Two lecture/discussion sessions and one three-hour lab per week. Prerequisite: Agriculture 370 or Biology 200. [Cross-listed: Environmental Studies 320]

324 Advanced Genetics (4)
..Spring
A study of the relationship between genetic information and the organism. Topics include population genetics, selection, speciation, recombination, mutations, epigenetics, and systems biology. A variety of bioinformatics tools will be used for genomic analyses. Laboratories will involve crosses and analysis, molecular techniques, field trips, and computer applications. Includes discussions of God's providence and evolutionary theory. Three lectures and one three-hour laboratory per week. Prerequisite: Biology 125.

335 Cell Biology (4)
Fall
A study of the morphology and physiology of the cell, its organelles, and its constituents. Three lectures and one three-hour laboratory per week. Prerequisites: Biology 125; Chemistry 111.

348 Special Topics (3) .Occasional These courses will vary from year to year and are offered as student demand and instructor availability permit. They are designed to open additional areas of biological inquiry.

355 Research (1) \(\qquad\) Fall, Spring Laboratory or field research on an approved topic, supervised by the department staff. Strongly recommended for biology majors (sophomores, juniors, and seniors). This course can be seen as preliminary to Biology 380.

356 Research (1) Fall, Spring
A continuation of Biology 355 .
357 Medical Terminology (1). Fall, Spring
The course is designed for students in pre-health professions and secretarial science-medical emphasis. Students will learn medical terminology and its meaning within the context of the healing professions. Programmed texts and computer software will be used with regular testing periods throughout the semester. Recommended that Biology 203 or 225 be completed before taking this course. Graded on a pass/ no record basis.

Introduction to Biological Research (1). \(\qquad\) Fall, Spring
This is a mini-course designed to prepare students for directed senior research. The course will introduce the idea and practice of biological research. It will include the nature and scope of a research project, how to conduct literature searches, and how to design methods and protocols for problem solving. The class will meet weekly in seminar or tutorial format. Students will make weekly presentations of their progress, finalize their proposal for Biology 380, and (if appropriate) begin the work for the directed research project. Graded on a pass/no record basis. Prerequisites: Biology 122, 125, 200, 215. [Cross-listed: Chemistry 358; Environmental Studies 358]

380 Directed Senior Research (3) \(\qquad\) Fall, Spring A senior-level research course that focuses on problem solving and critical thinking in the biological sciences. The project will be chosen and conducted interactively with a staff mentor(s). Research should begin in the context of earlier courses and library literature and extend to the lab and field on or off campus. Project results will be presented in a peer seminar. Prerequisite: Biology 358. [Cross-listed: Chemistry 380; Environmental Studies 380]

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Business Administration}

General Major- Foundation (common to all emphases): Business Administration 100, 201, 202, 205, 206, 241, 301, 305, 351; Economics 202, 203.

Students must select one of the following emphases:
\begin{tabular}{|c|c|}
\hline Construction Management: & Foundation; Chemistry 101 or 109; Construction Management 101, 102, 220, 240, 270, 280; Mathematics 151 or 152; Physics 201 or 215,202 or 216; a minimum of three additional credits from business administration or construction management. \\
\hline Finance: & Foundation; Business Administration 242, 315, 325, 326, 327; Economics 303; Mathematics 151; Statistics 131. \\
\hline General: & (recommended for those interested in general business or economics) Foundation; three business administration electives; one economics elective; one elective from business administration or economics. \\
\hline Human Resource Management: & Foundation; Business Administration 207, 333, 335; Communication 228, 260; Psychology 210; Statistics 131; two electives from Communication 220, 222, English 305, Psychology 204, 376, Sociology 216. \\
\hline Information Systems: & Foundation; Computer Science 111, 120, 131, 220; one from Computer Science 211, 231, 320; one business administration elective; one economics elective; Mathematics 151; Statistics 131. \\
\hline International Business: & Foundation; Business Administration 330; Economics 321; Political Science 210; Theology 231 or 322; CORE 270 or any 200 -level foreign language course; a minimum of six credits in an approved international off-campus experience. \\
\hline Marketing: & Foundation; Business Administration 306, 308, 336, 338, Marketing Internship 374; Communication 260; Statistics 131. \\
\hline Public Administration: & Foundation; Political Science 202, 214, 245, 333; Communication 228; Business Administration 320; Economics 303 or 321; Economics 315. \\
\hline
\end{tabular}

\section*{General Minors-}

Business: Business Administration 100, 205, 206; Economics 202; Business Administration 201, 202 and one elective from business administration/economics or Business Administration 200 and two electives from business administration/economics.

Human Resource Management: Business Administration 205, 207, 333, 335; Communication 228, 260; Psychology 210.
Associate of Arts Degree Option Area of Concentration (Associate of Arts - Administrative Assistant)
See the "Academic Program" section for the Core Program for all A.A. programs (pages 21-22).
Business Administration 100, 105, 112, 321, 322; Business Administration 200 or 201; one elective from business administration; two electives in any combination of business administration, communication or English writing courses; CORE 110; CORE 180 (fulfills Core Program distribution elective).
Note: Medical Emphasis Option includes Biology 203 or 357.

\begin{abstract}
100 Computer Literacy for Business/Accounting Majors (3) \(\qquad\) Fall, Spring This course teaches computer skills needed for an entry-level position in a technologically oriented business. Areas of study include word processing, spreadsheet, presentations, database, Internet, data interpretation and integration, computer terminology, purchasing criteria, ethics, stewardship, Windows operating system basics, file management, and information search and retrieval. Students will demonstrate skills through proficiency tests. Required for, and enrollment preference given to, all accounting, business, business education and administrative assistant majors.
\end{abstract}

105 Calculating Machines/Records Management (3).............................................................................................................................Spring The development of job-level skill in the operation of the electronic calculator, emphasizing the application to the solution of typical problems in business mathematics. Includes an overview of records management principles and procedures and an introduction to database application software. Priority is given to business education majors and administrative assistant majors.

112 Keyboarding and Document Formatting II (3)...................................................................................................................................Fal
Development of accuracy and speed. Application of skill to more complex tabulations, correspondence, reports, business forms, and composition at the keyboard. This course also introduces students to the college network word processing software. Priority is given to business education majors and administrative assistant majors.

200 Introduction to Accounting (3) .....................................................................................................................................................Spring
This course provides exposure to basic accounting information concerning the preparation, use, and interpretation of accounting records and reports and the use of QuickBooks accounting software and spread sheets. This course may not be taken after Business Administration 201, 202 to meet an elective requirement.

201 Principles of Accounting (3)
Fall
Introduces the concepts and terminology of accounting and financial reporting for modern business enterprises. The course is centered around analyzing and interpreting accounting information for use in making decisions about organizations. There is a special emphasis on analyzing the balance sheet, the statement of income and expense, the statement of cash flows, and the statement of stockholders' equity. Additional emphasis is placed on problem-solving, critical thinking, and communication skills that are necessary for forming conclusions about business activities and to communicate these conclusions to others.

202 Principles of Accounting (3)
.Spring
An introduction to managerial accounting, presenting basic accounting concepts that are important to management decisions. Emphasis is placed on analyzing and interpreting accounting information that enables management accountants to work with managers from other areas, particularly marketing and operations, and to make decisions about costing, pricing, and production. The tools and information that are important are described within the decision framework rather than as isolated accounting procedures.

205 Principles of Management (3)
Fall, Spring
An introductory course in management theory and practice. Major topics covered include planning and strategic management, organizational design, leadership and motivation theory, and control mechanisms.

206 Principles of Marketing (3) Fall, Spring
A study of marketing institutions, product development, channels of distribution, price determination, promotion methods, government influences, and ethical problems facing marketing personnel. Includes a foundational study and discussion of business from a Christian perspective.

207 Human Resource Management (3) Fall
Introduces students to the role that Human Resource Management (HRM) plays in organizational settings. Course content is geared towards developing the foundational body of knowledge required of entry-level HRM practitioners and is organized around the four foundation areas of HRM expertise: staffing and recruitment, employee and organizational development, compensation and benefits administration, and labor relations. Prerequisite: Business Administration 205.

211 Programming for Business (3)
.Spring Odd
An introduction to techniques and tools used in developing computer business solutions, focusing on the development of solutions integrated with standard office suite tools (mainly Exel), such as spreadsheets and database management systems. Prerequisite: Computer Science 110 or 111. [Cross-listed: Computer Science 211]

215 Leadership Studies (3) Fall, Spring Involves the study of human behavior and how individuals influence that behavior. This course will reflect a diversity of perspectives on leadership and motivation. Students will examine different models, skills, and styles of leadership, review common traits of effective leaders, and evaluate, from a Christian perspective, the ethical and moral issues facing leaders.

226 Personal Financial Management and Stewardship (3) .Fall, Spring
Prepares students for the many financial decisions that they will be making during their lives in light of a Biblical and reformed view of stewardship. [Cross-listed: CORE 260]

241 Professional Practices: Career Preparation and Etiquette (1) Fall, Spring Students will learn the purpose and process of preparing for a career and will learn formal etiquette useful in many areas of life. We will use hands-on learning to ascertain knowledge about finding and applying for jobs, formal dining, professional interviewing, applying for graduate school, and other topics related to career preparation. This course is recommended for students in all majors within their last three semesters of graduation; however, preference is given to business and accounting majors.

242 Advanced Excel Techniques (1) ................................................................................................................................................Fall, Spring
This course will provide a development of skills needed to become proficient in the use of spreadsheets. Students will use PivotTables, charts, and organizational tools while incorporating many formulas to make their spreadsheets come to life. A main component of this course will be hands-on learning with students becoming peer instructors for one another. This elective course is designed for students majoring in business who are in their sophomore, junior or senior year. Prerequisite: Business Administration 100.

243 Introduction to QuickBooks (1) .Fall, Spring This elective course provides an introduction to and overview of QuickBooks, a computerized accounting software package popular in small- and mid-sized businesses. A main component of the course will be hands-on practice. By the time you complete this course you will have a good idea of all that QuickBooks offers, be familiar with the most common tasks, and know where to find information about more advanced features. Pre- or corequisite: Business Administration 201. Credit for both Business Administration 200 or Agriculture 221 and this module will not be allowed.

244 Lean Enterprise and Continuous Improvement (1).................................................................................................................Fall, Spring The philosophy and related processes known as Lean is a major movement in a variety of organizations today, including for-profit, not-forprofit, and governmental. Continuous Improvement (CI) is a time-based methodology often employed to implement and sustain a Lean environment. This one-credit module will expose students to the theories and practical applications of Lean and CI, providing them a familiarity and working knowledge in the strong likelihood that they join a firm that practices Lean.

270 Project Management (3)
This course is an introduction to the field of project management. The primary objective is to acquaint students with a broad basic overview of project management and the role of a project manager throughout the five primary processes of managing projects. The course will also cover common agile methodologies and principles because of how they relate to project management. The agile project management process encourages frequent inspection and adaptation, teamwork, accountability, self-organization, best practices that allows for rapid delivery and high quality, and a business approach that aligns development with customer needs and company goals. Prerequisite: sophomore standing. [Cross-listed: Computer Science 270, Construction Management 270]

281- Service-Learning (1-3)................................................................................................................................................Fall, Spring, Summer
See page 113, Individual Studies

301 Business Law I (3) \(\qquad\) .Fall, Spring This course provides an overview of the law as it relates to business, specifically focusing on regulation of businesses and business dealings. Specific topics covered include: government regulation, contracts, secured transactions, insurance, bankruptcy, and employment law. Primary emphasis is placed on contract formation and interpretation.

302 Business Law II (3)..........................................................................................................................................................................Spring
This course provides an overview of the law as it relates to business, specifically focusing on the way businesses manage liabilities. Specific topics covered include: torts, agency and vicarious liability, property, intellectual property, business entities, and estate and succession planning. Primary emphasis is placed on torts and corporate governance.

303 Geographic Information Systems and Surveying (4) Fall Even
An introduction to the acquisition, analysis, display, manipulation, and management of geographic information. Course topics will include geographical data input, storage, maintenance, analysis, and retrieval. Students will utilize common GIS software and associated hardware. An overview of survey methods used to gather and quantify features of physical geography will be included. The course will meet in two studio lab classes to provide an integral learn-by-doing experience applying GPS technology, survey methods, and GIS applications. Application of GIS to agriculture, business, environmental management, and other disciplines will be provided in this course. Prerequisite: sophomore standing or above. [Cross-listed: Agriculture 303, Construction Management 207, Environmental Studies 303]

304 Entrepreneurship/Small Business Management (3)
A study of the importance of entrepreneurship in both the for-profit and not-for-profit sectors to the development of a society, emphasizing the different paths to business concepts, interactions with entrepreneurs, and the development of a business plan. Prerequisite: junior or senior standing; or permission of instructor.

An introduction to the theory, issues, and practice of business finance. Key components include valuation of financial assets, financial planning and control, working capital management, and capital budgeting. Prerequisite: Business Administration 100, 201.

306 Marketing Management (3) .Spring
Prepares students to manage the interacting forces in the market to facilitate exchange processes between the producer and consumer. Strategic planning and implementation of all areas of marketing within acceptable ethical standards will be discussed. Through case studies and a simulation students will apply the concepts learned in Principles of Management and Principles of Marketing. Prerequisites: Business Administration 205, 206; junior or senior standing.

307 Production and Operations Management (3).
Fall Even
Designed to acquaint students with the theory underlying production and operations management, to give them practice in solving the kinds of problems confronted by managers of production and service operations, and to inform them of the opportunities and challenges in the field. Prerequisites: Business Administration 205; or permission of instructor.

308 Integrated Marketing Communications (3)................................................................................................................................................... Fall In this course, students will study the principles and practices of promoting a product or service including advertising, personal selling, direct marketing, public relations, trade promotions, and the internet, all from a Christian perspective. The importance of integrating all these areas of marketing communications will be emphasized. Prerequisites: Business Administration 206 or Communication 240; junior or senior standing.


311 Intermediate Accounting II (3).....................................................................................................................................................................Spring
Continuation of Business Administration 310, includes special financial reports and financial analysis.
312 Advanced Accounting (3) ...................................................................................................................................................................................Spring
A comprehensive study of accounting problems of partnerships, consolidations, branch operations, bankruptcies, estates, trusts, etc. Prerequisite: Business Administration 202.

313 Cost Accounting (3).
..Spring Even
A study of measurement and evaluation of production costs, including job order costing, process costing, standard costing, and quantitative methods of costing. Prerequisite: Business Administration 202.

314 Auditing (3)
A working knowledge of principles and procedures of professional auditing and accounting with special emphasis on AICPA standards and professional ethics. Prerequisite: Business Administration 311.

315 Federal Income Tax (3)
A study of federal income tax regulations and forms, based on the Internal Revenue Code, with primary emphasis on tax problems for the individual. Prerequisite: Business Administration 200 or 201; or permission of instructor.

316 Advanced Federal Income Tax (3). Spring Odd
A study of federal income tax regulations and forms, based on the Internal Revenue Code, with primary emphasis on corporations, partnerships, S corporations, estates, and trusts. Prerequisite: Business Administration 315.

320 Not-For-Profit-Accounting (3).
Fall Odd
Accounting methods and managerial analyses employed for governmental bodies and private and public not-for-profit institutions. Prerequisite: Business Administration 201.

321 Office Procedures and Administration (3) Fall
A study of procedures and duties essential to the efficient administration of an office by an executive secretary, including receiving, transmitting, duplicating, storing, and retrieving business information, composing business letters, reports, and memoranda. Pre- or corequisite: Business Administration 112.

322 Advanced Secretarial Procedures and Communications (3) .Spring
A continuation of Business Administration 321, with an emphasis on human relations in communication, taking and giving dictation, financial and legal aspects of secretarial work, administrative and supervisory opportunities for the secretary, and general development of skills and secretarial ethics. Prerequisite: Business Administration 321.

Advanced Financial Management (3) Spring Even
The study of advanced topics in financial management, such as risk analysis, capital structure, dividend policy, mergers, acquisitions, foreign investment, etc. Case analysis will be used extensively. Prerequisites: Business Administration 202, 305. Pre- or corequisite: Business Administration 242.

326 Investments Management (3)

\section*{Spring}

The study of all types of investments with primary emphasis on stocks, bonds, and related securities. Includes a discussion of the function of securities markets and institutions and portfolio management. Prerequisite: Business Administration 305; or permission of instructor.

327 Insurance and Risk Management (3) .Spring
Addresses the fundamental issues of risk management, property insurance, liability insurance, life and health insurance, the insurance market, and the operation of insurance companies. Topics to be discussed include the functions of insurance, government regulation, the nature and legal characteristics of insurance documents, marketing, loss adjustment, social insurance programs, employee benefit plans, re-insurance, and the international role of insurance underwriting. Open to juniors and seniors.

330 International Business (3) ..........................................................................................................................................................Spring Odd A study of the special problems involved in doing business across national boundaries with an emphasis on the economic basis for trade and the impact of religious, cultural, and political environments on business practice. Includes an evaluation of the management, marketing, and financial practices of multinational corporations from a Christian perspective. (Credit will be granted for either this course or the International Marketing course taught in the Netherlands, but not both.) Prerequisites: Business Administration 206; Economics 202; junior or senior standing.

333 Strategic Human Resource Management (3). .Spring An advanced course in Human Resource Management (HRM). Specific emphasis is placed on the critical strategic role that HRM plays in the success of any organization and the application of HRM practices and theory through case studies and interactive in-class exercises. Prerequisites: Business Administration 205, 207.

335 Organizational Behavior (3). Fall
An advanced study of the theory and practice of organizational behavior. Topics include personality, motivation, group leadership, organization/work design, and group/team dynamics. Specific emphasis is placed on the diagnosis of organizational dysfunction and the design and implementation of appropriate Human Resource Management-driven interventions. Prerequisites: Psychology 210; junior or senior standing. Business Administration 205 and Psychology 376 recommended.

336 Marketing Research (3). Fall A study of the various techniques used to assess the wants and needs of consumers, including focus groups and market surveys. Both qualitative and quantitative procedures will be studied with emphasis on questionnaire development and interpretation using SPSS. Business market and not-for-profit research will also be discussed. The value of secondary sources will be explored. A Christian response to the use of this analytical tool will be developed. Prerequisite: Statistics 131.

338 E-Marketing (3)
...Spring
An exploration of the methods businesses use to approach customers in the age of the Internet. Topics include using the Internet to convey information, sell a product position, comparing the product to competitors, order entry, and payment. Attention given to determining when the internet is useful in developing and selling a product and when products are not suitable for the Internet approach. The use of the Internet in Christian endeavors is also explored. Prerequisite: sophomore standing.

341- Special Topics (3) .....................................................................................................................................................................Occasional
348 Courses on different topics of special interest, utilizing individual instructor strengths, interests, and competencies. Each course selected will involve a topic not usually treated in depth in regularly scheduled courses.

351 Senior Business Seminar (3). Fall, Spring
An integration of departmental courses involving student research and analysis on current topics in business and economics, with primary emphasis on Christian perspectives for the businessperson. Required for business administration seniors. Pre- or corequisite: Business Administration 241.

371- Business Administration Internship (3-9) ................................................................................................................Fall, Spring, Summer
373 Intended to provide business administration majors the opportunity to apply the knowledge, principles, and skills gained in the classroom in an actual business environment. Prerequisite: junior or senior status and 2.00 GPA ; or permission of internship coordinator.

374 Marketing Internship (3-9).
Fall, Spring, Summer Intended to provide business administration majors with a marketing emphasis the opportunity to apply the knowledge, principles, and skills gained in the classroom in an actual business marketing environment. Prerequisite: junior or senior status and 2.00 GPA ; or permission of internship coordinator.

\section*{Chemistry}

Bachelor of Science

\section*{General Major-}

Chemistry 111, 180, 212, 225, 231, 261, 271, 358, 380; Physical Science 201; four courses from Chemistry 251 (or Au Sable 332), 321, 322, 331, 333, 361, 365, 393; three courses from Chemistry 252, 312, 323, 335, 362.

Students must complete the following cognates: Biology 125 or Environmental Studies 151 and 161; Mathematics 152, 153; Physics 201, 202, 203 or Physics 215, 216.

Bachelor of Arts
General Major- Chemistry 111, 180, 212, 225, 231, 261, 271; Physical Science 201; a minimum of two credits from Chemistry 281-283, 284, 285 or Chemistry 358, 380; two courses from Chemistry 251 (Au Sable 332), 321, 322, 331, 333, 361, 365, 393; two courses from Chemistry 252, 312, 323, 335, 362.

Students must complete the following cognates: Biology 125 or Environmental Studies 151 and 161 ; take one course from Mathematics 140, Statistics 131, 132; take one course from Mathematics 151, 152, 153; Physics 215, 216.

General Minor- Chemistry 111, 212, 225; two 3- or 4-credit courses from Chemistry 200 or above.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\section*{101 General Chemistry (4)}

Fall, Spring
A study of the basic concepts of general chemistry including atomic structures and chemical bonding, states of matter, chemical reactions, solutions, rates of reactions and equilibria, acids and bases, and oxidation reactions. Three lectures and one three-hour laboratory period per week. The laboratory experiments will parallel the lecture content.

102 General, Organic, and Biochemistry (4)
An introduction to the fundamental concepts of general, organic, and biochemistry. Using relevant biological case studies, we will explore how chemistry helps us investigate, understand and explain the function and malfunction of living systems. Topics include atomic structures and chemical bonding, states of matter, chemical reactions, solutions, equilibria, acids, bases and buffers, basic organic chemical mechanisms, structure and function of biomolecules, enzyme catalysis, and central dogma of molecular biology.

\section*{109 General Chemistry for Engineering (4)} ..Spring
This course will cover the foundations of chemistry with an emphasis on topics and problems relevant to engineering. Topics include atomic and molecular structure, chemical equilibria, chemical kinetics, chemical thermodynamics, and electrochemistry. An introduction to laboratory safety and chemical hygiene is included in the laboratory. Three lectures and one three-hour laboratory period per week. Prerequisites: one year of high school chemistry; Mathematics 152; Engineering 116 or Physics 201.

111 Principles of Chemistry (4)
Fall, Spring
A study of the fundamental principles of chemistry and an introduction to foundational issues in science. Topics include atomic and molecular structure, chemical equilibria, chemical kinetics, chemical thermodynamics, and electrochemistry. An introduction to laboratory safety and chemical hygiene is included in the laboratory. This is the first course in chemistry for majors in the physical and life sciences. Three lectures and one three-hour laboratory period per week. Prerequisite: completion of online mini-course or Chemistry 101.

122 Organic and Biological Chemistry (4) ................................................................................................................................................Spring Organic molecules and their functional groups and biomolecules and their function in living cells will be studied. Three lectures and one three-hour laboratory period per week. The laboratory will include experiments in organic and biological chemistry. Prerequisite: Chemistry 101 or 109 or 111; or permission of instructor.

180 First Semester Seminar (1) Fall An introduction to scientific inquiry and the skills necessary to flourish in the sciences. Students will learn to think like scientists, read and evaluate scientific writing, consider how their faith informs their science, and learn about contemporary science/faith issues as they begin to participate in the community of learning and research on Dordt's campus. [Cross-listed: Biology 180]

\begin{abstract}
212 Chemical Analysis (4). .Spring
An in-depth study of the theory and practice of quantitative methods of chemical analysis. Includes discussion of proper laboratory techniques, theory of operation of common laboratory equipment, discussion of various analytical methods, sampling and sample preparation, and discussion of statistical methods for evaluating and interpreting data. Three lectures and one three-hour laboratory period per week. Prerequisite: Chemistry 109 or 111 ; or permission of instructor.
\end{abstract}

225 Organic Chemistry: Structure and Mechanism (4) ............................................................................................................................ Fall
In this foundational organic chemistry course, students will learn the foundational topics and problem-solving skills needed to understand the plethora of chemical reactions that involve compounds containing carbon. A working knowledge and application of topics such as nucleophiles, electrophiles, acids, bases, stereochemistry, mechanism, kinetics, substitution reactions, elimination reactions, carbonyl chemistry, and conformational analysis will be developed. Through a detailed understanding of the chemistry, an honest discussion of ethical implications, and a thoughtful interaction with the material we will develop an understanding of how God reveals himself through his creational structure. Prerequisite: Chemistry 109 or 111.

231 Foundations of Physical Chemistry (4).
.Fall Odd
This course gives a foundational treatment of the major areas of physical chemistry: chemical kinetics, thermodynamics with an emphasis on chemical and phase equilibria, and quantum chemistry with an emphasis on simple quantum systems, bonding, and spectroscopy. Three lectures and one three-hour laboratory period per week. Prerequisites: Chemistry 109 or 111; Mathematics 151 or 153 (preferred). Physics 201, 202, 203 or Physics 215, 216 recommended.

251 Environmental Chemistry (3)...............................................................................................................................................Spring Odd
A study of the nature and transport of chemical species-both natural and human-introduced-in the natural environment (atmosphere, hydrosphere, geosphere, and biosphere). Three lectures per week. Prerequisite: Chemistry 109 or 111; or permission of instructor. Prior completion of Chemistry 122 or 225 recommended. [Cross-listed: Environmental Studies 251]

252 Environmental Chemistry Laboratory (1)..............................................................................................................................Spring Odd
This lab will include methods of sampling and analysis of samples from natural and/or human influenced environments. Graded on an A-F scale. Corequisite: Chemistry 251. [Cross-listed: Environmental Studies 252]

261 Introduction to Biochemistry and Molecular Biology (3) .................................................................................................................Spring An exploration of the creation of God as it manifests itself in the compounds and reactions found in the living cell. Students will learn about the structure and properties of the four major classes of biological molecules in the cell. Students will apply knowledge from General Chemistry and Organic Chemistry to explore the compounds found in the various cell organelles. Includes a study of the catalysis of all biological reactions by enzymes, the flow of molecules through membranes, and the importance of bio-signaling mechanisms. Three lectures per week. Prerequisite: Chemistry 225.

271 Inorganic Chemistry (3)
Fall Even
A survey of the chemistry of the elements based on the physical principles underlying the periodic arrangement of the elements. Three lectures per week. Prerequisite: Chemistry 109 or 111.

281- Service-Learning (1-3)................................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
284 Education Project in Chemistry (1-3)
.Fall, Spring
Students will design and implement a project in chemical education. May be offered upon request to the department chair.
285 Literature Review in Chemistry (1-3) .Fall, Spring
Students will conduct a literature review on a topic in modern chemistry. May be offered upon request to the department chair.
312 Instrumental Analysis (3) .Spring Odd Optical, electrical, and chromatographic methods of quantitative analysis and theoretical study. The class meets for three lectures per week for the first two-thirds of the semester; laboratory experiments are performed during the last one-third of the semester. Prerequisite: Chemistry 109 or 111; or permission of instructor. diversity of chemical reactions utilized in modern organic chemistry. Through the process of reviewing current chemical literature articles that report the total synthesis of natural products and investigate reaction mechanism, students will apply the foundational ideas learned in Chemistry 225, classify reactions based on analogy, articulate an understanding of topics such as stereoselectivity and regioselectivity, and explore how organic chemists advance the field. Through a detailed understanding of the chemistry, an honest discussion of implications, and a thoughtful interaction with the material will we develop an understanding of how we as scientists and Christians should respond to culture. Prerequisite: Chemistry 225.

Advanced Organic Chemistry: BioOrganic (3) Spring Odd In this advanced organic chemistry course, students will learn the application of organic chemistry to the processes of life. Through the process of reviewing chemical literature articles that report metabolic pathways and the total synthesis of biological products, students will apply the foundational ideas learned in Chemistry 225, classify reactions based on analogy, articulate an understanding of topics such as stereoselectivity and regioselectivity, and consider how biological catalysts accommodate chemical reactions. Through an in-depth application of the chemistry, an honest discussion of implications, and a thoughtful interaction with the material we will develop an understanding of how God has created a world in which life is supported through organic chemistry. Prerequisite: Chemistry 225.

323 Advanced Organic Chemistry Laboratory (1).
Spring Even
In this advanced laboratory course, students will propose, complete, and report on common laboratory techniques utilized in organic chemistry. Students will explore several common reactions including esterification, electrophilic aromatic substitution, and multi-step chemical synthesis. Students will also propose and complete an individual laboratory project. Graded on an A-F scale. Pre- or corequisite: Chemistry 321 or 322 .

331 Thermodynamics and Statistical Mechanics (3)
Spring Even
The study of heat, the laws of thermodynamics, thermodynamic generating functions, Maxwell's relations, kinetic theory, partition functions, and classical and quantum statistics. Three lectures per week. Prerequisites: Chemistry 231; Mathematics 152, 153; Physics 201, 202, 203 or Physics 215, 216. [Cross-listed: Physics 331]

333 Quantum Mechanics, Spectroscopy, and Chemical Kinetics (3)
Fall Even
Quantum mechanics with application to chemical systems, theoretical foundations of spectroscopy, and chemical kinetics. Three lectures per week. Prerequisites: Chemistry 231; Mathematics 152, 153; Physics 201, 202, 203 or Physics 215, 216; or permission of instructor.

335 Advanced Physical Chemistry Lab (1) .Fall Even (Starting Fall 2016) In this advanced laboratory course, students will propose, complete, and report on common laboratory techniques utilized in physical chemistry. Graded on an A-F scale. Pre- or corequisite: Chemistry 331 or 333.

341- Special Topics (3) Occasional
348 This course will consist of topics not normally covered in other chemistry courses. Specially designed to focus on more specific topics utilizing instructor strengths and consideration of student needs.

355 Research Apprenticeship (1) ....................................................................................................................................................................Fall, Spring Laboratory or field research on an approved topic, supervised by the department faculty, working on a current research project in the department. Strongly recommended for chemistry majors (sophomores, juniors, and seniors). This course can be seen as preliminary to Chemistry 358 and/or Chemistry 380.

358 Introduction to Chemical Research (1)
.Fall, Spring
This is a mini-course designed to prepare students for directed senior research. The course will introduce the idea and practice of chemical research. It will include the nature and scope of a research project, how to conduct literature searches, and how to design methods and protocols for problem solving. The class will meet weekly in seminar or tutorial format. Students will make weekly presentations of their progress, finalize their proposal for Chemistry 380, and (if appropriate) begin the work for the directed research project. Graded on a pass/ no record basis. Prerequisites: Chemistry 111, 225, 261. [Cross-listed: Biology 358, Environmental Studies 358]

361 Advanced Biochemistry (3).
.Fall Odd
A study of the way the cell uses the breakdown of molecules to extract energy and then uses this energy for sustaining the functions of the cell by producing new needed biomolecules. This sequence will begin with the study of the metabolism of the carbohydrates culminating in the electron-transfer processes leading to the production of ATP. The metabolism of other types of biomolecules such as lipids, proteins, and nucleic acids will also be studied. Finally, the processes of biosynthesis will be investigated beginning with photosynthesis of carbohydrates in plants and ending with biosynthesis of lipids and proteins. The last chapter will help the student to appreciate how all of these complex created biological processes are regulated by the use of hormonal signals which integrate and coordinate the metabolic activities of different tissues and optimize the allocation of fuels and precursors to each organ. Three lectures per week. Prerequisite: Chemistry 261.

362 Advanced Biochemistry Laboratory (1).
.Fall Odd
The purpose of the laboratory is to provide practical hands-on experience for students so they can appreciate the reactions taking place in the cells God has created. The experiments will be organized to parallel the various topics in Chemistry 261. One three-hour laboratory per week. Graded on an A-F scale. Prerequisite: Chemistry 261.

365 Solar System Chemistry (3) . \(\qquad\)
Course is currently being developed.
380 Directed Senior Research (3) .Fall, Spring A senior-level research course that focuses on problem solving and critical thinking in the chemical sciences. The project will be chosen and conducted interactively with a staff mentor(s). Research should begin in the context of earlier courses and library literature and extend to
the lab and field on or off campus. Project results will be presented in a peer seminar. Prerequisite: Chemistry 358. [Cross-listed: Biology 380, Environmental Studies 380]

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Christianity and Popular Culture}

General Major- Art 209; Communication 255; English 210; English 225 or History 308; Engineering 390; Linguistics 201; Philosophy 206, 304, 320; Sociology 201, 216; Theology 253, 351.

Students must complete one of the following:
A. Three courses ( 9 credits) from Business Administration 205, 335, Core 211, 214, English 225, 333, History 308, 326, Linguistics 301, Political Science 312, Theatre Arts 366, Theology 322.
B. \(12-15\) credit, semester-long internship.
C. Second major or minor from Art, Business Administration, Digital Media, English, Environmental Studies, a foreign language, History, Music, Philosophy, Political Science, Psychology, Theatre Arts, Theology.

General Minor- Communication 255; English 210; History 308; Philosophy 206, 320; Sociology 201; Theology 253.

\section*{Communication}

General Major- Foundation (common to both emphases): Communication 201, 220, 222, 228, 240, 270, 301, 311 or 314, 322, 380.
Students are advised to select an emphasis and courses in consultation with a member of the communication department. See also the student handbook of the communication department for elective and Core Program course selection.

Students must select one of the following emphases:
General: Foundation; three courses designed to fit the vocational choice of the student. Two of these courses must be communication courses and the communication department advisor must approve all three. Communication 372 and 373 will not be counted toward the major.

Public Relations: \(\quad\) Foundation; Communication 241, 260; Business Administration 205, 206, 308.
Digital Media Production Major- Note: Foundation courses not required for Digital Media Production majors. Art 201 or 202, 240, 295; Communication 240, 250, 255, 320, 330, 333, 380, 381; two courses from English 307, Theatre Arts 205, Business Administration 308, Music 306. Courses from the Los Angeles Film Studies program could satisfy these two requirements.

\section*{General Minors-}

Communication: \(\quad\) Communication 201, 220 or 322, 222, 228, 240, 270, 301.
Digital Media Production: Art 201 or 202, 240; Communication 240, 250, 320; two from Business Administration 308, Communication 330, 333, English 307, Music 306, Theatre Arts 205.

Journalism: \(\quad\) Communication 240, 241, 301, 302; Art 201 or Communication 242; Art 240 or Communication 393.
For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\section*{041 Student Publications Production (1)} Fall, Spring Open to all who work on student publications-who submit, in advance, a learning activities contract listing the types of projects and learning experiences in which they will participate. Graded on a pass/no record basis.

051 Forensics (.5) ..Fall, Spring
Forensics includes individual events and debate. Active participation involves weekly practice and coaching and formal judging in a collegial, competitive environment at tournaments. Credit will be awarded for each full year of active participation. Graded on a pass/no record basis.

Principles of Communication (3)
Designed to introduce the beginning communication student to some basic principles and thought in the field of communication: communication models, variables, symbols, perception, intrapersonal communication, and semantic problems.

220 Small Group Communication (3) Fall
A study of the theory and practice of group problem-solving in cooperative face-to-face discussion; the development of awareness and understanding of group dynamics, and the presentation of panel, symposium, and dialogue.

222 Interpersonal Communication (3) Fall, Spring
The study of concepts, problems, and responsibilities in communication between two or more persons, focusing on conversation with consideration of many variables and contexts. [Cross-listed: CORE 254]

228 Organizational Communication (3) .Spring
The analysis of formal and informal communication in such organizations as corporations and institutions. Included will be considerations of communication problems related to grapevine, rumor, channels, perception, power, status, roles, structures, etc.

240 Introduction to Mass Communication (3) Fall
An introduction to the concept of mass communication and its application to electronic and written media. The course will survey the historical development of the technology, effects, and theory of the media through major issues.

241 Introduction to Journalism (3) Fall
An introduction to reporting and writing news for the print and broadcast media. The course includes practice in writing several types of news stories, an overview of the historical, cultural foundations of journalism, and a critical examination of the theoretical foundations of journalism. [Cross-listed: English 241]

242 Print Journalism (3)
Spring Odd
Students will study interviewing, editing, in-depth reporting, critical and feature writing, developing headlines and titles, and copy-editing. They will explore the way text and design work together. Students will be introduced to production and layout, using The Diamond and other assignments as laboratory work. Prerequisite: Communication 241; or permission of instructor. [Cross-listed: English 242]

250 Introduction to Film/Video Production (3)
In this introductory course, students will gain working knowledge of sophisticated cameras and equipment, a beginning knowledge of editing on the Avid platform, and in-depth discussion of what it means to be a Christian in the communication and entertainment industry today. Students will work in teams to produce films during the semester.

255 Film Criticism (3) ......................................................................................................................................................................................Spring
After watching numerous films in order to develop a critical sense of the history, themes, motivations, and aesthetic of motion pictures, students will pay particular attention to the concept of Christian film. Film screenings will include popular films, classic films, and films that both critics and audiences praise. Students will be introduced to theories of film criticism.

260 Public Relations (3).
 istration. After a study of the history of public relations, students will learn what is expected of public relations workers, study the various publics, become familiar with current problems and issues in public relations, analyze several cases, and develop a Christian perspective for the continued study of public relations.

270 Cross-Cultural Communication (3) Fall
This course explores a variety of cross-cultural and intercultural communication experiences. Students will explore the concept of culture and examine the relationship of culture and communication to build a framework for studying cross-cultural communication patterns from a variety of representative cultures (including North American culture). Special emphasis will be given to the influence of worldview, ethnic identity, and socialization on the process of communication. Overall, this course is designed to help you appreciate and understand different forms of communication and begin to develop a Christian perspective for the differences and relationships between cultures. [Cross-listed: CORE 270]

281- Service-Learning (1-3) \(\qquad\) Fall, Spring, Summer
See page 113, Individual Studies
301 Advanced Expository Writing I (3) Fall
This course is designed to introduce students to types of non-fiction writing frequently sought by magazines and journals. Major assignments include the interview, the narrative essay, and the review. Especially featured is the personal narrative. In addition to writing, students will read and react to various types of non-fiction writing-both essays and longer works. Significant class time is spent in workshop format with students reading and discussing their own work. Satisfies Core Program writing-intensive requirement. [Cross-listed: English 301]

\section*{ACADEMIC OFFERINGS: COMMUNICATION}

\begin{abstract}
302 Advanced Expository Writing II (3) .Spring
The primary goal of this course is to help students write with clarity, grace, and power. To achieve this goal, they will write expository essays, hone research skills, work style exercises, and critique one another's papers. Note: Advanced Expository Writing I emphasizes narrative prose, while Advanced Expository Writing II emphasizes argumentative and explanatory prose. Satisfies Core Program writing-intensive requirement. [Cross-listed: English 302]

305 Business and Technical Writing (3) ................................................................................................................................................Spring Students will study the process, application, and characteristics of business and technical writing, and the way in which writing style, strategies, content, and clarity will relate practically to one's profession. Concentrates on developing competence in a variety of writing tasks commonly performed in business, law, industry, social work, engineering, agriculture, and medicine. Satisfies Core Program writing-intensive requirement. [Cross-listed: English 305]
\end{abstract}

311 Advanced Public Address (3) ....................................................................................................................................................Spring Odd
An emphasis upon proper speech construction and delivery with application of communication concepts. Includes analysis of some public addresses. Prerequisite: CORE 110 or equivalent.

314 Argumentation and Persuasion (4) Spring Even
After a study of the history of argumentation and persuasion and the relationship of argumentation and persuasion, this course will focus on various theories of attitude change, the structure of argument, and the development of a Christian perspective. Applications of argument and persuasion to be considered are: propaganda, advertising, political campaigns, and political debate. The student will be expected to apply the course studies to his/her specific vocational decisions. Prerequisite: Communication 201.

320 Advanced Film/Video Production (3) Fall Building on the preproduction, production, and postproduction skills gained in Communication 250, students will bring their film/video production skills to a deeper level through in-depth analysis of other filmmakers' work and through hands-on work with green screen techniques and more. A variety of videos will be produced during the semester. Prerequisite: Communication 250.

322 Family Communication (3) ..Spring The focus of this course is to analyze and understand communication in long-term interpersonal relationships in the family. Problems specific to family communication will receive attention. The course aims at improving communication by stressing application of communication principles to family interaction. Prerequisite: Communication 222; or permission of instructor.

330 Advanced Video Editing (3)
.Spring Odd
Students will do an in-depth study of the film/video editing techniques of great editors through history, study the impact that editing decisions have on a final product, and bring their own editing abilities to a new level through advanced training on the Avid platform. Prerequisite: Communication 250.

333 Documentary Film Making (3)
Spring Even A study of the history of the genre; screen documentary films and draw upon a wealth of critical writings produced in the past to help us decipher the textual strategies that create documentary films' "reality effect." Students will also explore the creative, technical, and practical aspects of creating a documentary film. Teams will produce documentary films for their final projects. Prerequisite: Communication 250.

341- Special Topics (3) .Occasional
348 Courses will consist of topics not normally covered in other communication courses. Specially designed to focus on more specific topics utilizing instructor strengths and consideration of student needs.

350 Short Film Production (3) Fall
This course gives a select number of students an immersive opportunity to create a short film by working in assigned roles on a film crew. The team will collaborate to create a short film that is content worth consuming. Understanding the unique roles of filmmaking and the critical need for cooperation and collaboration will help students become better communicators in this culture-shaping arena.

371- Communication Internship (3-9). Fall, Spring, Summer
373 A supervised work experience designed to provide the student with the opportunity to apply principles and skills gained through coursework. Open to qualified juniors and seniors. Communication 372 and 373 may not be applied toward the major.

380 Senior Seminar (3)
The capstone for communication and digital media production majors. Students will research, discuss, and struggle with major issues in communication such as freedom of speech, media impact, modern technology, and the information superhighway. Students will be pressed to expand and refine their Christian perspectives regarding communication with the study of the role and responsibility of communication in society. Students will examine current communication theories, research, and research design. Prerequisite: senior standing and completion of all foundation courses in the major.of ethics, excellence, and Christian perspective in one's work through readings, written reports, and discussion. Students will give a publicscreening of their project at the end of the semester. Prerequisites: Communication 250, 320; junior or senior standing.

\section*{Community Development}

The mission of the Community Development Program is to prepare Christians to join the Father as He works to help communities (landscapes, people, plants, and animals) flourish and experience the beauty and joy of shalom.
\begin{tabular}{|c|c|}
\hline \begin{tabular}{ll} 
General Major- & \begin{tabular}{l} 
Foundation (con \\
opment 373 or c \\
program leader.
\end{tabular}
\end{tabular} & mmon to all emphases): Community Development 101, 151, 161, 201, 301, 320, 330, 391; Community Develcompletion of a semester long cross-cultural experience approved in advance by the community development \\
\hline \multicolumn{2}{|l|}{Students must select two of the following areas of specialization:} \\
\hline Belief Systems and Culture: & Psychology 201; Psychology 210 or 384; Theology 231, 322, 331, 332; Theology 253 or 351. \\
\hline Business and Economics: & Business Administration 205, 206; Economics 202, 203, 334; Sociology 215; one course from Business Administration 304, 320, 330, Economics 321, Environmental Studies 152. \\
\hline Communication and Digital Media: & Communication 222, 270; one course from Communication 220, 228, 240 , English 305; eleven additional credits of communication coursework approved in advance by the community development program leader. \\
\hline Community Education: & Education 101, 165, 203, 300; Communication 220 or 270; Education 355 or Linguistics 201; Sociology 215 or 216 . \\
\hline Facilities and Infrastructure: & Construction Management 101, 102, 207, 270; nine additional credits selected from construction management and engineering coursework and Environmental Studies 152 approved in advance by the community development program leader. \\
\hline Food Systems: & Agriculture 101, 111, 221, 251, 370; three credits of agriculture electives numbered 200 or higher. Relevant courses from Au Sable Institute may be used if approved in advance by the community development program leader. \\
\hline Natural Resources and the Environment: & Biology 200; Chemistry 101, 251; Economics 334; one course from Biology 316, Environmental Studies 270, 320; one course from Environmental Studies 152, 201, 202, 303, Geography 151. \\
\hline Public and Environmental Health: & Chemistry 111; Sociology 201; Biology 200 or Environmental Studies 152; Biology 302 or Environmental Studies 251; two courses from HHP 202, 209, 211. EMT training recommended. \\
\hline Politics and Social Policy: & Political Science 201, 214, 245; Political Science 210 or 370; Social Work 313; Political Science 333 or Social Work 315; Sociology 215 or 305. \\
\hline General Minor- Community De & evelopment 101, 151, 161, 201, 301, 320, 330, 391; one of the above areas of specialization. \\
\hline
\end{tabular}

\section*{101 Community Development Seminar I (1) \\ Spring}

An introduction to the community development discipline with an emphasis on current events and a holistic understanding of the discipline. The class will meet in one three hour laboratory block and integrate guest speakers, discussion and analysis, field trips, and interaction (direct or electronic) with community development professionals. Graded on a pass/no record basis.

151 Communities and the Environment (3) Fall
An introduction to contemporary environmental studies and creation care, with emphasis on class discussion of relationships between human population and resource use in light of biblical teaching about environmental stewardship. Particular attention is given to the biotic and ecological dimensions of creation stewardship and planetary distress. Designed to be taken by community development majors concurrently with Community Development 161. [Cross-listed: CORE 211, Earth Science 151, Environmental Studies 151]

\section*{ACADEMIC OFFERINGS: COMPUTER SCIENCE}

161 Field and Laboratory Investigations in Environmental Studies (1) Fall
A field and laboratory exploration of fundamental issues, concepts, and techniques of contemporary environmental studies with a biological and ecological focus. Includes visits to sites of natural history and stewardship interest both locally and regionally. Also includes an introduction to important technological tools in environmental studies and analysis of physical and biotic parameters of the environment. Required for students majoring or minoring in Environmental Studies or Community Development. Corequisite: Community Development 151. [Cross-listed: Environmental Studies 161]

201 Community Development Theory and Methods (3) Spring Odd An examination and critique of classical community development theory and methods from the inception of the discipline to the present time. Particular attention will be given to exploring the similarities and differences between secular and Christian approaches to the field and to examining the successes and failures of community development efforts. Two seventy-five minute lecture/discussion periods per week. Pre- or corequisites: Community Development 101, 151 and 161.

301 Community Development Seminar II (1).
.Spring Even
An examination of emerging trends and practices in community development. Particular emphasis will be put on how the field is developing and how Christians can contribute to it now and in the future. The class will meet in one three hour laboratory block and integrate guest speakers, recent articles and videos, field trips, and interaction (direct or electronic) with community development professionals. Prerequisite: Community Development 201.

320 Place, Grace, and Humans in Community (3)
.Fall Odd
A study of the philosophical foundations of social relationships. Possible topics explored include the relationship between groups of people and their physical environment, the possibility of understanding people from different cultures than our own, and whether we can hold other communities to the standards of our own communities. Prerequisite: CORE 200. [Cross-listed: Philosophy 320]

330 Community Development and the Kingdom of God (3).
Spring Even
An exploration of the opportunities community development professionals have to live as kingdom citizens. This course will build on the framework established in Community Development 201, extending the theoretical and practical concepts and examining how they relate to our calling as Christians to work toward restoration and shalom in urban, rural, domestic, and international settings. Prerequisite: Community Development 201.

373 Community Development Internship (3)
Fall, Spring
Provides community development majors and minors with an opportunity to learn from professionals in the community development field, to apply the insights, skills, and principles they have learned in their coursework, and to serve a community in a meaningful way. Prerequisites: junior or senior standing; permission of internship coordinator.

391 Professional Conference Attendance (1) \(\qquad\) Fall, Spring
Participation in a professional community development conference. Examples include the ECHO conference and the International Development Conference at Calvin College. Pre-conference and post-conference activities and assignments will be utilized to help participants prepare for, and process, the experience. Prerequisites: sophomore standing; permission of instructor.

\section*{Computer Science}

General Major- \(\quad\) Foundation (common to all emphases): Computer Science 111, 112, 120, 131, 145, 202, 390; Mathematics 212; one course from Communication 220, 222, English 305.

Students must select one of the following emphases:
Hardware Systems: Foundation; Computer Science 305, 311; Computer Science 371 or 393; Engineering 204, 220, 304; Mathematics 152, 153, 204, 209; Physics 201, 202.

Information Systems: Foundation; Business Administration 201, 202; two courses from Business Administration 205, 206, 305; Computer Science 220, 320, 371; Computer Science 211 or 231; CORE 266; Mathematics 151 or 152; Statistics 131 or 132.

Systems Administration: Foundation; Computer Science 245, 305, 308, 311, 371; Mathematics 152, 153, 209; one course from Computer Science 220, 231, Mathematics 203, Mathematics 215 and 216.
\(\begin{array}{ll}\text { Computer Science/Mathematics Major- } & \text { Computer Science 111, 112, 120, 131, 145, 202, 305; one course from Computer Science 220, 231, 308, 311; } \\ & \text { Mathematics 152, 153, 203, 207, 209, 212, 304; one course from Mathematics 201, 204, Mathematics 215 } \\ \text { and 216; Computer Science 390 or Mathematics 390. }\end{array}\)

\section*{General Minors-}

Computer Science: Computer Science 110 or 111; Computer Science 131, 145; two additional Computer Science courses; Statistics 131 or 132; one course from Mathematics 138 or above.

Web Development: Computer Science 111, 112, 120, 220, 231; Art 250; Business Administration 338; one course from Mathematics 151, 152, Statistics 131 or 132.

Associate of Arts Degree Option Area of Concentration (Associate of Arts in Computer Networking).
See the "Academic Program" section for the Core Program for all A.A. programs (pages 21-22).
Computer Science 111, 112, 120, 131, 145, 245, 371; two courses from Computer Science 202, 211, 220, 231; CORE 266; English 305; one course from Mathematics 140, 151, 152. Recommended electives: Business Administration 205, Communication 220, 222, Computer Science 220, Psychology 201, Statistics 131.

110 Programming for Engineers (3) Fall
An introduction to structured computer programming with an emphasis on engineering problem-solving applications. The course will focus on algorithm development and implementation in the C programming language. Basic concepts of computer programming, elementary composition principles, and the fundamental data structures are covered.

111 Programming I (3)
An introduction to computer programming. Basic notions of abstraction, elementary composition principles, the fundamental data structures, and object-oriented programming technique are introduced. Topics include variables, control structures, arrays, and input/output.

112 Programming II (3) .........................................................................................................................................................................Spring
A continuation of Computer Science 110 or 111. The course includes advanced programming techniques, in-depth examination of objectoriented principles, and good programming style including documentation. Prerequisite: Computer Science 110 or 111; or permission of instructor.

120 Information Systems Design (3)
Fall
An introduction to the nature of information systems, the conceptual foundations and use of such systems. Topics include information systems project management, requirements analysis and use cases, structural and behavioral modeling, prototyping, and use of the Unified Modeling Language. Corequisite: any college level computer science course.

131 Introduction to Data Communications (3).
Fall
A study of the concepts, issues, and technology involved in the transmission of data. Topics include network configurations, communications protocols, data coding schemes, and transmission hardware. Prerequisite: completion of Core Program mathematics requirement.

145 Computer Systems (4)
...Spring
An introduction to the organization and inner workings of a modern digital computer and its components. Topics include introductory digital logic and circuits, CPU components, memory systems, input/output, storage systems, and introductory operating systems concepts. Students gain experience in working on computers in the laboratory component of this course. Three lectures and one laboratory period of two hours per week. Strong algebra skills required.

202 Data Structures (3)
Fall Even
A study of the various types of information forms handled by a computer, including the format of data and the design and analysis of algorithms to manipulate data. Prerequisite: Computer Science 112; Pre- or corequisite: Mathematics 151 or 152; or permission of instructor.

211 Programming for Business (3). .Spring Odd
An introduction to techniques and tools used in developing computer business solutions, focusing on the development of solutions integrated with standard office suite tools (mainly Exel), such as spreadsheets and database management systems. Prerequisite: Computer Science 110 or 111. [Cross-listed: Business Administration 211]

220 Database Systems Design (3)
.Spring Odd
A study of the design, development, and implementation of an information system for management. Topics include database architecture, data definition and manipulation, report generation, and high-level language interface. Prerequisites: Computer Science 110 or 111; Computer Science 120.

231 Client/Server Programming (3).
Fall Odd
An introduction to software development in a networked computing environment. Focus will be on development of web-based software solutions employing tools such as scripting languages for both the client (browser) side and the server side. Prerequisite: Computer Science 110 or 111; Corequisite: Computer Science 120.

245 Network Systems Administration (3)
Spring Even
An introduction to the issues involved in installing and maintaining a network operating system and other network servers. Students will gain hands-on experience with modern network operating systems and servers for common network services. Topics include managing network applications such as file serving, email, web serving, and security implementation. Strong algebra skills required.

270 Project Management (3) Fall
This course is an introduction to the field of project management. The primary objective is to acquaint students with a broad basic overview of project management and the role of a project manager throughout the five primary processes of managing projects. The course will also cover common agile methodologies and principles because of how they relate to project management. The agile project management process encourages frequent inspection and adaptation, teamwork, accountability, self-organization, best practices that allows for rapid delivery and high quality, and a business approach that aligns development with customer needs and company goals. Prerequisite: sophomore standing. [Cross-listed: Business Administration 270, Construction Management 270]

281- Service-Learning (1-3)
Fall, Spring, Summer
283 See page 113, Individual Studies
305 Operating Systems (3)
.Spring Odd
A study of the basic principles of modern multi-programming operating systems and the interrelationships between the operating system and the architecture of the computer system. Topics include concurrent processes and deadlock, memory management and virtual storage, multiprocessing, auxiliary storage management, and systems security. Prerequisites: Computer Science 145, 202; or permission of instructor.

308 Programming Language Concepts (3)
Spring Even A study of the syntax, design, and history of programming languages and programming language structures. Topics discussed include variables, expressions, data types, scoping, and procedures. Prerequisite: Computer Science 202; or permission of instructor.

311 Computer Architecture and Assembly Language Programming (3)
.Fall Odd
The topics of this course cover the design of a computer, how data is converted and represented, CPU organization, addressing, relocatability, use of base registers, multiple radix arithmetic, and programming in machine language. Prerequisites: Computer Science 145 or Engineering 204; Computer Science 202; or permission of instructor.

320 Information Systems for Decision Support (3) .......................................................................................................................Spring Even
A study of computer tools and techniques used in support of decision-making. Topics may include simulation, business intelligence, online analytical processing, data warehousing, knowledge management, expert systems, and artificial intelligence. Prerequisites: Computer Science 131; Statistics 131 or 132.

341- Special Topics (3) .Occasional
348 These computer science courses cover topics that maximize individual instructor strengths, interests, and competencies. Each course will deal with a topic in computer science not usually covered to any extent in regularly scheduled courses.

371 Practicum (3)
Fall, Spring
Students will be given opportunity to apply the principles of management information systems in an on-campus or off-campus assignment. Prerequisites: three 200-level or above Computer Science courses; junior standing or sophomore standing for Associate of Arts students.

390 Technology and Society (3)............................................................................................................................................................................................. An examination and critique of the relationship of technology to other areas of Western society. During the first half of the course students examine a Christian philosophy of technology and application is made to such problems as the role of the computer, technocracy, appropriate technology, and the historical two-cultures dualism. During its second half, the course focuses on the question of engineering ethics, with particular emphasis on such questions as safety and risk, professional responsibility and authority, whistle blowing, normative socioeconomic structures, and morality in career choice. This course requires the student to write and orally present a significant thesis paper. Prerequisites: CORE 200; junior or senior standing. [Cross-listed: CORE 267, Engineering 390]

391- Individual Studies (1-3) .............................................................................................................................................Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Construction Management}

For a description of the Construction Management program see Business Administration: Construction Management on page 52 and Engineering Science: Construction Management on page 95.

\section*{101 Principles of Construction Management (3)}

Fall
An introductory survey course in construction management that begins by building a Christian perspective on the task and calling of a construction manager or construction engineer. The course introduces methods of construction project planning, scheduling, delivery, quality, and control. It also introduces construction contract types, construction cost estimating and accounting, along with an overview of construction method, practice, and safety.

102 Construction Communication and Architectural Graphics (2)
.Spring
This lab studio course introduces architectural and construction communication by practicing methods of construction documentation and preparation. The course will introduce students to basic plan reading. Construction planning computer applications and architectural computer-aided drafting will be explored and practiced.

207 Geographic Information Systems and Surveying (4) Fall Even An introduction to the acquisition, analysis, display, manipulation, and management of geographic information. Course topics will include geographical data input, storage, maintenance, analysis, and retrieval. Students will utilize common GIS software and associated hardware. An overview of survey methods used to gather and quantify features of physical geography will be included. The course will meet in two studio lab classes to provide an integral learn-by-doing experience applying GPS technology, survey methods, and GIS applications. Application of GIS to agriculture, business, environmental management, and other disciplines will be provided in this course. Prerequisite: sophomore standing or above. [Cross-listed: Agriculture 303, Business Administration 303, Environmental Studies 303]

213 Statics for Construction Management (2) Fall
A mechanics course that examines the effects of forces on statically determinate rigid bodies in equilibrium, including the analysis of determinate truss structures. This course is a subsection of Engineering 210. Prerequisites: Mathematics 151; Physics 201 or 215.

214 Mechanics of Materials for Construction Management (2).
A mechanics course that examines the stresses, strains, and deformations that develop when various loads are applied to deformable bodies, including beams and columns. This course is a subsection of Engineering 212. Prerequisite: Construction Management 213 or Engineering 210.

220 Construction Materials and Methods (4) .Fall Odd
A comprehensive study of the properties, sources, processing, methods, sequences, and equipment used in residential and commercial construction projects. Planning and managing of the construction process, including an introduction to structural and finish systems that make up building structures, are investigated. Appropriate application and responsible use of materials for design and functional intent is investigated. The environmental impact of construction is discussed. Prerequisite: Construction Management 101.

240 Mechanical and Electrical Systems (3) Spring Even A study of the construction of mechanical and electrical systems, emphasizing principles of heating, cooling, ventilation, water supply, waste disposal, and electrical distribution. An introduction to mechanical, electrical, and plumbing codes and design software included. Energy conservation issues, sustainable design principles, and use of renewable energy are addressed. Prerequisite: Construction Management 220.

\section*{270 Project Management (3)} . Fall
This course is an introduction to the field of project management. The primary objective is to acquaint students with a broad basic overview of project management and the role of a project manager throughout the five primary processes of managing projects. The course will also cover common agile methodologies and principles because of how they relate to project management. The agile project management process encourages frequent inspection and adaptation, teamwork, accountability, self-organization, best practices that allows for rapid delivery and high quality, and a business approach that aligns development with customer needs and company goals. Prerequisite: sophomore standing. [Cross-listed: Business Administration 270, Computer Science 270]

280 Construction Estimating (4) Spring
An introduction to construction estimating and bid preparation with an emphasis on quantity takeoff. Includes a detailed study and application of pricing, subcontract evaluation, and bidding techniques using blueprints and specifications. Project types studied include residential, light commercial, and commercial building projects. Prerequisite: Construction Management 101.

318 Soil Mechanics and Foundation Design (4) Fall
A study of the engineering principles relating to soil properties and foundation design. The material properties of soil including structure, index properties, permeability, compressibility, and consolidation will be explored. Methods of soil testing, identification, and remediation will be covered. Principles of settlement and stresses in soils will be considered. Slope stability, retaining walls, and bearing capacity of shallow foundations will be introduced. The soils lab will provide hands-on opportunities to determine water content, perform sieve analyses, and test liquid, plastic, and shrinkage limits. Soil classification, compaction, compression, and consolidation testing will be explored. Prerequisite: Engineering 212 or Construction Management 214. [Cross-listed: Engineering 318]

371- Construction Management Internship (1-3) ..............................................................................................................Fall, Spring, Summer
373 An off-campus construction management experience that is intended to provide the student with the opportunity to apply knowledge, principles, and skills gained in the classroom in a project management role on a construction related project. Written and oral summary reports are required. Prerequisite: completion of two years of construction management curriculum.

The Core Program is required of all Dordt students. Its central purpose is to prepare students for faithful Christian discipleship in the areas and responsibilities of life that are common across academic majors and vocations. The Core Program articulates and helps students develop a broad, firmly-rooted Christian perspective on life and learning; it helps develop an understanding of who humans are and how people are called to live in relationships and in a particular historical context; and it equips students with knowledge, competencies, critical thinking, and connections needed for both their specialized programs and for life-long learning and service to God's kingdom in the contemporary world.

100 Kingdom, Identity, and Calling (2). Fall, Spring
Introduces incoming students into the vision, expectations, and community of Dordt College. Students examine their belief in Christ and seek their identity and calling in God's kingdom.

\section*{COMMUNICATION COMPETENCY}

110 Communication and Culture (3) Fall, Spring
Examines the ways in which communication is used in the public sphere to create, maintain, and change culture. Students apply understandings of the concepts of culture and communication to a range of contemporary social issues, cultural texts, and communication practices. Emphasis is given to public speaking, to listening skills, and to rhetorical methods for analyzing and constructing oral and written arguments. Students also work cooperatively on researching and designing larger class presentations.

Communication 051 Forensics also fulfills communication competency requirement.

\section*{ENGLISH COMPETENCY}

120 English Composition (3) .................................................................................................................................................................................. Spring Students will write a number of essays and a research paper. As they work on these, they will become aware of writing as a process and develop skills in generating ideas, revising, and editing. They will also review traditional grammar and principles of usage and style.

Writing-Intensive Courses: English 220, 305, 306, English/Communication 301, English/Communication 302, History 280, Psychology 366, Theatre Arts 365.

130 Health, Sport, and the Body (1.5)
Fall, Spring
A study of the concept of fitness and health from a Christian view of humankind. Designed to help students evaluate their own physical needs and strengths. This course assists students in developing their personal exercise and activity program. Preferably should be taken in the freshman year. Graded.

135 Introduction to Lifetime Activities (. 5 per component). Fall, Spring Students will complete up to three lifetime fitness activity components. Each activity component focuses on the lifetime fitness and health principles learned in CORE 130.

140 Roots of Western Culture and Worldviews (3). Fall, Spring
A study of the roots and formation of Western culture from ancient times to the early modern period, in the light of a biblical view of history. Special attention is given to the synthesis of and tensions between classical, Christian, and Germanic worldviews and cultures.

145 Western Culture in Global Context (3) \(\qquad\) Fall, Spring Continuation of CORE 140. A study of the emergence of modern and contemporary Western culture in its increasingly global context. Prerequisite: CORE 140; or permission of instructor.

150 Biblical Foundations (3) .Fall, Spring A survey of biblical revelation in its progressive unfolding of key ideas and institutions against their cultural-historical background and within their covenant setting. Emphasis is placed on the normativity of Scripture that reaches its fullness and fulfillment in Christ for all academic work.

160 Introduction to the Arts (3) \(\qquad\) Fall, Spring Students choose from a variety of sub-courses in art, drama, film, and music topics that are of interest to them. Students also fulfill requirements by attending special arts events and lectures.

180 Responding to Literature (3)......................................................................................................................................................Fall, Spring This course asks students to respond to poems, essays, stories, plays, a novel, and perhaps a film. Its purpose is to teach students how to understand these various forms and how to evaluate the moral vision when the imaginative world intersects with their own lives.

Introduction to Christian Philosophy (3)
Using figures from the history of Western philosophy as our guide, this class will challenge you to examine your own life, see why you do what you do, and evaluate how your actions are shaped by certain religious commitments. It will demonstrate the need for wisdom and discernment and will begin to equip you with the tools you will need (critical thinking, self-reflection, clear communication) to discern how we are called to live as Christian disciples in today's day and age. Prerequisites: CORE 140, 150.

\section*{NATURAL SCIENCE}

\section*{211 Creation Care and the Environment (4)} Fall
An introduction to contemporary environmental studies and creation care, with emphasis on class discussion of relationships between human population and resource use in light of biblical teaching about environmental stewardship. Particular attention is given to the biotic and ecological dimensions of creation stewardship and planetary distress. Three lectures and one laboratory period of three hours per week. [Cross-listed: Community Development 151, Earth Science 151, Environmental Studies 151]

212 Human Biology I (4) .Fall, Spring An overview of the structure and function of the human body, using an experimental approach. Addresses how worldview impacts the use of one's own body and guides ethical decision-making. Three lectures and one laboratory per week. For nursing, HHP, and other nonbiology majors. [Cross-listed: Biology 203]

213 Apian Biology: The Biology and Role of Honeybees in Creation (4) Occasional A course in the biology and role of honeybees in creation. Students will study the history, anatomy, and physiology of the honeybee as well as the management of honey bees including the role in the pollination of plants, honeybee health, reproduction, and the production of honey and beeswax. Three lectures and one laboratory period per week.

214 Food: Connecting to Life (4). Fall, Spring
Students will study our current food system from the producer to the consumer. Agricultural production practices, processing, and marketing will be considered in the context of cultural influences, environment, economics, politics, and social impacts. Using tools of scientific investigation, students will be asked to examine how systems of food production affect food chemistry, safety, preservation, marketing, and government regulations, and ultimately, society and the environment. Finally, students will examine how their faith commitment is shaped by an understanding of stewardship and global needs. The laboratory component includes growing, preserving, and preparing food along with visiting producers and processors.

\section*{3)}

Fall Even
Welcome to the flora of North America! This is a course in field biology and taxonomy of vascular plants. Our study will focus on the native vegetation of the tall-grass prairie landscape with its associated gallery forests and wetlands. We will be comparing local studies to plant complexes from other geographic locations. Two lectures and one laboratory period per week. This course includes extensive field work and potentially several weekend field trips.

221 Physics Applications and Implications (4) Spring The development of modern physics will follow a historical framework with particular attention given to the relationship between scientific discovery and Christian faith.

222 Energy, Materials, and the Environment (4) Spring Flowing from a foundation in physical and earth sciences, this course offers an introduction to energy and material use in Western society and examines the resulting impact on the environment. Contemporary practices and their historical roots are critiqued in light of Biblical norms for stewardship. An emphasis on evaluation and implementation of practical steps toward sustainability permeates the course with the goal of motivating and equipping students to become lifelong stewards. The laboratory portion of the course combines tours, laboratory measurements, economic analysis, and environmental analysis. Three lectures and one laboratory period of three hours per week. [Crosslisted: Earth Science 152, Environmental Studies 152]

223 Introductory Geology and Physical Geography (4). Fall
A general introduction to the physical nature and structure of the solid Earth, including, briefly, its physical geography and a more detailed look at its geology. The environmental implications of these subjects are detailed. Three lectures and one laboratory period of three hours per week and one or two field trips. [Cross-listed: Earth Science 201, Environmental Studies 201, Geography 201]

224 Solar System Astronomy (4)
Fall Odd
An introduction to the structure and diversity of the solar system, focusing on both the historical development of understanding of our cosmic "neighborhood" from the ancient Greeks to Einstein as well as recent discoveries and their implications for an improved understanding of our Earth. Students will obtain hands-on experience observing the heavens with naked eye, binoculars, and telescopes. The course involves three lecture hours and three observation/laboratory hours per week. Prerequisite: completion of Core Program mathematics requirement. [Crosslisted: Astronomy 121, Earth Science 121]

225 Stellar and Galactic Astronomy (4)
.Fall Even
An introduction to stellar and galactic astronomy, focusing on the historical development of understanding of the cosmos as well as recent discoveries and their implications. Topics include the classification and explanation of stars, stellar life-cycles, remnants of stellar collapse (white dwarfs, neutron stars, black holes), galaxies, and cosmology (the study of the universe as a whole). Students will examine origins in light of Scripture and modern scientific evidence. Students will also obtain hands-on experience observing the heavens with naked eye, binoculars, and telescopes. The course involves three lecture hours and three observation/laboratory hours per week. Prerequisite: completion of Core Program mathematics requirement. [Cross-listed: Astronomy 122]

Any lab based science course from agriculture, astronomy, biology, chemistry, engineering, environmental studies or physics also fulfills the natural science requirement.

\section*{QUANTITATIVE REASONING}

Any mathematics or statistics course numbered 120 or higher.

\section*{PERSONS IN COMMUNITY (CORE 250-259)}

251 Lifespan Development (3) \(\qquad\) Fall, Spring This course studies the growth and maturation of persons throughout the entire lifespan, including examination of physical, cognitive, personality, social changes, faith development, and other developmental tasks. This course will also focus on evaluating the theoretical issues and descriptive information portraying the growth of an individual from conception through late adulthood. Students will develop a biblically-informed vision of who we are as image-bearers of God and what it means to be humans living in God's creation. [Cross-listed: Psychology 204]

252 The Social Psychology of Persons (3) Fall, Spring We influence and are influenced by culture, social structures, groups, personality, family, and the media, just to name a few. Studying the situational and personal/interpretive factors that influence an individual's social behavior can reveal new insights about the grace and sin at work in our relationships and social situations. Utilizing a biblical perspective on the social psychology of persons, this class will explore how students can function as faithful Christians within all of these situations. [Cross-listed: Psychology 210, Sociology 210]

254 Interpersonal Communication (3)
Fall, Spring
The study of concepts, problems, and responsibilities in communication between two or more persons, focusing on conversation with consideration of many variables and contexts. [Cross-listed: Communication 222]

256 Vulnerable Populations (3).
Spring
A historical and contemporary analysis of groups considered vulnerable by economic and social standards in American society. Causes, consequences, and implications for society are examined from a biblical view of humankind with an emphasis on social work practice. [Cross-listed: Sociology 215, Social Work 215]

\section*{JUSTICE AND STEWARDSHIP (260-269)}

260 Personal Financial Management and Stewardship (3) Fall, Spring Prepares students for the many financial decisions that they will be making during their lives in light of a Biblical and reformed view of stewardship. [Cross-listed: Business Administration 226]

261 Sociology and Social Justice (3) Fall, Spring Includes an examination of culture, socialization, social structure, group behavior, and inequalities (of class, race, and gender), as well as identifying and analyzing the pressing problems in our world that requires an understanding of social change that occurs through collective action and social movements. Through an exploration of predominant sociological theories, students are able to contrast those with a biblical worldview that challenges them to articulate how a reformed Christian understanding of creation (and norms) sin, redemption, and consummation may be used to positively affect social interaction, organizations, and institutions. [Cross-listed: Sociology 201]

262 Introduction to Politics (3)
Spring
An introduction to the political dimension of life from a biblically-oriented perspective. Laying the foundation for political thought and practice, the course will examine scripture, models of how the church relates to culture, and examples of Christian engagement with the political world. It will also provide a brief survey of each of the fields of political science and raise practical questions about political involvement. [Cross-listed: Political Science 201]

264 American National Politics (3) Fall
A general introduction to the American political process-its foundations, external influences, institutions, political actors, and policymaking. [Cross-listed: Political Science 202]

Seeks to expose students who are not majoring in business administration or accounting to a wide variety of principles, policies, institutions, and problems within the field of economics. It includes the discussion of concepts such as property, value, work, wages, prices, profits, Christian stewardship in the marketplace, and comparative economic systems.

267 Technology and Society (3).............................................................................................................................................................Spring
An examination and critique of the relationship of technology to other areas of Western society. During the first half of the course students examine a Christian philosophy of technology and application is made to such problems as the role of the computer, technocracy, appropriate technology, and the historical two-cultures dualism. During its second half, the course focuses on the question of engineering ethics, with particular emphasis on such questions as safety and risk, professional responsibility and authority, whistle blowing, normative socioeconomic structures, and morality in career choice. This course requires the student to write and orally present a significant thesis paper. Prerequisites: CORE 200; junior or senior standing. [Cross-listed: Computer Science 390, Engineering 390]

\section*{CROSS-CULTURAL STUDIES (270-289)}

270 Cross-Cultural Communication (3) .................................................................................................................................................... Fall
This course explores a variety of cross-cultural and intercultural communication experiences. We will explore the concept of culture and examine the relationship of culture and communication to build a framework for studying cross-cultural communication patterns from a variety of representative cultures (including North American culture). Special emphasis will be given to the influence of worldview, ethnic identity, and socialization on the process of communication. Overall, this course is designed to help you appreciate and understand different forms of communication and begin to develop a Christian perspective for the differences and relationships between cultures. [Crosslisted: Communication 270]

271 Learner Differences (3) Fall, Spring Examination of individual differences and diverse cultures and communities-ethnicities, SES, immigrant, cognitive (SPED and TAG), gender, learning profiles, as well as English language learners. Focus on designing inclusive learning environments to meet high standards. Prerequisite: Education 101. [Cross-listed: Education 145]

272 History of the Muslim World (3)
.Spring Odd
A survey of the history of the Muslim world focusing on the Middle East, North Africa, and Southwest Asia. Primary emphasis is on the development and features of Muslim society and culture, the relations between Muslim and Western civilizations, and the sources of tension in the modern Muslim world. Not open to first-semester freshmen. Prerequisite: CORE 140. [Cross-listed: History 212]

273 Latin America (3)........................................................................................................................................................................Fall Odd
A selective survey of the history of Latin America from pre-Columbian times to the present. Attention will be given to the indigenous and colonial origins of Latin American culture and society. Twentieth-century developments will be explored through a series of case studies. Not open to first-semester freshmen. Prerequisite: CORE 140. [Cross-listed: History 213]

274 East Asia (3) Fall Even The history of East Asia, paying special attention to China, Japan, and Indonesia in the early-modern and late-modern periods. The primary emphasis will be on east Asian responses to the challenges represented by Western ideas, commerce, and imperialism in its various expressions. Not open to first-semester freshmen. Prerequisite: CORE 140. [Cross-listed: History 214]

275 Faith and Cultural Aspects in Health Care (3). Fall
Students will engage in an introductory study of culture and its influence on behavior. Specific cross-cultural issues that affect health care delivery are discussed. Students will consider the worldviews of modern cultures and the implications for Christian discipleship; define health and illness as Christian individuals and part of the community as a whole; and comprehend traditional and alternative health care practices, incorporating religious beliefs, practices, and rituals. A phenomenological assessment is applied to the populations studied. Prerequisites: BSN major or junior standing; permission of instructor. [Cross-listed: Nursing 310]

276 Diversity and Inequality (3) Fall
Students examine the historical and contemporary factors related to diversity and inequality in North America and increase their appreciation for the contributions of diverse groups in culturally-pluralistic societies. The course assumes that human diversity is created good and explores how to discern that goodness after the Fall. Students assess their own biases in light of course material and increase their sensitivity to diversity. [Cross-listed: Social Work 216, Sociology 216]

Asian-Americans, and Mexican-Americans. Major writers from the four different groups will be read, including Douglass, Ellison, Wright, Walker, Erdrich, Silko, Momaday, Cisneros, Gilb, Chavez, Yamamoto, Tan, and Mura. Open to freshmen. [Cross-listed: English 203]

278 World Music (3) Spring Even
Examination of music heard in various contemporary world cultures, its aesthetic and stylistic aspects as well as its functions and underpinning ideas and values. [Cross-listed: Music 222]

281 Central America: Language, Culture, and Society (3) .Summer Even Learn or improve your Spanish language skills while living in a Central American setting. Explore the historical roots and influences shaping a contemporary Central American country. Emphasis is placed on understanding the challenges and potential of Central America today. Students will live with families and have ample opportunities to interact with local Spanish speakers. Several excursions are planned to supplement classroom instruction. Previous Spanish courses are not required.

282 Serving and Learning in Hungary and Transcarpathia, Ukraine (3).
.Summer Odd
Arrive in Budapest, Hungary and spend time exploring and studying Hungarian culture and history. Then spend two weeks living in Hungarian ethnic communities in rural Transcarpathia, Ukraine. Visit schools in the region and assist in teaching English to middle and high school students and adults. Absorb and experience the local culture and be of service in appropriate ways to people living in the postcommunist era. There will be pre-trip orientation and assignments related to history, culture and language of the region.

283 Dutch Culture and Reformed Worldview (3)
Summer Even Study the identity of the Dutch people from prehistoric times to the present while living in the Netherlands for three weeks. Examine the history of the Calvinist heritage from the Synod of Dort through the contributions of Abraham Kuyper. Discover how Kuyper's Reformed worldview has shaped various aspects of life and society, such as church, politics, trade, land reclamation, etc. Special attention will be given to events and sites relating to World War II. There are classes in the morning and field trips in the afternoon. Weekend trips to London and Normandy/Paris are part of the program. CORE 283 is not a language class and is open to students from any major.

284 Culture, Missions, and Community Development in Nicaragua (3)
Summer Even The course will focus on culture, missions, and community development in Nicaragua in cooperation with the Nehemiah Center in Managua, Nicaragua. Through pre-trip orientation and assigned readings and a variety of in-country experiences, students will explore the history, culture, government, and social life of Nicaragua and examine how a variety of mission outreaches and community developments have attempted to offer assistance in Nicaragua. Utilizing representatives from a variety of agencies active in Nicaragua, the students will be involved in discussions about the future of Nicaragua and its relationship to the rest of the world, as well as having an opportunity to learn about the differing philosophies and implementation plans of these different mission agencies and community development organizations. Where possible, students will be given the opportunity to get involved in the day-to-day work of the agencies visited in Nicaragua.

285 Korean Culture (3) ..Summer Even
Students will stay in Korea for three weeks in urban and rural areas and study its culture through religion and music. Both in a classroom setting and through travels, students will learn about the history and religions of Korea with emphasis on their modern development. They will experience Korean culture and music through personal relationships with Chong-Shin University students while they take lectures, discussions, and excursions together. This course is open to students of any major who have completed at least one year of college.

286 Serving and Learning in Southern Africa (Zambia) Summer Even Arrive in Ndola, Zambia, and spend time exploring and studying Zambian culture and history. Spend two weeks living in the Northrise University dormitory with African students and/or in Zambian homes. Visit NGO's in the region and assist in teaching agriculture to Northrise students and other adults. Absorb and experience the local culture and be of service in appropriate ways to people living in this country that was a British colony until the 1960's. There will be pre-trip orientation and assignments related to history, culture, and language of the region.

293 Cross-Cultural Reflections (3) ..Fall, Spring, Summer A 'portable', supervised reading and journal-writing course that students complete while participating in a semester-long internship or practicum experience in a cross-cultural setting (following established criteria for cross-cultural experiences). The selected readings and journal-writing instructions are designed to help the student to bring coherence to both the inner journey that occurs when students reflect upon a significant experience in their lives and the external journey they make into a cross-cultural situation. The reading and reflective journaling is not intended to substitute for or replace the requirements for the internship/practicum, but rather to build on the total impact of the experience and to enrich the student's cross-cultural understanding.

\section*{ADVANCED REFORMED THOUGHT (310-329)}

310 History and Philosophy of Education (3).
.Fall, Spring Why do we "do school" the way we do? Are the ways we educate the best? What does "the best" mean when we apply it to education? Most of all, what do the ways we "do school" say about our most basic commitments and beliefs? Philosophy of Education explores these questions and others like it, examining how basic commitments affect the ways we govern schools, see students, plan teaching and learning, and make curriculum. Students draw on resources, especially those from the tradition of Reformed Christian education, to construct a statement describing
their own education philosophy. While this course meets a requirement in the Teacher Preparation Program, it does not assume a background in teacher preparation. Students from outside teacher preparation are welcome. Prerequisite: CORE 200.[Cross-listed: Education 300]

\begin{abstract}
311 Agriculture Senior Seminar (3) Spring
An integration of departmental courses, research, and analysis of current topics with emphasis on Christian perspective for persons involved in agriculture. Issues will include government policies, world hunger, the family farm, meat production, and others. Three lectures per week. Prerequisites: CORE 200; junior or senior standing in the agriculture department; or permission of instructor. [Cross-listed: Agriculture 361]
\end{abstract}

312 History of Science and Technology (3) ..............................................................................................................................................Spring
Enables the student to examine from a Reformed, biblical perspective the narrative of scientific unfolding and technological development as two human activities that are manifest in all cultures. Emphasis is on the major paradigms and events that have shaped the development of science and technology in the West and most recently in North America. The course focuses on the historical activity of engineers and artisans, while investigating the interrelationship between scientific thought and technological development. Events and ideas such as the philosophical origins of Western science, the Copernican revolution, Enlightenment rationalism, the industrial revolutions, 20th century positivism, the Einsteinian revolution, and the modern systemization ethic are discussed. Prerequisites: CORE 140, 145, 200. [Cross-listed: Engineering 310]

\begin{abstract}
313 Church, State, and Social Welfare (3).
Spring
This course examines the question of which societal sphere is responsible for protecting vulnerable people. The course will follow the historical path of development of the modern social welfare institution, with a particular focus on the Progressive Era and the birth of social work and public administration. Students will examine structure, development, and contemporary response through discussion, research and varied readings on the biblical call to care for our neighbor, charity, social justice, and the normative role of the state and the church. Students will wrestle with this fundamental question: "How must I, acting alone, or in combination with others, behave towards vulnerable people?" Prerequisite: CORE 200. [Cross-listed: Social Work 313]
\end{abstract}

314 Christian Mind and Heart (3) .......................................................................................................................................................Spring
Students will deal with the issues of how they imagine, think, experience, and live in the world where Christ's redemption is present but not yet complete. We will discuss the biblical foundation for Reformed thinking, the responsibility of humans to fulfill our mission as image-bearers in God's world, and the development of a Reformed world and life view for actual Christian thinking and living. Students will explore significant issues of Christian life through personal and group projects that engage particular aspects of their major studies or life vision. Prerequisite: CORE 200. [Cross-listed: Theology 323]

315 Perspectives in Physical Science (3)
.Spring 2016 (Fall Odd beginning 2017-18)
Historical, philosophical, and theological perspectives on the physical sciences are discussed and developed. The historical and contemporary roles of Christianity and other influential forces in science are considered. Prominent positions in the philosophy of science are examined. Aspects of the complex interactions between Christian faith and the physical sciences are discussed. Prerequisites: CORE 200; completion of the Core Program natural science requirement with a physical science course (Astronomy, Chemistry, Physics, or CORE 220-229). [Cross-listed: Physical Science 201]

316 Aesthetics (3)
.Spring
A study of the aesthetic dimension of creation, the nature and qualifying function of artistic activity, and artifacts, and an introduction to general aesthetic theory and its history. Prerequisite: CORE 200. [Cross-listed: Philosophy 206]

317 Professional Practice Development in Society (3)...........................................................................................................................Spring
This capstone course concentrates discussion of Christian nursing practice within a broader perspective of a Reformed Christian worldview. It examines conflicting worldviews, prominent theoretical frameworks used to explain and guide professional nursing practice, and the integration of Christian caring while performing the various roles of the professional nurse. Students develop their individual philosophical perspective of nursing practice. The ability to conceptualize issues, apply critical thinking, theoretical reflection, and serviceable insight to political, economic, and psychosocial issues and trends affecting nursing and health care is facilitated. Prerequisites: CORE 200; enrollment in BSN program; or permission of instructor. [Cross-listed: Nursing 390]

318 Theology of the Reformation (3)
This course focuses on Luther and Calvin against their historical and theological backgrounds in order to understand the foundation of Protestant theology and thought. By studying both their classical works and secondary sources, students will critically understand how the fundamental doctrines began to be shaped in the 16th century and how they developed in the centuries following. Theological method, spirituality, and culture of the Reformation theology will be discussed along with the landmark doctrines concerning Scripture, sin and grace, salvation, and church. Prerequisites: CORE 150, 200. [Cross-listed: Theology 222]

319 Theology and Popular Culture (3)
.Spring Odd
The purpose of this course is to explore the relationship between Christian faith and culture. We will begin by establishing a Biblical perspective with a Reformed emphasis upon the "creation, fall, redemption, new creation" paradigm, as well as a brief historical survey of how Christians have engaged cultural issues. An important part of this course will be the exploration of "cultural theory" and "popular culture"
in dialogue with a reformed biblical perspective. Finally we will engage the "so what?" question: What does this mean for the Christian community as we seek to live faithfully in the world? Prerequisite: CORE 200. [Cross-listed: Theology 253]

320 Economics and Religious Belief (3)
Fall, Spring
An interdisciplinary exploration of the complex relationship between worldviews and economic outcomes, with special attention to the impact of worldview on wealth creation, economic development, and ideas about how to measure these things. We will discuss topics as diverse as the study of economically-important differences among belief systems; the influence of specific belief systems on the development of economies; variations in how economic progress is measured at the individual, company or country level; and the implications of a reformed, Christian worldview for economic development and policy. Prerequisites: CORE 200; junior or senior standing.

321 Perspectives on Origins (3)
.Spring Odd
A study of the philosophical, theological, and scientific aspects of evolutionary theory and the creation-evolution debate. The course will use a seminar format in which students will be required to articulate and critically analyze the different positions on origins. Not open to freshmen. Prerequisites: one college science course; CORE 200. [Cross-listed: Biology 251]

323 History and Theory of Literary Criticism (3)
Spring Even
Major works of literary criticism and theory of criticism, both classic works from Plato through Eliot and key works drawn from the ferment of contemporary theory will be analyzed, with the aim of formulating clearer Christian theories of literature. Prerequisite: CORE 200. English 210 recommended. [Cross-listed: English 333]

324 History of Psychology and Worldview (3). Fall
A brief study of the historical development of psychological theories from the ancient world to the present, with extended treatment given to major contemporary movements or perspectives in psychology (such as psychoanalysis, behaviorism, and humanism) and to recent attempts by Christians to "integrate" theology and psychology. Prerequisites: CORE 200; Psychology 201; senior standing. [Cross-listed: Psychology 384]

325 History of Calvinism (3) Occasional A study of historic Calvinism as it was expressed by John Calvin and those who followed in his name. Explores the permutations and applications of Calvinism through time including, but not limited to, Counter Remonstrants, English and American Puritans, Hungarian Calvinists, Afrikaners, and the modern Dutch Calvinist movement. Prerequisites: CORE 140, 200. Some European history recommended. [Cross-listed: History 335]

326 Faith, Emotions, and Being Human (3).
Fall Even
A survey of different non-Christian views about the nature, place, and task of man, and a study of the main themes of a Christian theory of man. Prerequisite: CORE 200. Open to juniors and seniors in all disciplines. [Cross-listed: Philosophy 350]

399 Calling, Task, and Culture (3)
Fall, Spring
This is an inter-disciplinary, capstone Core Program course that helps you reflect upon issues you encounter in your life, evaluate them from a Christian perspective, and live out a biblical perspective as a disciple of Christ. Prerequisites: CORE 140, 150, 200; second-semester junior or senior standing.

\section*{Criminal Justice}

General Major-

General MinorCriminal Justice 101, 202, 205, 302, 305, 322, 323, 324, 350, 373; Political Science 214; Sociology 216. To complete this interdisciplinary major, students will work with their advisor to select three additional courses to complement their vocational goals from communication, psychology, political science, or recreation. Students are advised to consider taking a minor in one of these programs. Criminal Justice 101, 202, 205, 373; one from Criminal Justice 302, 305, Sociology 216; Criminal Justice 322 or 323.

\section*{101 Introduction to Criminal Justice (3)}

Overview of the criminal justice system, including criminal justice research, criminal law, procedure, evidence, criminology, victimology, policing, the courts, and corrections. Students will explore how our views of crime and the criminal justice system have been influenced by government leaders and the media. Students will also seek to apply biblical norms to our analysis of the criminal justice system with suggestions on reform.

202 Criminology (3). Fall
A theory-based course that studies crime causation, typologies of crime, and crime control. It looks at both historical and modern theories, including those that look to individual, social, and structural causes. It also broadly analyzes the guardianship and enforcement functions of the criminal justice system. Students will be able to identify criminology theories in modern media and engage in theory-building exercises. Prerequisite: sophomore standing. [Cross-listed: Sociology 202]

Students will become acquainted with the forensic sciences, learn how to gather evidence and use it to solve crimes, and understand how proper investigation promotes justice. Considerable emphasis will be placed on how to conduct interviews and interrogations, write reports, and testify in court. Students will learn how to evaluate criminal investigations in current and high profile cases. Students will apply biblical norms and discuss police ethics in conducting investigations. Intended for anyone interested in criminal investigation and hands-on learning.

302 Juvenile Justice (3). .Spring Even Students will review causal theories of juvenile crime and will also examine the history and philosophy of the treatment of juveniles in the criminal justice system and the goals and effectiveness of the system. Promising alternatives rooted in a biblical reconciliation worldview will be included. Problems such as gangs, drug usage, and school violence will also be explored. The emphasis will be on how to be a salt and a light in a strategic part of society.

305 Victimology and Family Violence (3).....................................................................................................................................Spring Odd
The victimology section will look at the various harms suffered due to crime, how victims interact with various agencies and players, public reaction to victims, the victims' rights movement, and how to better serve the victims of crime through our criminal justice system. Students will also identify and describe the problem, measure its true dimensions, and review evidence and hypotheses of victimologists. In the family violence portion, theories on family violence will be analyzed, the consequences of family victimization will be considered, as well as how to recognize child abuse and understand the dynamics of partner violence. Students will analyze legal and enforcement responses, consider how institutional responses can prevent or lessen revictimization, and look to how a restorative justice model can alleviate some of the harms of victimization. Prerequisite: junior standing; or permission of instructor. [Cross-listed: Sociology 305]

322 American Constitutional Law (3) Spring This course focuses on the American Constitution as interpreted by the Supreme Court. Through analysis of landmark cases, this course will study both historical and recent developments in constitutional law with the goal of gaining deeper insight into the way our system works and the reasons for the freedoms we hold dear. Prerequisite: Political Science 202; junior standing; or permission of instructor. [Cross-listed: Political Science 322]

323 Criminal Law (3)................................................................................................................................................................................Fall
This course is an introduction to the basic concepts of criminal law focusing on a study of what constitutes particular crimes, both in the common law and by statute, including certain defenses. Principles learned in this course will help students develop a deeper ability to discern what constitutes fair administration of justice: dealing fairly with the accused while continuing to uphold the interests of both victims and society at large. Prerequisite: sophomore standing.

324 Criminal Procedures (3) ..................................................................................................................................................................Spring
This course continues the material covered in Criminal Law, this time focusing on the procedural protections guaranteed by the 4th, 5th, 6th, and 8th Amendments to the Constitution, helping students develop a more sophisticated understanding of things like searches and seizures and the right to an attorney. Students will learn the crucial role these protections play in protecting the rights of those suspected or accused of criminal activity. Prerequisite: Criminal Justice 323; or permission of instructor.

\begin{abstract}
350 Domestic Preparedness (3) Fall This course will introduce students to the complex issues surrounding response to a major incident, be it man-made (such as terrorism) or natural. Drawing on the roles of police as first responders, emergency management personnel, and protectors of public order, this course will look at major historic incidents, such as \(9 / 11\) and Hurricane Katrina, to encourage students to think critically about how to learn from the past and how to be always ready to pursue one's vocation, especially in times of trial. Prerequisite: Justice and Stewardship core requirement; junior standing.
\end{abstract}

373 Field Experience in Criminal Justice (3) Fall, Spring This field experience provides exposure to the type of activities in which Criminal Justice graduates are likely to be involved. Requires 8-10 on-site hours per week plus one hour of weekly supervision. Application deadline for the spring semester is November 1 ; deadline for the fall semester is April 1. Prerequisites: declared criminal justice emphasis or minor; junior or senior standing; approval of the department.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer

\section*{Dutch}

General Major- \(\quad\) Dutch 201, 202, 204, 301; Dutch 206 or CORE 283; Linguistics 201; four courses from Dutch 101, 102, 208, 341-348, 393; four semesters of Dutch conversation 251-258. Six credits in study-abroad courses are required.

General Minor- Dutch 201, 202, 204, 301; Dutch 206 or CORE 283; Linguistics 201; one course from Dutch 102, 341-348, 393; three semesters of Dutch conversation 251-258. Three credits in study-abroad courses are required.
101 Elementary Dutch I (4) ..... FallAn introductory study of the language and culture of the Dutch-speaking people. Emphasis on the acquisition of oral and written languageskills in a communicative context combined with the study of cultural etiquette and social customs. If desired, students can schedule extrasessions with advanced students (often native speakers) to practice oral skills.
102 Elementary Dutch II (3) ..... SpringContinuation of 101. Prerequisite: Dutch 101 or its equivalent.
201 Intermediate Dutch I (3) ..... Fall
An intermediate course that continues the study of the language in a communicative context with emphasis on precision and expansion oflinguistic skills. Emphasis is also put on the development of cultural understanding and sensitivity, studying people's values and beliefs asexpressed in their economic, political, and religious systems. Dutch culture will be compared with our culture in the light of the culturalmandate. Prerequisite: Dutch 102 or its equivalent.
202 Intermediate Dutch II (3) Spring EvenContinuation of Dutch 201. Prerequisite: Dutch 201 or its equivalent.
204 Literary and Cultural Readings (3) ..... OccasionalDesigned to develop reading skill and an appreciation for Dutch culture and literature with emphasis on contemporary literature. Permis-sion will be granted for individual readings in academic areas of interest to the student. Prerequisite: Dutch 202 or department approval.
207 World Literature I (3). ..... Fall OddSee English 207.
208 World Literature II (3) Spring EvenSee English 208.
251- Conversation (1) ..... Fall, Spring
258 Designed to give the student practice in listening and speaking. The content of the courses will be altered each year. The class will meet twotimes each week. Graded on a pass/no record basis. Prerequisite: Dutch 201; or permission of instructor.
281- Service-Learning (1-3) ..... Fall, Spring, Summer
283 See page 113, Individual Studies3)OccasionalAn application of the principles of general phonology to the sound system of Dutch. See Linguistics 301. Prerequisites: Dutch 201; Linguis-tics 201.
341- Special Topics (3) ..... Occasional
348 The topics for these courses will be chosen from the areas of literature, advanced language studies, culture, or teaching methods. Thecourse offerings as well as the content will reflect student interest and need. Prerequisite: departmental approval.
391- Individual Studies (1-3) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Earth Science}

121 Solar System Astronomy (4) ..........................................................................................................................................................Fall Odd
An introduction to the structure and diversity of the solar system, focusing on both the historical development of understanding of our cosmic "neighborhood" from the ancient Greeks to Einstein as well as recent discoveries and their implications for an improved understanding of our Earth. Students will obtain hands-on experience observing the heavens with naked eye, binoculars, and telescopes. The course involves three lecture hours and three observation/laboratory hours per week. Prerequisite: completion of Core Program mathematics requirement. [Cross-listed: Astronomy 121, CORE 224]

151 Creation Care and the Environment (4).............................................................................................................................................. Fall An introduction to contemporary environmental studies and creation care, with emphasis on class discussion of relationships between human population and resource use in light of biblical teaching about environmental stewardship. Particular attention is given to the biotic and ecological dimensions of creation stewardship and planetary distress. Three lectures and one laboratory period of three hours per week. [Cross-listed: Community Development 151, CORE 211, Environmental Studies 151]

152 Energy, Materials, and the Environment (4) ......................................................................................................................................Spring
Flowing from a foundation in physical and earth sciences, this course offers an introduction to energy and material use in Western society
and examines the resulting impact on the environment. Contemporary practices and their historical roots are critiqued in light of Biblical norms for stewardship. An emphasis on evaluation and implementation of practical steps toward sustainability permeates the course with the goal of motivating and equipping students to become lifelong stewards. The laboratory portion of the course combines tours, laboratory measurements, economic analysis, and environmental analysis. Three lectures and one laboratory period of three hours per week. [Crosslisted: CORE 222, Environmental Studies 152]

201 Introductory Geology and Physical Geography (4).
Fall
A general introduction to the physical nature and structure of the solid Earth, including, briefly, its physical geography and a more detailed look at its geology. The environmental implications of these subjects are detailed. Three lectures and one laboratory period of three hours per week and one or two field trips. [Cross-listed: CORE 223, Environmental Studies 201, Geography 201]

202 Meteorology and Climate Change (3) Spring Even Provides a general introduction to meteorology and weather. Climate and climate change in Quaternary times to the present are also considered. The implications of an anthropogenically enhanced greenhouse effect will be addressed, with particular attention given to the impact of these changes on the structure and function of ecosystems. [Cross-listed: Environmental Studies 202, Geography 202]

227 Paleontology (3)
..Fall Occasional An introduction to the major fossil plants and animals, and the environments (paleoecology) in which they are found. Three lectures, or two lectures and a two-hour laboratory per week. The course includes several Saturday field trips and one weekend field trip to the Pella area. Prerequisite: Biology 122; or permission of instructor. [Cross-listed: Biology 227]

\section*{Economics}

\section*{General Minor- Economics 202, 203; Mathematics 151 or 152; Statistics 131 or 132; three courses from Economics 232, 303, 305, 309, 315,} \(321,334,393\). Economics 232 recommended.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.
\(\qquad\)
The study of allocation of scarce resources at the level of the individual, household, and firm. Included are human motivation and preferences, the market, the function of prices, supply, demand, perfect and imperfect competition, and selected policy questions. Christian views on the nature of humanity, human motivation, and the market are also studied.

203 Principles of Economics: Macro (3) ................................................................................................................................................Spring
An introduction to the study of human choice in the allocation of scarce resources, concentrating on the aggregate or national level. Economic systems, national income accounts and analysis, income distribution, fiscal and monetary policy, banking systems, economic growth, and selected economic policy problems are covered. Christian views on the origin and nature of economic resources and humankind's stewardship responsibilities are discussed. Prerequisite: Economics 202; or permission of instructor.

232 Econometrics (3) .......................................................................................................................................................................................................
This course covers all of the topics in Statistics 201 and topics commonly used in economic applications of statistics: time series and forecasting, linear time series models, moving average, autoregressive and ARIMA models, data analysis and forecasting with time series models and forecasting errors. Meets at the same times as Statistics 201 plus two additional hours per week. Offered second half of spring semester. Credit will not be given for both Statistics 201 and 202. Prerequisite: Statistics 131 or 132. [Cross-listed: Statistics 202]

281- Service-Learning (1-3)................................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
303 Money and Banking (3) Fall
An analysis of the nature and function of money; the operation of the financial system; the organization, management and regulation of financial institutions; and the Federal Reserve Systems with special emphasis on the impact of monetary policy and financial institutions on the global economy. Prerequisites: Economics 202, 203.

305 Intermediate Macroeconomics: Theory and Policy (3) Spring Even This course provides an intermediate-level study of large scale relationships between macroeconomics, the financial system, and stabilization policy. It is comprised of a theoretical, institutional, and empirical study of national income distribution, price levels, labor markets, and policy-induced economic stabilization. It is particularly concerned with fluctuations in economic activity and the implications of economic disequilibrium for public policy. A reformational Christian perspective will be employed to critically assess prevailing macroeconomic paradigms and systems. Prerequisites: Economics 202, 203; Mathematics 151 or 152; Statistics 131 or 132; or permission of instructor. Economics 232 recommended.

309 Economic History of the United States (3) ..Spring Odd A history of the development of the United States from an economic point of view. To set the context for the U.S. experience, the course will trace the roots of American economic development back to European and Medieval Economic thought. The causes and effects of major historical events are analyzed using contemporary economic thought. Some of the economic institutions and policies that played an important role in U.S. economic history will be evaluated from a Christian perspective. Prerequisite: CORE 266 or CORE 320 or Economics 203.

315 Government Finance (3). .Occasional
A study of government taxing and spending, primarily at the federal level. Christian and secular views on government economic activity, forms of taxation and their effects, debt financing, budget processes and problems are studied. The broad purpose of the course is to help students learn how to apply economic principles in an analysis of the effects of governmental policies, particularly tax and expenditure policies. Emphasis is on analytical skills.

321 Global Economic Development (3) .Fall Odd
A study of economic aspects of poverty and underdevelopment in the modern world. Specific topics include the dimensions and nature of poverty in the world, characteristics and types of developing nations, theories of development, and emerging issues in development. We will also consider the implications of biblical principles for policy to promote economic development and alleviate poverty. Prerequisite: Economics 203; or permission of instructor.

334 Economics of Natural Resources and the Environment (3) \(\qquad\) .Occasional A study of economic aspects of Christian stewardship in relation to the environment and use of natural resources. Major topics include biblical norms on creation, property rights, economic justice, the economic dimensions of current environmental problems and trends in resource use, institutions and social structures that affect environmental policy, economic theories related to resource use and environmental quality, and evaluation of current and proposed policies from a Christian point of view. Prerequisite: CORE 266 or Economics 202 [Cross-listed: Environmental Studies 334]

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Education}

\section*{Master of Education Program See pages 85, 91-93.}

Teacher Preparation Program The Teacher Preparation Program is built on a liberal arts base and on professional courses that prepare students for teaching in early childhood, elementary, middle, and secondary classrooms. Following successful completion of one or more of the four options listed below, students are recommended for the initial level of licensure granted by the State of Iowa.

Admission to the Program Application for admission to the Teacher Preparation Program is required. Application is completed through the Office of the Director of Teacher Preparation. The standards for admission to the program are described in the Teacher Preparation Program Handbook. Completed applications are evaluated by the education department and approved by the Teacher Preparation Committee.

The Teacher Preparation Committee takes the following formal actions:
- Admits applicants who have met all the criteria for admission.
- Conditionally admits applicants whose deficiencies can be remediated.
- Rejects applicants who do not meet the standards for admission. If denied admission, a student may reapply for admission after one semester by contacting the Director of Teacher Preparation. Generally, acceptance into the Teacher Preparation Program must precede approval for the professional year, including student teaching, by at least one semester. Each applicant is informed in writing of the decision of the Teacher Preparation Committee regarding admission to the program.

The following are the criteria for admission to the Teacher Preparation Program:
- Indicate to the Director of Teacher Preparation intention to apply to the Teacher Preparation Program.
- Pass a basic skills (reading, writing, mathematics) test. Students may choose to take either the Collegiate Assessment of Academic Proficiency (CAAP) or Praxis CORE tests. Students must achieve CAAP passing scores of 57 in reading, 59 in writing, and 54 in mathematics or Praxis CORE tests passing scores of 156 in reading, 162 in writing, and 150 in mathematics.
- Minimum GPA of 2.50, not including level two education courses.
- Grade of C or higher in all level one education courses.
- Completed level one courses with key competencies met as indicated in the Teacher Preparation Candidate Assessment Plan.
- Acceptable professional dispositions based on a dispositions for teaching interview with the education department along with recommendations from student services and the education department.
- Satisfy program standards response requirements at level one.
- Submit a current résumé to the candidate's education department advisor.

Approval for the Professional Year and for Student Teaching Student teaching is required of all students preparing for licensure. To receive graduation credit and a recommendation for licensure, student teaching must be taken at Dordt College. Application for approval for student teaching is required. Application forms are distributed or may be obtained from the Director of Teacher Preparation. The criteria for approval for student teaching are described in the Teacher Preparation Program Handbook. Completed applications are evaluated by the education department and approved by the Teacher Preparation Committee. Each applicant is informed in writing of the decision of the Teacher Preparation Committee regarding approval for student teaching.

The following are the criteria for approval for student teaching:
- Application to student teaching.
- Cumulative GPA of 2.60 or above.
- GPA of 2.60 or above in each endorsement area.
- Acceptance into the Teacher Preparation Program at least one semester prior to student teaching.
- Successful completion of level two courses with competencies as indicated in the Teacher Preparation Candidate Assessment Plan.
- Grade of C or higher in all level two education courses.
- Acceptable professional dispositions based on a dispositions for teaching interview with the education department along with recommendations from student services and the education department.
- Satisfy program standards response requirements at level two.
- Submit a current résumé to the candidates education department advisor.

Requirements for Institutional Recommendation for Licensure To be recommended by the Teacher Preparation Committee for initial Iowa licensure, the teacher candidate must have completed student teaching and successfully met all standards described in the Teacher Preparation Candidate Assessment Plan. Formal application for licensure is required. Application forms are distributed or may be obtained from the Director of Teacher Preparation. Completed applications are evaluated by the education department and approved by the Teacher Preparation Committee. Each graduate is informed in writing of the decision of the Teacher Preparation Committee regarding recommendation for licensure.

The following are the criteria for recommendation for initial Iowa teaching licensure:
- Completed application form.
- Undergo an FBI Criminal Background Check (including fingerprinting process).
- Submit a money order for \(\$ 150\) payable to the Iowa Board of Educational Examiners ( \(\$ 85\) licensure fee and \(\$ 65\) background check). Licensure fees are subject to change annually.
- Successful completion of student teaching including satisfactory completion of performance competencies for each teacher preparation program standard.
- Satisfy program standards response requirements at level three.

All teacher preparation graduates, regardless of the option being completed, must pass the state-approved entry to the teaching profession exams. The state of Iowa offers two options:
- Two Praxis II tests: (1) a Professional Learning and Teaching (PLT) test applicable to the grade levels of the endorsement, and (2) a Content Knowledge test applicable to the subject area major of the endorsement chosen. Qualifying scores are set by the State of Iowa and are listed in the Teacher Preparation Program Handbook. There is a charge of approximately \(\$ 130^{*}\) for each Praxis II assessment.
- The edTPA (Education Teacher Performance Assessment). Qualifying scores are set by the State of Iowa and are listed in the Teacher Preparation Program Handbook. There is a charge of \(\$ 300^{*}\) for the edTPA assessment.
*Testing fees are subject to change annually. Information regarding selection of tests and passing scores may be obtained from the director of teacher preparation.

Program Options and Requirements Successful completion of the program of courses in teacher preparation meets requirements for graduation and enables the student to satisfy the requirements for initial licensure from the State of Iowa.

Each program option in teacher preparation includes:
- Core Program requirements.
- professional education requirements.
- content course requirements in the selected endorsement program(s).
- electives (depending on the program option selected).

Note the following Core Program requirements for teacher preparation students:
- Education 145 meets the Core Program cross-cultural requirement.
- Mathematics-all teacher preparation students take Statistics 131 to meet the Core Program quantitative reasoning requirement.
- Psychology 204 meets the Core Program persons in community requirement (CORE 250-259) and a professional education requirement.
- Education 300 meets the Core Program advanced reformed thought requirement (CORE 310-329) and a professional education requirement.

Teacher preparation candidates choose from four major emphases. Several endorsement options are available under each emphasis.

\section*{ACADEMIC OFFERINGS: EDUCATION}

Education Major: Education 101, 145, 165, 209, 300, 239 or 369, 381, 382; fourteen credits of student teaching; Psychology 204; Statistics 131; one of the following sequences of courses:
1. ELEMENTARY SEQUENCE: Education 201 or 202, 333, 335 or 336.
2. ELEMENTARY SUBJECT AREA SEQUENCE: Education 201 or 202, 265, 335 or 336.
3. SECONDARY SEQUENCE: Education 202 or 203, 265, 336 or 337.
4. VERTICAL SEQUENCE: one course from Education 201, 202, 203; Education 265; one course from Education 335, 336, 337.

OPTION I: Elementary General Classroom Content Major: Endorsement 102. Education 155, 175, 220, 331, 332, 334; Geography 151; Mathematics 108; one course from CORE 211, 212, 214; one course from CORE 222, 223, 224; completion of a 12 credit field of specialization from the available options. [Note: certain core requirements are also required for this major: CORE 140, 145, and core English competency requirement. Students with transfer credit for any of these core components must have the courses approved by the education department for the endorsement requirements.]

Fields of Specialization Note: unless indicated, a field of specialization does not provide the student with an endorsement area. A minor or major in any academic area offered by the college fulfills the requirements for a field of specialization.
1. ART: Art 201, 202; one course from Art 207, 208, 209; Art 216 or 218.
2. EARLY CHILDHOOD: Endorsement 106. Education 210, 320, 321, 322, 326.
3. ENGLISH/LANGUAGE ARTS: English 306, 336; one course from English 203, 207, 208; one course from CORE 110, Communication 311, 314.
4. ESL: Education 355; English 336; Linguistics 201, 301.
5. HEALTH: HHP 202, 209, 211; Sociology 225.
6. MATHEMATICS: Mathematics 138, 140; Statistics 131; one course from Mathematics 145, 151, 152.
7. MUSIC: Music 103, 103L, 104, 104L, 312; one semester each of Music 240 and Music 250.
8. PHYSICAL EDUCATION: three courses from Biology 203, HHP 206, 207, 308; two courses from HHP 212-217.
9. READING: Education 175, 210, 265, 314, 339; English 306.
10. SCIENCE: one course from Biology 125, CORE 211, 212; one course from Chemistry 101, 111, Physics 215; one course from Earth Science 121, 151, 201.
11. SOCIAL STUDIES: History 201 or 202; one course from History 212, 213, 214; Geography 151; Political Science 201.
12. SPANISH: Spanish 201, 202; Spanish 204 or 206; three hours of Spanish \(251-258\) or Spanish 301. Study- abroad courses are recommended.
13. SPECIAL EDUCATION: Education 210, 253, 315, 317.
14. SPEECH COMMUNICATION/THEATRE: Communication 201, 220; Theatre Arts 102 or 384; Education 262.
15. THEOLOGY: Theology 110; one course from Theology 211-214; one course from Theology 215-217; Theology 221 or 351.

Elementary Subject Area Minor Completion of the Elementary General Classroom Content Major along with one of the following subject area minors provides an additional endorsement or endorsements to teach in a specialized subject area in grades K-8. (The term "endorsement" and the endorsement numbers are part of the Iowa licensure code.)
1. ART: Endorsement 113. Art 201, 202, 216; two courses from Art 207, 208, 209, 210; two courses from Art 218, 225, 228, 230, 240; one course from Art 302, 316, 318, 325, 328, 330, 340. (Art 211 is required as a professional methods of teaching course.)
2. EARLY CHILDHOOD WITH SPECIAL EDUCATION: Endorsement 100. Education 170, 175, 210, 253, 320, 321, 322, 326.
3. ENGLISH/LANGUAGE ARTS: Endorsement 119. Theatre Arts 384 or Education 262; Education 155; English 201 or 202; English 306, 336; one course from English 241, 301, 302, 303, 304; one course from English 203, 205, 207, 208, 210, 314. (Education 333 is required as a professional methods of teaching course.)
4. HEALTH: Endorsement 137. Biology 203; HHP 101, 202, 205, 207, 209, 211; Sociology 225. (HHP 306 is required as a professional methods of teaching course.)
5. MATHEMATICS: Endorsement 142. Mathematics 108, 118, 138, 151 or 152, 207, 390; Computer Science 111; Statistics 131. (Education 332 is required as a professional methods of teaching course.)
6. MIDDLE SCHOOL: Teacher candidates earn middle school teaching endorsements by completing Education 202, 333, 336, 369 and at least two of the following fields of specialization: (Education 369 PDS Internship must be completed in a grade 5-8 classroom.)
A. ENGLISH/LANGUAGE ARTS: Endorsement 1821. English 306, 336; Education 155; one course from English 203, 207, 208; one course from CORE 110, Communication 311, 314.
B. MATHEMATICS: Endorsement 1822. Mathematics 138, 140; Statistics 131; one course from Mathematics 145, 151, 152.
C. SCIENCE: Endorsement 1823. One course from Chemistry 101, 111, Physics 215; one course from Biology 125, CORE 211, 212; one course from Earth Science 121, 152, 201.
D. SOCIAL STUDIES: Endorsement 1824. History 201 or 202; one course from History 212, 213, 214; Geography 151; Political Science 201.
7. MUSIC: Endorsement 144. Music 103, 103L, 104, 215; one course from Music 206, 207, 208; Music 205 or 222; one course from Music 203, 206, 207, 208, 209, 305, 318-319; four large ensemble credits or an additional course from Music 203, 206, 207, 208, 209, 305; Music 19; three semesters of Music 09; one semester each of Music 240 and Music 250. (The following are required as professional methods of teaching courses: Music 312, 313, 316, 317.)
8. PHYSICAL EDUCATION: Endorsement 146. Biology 203; HHP 12, 13, 101, 206, 207, 208, 308, 325. (HHP 306 is required as a professional methods of teaching course.)
9. READING: Endorsement 148. Education 145, 155, 165, 175, 210, 265, 314, 320, 321; English 306. (Education 333 is required as a professional methods of teaching course.)
10. SCIENCE-BASIC: Endorsement 150. Three courses from CORE 221, Physics 215, 216, Chemistry 101, 122; two courses from CORE 212, Biology 122, 215; two courses from Environmental Studies 151, Astronomy 121, Earth Science 201, 202, 227. Physical Science 201 or Biology 251 recommended. (Education 334 is required as a professional methods of teaching course.)
11. SOCIAL STUDIES: Endorsement 164. CORE 266; Geography 151; History 201 or 202; one course from History 212, 213, 214; two courses from History 220-225, 230; two courses from Political Science 201, 202, 214, 312. (Education 331 is required as a professional methods of teaching course.)
12. SPANISH: Endorsement 133. Spanish 201, 202, 204 or 206, 300, 301, 302; Linguistics 201; three semesters of Spanish 251-258; one course from Spanish 304, 341-348, 393. Three credits in study-abroad courses are required. (Students completing both the Spanish and TESL endorsements must take Spanish 301L.) (Education 355 is required as a professional methods of teaching course.)
13. SPECIAL EDUCATION: K-6 INSTRUCTIONAL STRATEGIST I: MILD TO MODERATE: Endorsement 260. Education 145, 165, 210, \(252,253,314,317\). (Education 315 is required as a professional methods of teaching course.)
14. SPEECH COMMUNICATION/THEATRE: Endorsement 167. Communication 201, 220; one additional course from communication; Education 262; Theatre Arts 102, 382, 384. (Education 333 is required as a professional methods of teaching course.)

Option II: Elementary Subject Area Classroom Emphasis Major: Completion of the Education Major: Elementary Subject Sequence along with one of the following subject area majors prepares the student for specialized subject area teaching in grades K-8 and allows the student to obtain the endorsement indicated. (The term "endorsement" and the endorsement numbers are part of the lowa licensure code.)
1. ART: Endorsement 113. Art 201, 202, 216, 370; three courses from Art 207, 208, 209, 210; three courses from Art 218, 225, 228, 230, 240; two courses from Art 302, 316, 318, 325, 328, 330, 340. (Art 211 is required as a professional methods of teaching course.)

\section*{2. FOREIGN LANGUAGE:}
A. SPANISH: Endorsement 133. Spanish 201, 202, 204 or 206, 300, 301, 302, 304; Linguistics 201; one course from Spanish 102, 207, 341 348,393 ; four semesters of Spanish 251-258. Six credits in study-abroad courses are required. (Students completing both the Spanish and TESL endorsements must take Spanish 301L.) (Education 355 is required as a professional methods of teaching course.)
B. FRENCH: Endorsement 123. French 101, 102, 201, 202, 204, 206; Linguistics 201; four semesters of French 251-258. Six credits in study abroad courses to include advanced French study are required. (Education 355 is required as a professional methods of teaching course.)
3. SPECIAL EDUCATION: K-6 INSTRUCTIONAL STRATEGIST I: MILD TO MODERATE: Endorsement 260. Education 145, 165, 210, \(252,253,271,272,314,317,320\). (Education 315 is required as a professional methods of teaching course.)
4. MUSIC: Endorsement 144. Music 103, 103L, 104, 104L, 203, 203L, 205, 222; two courses from Music 206, 207, 208; one course from Music 204, 209, 305; Music 19; six semesters of Music 09; two semesters each of Music 240 and Music 250 ; four large ensemble credits. (The following are required as professional methods of teaching courses: Music 312, 313, 316, 317.)
5. PHYSICAL EDUCATION: Endorsement 146. Biology 203; HHP 12, 13, 101, 205, 206, 207, 208, 308, 325; two courses from HHP 212-217. (Note: HHP 212-217 are half-courses.) (HHP 306 is required as a professional methods of teaching course.)

OPTION III: Secondary Subject Area Classroom Emphasis Major: Completion of the Education Major: Secondary Sequence along with one of the following subject area majors prepares the student for specialized subject area teaching in grades 5-12 and allows the student to obtain the endorsement indicated. (The term "endorsement" and the endorsement numbers are part of the Iowa licensure code.)
1. AGRICULTURE: Endorsement 112. Agriculture 101, 105, 111, 201, 221, 232, 252, 290, 302, 370; Chemistry 101 or 111, 122. (Education 352 is required as a professional methods of teaching course.)
2. ART: Endorsement 114. Art 201, 202, 216, 370; three courses from Art 207, 208, 209, 210; three courses from Art 218, 225, 228, 230, 240; two courses from Art 302, 316, 318, 325,328, 330, 340. (Education 350 is required as a professional methods of teaching course.)

\section*{ACADEMIC OFFERINGS: EDUCATION}
3. BUSINESS-ALL: Endorsement 1171. Two courses from Business Administration 200, 201, 202; Business Administration 301 or 302; Business Administration 100 or Computer Science 211; Business Administration 205, 206; one course from Business Administration 304, 306, 308; Economics 202, 203; one course from English 305, Communication 220, 228. (Education 359 is required as a professional methods of teaching course.)
4. ENGLISH/LANGUAGE ARTS: Endorsement 120. Education 155; English 201, 202, 210, 306, 314, 316, 336; one course from English 241, 301, 302, 303, 304; one course from English COURSES FOR MAJORS. English 203, 312, and 333 recommended. (Education 354 is required as a professional methods of teaching course.)
5. ENGLISH/LANGUAGE ARTS-ALL: Endorsement 1201. Education 155, 265; English 201, 202, 210, 241, 306, 336; English 314 or 316; one additional course from English 205, 207, 208, 312, 314, 316; Communication 240, 250, 314; Theatre Arts 101, 384; CORE 110. (Education 354 and 358 are required as professional methods of teaching courses.)

\section*{6. FOREIGN LANGUAGE:}
A. SPANISH: Endorsement 134. Spanish 201, 202, 204 or 206, 300, 301, 302, 304; Linguistics 201; one course from Spanish 102, 207, 341 348, 393; four semesters of Spanish 251-258. Six credits in study-abroad courses are required. (Students completing both the Spanish and TESL endorsements must take Spanish 301L.) (Education 355 is required as a professional methods of teaching course.)
B. FRENCH: Endorsement 124. French 101, 102, 201, 202, 204, 206; Linguistics 201; four semesters of French \(251-258\). Six credits in study abroad courses to include advanced French study are required. (Education 355 is required as a professional methods of teaching course.)
7. HISTORY:
A. HISTORY-UNITED STATES and WORLD: Endorsements 158 and 166. History 201, 280, 380; one course from History 212, 213, 214; three world history electives from History 212-214, 220-226, 230, 319, 321, 326, 327, 328, 335, 341-344; four American history electives from History 202, 301, 306, 307, 308. History 388 or 389 strongly recommended. (Education 356 is required as a professional methods of teaching course.)
B. HISTORY-WORLD: Endorsement 166. History 230, 280, 380; one course from History 212, 213, 214; seven history courses numbered above 201. A maximum of three courses may be from History 202, 301, 306, 307, 308, 345-348. At least three courses must be 300-level. History 388 or 389 strongly recommended. (Education 356 is required as a professional methods of teaching course.)

Students who complete a history major can add an endorsement in American government, economics, psychology, or sociology by completing fifteen semester hours in one of these social sciences:
- Endorsement 157-American Government. Political Science 202, 214, 322, 333, 370.
- Endorsement 160-Economics: Economics 202, 203, 303; two courses from Economics 309, 315, 321, 334. (NOTE: Economics 309, 315, 321, and 334 are offered in alternate years.)
- Endorsement 163-Psychology. Psychology 201, 210, 362; two courses from Psychology 218, 224, 374, 376.
- Endorsement 165-Sociology. Sociology 201, 216; three electives in sociology.
8. SPECIAL EDUCATION: 5-12 INSTRUCTIONAL STRATEGIST I: MILD TO MODERATE: Endorsement 261. Education 145, 165, 210, \(252,253,265,271,272,314,317\). (Education 315 is required as a professional methods of teaching course.)
9. MATHEMATICS: Endorsement 143. Mathematics 152, 153, 203, 207, 208, 212, 215, 216, 291, 304, 311, 390, 392; Computer Science 111. (Education 357 is required as a professional methods of teaching course.)
10. MUSIC:
A. MUSIC-CHORAL MUSIC EDUCATION: Endorsement 145. Music 103, 103L, 104, 104L, 203, 203L, 204, 206, 207, 208, 215, 222, 315, 323; one course from Music 205, 209, 305; Music 19; six semesters of Music 09; four semesters of Music 240; one additional semester from Music 240, 250, 260, 270; six semesters of Concert Choir or Chorale. (The following are required as professional methods of teaching courses: Music 312, 313, 316, 317.)
B. MUSIC-INSTRUMENTAL MUSIC EDUCATION: Endorsement 145. Music 103, 103L, 104, 104L, 203, 203L, 204, 206, 207, 208, 215, \(305,315,316-319\); Music 19 ; six semesters of Music 09 ; four semesters of Music 270; Music 240 or 04 ; one additional semester from Music 240, 250, 260, 270; six semesters of Band or Orchestra. (The following are required as professional methods of teaching courses: Music 312, 314, 323.)
C. MUSIC-CHORAL/INSTRUMENTAL MUSIC EDUCATION: Endorsement 145. Music 103, 103L, 104, 104L, 203, 203L, 204, 206, \(207,208,215,222,305,315,316-319,323\); Music 19; six semesters of Music 09; four semesters of Music 240 ; four semesters of Music 270; four semesters of Concert Choir or Chorale; four semesters of Band or Orchestra. (The following are required as professional methods of teaching courses: Music 312, 313, 314.)
11. PHYSICAL EDUCATION: Endorsement 147. Biology 203; HHP 12, 13, 101, 205, 206, 207, 208, 308, 325; two courses from HHP 212-217. (Note: HHP 212-217 are half-courses.) (HHP 305 is required as a professional methods of teaching course.)
12. SCIENCES: (Single Academic Program Science Majors)
A. BIOLOGY: Endorsement 151. Biology 122, 125, 180, 200, 215; three 3- or 4-credit courses from: Biology 210 or above, Agriculture 251, 315 (at least seven credits must be in biology); Chemistry 111 or 122 (Chemistry 122 recommended). (Education 351 is required as a professional methods of teaching course.)
B. CHEMISTRY: Endorsement 152. Chemistry 111, 180, 212, 225, 231, 261, 271; three credits from chemistry courses numbered 200 or above; Mathematics 151 or 153 . Physical Science 201 recommended. (Education 351 is required as a professional methods of teaching course.) Note: Mathematics 151 or 153 will fulfill the Core Program quantitative reasoning requirement for education majors.
C. PHYSICS: Endorsement 156. Physics 201, 202, 203; Physical Science 201; Mathematics 152, 153; three courses from Physics 206, 325, 326, 331, 337, 393. (Education 351 is required as a professional methods of teaching course.) Note: Mathematics 152 and 153 are pre- or corequisites for Physics 201 and 202 and will fulfill the Core Program quantitative reasoning requirement for education majors. Most of the 300 level courses have additional prerequisites.

SCIENCES: (Multiple Academic Program Majors)
The following endorsements in the sciences may be acquired by meeting the course requirements listed. Endorsements may be added to the single academic program majors (biology, chemistry, or physics) above. Alternatively, combinations of two or more of the endorsement options listed below constitute a secondary education major in those endorsement areas.
D. BIOLOGY: Endorsement 151 . Biology \(122,125,180,200,215\). (Education 351 is required as a professional methods of teaching course.)
E. CHEMISTRY: Endorsement 152. Chemistry 111, 180, 212, 122 or \(225,251,252\). (Education 351 is required as a professional methods of teaching course.)
F. EARTH SCIENCE: Endorsement 153. Earth Science 121, 151, 201, 202, 227. (Education 351 is required as a professional methods of teaching course.)
G. PHYSICS: Endorsement 156. Physics 201, 202, 203; Mathematics 152, 153; one course from Physics 206, 325, 326, 331, 337, 393. (Education 351 is required as a professional methods of teaching course.) Mathematics 152 and 153 will fulfill the Core Program quantitative reasoning requirement for education majors. Most of the course options have additional prerequisites.
13. SOCIAL SCIENCE: Endorsement 186. History 201, 280; two courses from History 301, 306, 307, 308, *388; one course from History 212, 213, 214; two courses from CORE 145, History 220, 221, 222, 223, 224, 225, 230, 319, 326, 335, *389 (students planning to teach in Canada are advised to take 230); Political Science 202, 214; Political Science 201 or 210; Psychology 201; one course from Psychology 210, 218, 224; Sociology 201; one course from Sociology 215, 216, 225; Geography 151; Geography 201 or 202; Economics 202, 203; Statistics 131. History 380 strongly recommended. (Education 356 is required as a professional methods of teaching course.) *Note: History 380 is a prerequisite for History 388 and 389.

Secondary Subject Area Classroom Emphasis with an Additional Academic Minor Completion of the Secondary Subject Area Classroom Emphasis Major along with a subject area major (described above) may add an additional grade 5-12 teaching endorsement by completing one of the following subject area minors. (The term "endorsement" and the endorsement numbers are part of the Iowa licensure code.)
1. AMERICAN GOVERNMENT: Endorsement 157. Political Science 201, 202, 214, 322, 333, 370; two courses from Political Science 245, 335, Criminal Justice 101. One course taken on the American Studies Program may be substituted for one of the courses. (Education 356 is required as a professional methods of teaching course.)
2. ART: Endorsement 114. Art 201, 202, 216; two courses from Art 207, 208, 209, 210; two courses from Art 218, 225, 228, 230, 240; one course from Art 302, 316, 318, 325, 328, 330, 340. (Education 350 is required as a professional methods of teaching course.)
3. BIBLE: No state endorsement is available. Theology 222, 254; Theology 322 or 323; two courses from Theology 211-214; two courses from Theology 215-217; Education 261.
4. BIOLOGY: Endorsement 151. Biology 122, 125, 180, 200, 215; a minimum of seven additional credits from: biology courses numbered above 210, Agriculture 251, 315. (Education 351 is required as a professional methods of teaching course.)
5. CHEMISTRY: Endorsement 152. Chemistry 111, 180, 212, 225, 251, 252; a minimum of seven additional credits from Chemistry 231, 261, 271, \(321,322,323,362\). (Education 351 is required as a professional methods of teaching course.)
6. ENGLISH/LANGUAGE ARTS: Endorsement 120. Education 155; English 210, 306, 336; English 201 or 202; English 314 or 316; one course from English 241, 301, 302, 303, 304; one course from English COURSES FOR MAJORS. (Education 354 is required as a professional methods of teaching course.)
7. HEALTH: Endorsement 138. Biology 203; HHP 101, 202, 205, 207, 209, 211; Sociology 225. (HHP 305 is required as a professional methods of teaching course.)
8. HISTORY-WORLD: Endorsement 166. History 280, 380; one course from History 212, 213, 214; three courses from History 201, 202, 220, \(221,223,224,225,230\); two courses from History 319, 326, 327,335. (Education 356 is required as a professional methods of teaching course.)
9. MATHEMATICS: Endorsement 143. Mathematics 152, 153, 203, 208, 212, 215, 216, 390; Computer Science 111. (Education 357 is required as a professional methods of teaching course.)

\section*{ACADEMIC OFFERINGS: EDUCATION}
10. MIDDLE SCHOOL: Teacher candidates earn middle school teaching endorsements by completing Education 202, 265, 336, 369 and at least two of the following fields of specialization: (Education 369 PDS Internship must be completed in a grade 5-8 classroom.)
A. ENGLISH/LANGUAGE ARTS: Endorsement 1821. English 306, 336; Education 155; one course from English 203, 207, 208; one course from CORE 110, Communication 311, 314.
B. MATHEMATICS: Endorsement 1822. Mathematics 138, 140; Statistics 131; one course from Mathematics 145, 151, 152.
C. SCIENCE: Endorsement 1823. One course from Chemistry 101, 111, Physics 215; one course from Biology 125, CORE 211, 212; one course from Earth Science 121, 152, 201.
D. SOCIAL STUDIES: Endorsement 1824. History 201 or 202; one course from History 212, 213, 214; Geography 151; Political Science 201.
11. PHYSICAL EDUCATION: Endorsement 147. Biology 203; HHP 12, 13, 101, 205, 206, 207, 208, 308; three credits from HHP 209, 212-217, 325. (Note: HHP 212-217 are half-courses.) (HHP 305 is required as a professional methods of teaching course.)
12. PHYSICS: Endorsement 156. Physics 201, 202, 203, 325; three elective courses in physics. Most of the course options have additional prerequisites. (Education 351 is required as a professional methods of teaching course.)
13. SPANISH: Endorsement 134. Spanish 201, 202, 204 or 206, 300, 301, 302; Linguistics 201; three semesters of Spanish 251-258; one course from Spanish 304, 341-348, 393. Three credits in study-abroad courses are required. (Students completing both the Spanish and TESL endorsements must take Spanish 301L.) (Education 355 is required as a professional methods of teaching course.)
14. SPECIAL EDUCATION: 7-12 INSTRUCTIONAL STRATEGIST I: MILD TO MODERATE: Endorsement 261. Education 145, 165, 210, \(252,253,314,317\). (Education 315 is required as a professional methods of teaching course.)
15. SPEECH COMMUNICATION/THEATRE: Endorsement 168. Communication 201, 240, 241, 314; Theatre Arts 102, 103, 382, 384. Communication 311 and Education 262 recommended. (Education 358 is required as a professional methods of teaching course.)

Option IV: Vertical Subject Area Classroom Emphasis Major (provides endorsement to teach a content area at both elementary and secondary, grades K-12, levels): Completion of the Education Major: Vertical Sequence along with one of the following subject area majors prepares the student for specialized subject area teaching in both elementary and secondary and allows the student to obtain the endorsements indicated. (The term "endorsement" and the endorsement numbers are part of the Iowa licensure code.)
1. ART: Endorsements 113 and 114. Art 201, 202, 216, 370; three courses from Art 207, 208, 209, 210; three courses from Art 218, 225, 228, 230, 240; two courses from Art 302, 316, 318, 325, 328, 330, 340. (Art 211 and Education 350 are required as professional methods of teaching courses.)

\section*{2. FOREIGN LANGUAGE:}
A. SPANISH: Endorsements 133 and 134. Spanish 201, 202, 204 or 206, 300, 301, 302, 304; Linguistics 201; one course from Spanish 102, 207, 341-348, 393; four semesters of Spanish 251-258. Six credits in study-abroad courses are required. (Students completing both the Spanish and TESL endorsements must take Spanish 301L.) (Education 355 is required as a professional methods of teaching course.)
B. FRENCH: Endorsements 123 and 124. French 101, 102, 201, 202, 204, 206; Linguistics 201; four semesters of French 251-258. Six credits in study abroad courses to include advanced French study are required. (Education 355 is required as a professional methods of teaching course.)
3. SPECIAL EDUCATION: K-12 INSTRUCTIONAL STRATEGIST I: MILD TO MODERATE: Endorsements 260 and 261. Education 145, \(165,210,252,253,265,271,272,314,317,320\). (Education 315 is required as a professional methods of teaching course.)
4. MUSIC:
A. MUSIC-CHORAL MUSIC EDUCATION: Endorsements 144 and 145. Music 103, 103L, 104, 104L, 203, 203L, 204, 206, 207, 208, \(215,222,315,323\); one course from Music 205, 209, 305; Music 19; six semesters of Music 09 ; four semesters of Music 240; one additional semester from Music 240, 250, 260, 270; six semesters of Concert Choir or Chorale. (The following are required as professional methods of teaching courses: Music 312, 313, 316, 317.)
B. MUSIC-INSTRUMENTAL MUSIC EDUCATION: Endorsements 144 and 145. Music 103, 103L, 104, 104L, 203, 203L, 204, 206, 207, \(208,215,305,315,316-319\); Music 19; six semesters of Music 09 ; four semesters of Music 270 ; Music 240 or 04 ; one additional semester from Music 240, 250, 260, 270; six semesters of Band or Orchestra. (The following are required as professional methods of teaching courses: Music 312, 314, 323.)
C. MUSIC-CHORAL/INSTRUMENTAL MUSIC EDUCATION: Endorsements 144 and 145. Music 103, 103L, 104, 104L, 203, 203L, 204, 206, 207, 208, 215, 222, 305, 315, 316-319, 323; Music 19; six semesters of Music 09; four semesters of Music 240 ; four semesters of Music 270; four semesters of Concert Choir or Chorale; four semesters of Band or Orchestra. (The following are required as professional methods of teaching courses: Music 312, 313, 314.)
5. PHYSICAL EDUCATION: Endorsements 146 and 147. Biology 203; HHP 12, 13, 101, 205, 206, 207, 208, 308, 325; two courses from HHP 212-217. (Note: HHP 212-217 are half-courses.) (HHP 305 and 306 are required as professional methods of teaching courses.)

\section*{Other Endorsement Options}
1. ATHLETIC COACH K-12: Endorsement 101: In the State of Iowa, you must be licensed to coach at the secondary level in the public school system. There are two forms of coaching licensure - a coaching authorization and a coaching endorsement. Both the authorization and endorsement allow you to be employed as a head or assistant coach in any interscholastic athletic activity. Both licenses require courses in four conceptual areas: Coaching Theory, Lifespan Development, Physiology, and First Aid and Prevention of Athletic Injuries. These courses may be taken in any sequence over any length of time through Area Education Agency (AEA) workshops or for college credit.

The coaching authorization gives a non-education student the right to coach in the middle school or high school. The person is allowed to be the head or assistant coach for any sport following the completion of the coursework in the previous paragraph and filing an application for the authorization through the Department of Education of the State of Iowa (see contact information below). The coaching endorsement can be obtained by individuals who hold a teaching license and have completed the four required classes for college credit. Coaching Theory, Lifespan Development, and Physiology must be taken for one credit hour each and First Aid and Prevention must be taken for two credit hours. The coaching endorsement is automatically renewed with your teaching license.

For information on licensure, see website www.state.ia.us/boee/doc/faqs_cch.asp.
The following courses with an education major qualify an applicant to be a head coach or assistant coach in all sports at all grade levels.
Biology 203/CORE 212 - Human Biology I or HHP 206 - Exercise Physiology and Biomechanics
HHP 207 - First Aid and Athletic Injuries
HHP - Coaching Theory (one from HHP 212-217)
Psychology 204 - Lifespan Development
These courses also meet the State of Iowa's requirement for the coaching authorization available for those who have not completed an education major. The coaching authorization allows the holder to be head coach or assistant coach in all sports at all grade levels.
2. TEACHING ENGLISH AS A SECOND LANGUAGE (TESL) K-12: Endorsement 104. Students will earn the TESL endorsement by completing the program content courses listed.

TESL-Domestic: Education 320, 349, 355; English 336; Linguistics 201, 301. (Students completing both the Spanish and TESL endorsements must take Spanish 301L.)
TESL-International: Education 239 or 369 (in an international placement), 270, 320, 349, 355; English 336; Linguistics 201, 301; SPICE/SPIN 271. Student teaching must be completed in an international setting. (Students completing both the Spanish and TESL endorsements must take Spanish 301L.)

\section*{Master of Education Degree}

The following program in teacher leadership meets the master's degree requirements in a recognized endorsement area for a Professional Teacher's License in the State of Iowa.

Teacher Leadership- Education 501, 502, 503, 504, 505, 506, 507, 508, 509, 510.
The following 36 -credit program in school leadership meets the master's degree requirements for an Initial Administrator License in the State of Iowa.

School Leadership- Education 501, 502, 503, 504, 505, 560, 560L, 561, 561L, 562, 563, 563L, 564, 564L.

\section*{Associate of Arts Degree Options}

The education department offers the following options for an A.A. degree leading to paraeducator certification from the State of Iowa. See the "Academic Program" section for the Core Program for all A.A. programs (pages 21-22).
1. GENERALIST: Paraeducator Certification 950. Completion of this option provides certification to work as a paraeducator generalist in prekindergarten through grade twelve classrooms. Education 101, 145, 155, 165, 175, 201 or 202, 204, 209; Psychology 204; nine additional credits from education courses.
2. EARLY CHILDHOOD: Paraeducator Certification 951. Completion of this option provides certification to work as a paraeducator early childhood specialist in prekindergarten through grade three classrooms. Education 101, 145, 165, 175, 201, 204, 320, 321, 322 or 326; Psychology 204; seven additional credits from education courses. Education 155 strongly recommended.
3. SPECIAL NEEDS: Paraeducator Certification 952. Completion of this option provides certification to work as a paraeducator special needs specialist in prekindergarten though grade twelve classrooms. Education 101, 145, 165, 175, 204, 314, 320; one course from Education 201, 202, 203; Education 332 or 333; one course from Education 210, 252, 253, 315; Psychology 204; three additional credits from education courses.
4. ENGLISH AS A SECOND LANGUAGE: Paraeducator Certification 953. Completion of this option provides certification to work as a paraeducator ESL specialist in prekindergarten through grade twelve classrooms. Education 101, 145, 165, 175, 204, 320, 333, 355; one course from Education 201, 202, 203; Psychology 204; six additional credits from education courses.

\section*{ACADEMIC OFFERINGS: EDUCATION}
5. CAREER AND TRANSITIONAL PROGRAMS: Paraeducator Certification 954. Completion of this option provides certification to work as a paraeducator career and transitional specialist in grade five through grade twelve classrooms. Education 101, 145, 165, 204, 252, 317, 333; one course from Education 201, 202, 203; Psychology 204; eight additional credits from education courses.

101 Introduction to Education (2) .Fall, Spring
Designed to introduce students to the domain of education and to induct them into an initial understanding of teaching and the teaching profession. Emphasis is on the development of a distinctively Christian approach to education. Education 101 is a prerequisite to all other education courses.

104 Pre-Student Teaching Field Experience I (1). .Fall, Spring
An optional 10 hour field-based practicum designed for students who do not complete Education 101 at Dordt College. Candidates will observe various K-12 classrooms and recognize qualities of effective teaching as identified by the Teacher Preparation Program (TPP) standards. Graded on a pass/no record basis.

145 Learner Differences (3) Fall, Spring
Examination of individual differences and diverse cultures and communities-ethnicities, SES, immigrant, cognitive (SPED and TAG), gender, learning profiles, as well as English language learners. Focus on designing inclusive learning environments to meet high standards. Prerequisite: Education 101. [Cross-listed: CORE 271]

155 Children's and Adolescent Literature (3) \(\qquad\) Fall Odd, Spring
This course focuses on the classroom use of literature for children and adolescents. It includes a variety of genres, fiction and nonfiction, technology- and media-based information, and non-print materials. It introduces the student to a wide range of authors and literature, including a variety of cultures, linguistic backgrounds, and perspectives. Ways to encourage reading and interacting with texts in the content areas are discussed and practiced. Prerequisite: Education 101.

165 Learning Environments (3)
Fall, Spring
Focus on designing and implementing developmentally appropriate and challenging learning experiences. Creating individual and collaborative learning environments including competency-based, cooperative learning, technology-supported, experiential, and other environments. Prerequisite: Education 101.

170 Infant/Toddler Instructional Adaptations (1.5) .Fall Even
This course will study appropriate infant/toddler programs (birth - age 3) including an overview of typical and atypical development, quality routines, appropriate environments, materials, and activities in the areas of cognition, language development, physical motor, socialemotional, aesthetics, and adaptive behavior. The importance of working with families, teaching through play, and using developmentally appropriate assessments to inform instruction will be emphasized. This course will also student current legislation that affects services provided to families and young children, including those with special needs. Prerequisite: Education 101.

175 Foundations of Literacy (1.5) ..Fall Even, Spring This course is an introduction to literacy instruction for prekindergarten thru elementary school. Different philosophical approaches to reading instruction, assessment, and research pertaining to speaking, listening, reading, writing, and viewing will be studied. Topics addressed will include the Science of Reading (including phonemic awareness, phonics, vocabulary, fluency, and comprehension) and the writing process. The standards of the International Reading Association will be introduced. Prerequisite: Education 101.

201 Planning, Instruction, and Assessment in Elementary Schools (3). \(\qquad\) Fall, Spring This course introduces students to an understanding of instructional theory at the elementary school level. Focus is on the planning process and the integral role of instruction and assessment. Emphasis is on the development of a distinctively Christian approach to teaching and learning. Various perspectives on the instructional process are critically examined. Prerequisite: admission to the Teacher Preparation Program. Corequisite: Education 209.

202 Planning, Instruction, and Assessment in Middle Schools (3) Fall
This course introduces students to an understanding of instructional theory at the middle school level. Focus is on the planning process and the integral role of instruction and assessment. Emphasis is on the development of a distinctively Christian approach to teaching and learning. Various perspectives on the instructional process are critically examined. Prerequisite: admission to the Teacher Preparation Program. Corequisite: Education 209.

203 Planning, Instruction, and Assessment in Secondary Schools (3) Spring This course introduces students to an understanding of instructional theory at the high school level. Focus is on the planning process and the integral role of instruction and assessment. Emphasis is on the development of a distinctively Christian approach to teaching and learning. Various perspectives on the instructional process are critically examined. Prerequisite: admission to the Teacher Preparation Program. Corequisite: Education 209.

A 45 hour supervised field-based internship in prekindergarten through grade twelve classrooms (placement determined by the certification option selected ). This course is required for all paraeducator certification options. Prerequisite: Education 101.

210 Assessment and Diagnosis in Remedial and Special Education (3). Fall Introductory course in the use of assessment techniques in special and remedial education. Various formal and informal assessment techniques are examined and applied to the development of educational programs that meet the needs of the handicapped. Prerequisite: Education 201 or 202.

220 Teaching the Co-Curricular Areas in Pre-K through Middle School (3). Fall, Spring Odd Provides background on methods and materials necessary for teaching physical education, health, wellness, visual arts, and performing arts in preschool, elementary, and middle school classrooms. Prerequisite: Education 201 or 202.

239 Service Learning Field Experience (2) .Fall, Spring A field experience, designed to be taken in conjunction with Education 335/336/337 during the student's junior year. Students assist in classrooms for a total of 60 hours. Experiences gained in the field are addressed in the concurrent education courses. Prerequisite: admission to the Teacher Preparation Program; or permission of instructor.

252 Introduction to Behavior Management (3).
Fall Odd
An introduction to understanding and working with behavior problems commonly found in children and adolescents. Students will become familiar with the identification and assessment of problem behaviors, planning classroom interventions, monitoring progress, choosing corrective strategies, and supporting interventions beyond the classroom. This course has implications for both the regular and special education teacher. Prerequisite: Education 201 or 202 or 203.

253 Introduction to the Education of Children and Youth with Mild Disabilities (4). .Fall Odd A survey course dealing with the provision of educational services to students with mild disabilities, focusing on the history of special education, legal issues related to the field of special education, and an in-depth study of the characteristics of learners with mild to moderate disabilities. Prerequisite: Education 201 or 202 or 203.

260 Teaching Bible in Pre-K through Middle School (1.5).
.Fall Odd
Designed to discuss the role of Bible teaching in the Christian school, to examine curriculum materials, to develop pedagogical skills for teaching Bible, and to involve students in the designing of their own appropriate curriculum materials. Prerequisite: Education 201 or 202.

261 Teaching Bible to Adolescents (3). .. Fall Odd
Discussion of a Reformed approach to the teaching of Bible. This course includes the study of the nature of faith, adolescent faith development, Reformed hermeneutics, pedagogical skills for teaching the Scriptures, and methods and content of the secondary (7-12) Bible curriculum. The course will cover theological and pedagogical foundations and the practical content of teaching Bible. Prerequisite: Education 202 or 203; or permission of instructor. [Cross-listed: Theology 254]

262 Educational Theatre in the Classroom and Beyond (3) Fall Odd
An introduction to informal dramatics for the classroom, youth theatre programs, and other applications in fields such as youth ministry, social work, and psychology. Students interested in elementary, middle or high school teaching are encouraged to enroll. Emphasis is on dramatic activity requiring minimal equipment and facilities. Field experience required in area schools, churches, or after-school programs. Prerequisite: admission to the Teacher Preparation Program; or permission of instructor. [Cross-listed: Theatre Arts 262]

265 Content Area Reading (1.5). .Fall The emphasis of this course is on using instructional strategies in the various content subjects to developing reading, writing, and studying skills to benefit all learners in today's diverse society. As children progress from elementary to middle and high school levels, much of their learning depends on how well they are able to read in the various subject areas. Responsibilities of the Christian educator in helping students develop their potential in reading in content areas will be addressed. Prerequisite: Education 201 or 202 or 203.

270 Comparative and International Education (3) .Occasional This course in comparative and international education helps pre-service teachers to develop an awareness of the strengths, challenges, and debates impacting education in different locations. An increased knowledge of the culture and education systems explored provide students with greater insights into their own educational systems and will allow them to recognize how a global understanding of education has important implications for what happens within their own context. Corequisite: SPICE/SPIN 271.

271 Special Education Practicum I (2-2.5). Fall
A supervised field experience in the fall semester that allows the student to aid/observe in a special education classroom. The practicum is provided in a setting appropriate for the endorsement sought. Graded on a pass/no-record basis. Prerequisite: Education 201 or 202 or 203.

272 Special Education Practicum II (2) Spring
A supervised field experience in the spring semester that allows the student to aid/observe in a special education classroom. The practicum is provided in a setting appropriate for the endorsement sought. Graded on a pass/no-record basis. Prerequisite: Education 201 or 202 or 203.

281- Service-Learning (1-3). \(\qquad\) .Fall, Spring, Summer
283 See page 113, Individual Studies
300 History and Philosophy of Education (3) Fall, Spring Why do we "do school" the way we do? Are the ways we educate the best? What does "the best" mean when we apply it to education? Most of all, what do the ways we "do school" say about our most basic commitments and beliefs? Philosophy of Education explores these questions and others like it, examining how basic commitments affect the ways we govern schools, see students, plan teaching and learning, and make curriculum. Students draw on resources, especially those from the tradition of Reformed Christian education, to construct a statement describing their own education philosophy. While this course meets a requirement in the Teacher Preparation Program, it does not assume a background in teacher preparation. Students from outside teacher preparation are welcome. Prerequisite: CORE 200. [Cross-listed: CORE 310]

314 Diagnosis and Remediation of Language/Reading Difficulties (3)..
.Spring
A study of the causes of reading difficulties in the preschool, elementary, middle-level, and secondary school, their diagnosis and correction in both classroom and remedial setting. Prerequisites: Education 175; Education 201 or 202; or permission of instructor.

315 Instructional Methods and Strategies for the Education of Students with Mild Disabilities-Preschool, Elementary, and Middle School (4) ..Spring Even Deals with the instruction of students with mild disabilities such as learning disabilities, mild behavior disorders, and cognitive disabilities. Focus is on strategies directed toward the successful integration of students with mild disabilities into the regular elementary or middle level classroom. Includes embedded practicum experience. Prerequisite: Education 201 or 202 or 203.

317 Transitional Collaboration (1) .Spring
Acquaints students with sources of services, organizations, and networks that provide transitional, career, and vocational supports for students with disabilities at all levels of development with particular focus on the needs of students transitioning from elementary to middle school, middle school to high school, and high school to post high school experiences. Prerequisite: Education 201 or 202 or 203.

320 Phonics (1.5)
.Spring
The content of this course focuses on the knowledge and instruction of phonics and word identification strategies commonly used by reading professionals, early childhood professionals, and those teaching English as a second language. Planning, instructing, and assessing using strategies that reflect best practices in early literacy instruction will be a central focus. Prerequisite: Education 201 or 202 or 203; or permission of instructor.

321 Early Childhood Literacy (1.5).

\section*{.Spring}

This course is designed to cover the stages involved in the development of literacy in children up to the age of eight. Teaching methods and materials will be considered. The ability to communicate is a wonderful gift from God. It is amazing to work with and teach young children as they develop this gift. Prerequisite: Education 201 or 202 or 203; or permission of instructor.

322 Introduction to Early Childhood (4) ..Fall Odd
Designed to provide an overview of the field of early childhood education. Included are the following topics: growth and development of children from ages birth to eight; current trends in early childhood education; age appropriate lesson planning; what constitutes a supportive environment for young children; and the development of a professional Christian attitude towards children. Includes a 20-hour practicum in a child development center for children ages 0-5. Prerequisite: Education 201.

326 Organization and Administration of Early Childhood Programs (3) .Fall Even This course focuses on the administrative aspects of running a preschool. Topics include legal and licensing issues, as well as the development of a facility that is safe and organized in a way that promotes child development. Issues related to assessing program quality in terms of curriculum and personnel and ways to foster positive child-family-school relationships will be addressed. Prerequisite: Education 201.

331 Teaching Social Studies in Pre-K through Middle School (3).
.Spring
An introduction to a basic framework for social studies teaching with focus on methodologies, lesson and unit planning, learning resources, classroom organization, and new-tech media. Includes practical application activities for each major topic. Prerequisite: Education 201 or 202. Education 331 may change from a 3 credit to a 1.5 credit course beginning Spring 2016.

332 Teaching Mathematics in Pre-K through Middle School (3) Fall Examines the principles of teaching mathematics including materials, pedagogy, lesson design, goals, and evaluation. Particular focus is placed on application of the Iowa Core Characteristics of Effective Instruction and the Iowa and National Core standards for mathematical
practice and content as well as standards from the National Council of Teachers of Mathematics (NCTM). Prerequisite: Education 201 or 202; Mathematics 108. Corequisite: Education 239 or 369.

333 Teaching Reading and Language Arts in Pre-K through Middle School (3) Fall
Designed to cover basic principles involved in the teaching of language arts. Special attention will be given to reading and writing. Handwriting, spelling, grammar, listening, speaking, and viewing will also be addressed. Various approaches and materials will be studied. Prerequisite: Education 201 or 202 or 203. Corequisite: Education 239 or 369 .

334 Teaching Science in Pre-K through Middle School (3) .Spring
A basic course in the principles and techniques of teaching natural sciences. The primary focus is on the development of materials for use in the elementary and middle-level science classroom. Prerequisite: Education 201 or 202. Education 334 may change from a 3 credit to a 1.5 credit course beginning Spring 2016.

335 Applied Educational Psychology for Elementary Teachers (3) Fall
Examines the unique emotional, physical, intellectual, social and spiritual development of elementary students. Emphasis on developing a biblical view of the student through developmentally appropriate differentiation. Significant focus on the development of positive learning environments utilizing appropriate motivation and classroom management strategies. Prerequisite: Education 201 or 202.

336 Applied Educational Psychology for Middle School Teachers (3)
Examines the unique emotional, physical, intellectual, social and spiritual development of early to mid-adolescence. Emphasis on developing a biblical view of the student through developmentally appropriate differentiation. Significant focus on the development of positive learning environments utilizing appropriate motivation and classroom management strategies. Prerequisite: Education 201 or 202 or 203.

337 Applied Education Psychology for Secondary Teachers (3) Fall Examines the unique emotional, physical, intellectual, social and spiritual development of early to mid-adolescence. Emphasis on developing a biblical view of the student through developmentally appropriate differentiation. Significant focus on the development of positive learning environments utilizing appropriate motivation and classroom management strategies. Prerequisite: Education 202 or 203.

339 Supervised Practicum in Reading (1)
.Spring (Not offered after Spring 2016)
This course gives the pre-service teacher an opportunity to work with a student who is experiencing reading difficulties. Graded on a pass/ fail basis. Prerequisite: Education 201 or 202.

349 Supervised Practicum in Teaching English as a Second Language (1.5). \(\qquad\) .Fall, Spring This course provides pre-service teachers who are seeking to complete the Iowa Teaching English as a Second Language (ESL) endorsement an opportunity to gain valuable experience in K-12 ESL classrooms. Students will complete a designated number of hours in a supervised practicum. They will identify learning needs of K-12 students and design and evaluate strategies appropriate for English language learners. Prerequisite: Education 201 or 202 or 203. Corequisite: Education 355.

350 Methods of Teaching Art in High Schools and Middle Schools (3). Fall Even Methods and techniques of organizing and motivating art on the secondary school level. Media explored depends on the needs and interests of the class. Prerequisite: Education 202 or 203.

351 Methods of Teaching Sciences in High Schools and Middle Schools (3) Fall Odd
A review of recent trends in science teaching in middle and secondary schools. Use of audio-visual materials pertinent to the various sciences, methods of evaluation, laboratory techniques, and textbook evaluations are included. Students give several class presentations and observe actual teaching situations. Prerequisite: Education 202 or 203.

352 Methods of Teaching Agriculture in Middle and High Schools (3) Occasional Students will examine recent trends in agriculture teaching in secondary schools. Use of audio-visual materials, methods of evaluation, laboratory techniques, and textbook evaluations are included. The course will emphasize the development of a distinctively Christian approach to teaching agriculture. Students participate in an extensive, 40 -clock hour, practicum experience in a local agriculture classroom, give several presentations, and observe actual teaching situations. Prerequisite: admission to the Teacher Preparation Program; or permission of instructor.

354 Methods of Teaching English and Language Arts in High Schools and Middle Schools (3)
Fall Even
Discussion of a Christian approach to the teaching of English in middle and secondary schools. Methods and approaches to teaching literature, reading, language, and composition, as well as micro-teaching in these areas. Attention is given to lesson, unit, course, and curriculum planning and to the use of audio visual materials. Prerequisite: Education 202 or 203.

355 Methods of Teaching a Second Language (3 or 4) Fall Even Presentation of various methods for teaching a second language. Theories of second language acquisition will be examined. Students will learn strategies for teaching oral language, vocabulary, reading, and writing to language learners. Planning of standards-based language instruction that develops the four language skills and takes into account differing learning styles, interests, and varying levels of language

\section*{ACADEMIC OFFERINGS: EDUCATION}
proficiency will be emphasized. Students may choose one endorsement area (teaching foreign language OR teaching ESL/EFL) for three credits or do both endorsement areas for four credits. Prerequisite: Education 202 or 203.

356 Methods of Teaching History and Social Studies in High Schools and Middle Schools (3) Fall Even
Discussion of a Christian approach to the teaching of history and social studies in middle and secondary schools. Emphasis is on current methods and consideration of practical suggestions in classroom procedure. Prerequisite: Education 202 or 203.

357 Methods of Teaching Mathematics in High Schools and Middle Schools (3)
Fall Odd
Methods of effective teaching of mathematics in middle and secondary schools. Prospective teachers attain understanding of the basic mathematics taught at the secondary level. Prerequisite: Education 202 or 203.

358 Methods of Teaching Speech, Communication, and Theatre Arts in High Schools and Middle Schools (1) \(\qquad\) .Arranged This course provides pre-service teachers who are seeking to complete the Iowa English/Language Arts-All endorsement an opportunity to gain valuable experience in high school/middle school speech and/or theatre arts classrooms. Students will complete a minimum of 20 clock hours in a supervised practicum. They will identify learning needs of secondary level students and design and evaluate strategies appropriate for the speech/theatre arts setting. Graded on a pass/fail basis. Prerequisite: Education 202 or 203.

359 Methods of Teaching Business in High Schools and Middle Schools (3).
Fall Even
Examination of the role of business education in the curriculum and current concerns in business education. Study of methods and materials for courses in business education at the secondary and higher education levels. Prerequisite: Education 202 or 203.

369 PDS Internship (2-4)
A 240 -hour practicum experience designed to develop your content expertise, pedagogical skillset, and teaching dispositions. You will have the opportunity to apply the teaching and learning strategies examined in the methods courses taken concurrently with Education 369. The course includes reflective observation and practice in P-12 classrooms. Participants will observe classroom instruction by qualified teachers as well as co-plan and co-teach lessons to gain the practical experience necessary to reflect, evaluate and improve upon their teaching effectiveness.

370 Student Teaching Internship-Early Childhood (4-8)
Fall, Spring
The teaching internship in a pre-school setting is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

371 Student Teaching Internship-Elementary (4-14)
Fall, Spring
The teaching internship in an elementary (grades K-6) setting is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

372 Student Teaching Internship-Middle Level (4-8)
Fall, Spring
The teaching internship in a middle school (grades 5-8) setting is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

373 Student Teaching Internship-Secondary (4-14) Fall, Spring The teaching internship in a secondary school (grades 5-12) setting is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

374 Student Teaching Internship-Vertical (4-14)
Fall, Spring
The teaching internship in a P-12 school setting is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

375 Student Teaching Internship-English as a Second Language (4-8) .........................................................................................Fall, Spring
The teaching internship in an ESL setting is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

376 Student Teaching Internship-Reading (4-8) Fall, Spring The teaching internship in an elementary (grades K-6) setting is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.
capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

Student Teaching Internship-Secondary Instructional Strategist (4-8) Fall, Spring The teaching internship in a secondary (grades 5-12) inclusive classroom or in a classroom serving students with mild disabilities is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

379 Student Teaching Internship-Multiple Endorsements (4-14). Fall, Spring
The teaching internship is the capstone experience of the Teacher Preparation Program. Student interns co-teach, to the greatest extent possible, with qualified mentor teachers in local Professional Development Schools (PDS) or in other partner schools.

381 Senior Seminar I (1) Fall
Education 381 is scheduled in the fall semester of the professional year. Emphasis is on developing professional skills including communication with the home and colleagues, motivation techniques, effective classroom management, and understanding legal and ethical issues applicable to the teaching profession. Graded on a pass/fail basis.

382 Senior Seminar II (1).
.Fall, Spring
Education 382 is scheduled in the spring semester of the professional year and is taken concurrently with the teaching internship. Emphasis is on developing a coherent biblical philosophy of education, appropriate motivation techniques, effective classroom management, and understanding legal and ethical issues applicable to the teaching profession. Graded on a pass/fail basis.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Education: Graduate Courses}

The 500-level courses are graduate education courses, closed to undergraduate students unless they have completed all degree requirements except student teaching.

501 Issues in Education (3)

\section*{Summer}

This course critically examines the philosophical and historical background and context of contemporary educational practice. The focus is on key issues currently affecting the areas of teaching, curriculum, learning, and the school as an institution. Emphasis falls on relating philosophical and historical contexts to daily classroom practice. Course participants are equipped to use philosophical analysis as part of their reflective practice drawing on understandings and commitments in this course.

502 Learner Development and Principles of Learning (3) This course examines a biblical model of the teacher, learner, and the learning process. Consideration is given to the application of a biblical model as it relates to teaching and learning. This model is weighed and examined against other psycho-educational theories of development and learning. This course will equip leaders to create learning environments that celebrate image bearing.

503 Interpreting and Applying Educational Research (3). \(\qquad\) Summer (School Leadership), Fall (Teacher Leadership) This course provides leaders with a conceptual introduction to the essential principles and appropriate methods of educational research. Course participants will be equipped to analyze and interpret existing research and critique contemporary methods, techniques, and trends in education as well as be prepared to conduct action research in their own classrooms and schools. Education 503 will be offered for students in the teacher leadership program every fall and for students in the school leadership program summer odd.

504 Curriculum Development and Evaluation (3)
Framed in a biblical orientation, this course examines and develops curricular structures. Consideration will be given to how state, provincial, and Core Curriculum standards fit within these curricular decisions. Topics include an examination of content delivery models, appropriate instructional design models, and methods for implementing curricular change.

505 Education in the Inclusive Classroom (3). Summer This course examines the knowledge, skills, and dispositions needed to identify and meet the instructional and social needs of all students, including those with mild to moderate disabilities. Classroom-based procedures for identifying students with disabilities will be considered. Leaders will discover strategies that facilitate the inclusion of students with special needs in the general classroom.

506 Best Practices in Instructional Strategies (3) Summer Odd This course utilizes a biblical foundation to explore the nature of teaching and learning and to engage in a variety of research-based teaching and instructional strategies. Consideration of the biblical nature of the learner as well as an understanding of appropriate educational objectives and goals will shape the strategies utilized in the K-12 classroom.

507 Classroom Assessment Strategies (3)
This course seeks to align assessment practices with a biblical understanding of the roles of teacher and learner. The course invites the examination and evaluation of formative and summative assessment strategies; application and design of appropriate assessment strategies for effective and developmentally appropriate learning environments; proficiency in multiple forms of assessment; and the development of skills and strategies to help students become effective self-assessors.

508 Teaching and Learning with Technology (3)
Summer Even
This course is designed to foster creative and divergent thinking regarding the application and integration of technology into the processes of teaching and learning. The intent is to "distinguish sharply, think critically, and judge wisely" how technology is changing the teaching/ learning environment. Hands-on technology training will provide a basis upon which participants will reconstruct curriculum and instructional techniques to support the learning needs of their students.

509 Teacher Leadership Field Experience (3)
Spring
This course provides opportunities for teacher leaders to practice biblical servant leadership within the areas of professional and curriculum development in school. The course offers opportunities for teacher mentoring, teacher-led professional development, as well as curriculum development and evaluation. This culminating course puts into practice the principles of the M.Ed. in Teacher Leadership.

510 Action Research Project (3)
.Spring
This course is the fruitful interaction of faith, educational theory, and practice and will allow teacher leaders to explore in depth an issue or idea that will help improve instruction in their classrooms or school. The action research project allows teacher leaders to add to the body of educational knowledge by exploring problems and issues from a biblical perspective.

560 Foundations of Educational Leadership (3)
Fall Odd A comprehensive overview of the field of educational administration including theories of leadership, leadership traits, leadership behaviors, contemporary approaches, and the Iowa School Leadership Standards. Corequisite: Education 560L.

560L Field Experience I in Educational Leadership (1.5)
Fall Odd
A field-based learning experience of 60 hours or more under the joint supervision of a school administrator and Dordt College faculty. Activities are integrated into Education 560 and serve as evidence of meeting program performance assessment standards. Corequisite: Education 560. Graded on a pass/no-record basis.

561 Instructional Leadership (3) .Spring Even
This course will provide a theoretical and practical overview of the supervision and evaluation of instruction. It introduces supervision and inquiry into current issues and best practices in supervision. We will use practical, interactive exercises to develop skills in the clinical process and developmental approach to supervision. Attention will also be given to supervision of the school/district professional development programs. One of two required evaluator approval elements is met in this course. Corequisite: Education 561L.

561L Field Experience II in Educational Leadership (1.5).
Spring Even A field-based learning experience of 60 hours or more under the joint supervision of a school administrator and Dordt College faculty. Activities are integrated into Education 561 and serve as evidence of meeting program performance assessment standards. Corequisite: Education 561. Graded on a pass/no-record basis.

562 Legal and Ethical Foundations in Educational Leadership (3). Summer Examination of the fundamental issues of law and ethics as they are applied to the classroom teachers and school administrators. Areas to be studied include educational structure and governance, church/state relations, students' rights, teachers' rights and responsibilities, and tort liability.

563 Collaborative Leadership (3).
Fall Even
Organizational influences on leadership, communications in schools, decision making, managing conflict, and facilitating change in schools. Corequisite: Education 563L.

563L Field Experience III in Educational Leadership (1.5)
.Fall Even
A field-based learning experience of 60 hours or more under the joint supervision of a school administrator and Dordt College faculty. Activities are integrated into Education 563 and serve as evidence of meeting program performance assessment standards. Corequisite: Education 563. Graded on a pass/no-record basis.

564 Management and School Improvement (3) .Spring Odd Presentation and development of methods for creating a climate of continuous, systemic improvement in schools. Participants will gain understanding of how the relationships among the development of learning communities, teacher leadership, school effectiveness, and site-based accountability can positively improve schools. Also covered are the basic principles and purposes of effective personnel practices and policies. Attention will be focused on the various approaches to personnel staffing, budgeting, and contract negotiations. The second of two required evaluator approval elements is met in this course. Corequisite: Education 564L.

\section*{Engineering}

The mission of the engineering department is based on an awareness of a calling that Christian engineers have as God's covenant people to bring every area of life under the lordship of Christ. Therefore, the Dordt College engineering program seeks to provide serviceable insight in the field of engineering from a distinctively Christian perspective; in a manner that demonstrates the unity of creation and rejects the classic polarizations between technical and humanities, vocational and liberal arts, or natural and spiritual; while demonstrating the highest possible quality of undergraduate teaching that we understand to be, most fundamentally, the enabling for Christian discipleship.

In harmony with this mission, the general program objectives are as follows:
Religious Orientation: The Dordt College engineering program will seek to guide students as they develop a Christian worldview, so that graduates of the engineering program will recognize that they are empowered by the spirit of Christ in order to responsibly serve the Creator, fellow humans, and the entire creation through their calling as an engineer.
Creational Structure: The engineering program will seek to provide a cohesive curriculum of diverse courses, so that graduates are prepared for life-long learning in any area of the natural sciences, social sciences, and humanities. The program will also provide students with the passion and competencies necessary for successful service as engineers in either graduate school or industry.
Creational Development: The program and curriculum will highlight the various aspects of human responsibility and involvement in the process of dynamically unfolding the creation. Graduates from the Dordt College engineering program will reflect a desire to responsibly unfold the potential of creation through science and technology in stewardly ways. Graduates will be able to articulate the historical and philosophical roots and problems associated with Western science and technology, and demonstrate the ability to critically assess how the spirits of the age impact technological direction.
Contemporary Response: The engineering program will enable students to convert their insights and competencies into committed action in service to God and their neighbor. A student of the Dordt College engineering program will acquire the tenacity and perseverance necessary for engineering service. A Dordt engineering graduate will be able to articulate a vision for a community of Kingdom-committed citizens who become a light in the world by developing normative technological models and living normative lives. Graduates will recognize the need for bringing the Gospel of redemptive healing to technology and seek to develop technology in ways that reflect a love that desires the well-being (social, economic, ecological, etc.) of all of God's creatures.

The following specific curricular outcomes serve to facilitate the achievement of the general objectives described above.
1. Educational Breadth and Worldview: Students will engage in a broad-based curriculum that educates the whole person and enables the engineering student to develop his or her Christian worldview, recognizing the required breadth of knowledge in our global and culturally diverse world.
2. Faithfulness and Responsibility: Students will do technology holistically in recognition of many factors including trust, ethics, justice, economics, relationships, language, culture, aesthetics, and logic.
3. Societal and Historical Context: Students will understand contemporary issues within the broader context of cultural, societal, and historical development. They will know their place and task in the dynamic unfolding of creation in time, which has been called the cultural mandate.
4. Life-Long Learning: Students will recognize that life-long learning is necessary to remain faithful and effective in their call to participate in the continual unfolding of creation.
5. Critical Thinking and Problem Solving: Students will have the ability to think critically and identify, formulate, and solve problems.
6. Mathematics, Science, and Engineering Fundamentals: Students will have the ability to apply foundational knowledge in mathematics, science, and engineering, and gain an appreciation for the numerical and spatial aspects of the creation.
7. Experimental Design and Analysis: Students will have the ability to design and conduct experiments, as well as analyze and interpret data.
8. Engineering Design: Students will have the ability to holistically design systems, components, or processes by giving consideration to norms for design that stem from a vision of faithful and responsible engineering service.
9. Engineering Skills and Tools: Students will have the ability to use the techniques, skills, and modern engineering tools (e.g. computational tools) necessary for professional engineering practice.
10. Teamwork: Students will have the ability to engage in the communal task of engineering and will recognize the importance of servant leadership and the interdependency of individual member strengths as part of the whole.
11. Communication: Students will have the ability to effectively express ideas and information through public speaking, writing, and graphical forms of communication.

In addition to the standard admission requirements of the college, the following high school courses and preparatory indicators are recommended for students considering an engineering degree at Dordt College:
- Complete four units or more of college preparatory mathematics, one unit of chemistry, and one unit of physics. Preparation in computer programming/analysis is also helpful.
- Earn a combined SAT score (Math, Verbal) of 1100 or higher or a composite ACT score of 24 or higher. A minimum mathematics SAT score of 600 or ACT score of 25 is highly desirable. Students who have maintained a cumulative high school GPA of 3.4 or higher are more likely to successfully complete the Dordt College engineering program. The average composite ACT score of Dordt College engineering graduates is 28 .

\section*{ACADEMIC OFFERINGS: ENGINEERING}

After completing three semesters in an engineering curriculum (with a minimum of one semester at Dordt College), students seeking the B.S.E. degree will apply to be officially accepted into the engineering program. To be accepted into the engineering program students must:
- Review the program mission, along with the curricular objectives and outcomes of the engineering program. Students will reaffirm their commitment to the program objectives and outcomes as they partner with faculty in the learning process.
- Declare a specific concentration (or concentration with emphasis) in the engineering program and provide an updated program of study plan.
- Achieve a C- or better in each of Engineering 112, 114, 115, 116, 117, Chemistry 109 or 111, Mathematics 152, 153, 204, Physics 201, 202 , along with an overall GPA of 2.5 or higher.

Every student in the engineering major will be assigned an engineering faculty member as his or her academic advisor.
The engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. To earn a Bachelor of Science in Engineering degree from this ABET accredited program, students must successfully complete the major requirements outlined below.

Engineering Major- \(\quad\) Foundation (common to all emphases): Engineering 112, 114, 115, 116, 117, 202, 220, 299, 310, 379, 380, 381, 390; Chemistry 109 or 111; Mathematics 152, 153, 201, 204; Physics 201, 202.

Students must select one of the following concentrations:
Biomedical: Foundation; Engineering 119, 170, 210, 212, 302, 347, 357, 362, 365; two courses from Biology 125, 226, Chemistry 225, 261, 322; a minimum of ten credits from Engineering 204, 300, 303, 304, 314, 316, 319, 322, 323, 348, 360, 363.

Chemical: \(\quad\) Foundation; Engineering 170, 210, 300, 302, 303, 344 or \(345,354,355,362,366\); Chemistry 225; a minimum of four credits from Engineering 204, 212, 322; a minimum of seven credits from Chemistry 212, 231, 271, 312, 321, 322, 323, Statistics 132.

Civil: \(\quad\) Foundation; Engineering 170 or Computer Science 110; Engineering 210, 212, 302, 317, 318, 319; a minimum of five credits of mathematics or statistics from Mathematics 203, 209, 212, 215, 216, 311, 315, Statistics 132, 201.

Civil concentration students must select one of the following advanced engineering, math, and science course sequences.
A. For students interested in a general civil engineering concentration: Engineering 351, 352; a minimum of three credits from Engineering 300, 350, Construction Management 207; a minimum of three credits from Construction Management 101, 102, 220, 240, 270, 280.
B. For students interested in a civil engineering concentration with an interdisciplinary environmental emphasis: Chemistry 251, 252; Engineering 351 or 352; a minimum of three credits from Engineering 300, 350, Construction Management 207, 270; a minimum of three credits from Environmental Studies 201, 202.
C. For students interested in civil engineering concentration with an interdisciplinary construction-structural emphasis: Engineering 351, 352; a minimum of six credits from Construction Management 101, 102, 207, 220, 240, 270, 280.

Electrical: Foundation; Engineering 204, 322, 323,362,365; Computer Science 110; a minimum of three credits of mathematics or statistics from Mathematics 203, 209, 212, 215, 216, 311, 315, Statistics 132, 201.

Electrical concentration students must select one of the following advanced engineering, math, and science course sequences:
A. For students interested in a general electrical engineering concentration: Engineering 304, 360, 363; Physics 203; one course from Computer Science 112, 131, 145, Engineering 210, 300, 302, 303, 319, 326.
B. For students interested in an electrical engineering concentration with an interdisciplinary computer systems emphasis: Engineering 304, 363; Computer Science 112, 202; two courses from Computer Science 131, 145, 305, 311.
C. For students interested in an electrical engineering concentration with an interdisciplinary energy systems emphasis: Engineering 300, 360; Physics 203; two courses from Engineering 303, 304, 326, 350, 363.

Mechanical: Foundation; Engineering 170, 210, 212, 302, 362, 365 or 366 ; a minimum of five credits of mathematics or statistics from Mathematics 203, 209, 212, 215, 216, 311, 315, Statistics 132, 201.

Mechanical concentration students must select one of the following advanced engineering, math, and science course sequences:
A. For students interested in a general mechanical engineering concentration: Engineering 300, 303, 316, 350; one course from Engineering 314, 317, 357.
B. For students interested in a mechanical engineering concentration with an interdisciplinary mechatronics emphasis: Engineering 204, 314, 322, 323; one course from Engineering 300, 303, 304, 316.
C. For students interested in a mechanical engineering concentration with an interdisciplinary energy systems emphasis: Engineering 300, 303, 350, 360; one course from Engineering 204, 314, 316, 319.

Course substitutions within an emphasis or curricular sequence may be requested by students. All course substitutions must be requested in writing and approved by the engineering department to ensure that any changes meet the accreditation criteria for the multi-disciplinary engineering program.

\section*{Engineering Science Major}

The engineering science major shares the same mission as the engineering major but puts greater emphasis on basic science and allows more flexibility in course selection. The engineering science major has not been examined nor accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. To earn a bachelor of arts degree in engineering science, students must successfully complete the major requirements outlined below.

Engineering Science- Foundation (common to all emphases): Engineering 112, 114, 115, 116, 117, 390; Chemistry 109 or 111; Mathematics 152, 153, 204; Physics 201, 202.

Students must select one of the following emphases:
General: Foundation; 18 credits of natural science, computer science, or business administration related courses not included in the foundation requirements; 18 additional credits of engineering course electives not included in the foundation requirements.

Architecture: Foundation; Art 201, 202, 240; three courses from Art 207, 208, 209, 210; Engineering 210, 212, 299, 310; one course from Environmental Studies 151, 201, 202; a minimum of nine credits from Construction Management 101, 102, 207, 220, 240, 270, 280; a minimum of nine credits from Engineering 202, 302, 303, 317, 318, 319, 350, 351, 352.

Construction Management: Foundation; Business Administration 205; Construction Management 101, 102, 207, 220, 240, 270, 280; Engineering 210, 212, 317, 318; three courses from Engineering 202, 220, 299, 300, 302, 310, 319, 350, 351, 352.

To ensure a coherent course sequence, students must have all the courses in their proposed program of study approved by the engineering department before declaring a general engineering science major.

112 Introduction to Computer Aided Engineering and Design (1)............................................................................................................................... with the use of a solid modeling software package. The course meets for one design studio per week.

114 Introduction to Engineering (2)
An engineering foundations course that introduces students to Christi.................................................................................................................................................. are exposed to the concept of a biblically guided engineering design process. Students will explore engineering design economics (energy, material, time, and money) within the broader norms of engineering stewardship and holistic design. Basic engineering analysis tools and methods of engineering design will be practiced. Students are given the opportunity to learn about engineering by doing engineering as they participate in a project-based engineering analysis and design activities. The class will meet for two lecture periods per week for the first half of the semester, along with one lab-studio or discussion session each week for the entire semester.

115 Introduction to Engineering Statics and Structures (1)
An introduction to the engineering analysis and design of structures. Students will explore principles of statics analysis within the broader context of civil or mechanical engineering design. The course meets for two lecture periods per week for the second half of the semester, with an occasional lab-studio session being held in lieu of a lecture period.

116 Introduction to Engineering Thermal-Fluids (1) Fall
An introduction to the foundational science of engineering thermodynamics and fluid mechanics. Students will explore principles of thermal-fluid analysis within the broader context of chemical and mechanical engineering analysis and design.

117 Introduction to Engineering Electronics (1) .Spring
An introduction to electrical engineering fundamentals relating to electrical energy and circuit analysis. Concepts in digital logic and digital electronics are also introduced. Students will explore principles of electronic systems within the broader context of electrical engineering analysis and design. The course meets for two lecture periods per week for the second half of the semester, with an occasional lab-studio session being held in lieu of a lecture period.

119 Introduction to Biomedical Engineering (1) .Spring
An introduction to biomedical engineering fundamentals and bioengineering analysis. Students will explore the interdisciplinary field of bioengineering as a discipline and career. The course meets for two lecture periods per week for the second half of the semester, with an occasional lab-studio session being held in lieu of a lecture period.

170 Engineering Programming for Instrumentation and Automation (3)
An introduction to structured computer programming with application to engineering measurement, data acquisition, instrumentation, and automation. Corequisites: Engineering 220; Mathematics 204; or permission of instructor.

202 Elements of Materials Science (4) ..Spring
Studies the relationship between structure and properties of various materials, including metals, ceramics, polymers, and semiconductors. Students will learn how atomic and molecular arrangements, as well as manufacturing processes, influence the mechanical, electrical, and thermal properties of a material. Introductory topics in metallurgy in this course include the examination of effects of processing (heat treatment and manufacturing) and service environment on microstructure and properties. Laboratory explorations in materials engineering introduce concepts in experimental design and data analysis. Prerequisites: Chemistry 109 or 111; Physics 201.

204 Introduction to Microprocessors and Digital Circuits (4) Spring Digital circuits are covered, from simple logic gates through elementary microprocessor architecture. The course begins with elementary logic for binary systems, Boolean algebra, binary integer number formats and arithmetic, and combinational design. Intermediate topics include synchronous state machine design and register level concepts. The course concludes with topics in microprocessor architecture that include elementary assembly language and interfacing. Laboratory provides hands-on experience in logic design and microprocessor interfacing and includes two formal design projects. This course serves both computer science and engineering students. Prerequisite: Physics 202 or Physics 216 or Engineering 117.

210 Statics and Dynamics (4) Fall
A mechanics course that examines the effects of forces and moments applied to rigid and deformable bodies in equilibrium. Students will analyze concentrated and distributed force systems applied to static particles, rigid bodies, trusses, frames, and machines. The course also studies the kinematics and kinetic analysis of particle systems and rigid bodies. Prerequisite: Engineering 115; Physics 201.

212 Mechanics of Materials (4) .Spring
A solid mechanics course that examines the stresses, strains, and deformations that develop when various loads (tension, compression, torsion, bending, or any combination of these loads) are applied to deformable bodies. Elements of structural design are introduced using safety factors and failure criteria for ductile materials. The mechanics design laboratory provides an introduction to experimental methods, hands-on experience applying and using strain gages and investigating beam loading, and an introduction to finite-element analysis (FEA) software. Prerequisite: Engineering 210.

220 Linear Circuits and Electronics (4) Fall
Assumes a prerequisite knowledge of DC electrical circuits, including the definitions of electrical quantities, circuit elements (sources, resistors, capacitors, inductors), understanding of Kirchhoff's laws and basic concepts in AC circuits such as frequency and phase. Topics in this course include: general linear circuit analysis including Norton's and Thevenin's theorems; superposition; nodal and loop analysis; natural and forced responses in RLC circuits; and sinusoidal steady state analysis. The course also gives introductions to operational amplifier circuits, single stage BJT transistor circuits, and steady-state balanced 3-phase power calculations. The lab includes a formal design project. Prerequisite: Engineering 117 or Physics 202 or Physics 216. Corequisite: Mathematics 204. [Cross-listed: Physics 206]

281- Service-Learning (1-3)...............................................................................................................................................Fall, Spring, Summer
See page 113, Individual Studies
299 Thermodynamics (3). Spring
An introduction to thermodynamic principles, including work, heat, properties of pure substances, the first and second laws, entropy, and thermodynamic relations. Prerequisites: Physics 202 or Engineering 116; Mathematics 153.

300 Thermal-Chemical Systems (4)
Fall
Engineering thermodynamics applied to chemical, energy, and environmental systems. Students will study cycles and efficiencies, mixtures and solutions, chemical reactions, chemical and phase equilibrium, combustion thermodynamics, availability analysis, gas mixtures and psychrometrics, and thermal-fluid systems analysis. Applications to chemical reactors, combustion systems, emissions measurement, efficiency assessment, and indoor/outdoor air quality will be explored. The course meets for four lecture periods per week, with an occasional lab-studio session being held in lieu of a lecture period. Prerequisite: Engineering 299.

302 Fluid Mechanics and Hydraulics (4) Fall
A comprehensive, introductory course in fluid mechanics covering: hydrostatics; control volume approach to the continuity, momentum, and energy equations; dimensional analysis, similitude, and modeling; introductory boundary layer theory; fluid drag and lift; flow through conduits, pumps and compressors; and hydraulics and open channel flow. All students participate in team design projects involving design of water supply or sewage removal piping systems. The fluid systems and hydraulics laboratory will emphasize experimental design, technical communication skills, and report writing. Prerequisites: Engineering 116; Mathematics 204; Physics 202.

303 Heat Transfer (4)
Spring
Studies of the three modes of heat transfer (conduction, convection, and radiation) with application to heat exchangers. Computer methods are used extensively for heat transfer design and analysis. A formal heat exchanger design project is included in this course. The thermo-
systems and heat transfer laboratory will emphasize experimental design, technical communication skills, and report writing. Prerequisite: Engineering 302; or permission of instructor.

304 Embedded Microcontroller Systems (4) Spring A course on the design of microcontroller-based systems and the associated software and hardware. Software issues such as modular design, interrupt-driven I/O, and design for reliability are covered. Hardware issues such as serial and parallel interfacing, bus structures, grounding and shielding, and \(\mathrm{D} / \mathrm{A}\) and \(\mathrm{A} / \mathrm{D}\) conversions are also studied. Lab exercises provide design experience using a particular microcontroller or a softprocessor foundation in an FPGA. Prerequisites: Engineering 204, 220; Computer Science 110 or 111; or permission of instructor.

310 History of Science and Technology (3). .Spring
Enables the student to examine from a Reformed, biblical perspective the narrative of scientific unfolding and technological development as two human activities that are manifest in all cultures. Emphasis is on the major paradigms and events that have shaped the development of science and technology in the West and most recently in North America. The course focuses on the historical activity of engineers and artisans, while investigating the interrelationship between scientific thought and technological development. Events and ideas such as the philosophical origins of Western science, the Copernican revolution, Enlightenment rationalism, the industrial revolutions, 20th century positivism, the Einsteinian revolution, and the modern systemization ethic are discussed. Prerequisites: CORE 140, 145, 200. [Cross-listed: CORE 312]

314 Kinematics and Dynamics of Machinery (3)
.Fall Odd
A mechanics course that explores the kinematics, dynamics, and deflections of rigid bodies resulting from applied forces. Students will analyze the motion, deflection, and stress experienced by a variety of mechanisms such as slider cranks, four-bar mechanisms, gears, cams, and machine assemblies. There will be a significant focus on the use of and theory behind the computer software tools such as Finite Element and kinematics analysis that are commonly employed for system design and analysis. The course will be taught in a studio format and will feature primarily independent tutorial and project work. Prerequisites: Engineering 202, 212.

316 Machine Design (3)
.Spring
This course establishes the fundamentals of stress analysis and the design of machine elements. The first half of the course covers stressstrain and deflection analyses, as well as failure criteria for static and dynamic loading. The second half of the course applies these fundamentals to the design of machinery focusing on common machine elements such as shafts, bearings, gears, springs, fasteners, clutches, and brakes. Students will analyze existing machine designs and complete an open-ended mechanical design project. Instruction will be a combination of classroom instruction and open-ended design studio. Familiarity with computer software capable of solving iterative design problems is required. Prerequisites: Engineering 202, 212; or permission of instructor.

317 Structural Analysis (3)
A study of the analysis of trusses, beams, and framed structures. Students will learn how to determine loads on structures, including dead loads, live loads, and environmental loads. Shear, moment, and deflected shape diagrams will be considered. Deformation calculations, approximate analysis methods, flexibility methods, and stiffness methods for the analysis of indeterminate beams and frames will be considered. Influence lines for determinate and indeterminate beams will be introduced. Prerequisite: Engineering 212.

318 Soil Mechanics and Foundation Design (4)
Fall
A study of the engineering principles relating to soil properties and foundation design. The material properties of soil including structure, index properties, permeability, compressibility, and consolidation will be explored. Methods of soil testing, identification, and remediation will be covered. Principles of settlement and stresses in soils will be considered. Slope stability, retaining walls, and bearing capacity of shallow foundations will be introduced. The soils lab will provide hands-on opportunities to determine water content, perform sieve analyses, and test liquid, plastic, and shrinkage limits. Soil classification, compaction, compression, and consolidation testing will be explored. Prerequisite: Engineering 212 or Construction Management 214. [Cross-listed: Construction Management 318]

319 Environmental Engineering (3)
Spring
An introduction to water supply and wastewater treatment, solid waste management, hazardous waste disposal, pollution control equipment, and other topics relating to the engineer's role for ensuring clean air and providing clean water to communities. Methods and equipment for monitoring and testing air and water quality will be examined. Prerequisites: Chemistry 109 or 111.

322 Electronics I (4)
.Fall Even
A study of the flow of electricity in, and application of, semiconductor devices. Topics include basic signals and amplifier characteristics, operational amplifiers models and applications, diodes and applications, field effect transistors, bipolar junction transistors, and methods of amplification with single-transistor circuits. The laboratory includes a number of short design problems. Prerequisite: Engineering 220.

323 Electronics II (4). .Spring Odd
A continuation of Engineering 322. Topics include biasing strategies for discrete and integrated circuit designs, current mirrors, differential and multistage amplifiers, frequency response, feedback, and stability. The laboratory includes construction of a kit, which introduces students to power output stages, tuned amplifiers, and demodulator circuits. The laboratory also includes a short design problem. Prerequisite: Engineering 322.

Review of vector calculus; divergence, curl, Gauss' and Stoke's theorems; electro- and magneto-statics; polarization; boundary conditions; Laplace and Poisson equations; magnetic vector potential; energy; Maxwell's equations for time varying fields; wave propagation; and Poynting's theorem. Prerequisites: Physics 203; Mathematics 201, 204. [Cross-listed: Physics 326]

341- Special Topics in Engineering (3) ............................................................................................................................................Occasional 343 Elective courses designed to treat particular topics in more detail than would be done in any of the above courses. Topics will depend on the mutual interest of students and staff.

344 Fluidization Engineering (1) ...................................................................................................................................................Occasional
A special topics course for chemical and energy systems engineers, exploring the theory and applications of fluidized bed reaction and conversion systems. The course will be offered in an independent study format with integral laboratory research and design projects.

345 Biorenewable Systems Engineering (1) ...Occasional
A special topics course for chemical and energy systems engineers, exploring the theory and applications of biorenewable technology, products, and processes. The course will be offered in an independent study format with integral laboratory research and design projects.

\begin{abstract}
347 Biomedical Engineering Research Methods (1) \(\qquad\) .Occasional A special topics course for biomedical engineers, exploring the techniques and knowledge necessary to design and conduct experiments in the biomedical engineering field. It will include the nature and scope of a research project, how to conduct literature searches, and how to design methods and protocols for problem solving. The course will be offered in a weekly seminar or independent study format with regular progress reports and an integral literature research and experimental design projects. Prerequisite: junior or senior standing with a biomedical concentration; or permission of instructor.
\end{abstract}

348 Biomedical Engineering Research (1-3) .Occasional
A special topics course for senior-level biomedical engineering students that focuses on developing problem solving and critical thinking skills in the area of biomedical engineering research. In collaboration with a faculty mentor(s), students will choose and conduct a research project. Offered in an independent study format. Project results will be presented in a departmental seminar. Prerequisite: Engineering 347.

350 Sustainable Energy Systems Design (3) Fall A senior-level design course that focuses on designing energy systems for conservation, sustainability, and efficiency. Methods of auditing energy utilization and design principles for energy conservation are addressed as are solar and renewable energy technologies for meeting residential, commercial, and industrial energy needs. A variety of computer tools will be used for system analysis. A design studio component may incorporate tours, community service projects, and design projects relating to energy utilization and conservation. Prerequisites: Engineering 300, 302.

351 Reinforced Concrete Design (3) ............................................................................................................................................Spring Even
Analysis and design of reinforced concrete beams, columns, one-way slabs, and frames. The design of members for axial load, flexure, shear, deflections, bond, and anchorage will be considered. Design will be based primarily on ACI strength design methods. Prerequisite: Engineering 317.

352 Structural Steel Design (3)
Spring Odd
A study of design and behavior of steel members and structures. The design of steel beams, columns, tension members, frames, trusses, and simple connections will be considered. Design will be based primarily on AISC specifications related to the load and resistance factor design method. Allowable stress design will be introduced. Prerequisites: Engineering 317.

354 Separation Processes and Mass Transfer (3) .. Spring Even
A study of equilibrium and non-equilibrium mass transport in chemical engineering applications. Methods for analyzing continuous contacting and multistage separation processes are explored. Mass transfer principles are applied to the design of distillation, gas absorption, extraction, evaporation, and humidification systems. Prerequisites: Chemistry 109 or 111; Engineering 300, 302; Mathematics 204.

355 Chemical Kinetics and Reactor Design (3)
..Spring Odd
An introduction to chemical kinetics and the design of chemical reactors. Differential and integral analysis of homogeneous reaction and heterogeneous reactions using kinetic data are explored. Ideal reactor designs, non-isothermal reactor designs, and the design of catalyzed reactors are addressed. Prerequisites: Chemistry 109 or 111; Engineering 300, 302; Mathematics 204.

357 Biomechanics (3) Fall Even
An introduction to applying the principles of mechanical engineering - primarily solid mechanics, fluid mechanics and dynamics - to living systems. The course will cover a broad range of biomechanics topics including cellular, circulatory, respiratory and skeletal mechanics, blood rheology, and locomotion. No prior biological knowledge will be assumed. Prerequisites: Engineering 202, 210, 212.

Introduction to Power System Analysis (4)
An introduction to the design, planning, and operation of electric power utilities. Includes principles of economic dispatch and politics
that impact design and operating strategies. Topics include power transmission lines, transformers, generators, system modeling, load flow analysis, faults, and system stability. Prerequisites: Engineering 220; Mathematics 201.

\begin{abstract}
362 Dynamic Systems and Process Control (3)
A study of the dynamics and automatic control of systems. Topics include dynamic system modeling, feedback, steady-state operation, transient response, root loci, state-space representation, frequency response, stability criteria, and compensation. A variety of system types are modeled and analyzed, including mechanical, electrical, hydraulic, pneumatic, thermal, and chemical systems. Structured modeling approaches using Laplace transform methods and state equations are explored. Prerequisites: Engineering 220; Mathematics 204; Physics 202.

363 Introduction to Communication Systems (4) \(\qquad\) Spring Even
A study of analog and digital communication systems performance and theory with applications in radio, satellite, telephone, computer networking, and radar systems. Topics include linear modulation (AM, SSB, etc.), exponential modulation (FM and PM), sampling theory, the discrete-time and discrete-frequency domains, and basic digital modulation methods such as m-ary PSK, DPSK, OFDM, etc. The topic of noise is considered at the most elementary level sufficient to distinguish the performance of various modulation methods in the presence of noise. Prerequisite: Engineering 220.
\end{abstract}
365 Control Systems Lab (1) ..... Fall

A laboratory course in the dynamic modeling and automatic control of mechanical and electrical systems. Corequisite: Engineering 362.

366 Process Control Lab (1).
Fall
A laboratory course in the dynamic modeling and automatic control of thermo-chemical processes. Corequisite: Engineering 362.
371- Engineering Internship (3-9).........................................................................................................................................Fall, Spring, Summer
373 An off-campus experience that is intended to provide the engineering major with an opportunity to apply knowledge, principles, and skills gained in the classroom in an engineering workplace environment. Written and oral summary reports by participants bring reflection on the technical experience into subsequent classes. Graded on a pass/fail basis. Prerequisite: completion of six engineering courses or junior standing in the engineering program.

379 Senior Design I (2) ..............................................................................................................................................................................Fall
The first of two project courses providing students with the opportunity to use, in an integrated manner, the knowledge and skills that have been acquired to this point in their education. This design studio course is devoted entirely to the research, planning, analysis, and report writing required in the first phase of the senior design project. Students work in project teams of two to four on a project of their mutual interest. The class meets for one lecture period and at least one team-mentor session per week. Prerequisites: Engineering 302 or 304; senior standing; minimum cumulative engineering GPA and overall GPA of 2.5.

380 Senior Design II (2) .........................................................................................................................................................................Spring
The second course devoted to senior design project activities. This lab studio course requires students to complete the design, experimentation, analysis, and communication components of their project. Work on the project, while culminating in this course, starts in Engineering 379 the previous semester. Teams confer weekly with members of the engineering department staff. Prerequisite: Engineering 379.

381 Engineering Economics (2) ...............................................................................................................................................................Spring A course on the fundamentals of engineering economics and system cost analysis. An introduction to engineering economic topics such as, cost estimating, economic decision making, time-value analysis, depreciation, taxes, cash flow, cost-benefit, and risk assessment will be addressed in the context of stewardship principles of engineering design. Prerequisite: Engineering 379.

390 Technology and Society (3). Spring
An examination and critique of the relationship of technology to other areas of Western society. During the first half of the course students examine a Christian philosophy of technology and application is made to such problems as the role of the computer, technocracy, appropriate technology, and the historical two-cultures dualism. During its second half, the course focuses on the question of engineering ethics, with particular emphasis on such questions as safety and risk, professional responsibility and authority, whistle blowing, normative socioeconomic structures, and morality in career choice. This course requires the student to write and orally present a significant thesis paper. Prerequisites: CORE 200; junior or senior standing. [Cross-listed: Computer Science 390, CORE 267]

391- Individual Studies (1-3) ..Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{English}

General Major- \(\quad\) Foundation (common to both emphases): English 201, 202, 210, 314, 316.
Students must select one of the following emphases:
\(\begin{array}{ll}\text { Literature Emphasis: } & \text { Foundation; seven additional courses from COURSES FOR MAJORS or six additional courses from COURSES FOR } \\ \text { MAJORS and Theatre Arts } 365 \text { or } 366 .\end{array}\)

Writing Emphasis: Foundation; two additional courses from COURSES FOR MAJORS; English 335 or 336; Communication 241, 242 or two additional courses from COURSES FOR MAJORS; four courses from English 301, 302, 303, 304, 305, 307, 393, Theatre Arts 380.

Strongly recommended for all majors: English 312 and Foreign Language study at or above 201 (whether or not the cross-cultural requirement is met in this way). Recommended for students considering graduate studies: English 333.

\section*{General Minors-}

English: English 210; one course from English 220, 301, 302, 303, 304, 305, 306, 307; four additional courses from COURSES FOR MAJORS.

Writing: Six courses from English 220, 301, 302, 303, 304, 305, 306, 307, 336, Communication 241, 242.
For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\section*{100 Basic Writing for College Students (4)} Fall
An intensive introduction to and review of the skills college-level writing requires, focusing on the larger issues of presenting, developing, and supporting ideas, on issues of correctness at the sentence level (grammar, usage, punctuation, and mechanics), on developing the element of voice, as well as on learning various essay styles for effective academic writing. Intended for students with special needs in written composition (i.e., for those with an ACT score below 18 on the English component of the test). Completing this course, with a grade of C or better, meets the Core Program writing requirement.

220 Intermediate College Composition (3) Fall
This is an intermediate-level, writing-intensive course, designed to meet the Core Program writing-intensive requirement for students who do not need CORE 120. It serves students who want a medium-level writing course; students who plan to continue their education in graduate/law/medical school, etc.; students who want to improve their writing and analytical skills; and any capable student who needs a writing or writing-intensive course. With an emphasis on analysis, argumentation, and research, this course guides students in reading and writing critically/rhetorically, structuring and developing different kinds of rhetorical essays, finding the best secondary sources, working research into their arguments, developing a lively style, and editing their writing. Students registering for this course should have taken, or be exempt from, CORE 120.

\section*{COURSES FOR MAJORS}

201 American Literature (3) Fall Odd
A study of selected prose and poetry of the Puritans and Neo-Classicals, and an extensive study of the American Romantics: Poe, Hawthorne, Emerson, Thoreau, and Whitman. English 210 recommended.

202 American Literature (3) Spring Even Surveys American writers from 1860 to the present. It aims to show the rise of realism and naturalism, the effect of worldview on literature, and the way in which writers responded to historical movements or crises. Students will be expected to respond to the literature from their own Christian point of view. English 210 recommended.

203 Ethnic American Literature (3)
..Fall Odd
Students will read, discuss, and write about literature from four different ethnic American groups: African-Americans, Native Americans, Asian-Americans, and Mexican-Americans. Major writers from the four different groups will be read, including Douglass, Ellison, Wright, Walker, Erdrich, Silko, Momaday, Cisneros, Gilb, Chavez, Yamamoto, Tan, and Mura. Open to freshmen. [Cross-listed: CORE 277]

205 Canadian Literature (3) Occasional This course introduces students to modern and contemporary Canadian literature, that is, literature since 1945. Besides exploring poems, short stories, and novels by Canadians, such as Margaret Atwood, Alice Munro, Robertson Davies, Hugh Cook, and Margaret Avison, students will have an opportunity to sample films and essays by and about Canadians. The course seeks to immerse students in the range of Canadian literary concerns for form, theme, and culture.

207 World Literature I (3).
selections from Erasmus, Machiavelli, Rabelais, Montaigne; tragedy of Marlowe/Shakespeare; and Cervantes' Don Quixote. Students trace the evolving hero/literary form as a reflection/catalyst of worldview. [Cross-listed: Foreign Languages 207]

208 World Literature II (3) .Spring Even
A survey of world literature from the Enlightenment through the 20th century. Enlightenment works include Molière's Tartuffe, Voltaire's Candide, and selections from Lessing and Descartes. Romanticism works include Goethe's Sorrows of Young Werther, Pushkin's Queen of Spades, and selections from Becquer, de Castro, and Hugo. Realism works include Flaubert's Madame Bovary, Chekhov's Cherry Orchard, Tolstoy's Death of Ivan Ilyich, and selections from Baudelaire and Dostoevsky. Twentieth century works include Mann's Death in Venice, Brecht's Good Woman of Setzuan, Mulisch's The Assault, Achebe's Things Fall Apart, Hosseini's The Kite Runner, and selections from Lorca, Joyce, Kafka, and Márquez. [Cross-listed: Foreign Languages 208]

210 Introduction to Literary Studies (3) .Spring Provides students with a foundation of knowledge and skills for work in the major. It does so by introducing them to the subject matter, critical schools and methods, research strategies, forms of responsive and critical writing, and major contested issues of the discipline.

221 The Short Story (3)
.Spring Odd
Introduces students to the contemporary short story. In addition to reading broadly in the genre through anthologies, students will study specific contemporary writers such as Alice Munro, Raymond Carver, Jane Smiley, Larry Woiwode, Carol Bly, or John Gardner via collections of their work. Tests and short papers will be required.

222 Themes in Literature (3). \(\qquad\) Fall Even
The aim of this course is to see how various writers of different cultures and eras express themselves on selected universal themes such as love, justice, evil, humans and technology, and the search for religious certainty.

223 Science Fiction (3). \(\qquad\) Occasional
This course surveys the genre of science fiction and its widespread impact on 20 th and 21 st century cultures. We will investigate many philosophical, theological, and scientific assumptions and debates in science fiction. Topics in course texts may include artificial intelligence, genetic engineering, space exploration, and the progress or destruction of civilization. We will also survey a variety of media: novels, short stories, films, TV shows, graphic novels, and video games. The course is appropriate for majors and non-majors alike.

225 Film and Literature (3)
Spring Even Introduces students to film art and film criticism, compares and contrasts films to novels and stories, and examines worldviews of the various artists. The course will examine how filmmakers and writers use film language or print to imply or express their views. It will also examine the degree to which filmmakers merely reproduce the themes of a book or make their own statements, even undercutting the source.

241 Introduction to Journalism (3) Fall
An introduction to reporting and writing news for the print and broadcast media. The course includes practice in writing several types of news stories, an overview of the historical, cultural foundations of journalism, and a critical examination of the theoretical foundations of journalism. [Cross-listed: Communication 241]

242 Print Journalism (3)
.Spring Odd
Students will study interviewing, editing, in-depth reporting, critical and feature writi...............................................................................................................................epy headlines and titles, and copy-editing. They will explore the way text and design work together. Students will be introduced to production and layout, using The Diamond and other assignments as laboratory work. Prerequisite: English 241; or permission of instructor. [Cross-listed: Communication 242]

281- Service-Learning (1-3)...............................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
301 Advanced Expository Writing I (3) Fall Designed to introduce students to types of non-fiction writing frequently sought by magazines and journals. Major assignments include the interview, the narrative essay, and the review. Especially featured is the personal narrative. In addition to writing, students will read and react to various types of non-fiction writing-both essays and longer works. Significant class time is spent in workshop format, students reading and discussing their own work. Satisfies Core Program writing-intensive requirement. [Cross-listed: Communication 301]

302 Advanced Expository Writing II (3).
.Spring
The primary goal of this course is to help students write with clarity, grace and power. To achieve this goal, they will write expository essays, hone research skills, work style exercises, and critique one another's papers. Note: Advanced Expository Writing I emphasizes narrative prose, while Advanced Expository Writing II emphasizes argumentative and explanatory prose. Satisfies Core Program writing-intensive requirement. [Cross-listed: Communication 302]

303 Reading and Writing of Poetry (3) .Spring Odd Students read and write various poems with fixed forms and in free verse. Students will explore how other poets get started and where
they get their ideas for poems. Time in class will be spent discussing each other's poems, and each student will have at least three personal conferences with the instructor. By the end of the semester, each student will have a portfolio of at least a dozen poems.

304 Fiction Writing (3). .Spring Even Introduces students to the task of writing fiction. In addition to significant reading in the genre, the course will require several exercises in various aspects of the craft, as well as the completion of one original short story. Time will be spent in workshop format and discussing technique, as well as the ways in which one's faith affects the work of writing fiction.

305 Business and Technical Writing (3) Spring
Students will study the process, application, and characteristics of business and technical writing, and the way in which writing style, strategies, content, and clarity will relate practically to one's profession. Concentrates on developing competence in a variety of writing tasks commonly performed in business, law, industry, social work, engineering, agriculture, and medicine. Satisfies Core Program writing-intensive requirement. [Cross-listed: Communication 305]

306 Writing Workshop for Teachers (3). Fall
Designed to help pre-service teachers from across the disciplines to improve their writing and understanding of writing. Using an inquirybased approach, students will seek to answer questions like-why do teachers write? What is successful writing? How does one improve their writing? Through reading and writing assignments, students will practice a variety of writing tasks. Satisfies Core Program writing-intensive requirement.

307 Screenwriting (3). \(\qquad\) Spring Odd
Students will gain insight into the process and the techniques involved in scriptwriting by studying film scripts and creating their own. Students will receive hands-on instruction in concept development, character development, plot structures, dialogue, and visualization.

312 Shakespeare and Elizabethan Drama (3).
.Fall Odd
Primary emphasis on a study of Shakespeare's plays: comedies, histories, and tragedies. Some attention to Shakespeare's sonnets, to other Elizabethan playwrights, and to background. One paper required. English 210 recommended.

314 Earlier British Literature (3).
.Fall Even
A survey of earlier British literature from the beginnings through the 17th century, including Beowulf, Chaucer, Sidney, Spenser, Shakespeare (his poems), Donne, Herbert, Jonson, and Bunyan. Special attention will be given to the Scriptural tradition that this literature evokes. Throughout, the course focuses on how the literature of these eras addresses fundamental questions about human nature. English 210 recommended.

316 Later British Literature (3).
.Spring Odd
A survey of later British literature from the beginning of the 18th century through the 20th century. The course will trace and critique the subsequent developments of Neo-classicism, Romanticism, and the Victorian age in the poetry, essays, and fiction of such writers as Pope, Goldsmith, Gray, Blake, Wordsworth, Coleridge, Keats, the Shelleys, Tennyson, the Brownings, Austen, Dickens, the Brontes, and Hopkins. English 210 recommended.

318 Modern British Literature (3).
Occasional
A study of the different ideas and techniques characteristic of 20th century British writers such as Hardy. Conrad. Housman, the War poets, Yeats, Forster, Joyce, Lawrence, Woolf, Mansfield, Waugh, Spender, Orwell, Auden, Thomas, and Lessing. English 210 recommended.

322 The English Novel (3).
Spring Even A study of the English novel, this course traces the novel's beginning with Defoe, Richardson, and Fielding, then follows the evolution of the novel through the 19th and 20th centuries with novelists such as Burney, Austen, the Brontes, Thackeray, Dickens, Trollop, Eliot, Hardy, and Conrad. English 210 recommended.

323 Modern and Contemporary English and American Novels (3) Fall Even The study of selected contemporary novels, American and English. Novelists include Bellow, Malamud, Potok, Updike, Burgess, and O'Conner. English 210 recommended.

333 History and Theory of Literary Criticism (3) .
Spring Even
Major works of literary criticism and theory of criticism, both classic works from Plato through Eliot and key works drawn from the ferment of contemporary theory will be analyzed, with the aim of formulating clearer Christian theories of literature. Prerequisite: CORE 200. English 210 recommended. [Cross-listed: CORE 323]

335 History of the English Language (3).
Spring Odd Surveys the Indo-European languages; the emergence, development, and flowering of the Anglo-Saxon language; the seven English dialects; the Chaucerian dialect; and the contributions of the Greek, Latin, and French language and cognate words.
336 English Grammar (3) ..... Fall
    A study of grammatical choices and their rhetorical effects. Students will approach English grammar not only as a technical subject but
    also as a craft, a field for research and scholarship, and a domain with socio-cultural, political, and ethical dimensions. Course topics will
    be explored through readings and discussions, practice exercises, research projects, and writing activities that require students to apply
    grammar knowledge in context.
341- Special Topics (3) ...................................................................................................................................................................................Occasional
348 These literature courses cover a different topic each year and are designed to be a special interest course maximizing individual instructor
    strengths, interests, and competencies. Usually courses will study in-depth the works of two or three literary figures normally not covered
    as intensively.
391- Individual Studies (1-3) ...........................................................................................................................................................Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{English for Academic Purposes}

For information on an ESL teaching endorsement, see the "Teacher Preparation Program," Teaching English as a Second Language K-12, page 85.

\begin{abstract}
101 Academic Interaction (3)Fall

This course develops academic speaking and listening skills, enabling students to participate to the best of their ability in the college classroom and in independent study. Listening, note-taking, discussion, and presentation skills with a focus on North American English pronunciation patterns are practiced. Vocabulary is expanded throughout the course. Satisfies Core Program communication competency requirement.

102 Academic Writing (3)........................................................................................................................................................................................... Fall
While engaging in a review of academic English grammar and usage, students learn to properly incorporate ideas from academic sources into their own writing. Skills such as critical reading, effective note-taking, proper summarizing, paraphrasing, and citation are presented and practiced. Satisfies Core Program English competency requirement.
\end{abstract}

\section*{Environmental Studies}

The major in environmental studies seeks to cultivate stewardship of the creation as a lifestyle and profession through an interdisciplinary program of study. This program asks: 1) how does the world work; 2) what is right for us as Christians in our relationship to the rest of creation; and 3) how should we then live and work to be obedient stewards?
\(\begin{array}{ll}\text { General Major- } & \text { Foundation (common to all emphases): Environmental Studies 151, 152, 161, 303, 325; Biology 200; CORE 266 or } \\ & \text { Economics 202; Mathematics } 151 \text { or Statistics } 131 .\end{array}\)

Students must select one of the following emphases:

Environmental Science: Foundation; Biology 122, 125, 215; Chemistry 111; Environmental Studies 251; one course from Chemistry 122, 212, 225, 312; two courses from Biology 316, Environmental Studies 270, 320; two courses from Agriculture 201, Environmental Studies 201, 202; one course from Biology 302, 310, 324; two courses from Environmental Studies 333, 334, Political Science 333. Students must also complete one of the following: the Environmental Studies 358 and 380 sequence, a departmentally approved summer internship (Environmental Studies 393) or a departmentally approved off-campus course that complements their program.

Natural Resource Management: Foundation; Biology 122, 125, 215, 316; Chemistry 111; Environmental Studies 251, 270, 320; one course from Environmental Studies 333, 334, Political Science 333; one course from Agriculture 291, 315, 316, Biology 310, 324; one course from Agriculture 201, 311, 370, Environmental Studies 201, 202. Students must also complete one of the following: the Environmental Studies 358 and 380 sequence, a departmentally approved summer internship (Environmental Studies 393) or a departmentally approved off-campus course that complements their program. One course from Chemistry \(122,225,312\) recommended.

Policy and Management: Foundation; Business Administration 205; Chemistry 101 or 111; Environmental Studies 333, 334; Political Science 245, 312, 333; Engineering 390; Political Science 202 or 214; Political Science 210 or 370; Agriculture 290 or Economics 321; one course from Biology 125, 316, CORE 216, Environmental Studies 270, 320; Communication 311 or 314 . Students must also complete one of the following: the Environmental Studies 358 and 380 sequence, a departmentally approved summer internship (Environmental Studies 393), or a departmentally approved off-campus course that complements their program.

\section*{ACADEMIC OFFERINGS: ENVIRONMENTAL STUDIES}

Courses in the following off-campus programs may substitute for up to four of the above with approval of the chair of environmental studies: Latin American Studies Program, Au Sable Institute of Environmental Studies, Creation Care Studies Program, or other approved off-campus study.

\section*{General Minors-}

Environmental Science: Environmental Studies 151, 152, 161, 325; Biology 200 or Agriculture 370; Chemistry 251; one course from Agriculture 201, Environmental Studies 201, 202, 303; one course from Biology 316, Environmental Studies 270, 320.

Environmental Studies: Environmental Studies 151, 152, 161, 303, 325; one course from Agriculture 201, Environmental Studies 201, 202; one course from Biology 316, CORE 216, Environmental Studies 270, 320; one course from Environmental Studies 333, 334, Political Science 333.

\section*{151 Introduction to Environmental Studies I (3) Fall}

An introduction to contemporary environmental studies and creation care, with emphasis on class discussion of relationships between human population and resource use in light of biblical teaching about environmental stewardship. Particular attention is given to the biotic and ecological dimensions of creation stewardship and planetary distress. Designed to be taken by environmental studies majors concurrently with Environmental Studies 161. [Cross-listed: Community Development 151, CORE 211, Earth Science 151]

152 Introduction to Environmental Studies II (4) Spring
Flowing from a foundation in physical and earth sciences, this course offers an introduction to energy and material use in Western society and examines the resulting impact on the environment. Contemporary practices and their historical roots are critiqued in light of Biblical norms for stewardship. An emphasis on evaluation and implementation of practical steps toward sustainability permeates the course with the goal of motivating and equipping students to become lifelong stewards. The laboratory portion of the course combines tours, laboratory measurements, economic analysis, and environmental analysis. Three lectures and one laboratory period of three hours per week. Environmental Studies 151 is not a prerequisite. [Cross-listed: Earth Science 152, CORE 222]

161 Field and Laboratory Investigations in Environmental Studies (1) Fall
A field and laboratory exploration of fundamental issues, concepts, and techniques of contemporary environmental studies with a biological and ecological focus. Includes visits to sites of natural history and stewardship interest both locally and regionally. Also includes an introduction to important technological tools in environmental studies and analysis of physical and biotic parameters of the environment. Required for students majoring or minoring in Community Development or Environmental Studies. Corequisite: Environmental Studies 151. [Cross-listed: Community Development 161]

201 Introductory Geology and Physical Geography (4) Fall
A general introduction to the physical nature and structure of the solid Earth, including, briefly, its physical geography and a more detailed look at its geology. The environmental implications of these subjects are detailed. Three lectures and one laboratory period of three hours per week and one or two field trips. [Cross-listed: CORE 223, Earth Science 201, Geography 201]

202 Meteorology and Climate Change (3).
Spring Even
Provides a general introduction to meteorology and weather. Climate and climate change in Quaternary times to the present are also considered. The implications of an anthropogenically enhanced greenhouse effect will be addressed, with particular attention given to the impact of these changes on the structure and function of ecosystems. [Cross-listed: Earth Science 202, Geography 202]

251 Environmental Chemistry (3). .Spring Odd A study of the nature and transport of chemical species-both natural and human-introduced-in the natural environment (atmosphere, hydrosphere, geosphere, and biosphere). Three lectures per week. Prerequisite: Chemistry 109 or 111; or permission of instructor. Prior completion of Chemistry 122 or 225 recommended. [Cross-listed: Chemistry 251]

252 Environmental Chemistry Laboratory (1). Spring Odd
This lab will include methods of sampling and analysis of samples from natural and/or human influenced environments. Graded on an A-F scale. Corequisite: Environmental Studies 251. [Cross-listed: Chemistry 252]

270 Avian Biology and Conservation (3)
Spring Even The identification, natural history, ecology, and stewardship of birds. Topics include morphological and physiological ecology of birds, habitat selection, communication, migration, reproductive ecology, territoriality, taxonomy, and conservation. The connections between avian ecology and creation stewardship will be explored. Recognition of a diverse set of birds by sight and sound is an important component of the course. Two lecture/discussion sessions and one three-hour lab per week. Field work will concentrate on local birds, but at least one trip to a distant site will be included. Prerequisite: one of Agriculture 101, Biology 122, CORE 212, Environmental Studies 151.

An introduction to the acquisition, analysis, display, manipulation, and management of geographic information. Course topics will include geographical data input, storage, maintenance, analysis, and retrieval. Students will utilize common GIS software and associated hardware. An overview of survey methods used to gather and quantify features of physical geography will be included. The course will meet in two studio lab classes to provide an integral learn-by-doing experience applying GPS technology, survey methods, and GIS applications. Application of GIS to agriculture, business, environmental management, and other disciplines will be provided in this course. Prerequisite: sophomore standing or above. [Cross-listed: Agriculture 303, Business Administration 303, Construction Management 207]

320 Wildlife Ecology and Stewardship (3) .Spring Odd
Advanced examination of animal (especially terrestrial vertebrate) populations, communities, and habitats, particularly as such analysis is applied to the manipulation and exploitation of animal populations and communities to regulate their abundance and distribution and/or to restore them. Considerable exploration and critique of the development and practice of wildlife management, particularly as it compares to biblical principles for creation stewardship. Two lecture/discussion sessions and one three-hour lab per week. Prerequisite: Agriculture 370 or Biology 200. [Cross-listed: Biology 320]

325 Restoration Ecology and Applied Stewardship (3).
.Spring Odd
An interdisciplinary capstone course designed to explore current research, thought, and issues in environmental stewardship with a focus on ecological restoration. Principles and practices of the discipline of restoration ecology will be explored and then utilized to develop a holistic restoration plan for a specific location. Prerequisites: Environmental Studies 151; junior or senior standing.

333 Philosophy of the Environment (3). Fall Even
A historical and systematic study of the structure and normed character of the various relationships between human beings and their environment. Prerequisites: CORE 200; junior or senior standing. [Cross-listed: Philosophy 333]

334 Economics of Natural Resources and the Environment (3) .Fall Odd
A study of economic aspects of Christian stewardship in relation to the environment and use of natural resources. Major topics include biblical norms on creation, property rights, economic justice, the economic dimensions of current environmental problems and trends in resource use, institutions and social structures that affect environmental policy, economic theories related to resource use and environmental quality, and evaluation of current and proposed policies from a Christian point of view. Prerequisite: CORE 266 or Economics 202. [Cross-listed: Economics 334]

341- Special Topics (3) \(\qquad\) Occasional
348 Courses on topics of special interest and importance in creation stewardship, depending on student demand and instructor availability. These courses address topics that are not treated in depth in established courses.

358 Introduction to Biological Research (1). \(\qquad\) Fall, Spring
This is a mini-course designed to prepare students for directed senior research. The course will introduce the idea and practice of biological research. It will include the nature and scope of a research project, how to conduct literature searches, and how to design methods and protocols for problem solving. The class will meet weekly in seminar or tutorial format. Students will make weekly presentations of their progress, finalize their proposal for Environmental Studies 380, and (if appropriate) begin the work for the directed research project. Graded on a pass/no record basis. Prerequisites: Environmental Studies 151, 152; Biology 122, 200, 215. [Cross-listed: Biology 358, Chemistry 358]

380 Directed Senior Research (3)
Fall, Spring
Focuses on identifying a stewardship problem and bringing rigorous analytical and critical thinking to bear in examining the problem, reporting on it, and making recommendations for its resolution. The research project will be chosen and conducted under the guidance of a faculty mentor and may investigate a problem from a natural science perspective in the field and/or laboratory or from a social science perspective. With approval, the research may be conducted at an off-campus location. Prerequisite: Environmental Studies 358. [Crosslisted: Biology 380, Chemistry 380]

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
See page 113, Individual Studies

\section*{French}

General Minor-
French 201, 202, 206; Linguistics 201; one course from French 102, 341-348; French 204 or 208; three semesters of French conversation 251-258. Study-abroad courses are required.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\section*{101 Elementary French I (4)}

Fall Even
An introductory study of the language and culture of French-speaking people. Emphasis is on the acquisition of oral and written language skills in a communicative context, combined with the study of cultural etiquette and social customs.

102 Elementary French II (3) .......................................................................................................................................................Spring Odd
Continuation of French 101. Prerequisite: one year of high school French or French 101.
201 Intermediate French I (3)
Fall Odd
An intermediate course that continues the study of the language in a communicative context with considerable emphasis upon precision and expansion of linguistic skills. Emphasis on the development of cultural understanding and sensitivity with a study of the people's values and beliefs as expressed in their economic, political, and religious systems. Comparison of this culture with our culture in the light of the cultural mandate. Prerequisite: two years of high school French or French 102.

202 Intermediate French II (3)....................................................................................................................................................Spring Even
Continuation of French 201. Prerequisite: French 201 or its equivalent.
204 Literary and Cultural Readings (3) .Occasional This course continues the development of French language skills, and an understanding and appreciation of Francophone cultures through literary readings with an emphasis on contemporary literature. Prerequisite: French 202 or its equivalent. This course will be taken in an off-campus program; consult the Department of Language Studies for a list of possibilities.

206 French Culture (3)
..Occasional
Designed to cover many aspects of the French way of life. Listening and speaking skills will be developed through the classroom activities. Prerequisite: French 202 or its equivalent. This course will be taken in an off-campus program; consult the Department of Language Studies for a list of possibilities.

207 World Literature I (3)..................................................................................................................................................................Fall Odd
See English 207.
208 World Literature II (3) Spring Even See English 208.

251- Conversation (1).......................................................................................................................................................................Fall, Spring
258 These courses are designed to give the student practice in listening and speaking. The content of the courses will be altered each year. The class will meet two times each week. Graded on a pass/no-record basis. Prerequisite: French 201; or permission of instructor.

281- Service-Learning (1-3)
.Fall, Spring, Summer
283 See page 113, Individual Studies
341- Special Topics (3)
....Occasional
348 The topics for these courses will be chosen from the areas of literature, advanced language studies, culture, or teaching methods. The offering of the courses as well as the content will reflect student interest and need. Prerequisite: department approval.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{General Studies}

Associate of Arts Degree Options Area of Concentration (Associate of Arts in General Studies)
See the "Academic Program" section for the Core Program for all A.A. programs (pages 21-22).
Seven courses that have been designed in consultation with and approved by the registrar to meet specific educational goals of the student.

\section*{Geography}

\footnotetext{
151 World Regional Geography: Peace and Justice on the International Stage (3). Fall
A survey of major geographical regions of the world including politics, economics, and cultures. Emphasis is on the interrelatedness of regions and how peace and justice are linked to human flourishing. [Cross-listed: CORE 265]

201 Introductory Geology and Physical Geography (4).
A general introduction to the physical nature and structure of the solid Earth, including, briefly, its physical geography and a more detailed
}
look at its geology. The environmental implications of these subjects are detailed. Three lectures and one laboratory period of three hours per week and one or two field trips. [Cross-listed: CORE 223, Earth Science 201, Environmental Studies 201]

202 Meteorology and Climate Change (3)
..Spring Even Provides a general introduction to meteorology and weather. Climate and climate change in Quaternary times to the present are also considered. The implications of an anthropogenically enhanced greenhouse effect will be addressed, with particular attention given to the impact of these changes on the structure and function of ecosystems. [Cross-listed: Earth Science 202, Environmental Studies 202]

\section*{Greek}

111 Elementary Greek (4) .Fall Odd
Students are introduced to the basics of biblical Greek and learn the basic forms of the Greek language, a foundational vocabulary, and elementary grammar. The focus of this course is on Greek nouns.

112 Elementary Greek (4) \(\qquad\) Spring Even Continues Greek 111. Students continue to work on the basic forms of the Greek language, a foundational vocabulary, and elementary grammar. The focus of this course is on Greek verbs.

211 New Testament Greek (3) .Fall Even Building on the language learned in the first year, students read from a variety of texts and are taught intermediate grammar. Prerequisite: Greek 112.

212 New Testament Greek (3) ..Spring Odd
This course is a continuation of Greek 211. Students continue to work on reading Greek texts, developing their knowledge of grammar, and engaging in elementary exegesis.

241- Readings in New Testament Greek (1) .Fall, Spring
244 Students read Greek texts and work on building vocabulary and grammar skills to retain and develop skills learned in Greek 212. Prerequisite: Greek 212.

281- Service-Learning (1-3). \(\qquad\) Fall, Spring, Summer
283 See page 113, Individual Studies
341- Special Topics (3) \(\qquad\) Occasional
348 Courses under this title are designed by the department from year to year to reflect student demand and need. The content of the course will be from the areas of literature, philosophy, theology, archaeology, language, and art.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Health and Human Performance}

General Major- Foundation (common to all emphases): Health and Human Performance (HHP) 101, 206, 207, 208, 308; Biology 203.
Students must select one of the following emphases:
Exercise Science: Foundation; HHP 202, 211; HHP 325 or Psychology 382; one course from HHP 361, 362, 371, 393. Chemistry 101 and 122 strongly recommended.

General: Foundation; HHP 325; four elective courses from HHP 202, 205, 209, 211, 212, 213, 214, 215, 216, 217, 305, 306, 371, 393. (Note: 212-217 are half courses.)

Sports Management: Foundation; Business Administration 100, 200, 205, 206, 207; one course from Business Administration 226, 304, 308, 333; one course from Communication 220, 222, 228; CORE 266; English 305; HHP 251, 253, 300, 325; HHP 362 or 373.

General Minor- Six approved courses within the HHP course offerings. Courses may be tailored to meet individual goals. The HHP department chairperson must approve the six courses.

Coaching Authorization-Licensure to Coach in the State of Iowa - see page 85. For information on licensure, see web site www.state.ia.us/boee/ doc/faqs_cch.asp.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\section*{I. ACTIVITIES AND INTERCOLLEGIATE SPORTS PARTICIPATION}

As part of the Core Program requirements, every student must complete an activity component that may include one of the following activities. Graded on a pass/no-record basis.

011 Intercollegiate Athletics (.5) \(\qquad\) Fall, Spring
Arrangements must be made through the athletic director.

\section*{012 Tumbling/Gymnastics (.5)}
\(\qquad\) Fall, Spring
Development of beginning and intermediate skills and techniques in gymnastics and tumbling, including work in free exercise.
013 Step Aerobics (.5) Fall, Spring
An opportunity for students to work on a personal fitness program through vigorous exercises to music.
014 Voice and Body Warm-ups (.5). Fall, Spring
A program of regularly repeated exercises designed to improve the performer's physical flexibility and vocal strength and range.
015 Adaptive Program (.5) Fall, Spring
Restricted activity for students with physical disabilities. Prerequisite: recommendation by a medical doctor.
019 Other Activity (.5) Occasional The HHP department may offer additional activities based on staffing, facilities, and student interest.

\section*{II. CLASSROOM COURSES}

101 Introduction to Health, Physical Education, and Sports Management (3) Fall, Spring Designed to be the entry-level course for those interested in exploring the areas of health, physical education, and sports management. The course will provide the student with an overview of the body of knowledge, the historical background, and career opportunities in each of the areas. The student will also develop and articulate a Christian perspective on health, physical education, and sports management.

202 Substance Abuse and Consumer Health (3)
.Spring
The first half of the course is devoted to introducing the student to the use, misuse, and abuse of drugs. Emphasis is placed on the psychological and physiological effects of drugs. The second half of the course will provide the student with basic health-related information that will aid the student in making sound decisions regarding personal health.

205 Curriculum in Physical Education and Health (3)
Fall Even Provides the student with the necessary background in organizing and administering a desirable curriculum in physical education and health (elementary and high school), including intramurals and adaptive programs.

206 Exercise Physiology and Biomechanics (3).....................................................................................................................................Spring
A study of the anatomy of human movement, including the application of physical laws of motion to the human body and how the body functions in and responds to exercise. Biology 203 strongly recommended.

207 First Aid and Athletic Injuries (3) Fall, Spring A study of accepted methods used to prevent athletic injuries. Instruction in administering first aid practices in emergencies. Fall semester emphasizes the elementary school child; spring semester focuses on participants in interscholastic sports. Priority will be given to students majoring in health and human performance or pursing a coaching endorsement. This course is not open to freshmen.

208 Assessment in Physical Education and Health (3) Fall
A study of elementary statistical procedures, the preparation and administration of physical fitness tests, health assessment procedures, and various athletic skills. A grading system in physical education and health is formulated.

209 Personal and Community Health (3)
..Spring Odd
This course examines the physical, mental, social, emotional, spiritual, and occupational dimensions of health. Emphasis is on the utilization of health information in making good health choices.

211 Nutrition (3). Fall, Spring
This course will focus on the basic science of foods and their components including relationships to health and disease. The implications of personal decision making and behavior change, as well as social, economic, and cultural influences, will be discussed. Does not count toward the biology major. [Cross-listed: Biology 210]

Seven-week course with emphasis on coaching skills, philosophies, and techniques of basketball. Not open to freshmen.

213 Coaching Theory of Track and Field (1.5).
Seven-week course with emphasis on coaching skills, philosophies, and techniques of track and field. Not open to freshmen.

214 Coaching Theory of Volleyball (1.5)......................................................................................................................................................Spring Odd
Seven-week course with emphasis on coaching skills, philosophies, and techniques of volleyball. Not open to freshmen.
215 Coaching Theory of Baseball/Softball (1.5)....................................................................................................................................... Spring Even
Seven-week course with emphasis on coaching skills, philosophies, and techniques of baseball and softball. Not open to freshmen.
216 Coaching Theory of Soccer (1.5).............................................................................................................................................................. Spring Odd
Seven-week course with emphasis on coaching skills, philosophies, and techniques of soccer. Not open to freshmen.
217 Coaching Theory of Football (1.5) ..............................................................................................................................................................Spring
Seven-week course with emphasis on coaching skills, philosophies, and techniques of football. Not open to freshmen.

251 Introduction to Sports Management (3)
An introductory course exploring the history, development, and governance as well as current issues and trends in sports management. Emphasis will be placed on developing a reformed, biblical perspective concerning athletics and the role athletics plays in Western culture.

253 Planning and Maintaining Sports Facilities (3)
Through debates, presentations, and literature reviews, students will learn to calculate space needs, estimate costs and projected uses for sport and recreation facilities, and apply the steps of facility planning. We will also discuss how a reformed, Christian perspective guides our priorities and decision making processes. Prerequisite: HHP 251.

281- Service-Learning (1-3) .........................................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
300 Sports Law (3)
Spring
Students will examine legal and ethical principles, laws, and regulations relating to sports management. In particular, the class will focus on the areas of contract, torts, agency law, employment law, risk management, and the acquisition of management and personal information. Through the course text, course lectures, course debate, and analysis papers, students will develop their ability to apply Christian and legal-ethical principles to current legal issues and case studies. Prerequisites: HHP 251, 253.

305 Peer Teaching in Physical Education and Health (3).
.Fall Odd
Provides an opportunity to apply the teaching skills and methods of physical education and health in a high school and peer-teaching setting. The focus is how to teach activities and health concepts to high school students.

306 Methods of Teaching Physical Education and Health in Grades P-8 (3).................................................................................................. Fall Provides background for teaching physical education and health to preschool and elementary school children. Emphasis is given to adaptive physical education methods. This course is open only to students pursuing the elementary physical education and/or health endorsements.

308 Motor Learning and Development (3) Fall The course introduces the major concepts of motor control and motor learning as they are expressed across the human lifespan. The course emphasizes the practical application of these theories in teaching, coaching, and therapy settings. The course will also explore how a reformed view of the person informs our understanding of motor learning and the resulting implications for teaching, coaching, and therapy. Prerequisites: HHP 203, 204.

325 Psychosocial Dimensions of Physical Activity (3) Fall
This course adds to students' understanding of physical activity by exploring the psychological and sociological aspects of human physical activity. Also, students will demonstrate a Reformed Christian understanding of human movement in discussion of a variety of issues related to health and human performance. Prerequisites: Psychology 201 or 204 or Sociology 201; junior or senior standing.

361 Field Experience in Physical Therapy (3).
Fall, Spring
Designed to give students enrolled in the prephysical therapy program a field experience in physical therapy. The student will work with a registered physical therapist for three hours each week of the semester. This course is open to junior and senior students enrolled in the prephysical therapy program.
of a professional sports management leader for three hours each week of the semester. This course is open to junior and senior students who have completed two of the following courses: HHP 251, 253, 300.

371- Health, Physical Education, Sports Management Internships (3-9) \(\qquad\) Fall, Spring, Summer
373 Intended to provide the HHP major the opportunity to apply knowledge principles and skills gained from the classroom into a workplace environment. Prerequisite: completion of no less than seven courses in the major. See HHP internship coordinator for approval.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{History}
\begin{tabular}{ll} 
General Major- & \begin{tabular}{l} 
Foundation (common to both emphases): History 201 or 230; one course from History 212, 213, 214; History 280, 380; \\
History 388 or 389.
\end{tabular} \\
Students must select one of the following emphases:
\end{tabular} General: \(\quad\)\begin{tabular}{l} 
Foundation; eight additional history courses above 214, at least three of which must be at the 300-level (must choose at \\
least two courses from History 202, 301, 306, 307, 308 and at least three courses from History 220-226, 230, 319, 321, \\
\\
\(326,327,328,335\) ).
\end{tabular}

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.
201 Survey of American History (3) ..... FallA survey of the main contours of American history from 1750 to the present. CORE 140 recommended.

202 Themes in American History (3) Spring
This course leads students through historical inquiry of selected main themes in American society such as sports, war, politics, and culture.. Students will gain an understanding of the historical and cultural development of these themes in the contemporary world. CORE 140 recommended.

212 History of the Muslim World (3). .Spring Odd
A survey of the history of the Muslim world focusing on the Middle East, North Africa, and Southwest Asia. Primary emphasis is on the development and features of Muslim society and culture, the relations between Muslim and Western civilizations, and the sources of tension in the modern Muslim world. Not open to first-semester freshmen. Prerequisite: CORE 140. [Cross-listed: CORE 272]

213 Latin America (3).
.Fall Odd
A selective survey of the history of Latin America from pre-Columbian times to the present. Attention will be given to the indigenous and colonial origins of Latin American culture and society. Twentieth-century developments will be explored through a series of case studies. Not open to first-semester freshmen. Prerequisite: CORE 140. [Cross-listed: CORE 273]

214 East Asia (3)
Fall Even
The history of East Asia, paying special attention to China, Japan, and Indonesia in the early-modern and late-modern periods. The primary emphasis will be on east Asian responses to the challenges represented by Western ideas, commerce, and imperialism in its various expressions. Not open to first-semester freshmen. Prerequisite: CORE 140. [Cross-listed: CORE 274]

220 Ancient History (3).
Fall Even
This course surveys the development of ancient Western civilization from Egypt and Mesopotamia, through Greek and Roman civilizations, to the decline of the Roman empire. Among the themes focused on in the course are the diversification of culture and the migration of people, the development and diffusion of ideas, arts and technology, resources, and the formation of a "Western culture" up to the fall of Rome. Prerequisite: CORE 140.

221 Medieval Europe (3)
Fall Odd
Surveys Medieval Europe from the decline of the Roman empire circa 400 A.D. to the emergence of the Renaissance circa 1350 A.D. This
survey focuses on the development of European civilization, particularly the formation of political, economic, ecclesiastical, and intellectual structures, and the relations between these. Prerequisite: CORE 140.

222 Renaissance and Reformation (3) .Spring Even Europe from the late medieval origins of the Reformation to the Treaty of Westphalia in 1648. Themes such as humanism, the Renaissance, the Reformation and Counter-Reformation, and the emergence of the secular state, will be included. Prerequisite: CORE 140.

223 Early Modern Europe (3). ...Occasional The history of Europe from the close of the Reformation period to the French revolution and Napoleonic wars, with particular reference to the rise of modern science, the emergence of the European states system, and the thought of the enlightenment. Prerequisite: CORE 140.

224 Age of Empires: 19th Century Europe (3)..
Fall Even The history of Europe from the Congress of Vienna to the outbreak of the First World War in 1914. The primary emphasis will be on the cultural, political, social, and economic developments in this period, with particular reference to the relations between the great powers and between Europe and other parts of the world. Not open to freshmen, except by permission of the instructor. Prerequisite: CORE 140.

225 War and Peace: 20th Century Europe (3).
.Spring Odd The history of Europe from the immediate pre-First World War period to the end of the post-Second World War period as marked by the reunification of Germany and the 1991 Maastricht Treaty on European Union. The primary emphasis will be on the cultural, political, social, and economic developments in this period, with particular reference to the destructiveness of nationalism, the cold war, and the processes of European integration. Prerequisite: CORE 140.

226 Themes in European and World History (3) \(\qquad\) .Occasional This course leads students through historical inquiry of main themes in European and world history, including global interactions and encounters, various cultural phenomenon, and multi-confessional religious reformation. Students will gain an understanding of the historical and cultural developments of these themes in the contemporary world, and the process by which historical themes become relevant in the contemporary world. Prerequisites: CORE 140, 145; or by permission of instructor.

230 Survey of Canadian History (3)
.Occasional
A survey of Canada's history from the age of discovery and exploration to the present. The various forces and individuals that contribute to the making of Canadian nationhood will be stressed, but due time will also be devoted to the racial and sectional issues that have worked against national unity. Prerequisite: CORE 140; or permission of instructor.

260 Introduction to Museum Studies (3) \(\qquad\) .Occasional This course will provide introductory exposure to the main aspects of museum work. Topics will include structure and administration, funding and government relations, function, and exhibit design and display. Students will also address ethical, moral, and legal issues within the field from the perspective of a Christian historian. Prerequisites: CORE 140; History 280.

280 Introduction to Historical Studies (3). Spring
An introduction to the basic skills, methods, and resources of historical scholarship including the types of historical literature and scholarship, biblical foundations for historical interpretation, historiographical schools of interpretation, and uses of historical scholarship. Satisfies Core Program writing-intensive requirement. Prerequisite: CORE 140; or permission of instructor.

281- Service-Learning (1-3). \(\qquad\) Fall, Spring, Summer
283 See page 113, Individual Studies
301 Colonial North America (3) .Fall Odd
An exploration of 16th and 17th century European colonial endeavors with particular attention to comparative cross-cultural encounters between Native Americans, Africans, and Spanish, French, Dutch, English, and Swedish colonists. Prerequisite: CORE 140. Some early modern European history recommended.

306 From Puritanism to Pluralism: Religion in American Culture (3).
.Spring Odd Studies the development of religious movements and beliefs in the context of American history and culture. More specifically, this course examines the influence of religion in forming American social, political, and intellectual culture as well as how those aspects of American culture have shaped religious belief and practice. A special theme will be the relationship between the Reformed tradition and American culture. Previous study of American history is advised. Prerequisite: CORE 140. History 201 recommended.

307 American Civil War and Reconstruction Era (3). Fall Even This course examines the period in United States history from the 1820 s through 1880 focusing upon the causes and significance of the Civil War and its aftermath, Reconstruction. The course will examine the social, political, military, economic, and diplomatic issues of the period. Prerequisite: CORE 140. History 201 recommended.

308 Media and Power: A History of Modern American Culture (3)
Spring Even
Examines the influence of mass media on the development of modern American culture. Typical topics include the role of the media in the resurgence of the Ku Klux Klan, the FDR administration, the civil rights movement, the 1960 presidential election, the counterculture movement, Vietnam, and the Gulf War. Prerequisite: CORE 140. History 201 recommended.

319 Modern Middle East (3) Spring Even
An in-depth study focusing on developments in the Middle East during the 20th century. Topics include de-colonization; "modernization" and the tension between western ideologies and Islam; Palestine, Israel, and the peace process; regional and global relations during and after the Cold War; the impact of the oil economy; urbanization; gender and family relations; and contemporary issues like water resources, ethnic conflict, human rights, and leadership change. Prerequisites: CORE 140; History 212; or permission of instructor.

321 The Crusades: History and Memory (3)
.Spring Odd
This course provides a solid historical foundation in the crusading movement and the role that crusades played in the development of the medieval church and theology. This course will also explore, evaluate, and analyze the process by which historical events, and more importantly the "memory" of those events, become relevant in, and even appropriated by, the modern world (specifically the modern West and Middle East). Finally, this course equips students with the necessary research skills of the historian with a major research project. Prerequisites: CORE 140, 145; or by permission of instructor.

326 Thought and Society in Modern Europe (3). Occasional This course examines the main trends in the development of Western (i.e. European and North American) thought from the French Revolution to the rise of post-modernism. The course focuses on the general theme of changing views about the relationships between God, humanity, and nature, with special attention given to developments in, and the interaction between, philosophy, theology, social theory, and natural sciences. These themes are examined in relation to changing religious commitments, especially secularization, and social structures like industrialization. Prerequisites: CORE 140. Previous study of modern European or U.S. history or modern philosophy recommended.

327 Topics in the History of the British Isles (3)
.Fall Even
Special attention is given to the distinctive histories and national cultures of England, Ireland, Scotland, and Wales, the origins of Great Britain, the British experience of American independence, the acquisition and loss of empire, the crisis of 1940, and the historical origins of contemporary constitutional problems. Prerequisite: CORE 140.

328 Forward to Revolution: Russian History and Culture (3)
.Fall Odd
This class provides a solid historical foundation in Russian history through the lens of Russian literature with a secondary focus on art, music, and dance. Students will gain a better understanding of how the arts can become a vehicle for social commentary and criticism in a highly autocratic society where the government has placed sever limits on direct political and social discourse. Students will examine how a non-Western tradition of Christianity and other world and life view shaped and inspired historical and cultural development. Prerequisites: CORE 140, 145; or by permission of instructor.

335 History of Calvinism (3) .Occasional A study of historic Calvinism as it was expressed by John Calvin and those who followed in his name. Explores the permutations and applications of Calvinism through time including, but not limited to, Counter Remonstrants, English and American Puritans, Hungarian Calvinists, Afrikaners, and the modern Dutch Calvinist movement. Prerequisites: CORE 140, 200. Some European history recommended. [Cross-listed: CORE 325]

341- Special Topics (3) \(\qquad\) .. Occasional
348 Each of these courses is devoted to a different topic, and each is designed to be a special-interest course utilizing individual instructor strengths, interests, and competencies. Each course will be concerned with a topic or period of history not usually treated to any great extent in regularly scheduled courses.

365 History Internship (3) Occasional This course is designed to give students the opportunity to practically apply the concepts, theories, and knowledge they have acquired in the classroom in a professional setting. Students will be supervised by a faculty monitor and on-site supervisor. Prerequisites: junior or senior standing and approval of the department; Business Administration 100.

380 Historiography (3) Spring This course covers the nature and meaning of history and the nature of the historian's task and responsibilities. Emphasis is on review and evaluation of the various schools of history and of the philosophies of leading historians. Prerequisite: CORE 140. History 280 and advanced academic standing recommended.

388 History Seminar-United States History Emphasis (3). Fall Focuses on writing a research paper about some aspect of the history of the United States. Students select a topic for in-depth study in order to implement and develop various skills learned in previous history courses. Emphasis is on mature evaluation of evidence, developing a historical interpretation in light of a biblical understanding of history, and constructing a narrative depicting the results of research. Open to juniors and seniors only. Prerequisites: CORE 140; History 280, 380.
389 History Seminar-World History Emphasis (3) Fall
Focuses on writing a research paper about some aspect of world history. The course description and requirements are the same as History 388. Open to juniors and seniors only. Prerequisites: CORE 140; History 280, 380.
391- Individual Studies (1-3) ..............................................................................................................................................Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Individual Studies}

The individual studies major provides an opportunity for specially qualified students to plan a specific program in an area of study not formally developed by the college as a major. The individual studies major is intended for a limited number of students who are self-motivated and mature, in addition to having the ability to articulate clear and concise goals, work independently, and carry a project to completion.

A student desiring to complete an individual studies major must submit a proposal to the registrar no later than the end of the junior year. The proposal must include a rationale for why an individual studies major meets the educational goals of the student, and a sequence of courses that meet those goals and will make up the student's major. This major should be no less than 45 credits that ensure depth and breadth of understanding in the area(s) selected.

Students who wish to plan an individual studies major should see the registrar to discuss the specific requirements and policies (students must have a 2.50 GPA with a minimum of 30 credits to be eligible). The registrar will work with the student to find a faculty member to assist the student in writing the proposal and serve as faculty advisor for the student. If, at any time, it becomes apparent that the student is not qualified to continue or is not carrying out the program as approved, the faculty advisor and/or the registrar can terminate the individual studies major.

\section*{281 Service-Learning (1)}
.Fall, Spring, Summer
Open to qualified students with permission from the department, director of Service-Learning, and the registrar. See page 38, Individual Studies for application procedures and policies governing service-learning courses. Graded on a pass/no-record basis.

282 Service-Learning (2)
Fall, Spring, Summer
Open to qualified second semester freshmen, sophomores, juniors, and seniors with permission from the department, director of servicelearning, and the registrar. See page 38, Individual Studies for application procedures and policies governing service-learning courses. Graded on an A-F scale.

283 Service-Learning (3) .............................................................................................................................................................Fall, Spring, Summer
Same as Service-Learning 282.
391 Individual Studies (1)
..Fall, Spring, Summer Open to qualified students with permission from the department and the registrar. See page 38, Individual Studies for application procedures and policies governing service-learning courses. The student will study a topic not normally included in regular course offerings that is interdepartmental in nature or that has a service-learning component. Graded on a pass/no-record basis.

392 Individual Studies (2).
.Fall, Spring, Summer
Open to qualified juniors and seniors with permission from the department and the registrar. See page 38, Individual Studies for application procedures and policies governing service-learning courses. The student will study a topic not normally included in regular course offerings that is interdepartmental in nature or that has a service-learning component. Graded on an A-F scale.

393 Individual Studies (3). \(\qquad\) Fall, Spring, Summer Same as Individual Studies 392.

\section*{Kuyper Scholars Program}

The Kuyper Scholars Program (KSP) is designed for highly motivated and academically gifted students who are seeking scholarly challenges beyond and throughout the regular curriculum. A program in Christian scholarship, it emphasizes interdisciplinary work and seminar participation and leadership. The Kuyper Scholars Program seeks not only to prepare, for Kingdom service, those students who are gifted as potential leaders in the Christian community and the rest of the world, but also to advance the academic atmosphere for all students and faculty at Dordt College. The Kuyper Scholars Program is co-directed by Dr. Mary Dengler and Dr. Carl Fictorie in consultation with a committee.

Admission to the Program Student admission into the Kuyper Scholars Program depends on an entrance essay, letters of recommendation, and demonstrated academic ability. (For new freshmen, academic ability is demonstrated by letters of recommendation, a composite ACT score of 28 or higher, and a cumulative high school GPA of at least 3.50 . For students with at least one semester of college work, requirements include two letters of recommendation from college faculty, a committee-approved academic record, and a GPA of at least 3.25.) Of primary importance
are the entrance essay and letters of recommendation; these must demonstrate the student's character and potential for academic excellence in the pursuit of serviceable insight in the area of Christian scholarship. Interested freshman students should apply through the college Admissions Office. Students with a semester of college work should contact a Kuyper Scholars Program co-director.

Retention Retention in the program is based on the following criteria:
- Maintaining a minimum 3.25 cumulative GPA
- Enrollment each semester in KSP 110, 120, or 220
- Completion of KSP 151 by the end of the freshman year. Completion of at least one scholars contract or project by the end of the sophomore year. Completion of at least three scholars contracts or projects by the end of the junior year.

\section*{Course Requirements - Kuyper Scholars Program General Minor-}

One lab based science course as part of the natural science Core Program requirement.
Statistics 131 or a mathematics course numbered 151 or higher.
A minimum of 18 KSP credits as follows:
- KSP 151 (4 credits)
- One credit each from KSP 110, 120, 220 (3 credits)
- One credit from KSP 230
- Eight credits from KSP 291-293 (scholars contracts). For contracts, both the additional credits for the contract (two credits minimum) and the credits from the course tied to the contract are considered KSP credits.
- Two credits from KSP 381-386 or KSP 391-396 (group and individual scholars projects).

Designated scholars courses and projects are open to all students in good academic standing on a credit-by-credit basis when prerequisites have been met. Students may submit a project proposal to a KSP co-director (generally from one to three credits). The proposal must include a recommendation from the faculty member who would supervise the project.

110 Scholars Events (.25) .Fall, Spring
Students must attend and report on (in writing) two on- or off-campus events such as guest lectures. Attendance includes both the actual event and any arranged scholars activities (dinners, small group discussions, etc.) related to the event. May be repeated for credit. Prerequisite: admission to the KSP.

120 Scholars Seminar I (.25). Fall, Spring
Students must participate in two scholars seminars, where students present their group and individual projects to the campus community (see KSP 381-386 and KSP 391-396). Participation includes attending the presentation and the related small-group discussions and reflection. May be repeated for credit. Prerequisite: admission to the KSP.

151 Rhetoric and Christian Scholarship (4).
An accelerated introduction to college writing, research, and speaking and listening skills, and an introduction to the requirements and expectations of the KSP. Substitutes for CORE 120 and CORE 110 in the Core Program. Prerequisite: admission to the KSP or an English ACT of 30 and permission of instructor.

220 Scholars Seminar II (.5)
Fall, Spring
Students lead one small-group discussion of scholars events (KSP 110) or scholars seminars (KSP 120). Students read the speaker's presentation in advance, do background research, prepare a written response to the presentation to be shared at the seminar, and lead a small-group discussion following the presentation. May be repeated for credit. Prerequisites: KSP 110 or 120; admission to the KSP.

230 Learning Portfolio (.25) ...Spring
The learning portfolio is a compilation of work completed as part of the KSP program along with a reflective analysis of this work. Through the learning portfolio, Kuyper Scholars will monitor progress in their program, reflect and evaluate how and why they learn, identify common themes or approaches in their work, and draw these themes together into a coherent whole in order to demonstrate how Reformed thinking has grown over their time at Dordt. This project will enable these students to become better scholars and leaders in Christ's kingdom. Graded on a pass/no record basis.

291- Scholars Contracts (1-3). Fall, Spring
293 Connected to a regularly offered course, this course allows more in-depth researching, writing, performance, etc. assigned by the instructor. Students must meet all the objectives of the regularly scheduled course as well as the work associated with the additional credit.

381- Group Scholars Projects (1-6) .Fall, Spring
386 Open to students in the KSP or permission of the KSP director and instructor. Scholars projects include a presentation to the college community at a scholar's seminar (KSP 120). Group scholars projects are not tied to existing courses.

396 Open to students in the KSP or permission of the KSP director and instructor. Scholars projects include a presentation to the college community at a scholars seminar (KSP 120). Individual scholars projects are not tied to existing courses.

\section*{Latin}
101 Elementary Latin I (4) ..... Fall EvenAn introductory study of the language through which students are taught how to understand and translate Latin prose and poetry, whilebecoming familiar with Latin grammar and syntax. The course will also focus on vocabulary acquisition, features of Roman history, life,and culture, as well as the nature of the impact of Latin on the English language.
102 Elementary Latin II (3) .Spring OddContinuation of Latin 101. Prerequisite: Latin 101 or one year of high school Latin with permission from the instructor.
201 Intermediate Latin I (3) ..... Fall OddStudents will further a foundational understanding of verb conjugations and noun and adjective declensions, expand their Latin vocabu-lary, develop an understanding of Latin grammar, and sharpen Latin reading skills in the areas of classical prose and poetry. Prerequisite:Latin 102 or two years of high school Latin with permission from the instructor.
391- Individual Studies (1-3)

\(\qquad\)
Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Linguistics}

Interdisciplinary Minor-Linguistics 201, 301, 393; two courses from Dutch 201, 202, English 335, 336, French 201, 202, Greek 112, 211, Latin 102, 201, Spanish 201, 202; two courses from Communication 314, CORE 270, 283, Education 355, Philosophy 202, 350, Psychology 218, 362, Theology 221.

201 Introduction to Linguistics (3) \(\qquad\) ...Spring An introduction to the basic principles of linguistics, including phonetics (the sounds of language), morphology (the words of language), syntax (the sentence patterns of language), and sociolinguistics (how language functions in society). Data from different dialects of English and a variety of other languages will be used. Special attention will be given to a biblical view on language. No previous knowledge of linguistics is required.

> 301 Applied Linguistics and English Phonology (3) ....................................................................................................................................Fall Odd An in-depth study of specific areas of linguistics, such as neurolinguistics (brain and language), psycholinguistics (language acquisition), computational linguistics (computer processing and language), and language change (how language has changed and still changes). One-third of the course is geared at the special interests of the students. ESL students will study the phonology (the study of sound patterns) of English and learn how to teach English pronunciation. Other students do research in a linguistic area of their interest, culminating in a research paper. Prerequisite: Linguistics 201.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Mathematics}

General Major- Mathematics 152, 153, 201, 203, 212, 291, 304, 311, 315, 390, 392; one mathematics course numbered above 201; one course from Mathematics 341-348; Computer Science 110 or 111.

Mathematics/Computer Science Major-Mathematics 152, 153, 203, 207, 209, 212, 304; one course from Mathematics 201, 204, Mathematics 215 and 216; Computer Science 111, 112, 120, 131, 145, 202, 305; one course from Computer Science 220, 231, 308, 311; Mathematics 390 or Computer Science 390.

\section*{General Minors-}

Applied Mathematics: Mathematics 152,153,291; three courses from Mathematics 201, 203, 204, 209, 315; Statistics 131 or 132.
Mathematics: Mathematics 152, 153, 203, 212, 291; one course from Mathematics 304, 311, 315; one mathematics course numbered above 200.

\section*{ACADEMIC OFFERINGS: MATHEMATICS}

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\begin{abstract}
100 Mathematics for College (3) \(\qquad\) Fall, Spring
This course prepares students for college-level mathematics through the study of algebra and geometry. The use of mathematical models will be woven throughout the course, providing students with the opportunity to see, understand, and use mathematics in a variety of applications. Also woven throughout is the understanding that mathematics is a creation of God, and must be used appropriately and responsibly. Corequisite: Mathematics 100L.
\end{abstract}

100L Mathematics Tutorial Sessions (1). .Fall, Spring
A one-hour tutorial session twice per week required for students in Mathematics 100. Students do not earn graduation credit for the tutorial session. Corequisite: Mathematics 100.

108 Mathematics for the Elementary Teacher (3).
.Fall Even, Spring
This course provides students the content knowledge needed for teaching elementary and middle school mathematics. The topics will show that mathematics is part of God's creation and how mathematics can be used to help understand and care for the creation. Specific topics include problem solving, numbers and numeration systems, computation and representation with integers, rational numbers and decimals, geometry and measurement. Prerequisite: elementary education major; an ACT mathematics score of 18 or higher or Mathematics 100.

118 Basis of Quantitative Thinking (3)
Fall Odd, Spring
This course is designed to provide students with knowledge in algebra, geometry, number theory, and probability and statistics for quantitative reasoning. The course will demonstrate that mathematics is part of God's creation and will appreciate the intricate connection between various aspects of the creation including applications from other areas and interconnections between various topics in the course. Prerequisite: an ACT mathematics score of 18 or higher.

138 Fundamentals of Mathematics in Context (3)
.Spring Odd
This course studies the origins, historical development, and meaning of key concepts, techniques, and applications of elementary mathematics. Topics are drawn from arithmetic (numeration systems, calculation procedures, number types), geometry (measurement, geometric constructions, shapes, deductive reasoning), and algebra (proportionality, problem-solving, theory of equations, graphing). Students will gain a more profound and thorough understanding of important foundational ideas in mathematics while exploring the broader historical, social, and philosophical contexts of the field. Prerequisite: an ACT mathematics score of 22 or higher or satisfactory completion of Mathematics 100 or 118 .

140 College Algebra (3) \(\qquad\) .Fall, Spring Even A study of standard pre-calculus topics in algebra and trigonometry. Elementary functions and functional notation are emphasized in preparation for calculus. Prerequisite: an ACT mathematics score of 22 or higher or satisfactory completion of Mathematics 100 or 118.

145 Mathematical Modeling and Simulation (3) Fall (First offered Fall 2016) A variety of topics from the sciences will be used to introduce students to the fundamental concepts of mathematical modeling and to several simulation tools. Topics may include: constrained and unconstrained growth, terminal velocity of falling objects, drug dosages, the spread of disease, population dynamics, enzyme kinetics, green house effects, pollution effects, the spread of forest fires, foraging, diffusion, etc. Modeling methods and tools for continuous and agent based models will be used. Prerequisite: Mathematics 140 or equivalent high school mathematics.

148 Introduction to Financial Mathematics (2). This course covers topics in basic interest theory including interest, annuities, and amortization as well as basic concepts in derivatives markets including stocks, bonds, forwards, puts, calls, spreads, and hedges. Course content is taught using a guided discovery approach focusing on student conceptual understanding. The course also includes discussion of Christian perspectives on investments and risk management. Offered first half of fall semester. Prerequisite: an ACT mathematics score of 22 or higher or satisfactory completion of Mathematics 100 or 118; strong algebra skills. [Cross-listed: Statistics 148]

151 Calculus for Business, Social, and Life Sciences (4)
Occasional
A study of the basic concepts and techniques of calculus for students majoring in business, social sciences, or life sciences. Topics include limits, differentiation, integration, exponential and logarithmic functions, partial derivatives, multiple integrals, and applications. Credit will not be given for both Mathematics 151 and 152. Prerequisite: grade of C - or higher in Mathematics 140 or equivalent.

152 Calculus I (4) Fall, Spring
A study of the basic concepts and techniques of calculus for students majoring in mathematics, computer science, engineering, or the physical sciences. Topics include limits, differentiation, integration, and applications. This course is intended for students without any previous calculus credit. Credit will not be given for both Mathematics 151 and 152 . Prerequisite: grade of C - or higher in Mathematics 140 or equivalent.

Continuation of Mathematics 152; a study of transcendental functions, integration techniques, Taylor series approximations, calculus in polar coordinates, vectors, calculus of vector valued functions and applications of calculus. Students with one semester of calculus credit should take this course instead of Mathematics 152 . Prerequisite: grade of C - or higher in Mathematics 152 or equivalent.

201 Multivariable Calculus (3) \(\qquad\) .Spring
A study of differential and integral calculus of functions of several variables, and line and surface integrals. Prerequisite: grade of C- or higher in Mathematics 153.

203 Elementary Linear Algebra (3). Fall
An introductory study of vectors, matrices, linear transformations, vector spaces, determinants, and their applications, with particular emphasis upon solving systems of linear equations. Pre- or corequisite: Mathematics 153 ; or permission of instructor.

204 Differential Equations (3) Fall
An introduction to the theory and techniques of solving elementary differential equations and the use of these techniques in applied problems. Prerequisite: grade of C- or higher in Mathematics 153.

207 Number Theory (3)
Spring Even
An introduction to the main topics of elementary number theory, including divisibility, prime numbers, factorization congruences, number theoretic functions, and number theoretic equations. Prerequisite: grade of C- or higher in Mathematics 151 or 152; or permission of instructor.

208 Modern Geometry (3)
Fall Even
A study of the basic concepts of modern geometry, both Euclidean and non-Euclidean, with some attention given to finite and projective geometry. Prerequisite: grade of C- or higher in Mathematics 151 or 152; or permission of instructor.

209 Numerical Analysis (3).
.Spring Odd
A study of numerical methods for integration, differentiation, calculus of finite differences, and applications, using the computer. Prerequisites: grade of C- or higher in Mathematics 153; Computer Science 111.

212 Discrete Structures (3)

\section*{Spring}

A study of topics in discrete mathematics that are relevant to computer science and mathematics, including logic and proof, induction and recursion, elementary set theory, combinatorics, relations and functions, Boolean algebra, and introductory graph theory. Prerequisite: grade of C- or higher in Mathematics 151 or 152; or permission of instructor.

215 Introduction to Univariate Probability (2) . .Spring Odd
An introduction to the theory and techniques of general probability and common univariate probability distributions. Topics include but are not limited to basic set theory, introductory probability rules (independence, combinatorials, conditionals, Bayes theorem, etc.), common univariate distributions (e.g., binomial and normal) and expected value/variance. Offered first half of the semester. Pre- or corequisite: Mathematics 152. [Cross-listed: Statistics 215]

216 Introduction to Multivariate Probability (2). .Spring Odd
An introduction to multivariate probability distributions. Topics include but are not limited to joint probability density functions, conditional and marginal probability distributions, moment generating functions, covariance and correlations, transformations and linear combinations of independent random variables. Offered second half of the semester. Prerequisite: Mathematics 215. Pre- or corequisite: Mathematics 152. [Cross-listed: Statistics 216]

218 Intermediate Financial Mathematics (2) Fall
This course covers intermediate topics in financial mathematics including progressing annuities, force of interest, duration, convexity, immunization, swaps, forwards and other topics on Actuarial Exam FM/2 that are not covered in Mathematics 148 . Offered second half of fall semester. Prerequisite: Mathematics 148. Pre- or corequisite: Mathematics 151 or 152. [Cross-listed: Statistics 218]

281- Service-Learning (1-3) ................................................................................................................................................Fall, Spring, Summer
See page 113, Individual Studies
291 Problem-solving Seminar (1). .Fall Odd Problem-solving is at the heart of doing mathematics. This seminar provides unity to the concepts and approaches learned throughout the mathematics major and minors as it examines various problem-solving techniques. Weekly sessions will be devoted primarily to presenting problem-solving techniques and solving a variety of problems. Open to sophomores, juniors, and seniors. Graded on a pass/no-record basis. Prerequisite: grade of C - or higher in Mathematics 152; or permission of instructor.
Abstract Algebra I (3) ............................................................................................................................................................................. Even
An introduction to algebraic structures focused mainly on groups. Brief attention is given to rings, integral domains, and fields. Prerequi-
site: grade of C- or higher in Mathematics 203 and 212; or permission of instructor.

305 Abstract Algebra II (3)
Spring Odd Continuation of Mathematics 304. A more extensive study of algebraic structures, focused primarily on fields. This course is offered as an individual studies course unless there is sufficient enrollment to warrant otherwise. Prerequisite: grade of C - or higher in Mathematics 304.

311 Real Analysis I (3).
.Fall Odd
An introduction to the content and methods of single-variable real analysis: infinite sets, the real number system, sequences, limits, series, continuity, differentiation, and integration. Prerequisite: grade of C - or higher in Mathematics 212; or permission of instructor.

315 Complex Analysis (3).
Spring Even
A study of the complex number system, functions of complex numbers, integration, differentiation, power series, residues and poles, and conformal mappings. Prerequisite: grade of C- or higher in Mathematics 201; or permission of instructor.

341- Special Topics (3) \(\qquad\) Spring Even
348 These mathematics courses cover different topics that maximize individual instructor strengths, interests, and competencies. Each course will deal with a topic in mathematics not usually covered extensively in regularly scheduled courses.

390 History of Mathematics (3).
.Fall Odd
A survey of the history of mathematics from ancient times into the 20th century, in cultural context, with attention given to how the philosophy of mathematics relates to the development of mathematics. Prerequisite: grade of C- or higher in Mathematics 151 or 152; or permission of instructor.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
393 See page 113, Individual Studies. Permission of instructor required.

\section*{Medical Technology}

The medical technology major consists of three years of preparatory courses in biology, chemistry, and mathematics, with a fourth clinical year at an institution with an accredited medical technology program. During the beginning of the third year, students will apply for acceptance to this program. After successful completion of the final year, students will graduate with a bachelor of science degree from Dordt College.

General Major- Biology 122, 125, 225, 226, 310, 357; Chemistry 111, 225, 321 or 322, 323; one course from Biology 304, 335, Chemistry 212, 312; Statistics 131; completion of the one year clinical program at a COMTE-certified college. Chemistry 261 and English 305 strongly recommended.

Students are advised to consult with the medical technology program advisor to help choose other suitable courses in their area of interest.

\section*{Music}
\begin{tabular}{ll} 
General Major- & Foundation (common to all emphases): Music 103, 103L, 104, 104L, 203, 203L, 204, 206, 207, 208, 215, 222, 315; Music \\
19; six semesters of Music 09; six semesters of large ensembles. CORE 316/Philosophy 206 is the recommended advanced \\
reformed thought course for music majors.
\end{tabular}

Students must select one of the following emphases:
Church Music: \(\quad\) Foundation; Music 209, 305, 313; Music 283 or 393; Theology 241; one course from Music 312, 323, 326 or three courses from Music 316-319; six semesters of Music 240, 250, 260, or 270 selected in consultation with an advisor.

General: Foundation; six credits of electives in music; six semesters of Music 240, 250, 260, or 270 selected in consultation with an advisor.

Music Management: Foundation; Business Administration 200 or 201; Business Administration 205, 206, 207; Business Administration 304 or Political Science 245; Communication 260; Music 373. Business Administration 100, English 305, and private music lessons recommended.

Performance and Pedagogy: Foundation; Music 209; Music 205 or 305; Psychology 204 (fulfills Core Program persons in community requirement); all of the courses in one of the following performance categories:
1. Organ: Six semesters of Music 260; Music 360 and 361; Music 393.
2. Piano: Six semesters of Music 250; Music 350 and 351; Music 326, 393.
3. Voice: Six semesters of Music 240; Music 340 and 341; Music 323, 393.
4. Instruments: Six semesters of Music 270; Music 370 and 371 ; Music 305, 391; one course in performance area selected from Music 316, 317, 318, 319.
Note: Students in performance and pedagogy must audition for acceptance into the program by the end of the sophomore year. Students in performance and pedagogy are required to present a half junior recital and a full senior recital. They must audition for the recital during the semester or year prior to the recital.

Students intending a career in Music Therapy should elect a general music major and a psychology minor.

\section*{General Minors-}

\begin{abstract}
Music: Music 103, 103L, 104, 104L, Music 205; one course from Music 206, 207, 208; a second course from Music 206, 207, 208 or one course from Music 209, 215, 222, 305; three semesters of Music 09; any combination of private lessons and ensembles adding up to a minimum of four credits.

Music Performance: Music 103, 103L, 104, 104L; one course from Music 205, 206, 207, 208; one course from Music 323, 326 or three courses from Music 316-319; three semesters of Music 09; four semesters of lessons in one performance area (240, 250, 260, or 270); one course from Music 340, 350, 360, 370; four semesters of large ensembles.
Note: Music performance minors must audition for acceptance into the minor program no later than their junior year. Music performance minors are required to present a half recital. They must audition for the recital during the semester or year prior to the recital.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program. For a description of the Worship Arts program, see page 143.
\end{abstract}

\section*{Ensembles (Graded on a pass/no-record basis)}
010 Chorale (1) Fall, Spring
011 Band (1) Fall, Spring
012 Concert Choir (1) Fall, Spring
013 Small Instrumental Ensemble (.5). ..... Fall, SpringA variety of small instrumental ensembles, including Jazz Band.
018 Small Vocal Ensemble (.5) ..... Fall, Spring
A variety of small vocal ensembles, including Kantorei and Bella Voce.
020 Orchestra (.5) Fall, SpringStudy and performance of music for string orchestra.
021 Northwest Iowa Symphony Orchestra (NISO) (.5) ..... Fall, SpringStudy and performance of music for full symphony orchestra.
Classroom Courses
009 Performance Class (0) ..... Fall, Spring
Concert and recital attendance; presentations of special topics related to music.
103 Music Fundamentals (3) ..... Fall
A course laying the foundation for musicianship and further study in music through the study of music fundamentals, i.e., rudimentary skills in notation, analysis, and composition as well as exposure to basic music literature.
103L Ear Training I (1) ..... Fall The development of basic skills in the reading and notation of rhythm and of diatonic melodies in major and minor, in hearing and playing primary triads, and in identifying major and minor scales and simple intervals. Corequisite: Music 103 or advanced placement.
104 Diatonic Harmony (3)...................................................................................................................................................................Spring Continuation of Music 103 through all aspects of diatonic harmony. Prerequisite: Music 103 or advanced placement.

Continuation of Music 103L. The further development of skills in the reading and notation of more complex rhythms and of diatonic melodies, in singing in alto clef, in hearing and singing all simple diatonic intervals, in hearing and singing all diatonic triads, and in identifying major, minor, and some modal scales. Prerequisite: Music 103L or advanced placement.

203 Chromatic Harmony (3) .....................................................................................................................................................................Fall
Continuation of Music 103-104, with focus on advanced and chromatic harmony. Prerequisite: Music 104 or advanced placement.
203L Ear Training III (1)
Fall
Continuation of Music 104L. The further development of skills in the reading and notation of complex rhythms and chromatic melodies, in singing in both alto and tenor clef, in hearing and singing compound intervals, in identifying major minor, modal, and whole tone scales, and in reading figured bass and lead sheet. Prerequisite: Music 104L or advanced placement.

204 Contemporary Music Theory and Literature (3)
.Spring Odd
A study of musical theories, compositional techniques, and literatures of the 20th and 21st centuries with emphasis on the development of personal commitments to and strategies for promoting a Christian vision of life as a musician. Prerequisite: Music 203 or advanced placement.

205 Introduction to Music Literature (3) .Spring Even
A survey of the basic repertoire and of masterpieces in several genres (art songs, symphonies, concerti, major choral works, etc.), involving extensive and intensive listening, and study of style and form.

206 Music History and Literature I (2) Fall Even Study of the literatures, cultural contexts, and intertextual relationships of Western music, from Antiquity through the 15th century. Prerequisite: Music 104; or permission of instructor.

207 Music History and Literature II (2).
Study of the literatures, cultural contexts, and intertextual relationships of Western music, from the 15th through the 18th century. Prerequisite: Music 104; or permission of instructor.

208 Music History and Literature III (2)
.Fall Odd
Study of the literatures, cultural contexts, and intertextual relationships of Western music, from the 18th through the 19th century. Prerequisite: Music 104; or permission of instructor.

209 Music in Worship (3)
Spring Even
An overview of the role of music in worship, worship music repertoire, and information and skills needed to plan music for worship. [Crosslisted: Theology 333, Worship Arts 333]

215 Basic Conducting (2) .Fall Odd
An introduction to conducting technique.
222 World Music (3)
Spring Even
Examination of music heard in various contemporary world cultures, its aesthetic and stylistic aspects as well as its functions and underpinning ideas and values. [Cross-listed: CORE 278]

281- Service-Learning (1-3) .Fall, Spring, Summer
283 See page 113, Individual Studies
305 Orchestration (3) .Spring Odd A study of transposition, instrumental ranges, and balance by arranging keyboard and choral works for instrumental ensembles.

306 Music and Digital Technology (3). .Occasional The course surveys modern uses of digital technology relating to sound and develops skills relating to the most common types of manipulating digital sound.

312 Teaching General Music (3) Fall Even Teaching techniques and materials for the prospective music educator. This course will address philosophical foundations, content, methodologies, materials, technologies, and curriculum development for K-12 general music. Prerequisite: Education 201 or 202 or 203; or permission of instructor.
\begin{tabular}{|c|c|}
\hline 313 & Choral Music Education (3) \(\qquad\) Fall Odd Teaching techniques and methods for the prospective vocal music educator. Designed for those preparing to teach choral music in middle and secondary schools, this course also deals with repertoire selection and rehearsal planning and techniques, and is therefore suitable for those preparing to enter the field of church music. Prerequisite: Education 201; or permission of instructor. \\
\hline 314 & Instrumental Music Education (3) \(\qquad\) Fall Even Teaching techniques and materials for those planning to teach elementary and/or secondary instrumental music. Prerequisite: Education 201; or permission of instructor. \\
\hline 315 & Advanced Conducting (2). \(\qquad\) Spring Even Continued study of conducting with attention to specific choral and instrumental techniques. Prerequisite: Music 215. \\
\hline \[
\begin{aligned}
& 341- \\
& 348
\end{aligned}
\] & Special Topics (3) \(\qquad\) Occasional These courses vary from year to year and are designed to meet special student interests and utilize staff strengths and the talents of experts in the community. Each course will cover material not usually treated in regularly scheduled courses. \\
\hline 373 & Music Management Internship (1-3) \(\qquad\) Fall, Spring Intended to provide the music management major the opportunity to apply the knowledge, principles, and skills gained in the classroom in an actual music management environment. Prerequisite: junior or senior status; 2.00 minimum GPA. \\
\hline \(391-\) & Individual Studies (1-3) ....................................................................................................................................ll, Spring, Summer \\
\hline 393 & See page 113, Individual Studies \\
\hline Peda & \\
\hline 316 & Brass Pedagogy (1) Fall Even Methods of teaching brass instruments. \\
\hline 317 & \begin{tabular}{l}
Woodwind Pedagogy (1) \(\qquad\) Spring Odd \\
Methods of teaching woodwind instruments.
\end{tabular} \\
\hline 318 & String Pedagogy (1). \(\qquad\) Spring Even Methods of teaching string instruments. \\
\hline 319 & Percussion Pedagogy (1) \(\qquad\) Fall Odd Methods of teaching percussion instruments. \\
\hline 323 & Vocal Pedagogy (2). .Spring Even Methods of teaching voice. \\
\hline 326 & Piano Pedagogy and Literature (3). \(\qquad\) Occasional Study of techniques and methods of teaching piano and survey of literature for the piano. \\
\hline \begin{tabular}{l}
Priv \\
Privat (e.g.,
\end{tabular} & \begin{tabular}{l}
Instruction \\
instruction is available to music majors and non-majors in the following areas. Instrumental lessons will be transcripted indicating the specific instrument umpet or violin). All lessons are graded on an A-F basis and can be repeated for credit each semester.
\end{tabular} \\
\hline 04 & Group Voice Lessons (1)........................................................................................................................................Fall, Spring \\
\hline 05 & Group Piano Lessons (1).......................................................................................................................................Fall, Spring \\
\hline 07 & Group Instrumental Lessons (1).............................................................................................................................Fall, Spring \\
\hline 19 & Piano Proficiency (0 credit). \(\qquad\) Fall, Spring Passing the piano proficiency requirement is necessary for certain majors and minors in music. Piano proficiency is demonstrated by passing a test administered by the music department. Preparation for this test may be gained through taking piano lessons. \\
\hline 240 & Private Voice Lessons (1)......................................................................................................................................F.all, Spring \\
\hline 250 & Private Piano Lessons (1)......................................................................................................................................Fall, Spring \\
\hline 260 &  \\
\hline
\end{tabular}
270 Private Instrument Lessons (1) ..... Fall, Spring
280 Composition Lessons (1) ..... Fall, SpringThe following advanced study courses are open only to students in major or minor programs of study requiring them. Admission is by audition; dates of the qualifyingjuries are posted in the music building.
340 Advanced Voice Study (3)

\(\qquad\) ..... Fall, Spring
Advanced voice literature and preparation of a half junior or senior recital
341 Advanced Voice Study (3) ..... Fall, SpringAdvanced voice literature and preparation of a full senior recital. Prerequisite: Music 340
350 Advanced Piano Study (3) ..... Fall, SpringAdvanced piano literature and preparation of a half junior or senior recital.
351 Advanced Piano Study (3)

\(\qquad\)
 Fall, Spring
Advanced piano literature and preparation of a full senior recital. Prerequisite: Music 350
360 Advanced Organ Study (3) ..... Fall, Spring
Advanced organ literature and preparation of a half junior or senior recital.
361 Advanced Organ Study (3) ..... Fall, Spring
Advanced organ literature and preparation of a full senior recital. Prerequisite: Music 360
370 Advanced Instrument Study (3) ..... Fall, SpringAdvanced instrumental literature and preparation of a half junior or senior recital.371 Advanced Instrument Study (3)Fall, SpringAdvanced instrumental literature and preparation of a full senior recital. Prerequisite: Music 370
Nursing

The bachelor of science in nursing is a four-year program of study. Within the unique collaborative curriculum, students complete a course of study that combines a traditional associate's degree in nursing with a bachelor of science degree in nursing. This program is possible through an ongoing partnership with St. Luke's College in Sioux City, Iowa. All students must complete Dordt's Core Program requirements, as well as all of St. Luke's requirements for the associate's degree. Students spend all four years (eight semesters) as full-time residents on Dordt's campus. Primarily all the coursework is done from Dordt's campus with clinical rotations during the four semesters with St. Luke's College completed at St. Luke's Regional Medical Center and surrounding geographic areas.

Students are eligible for NCLEX-RN state board licensure examination upon successful completion of the associate in nursing degree portion of the coursework, typically at the end of the third year. Year four focuses on upper division nursing courses for the completion of the B.S.N. degree. The St. Luke's A.S.N. program is approved by the Iowa Board of Nursing and fully accredited by the National League for Nursing Accrediting Commission. The Dordt B.S.N. program is approved by the Iowa Board of Nursing. Accreditation was granted by the Commission on Collegiate Nursing Education in 2007. (CCNE, One Dupont Circle, NW, Suite 530, Washington, D.C. 20036-1120, (202) 887-6791)

General Major- Courses taken at Dordt College: Biology 203, 204, 210, 302; Chemistry 102; Psychology 201, 204; Sociology 201; Statistics 131; Nursing 200-300, 310, 320, 325, 330, 351, 352, 390. Courses from St. Luke's: Nursing 110, 112, 115/116, 220, \(222,225 / 226,230,232,235 / 236,240,245,246\).

110 Professional Development I (1 credit, Offered by St. Luke's)
This course is the first in a series of four professional development courses. Nursing 110 introduces the concepts of roles of student nurse and health care team members, regulatory guidelines of nursing, therapeutic communication, evidenced-based practice, theory based decision-making, and cultural sensitivity. Prerequisite for Nursing 220, 225, 226, 230.

112 Pharmacology in Nursing Practice I (1 credit, Offered by St. Luke's)
This course is the first in a series of three pharmacology courses. Nursing 112 introduces pharmacological concepts with a focus on developing beginning competency in medication administration via percutaneous, enteral, intradermal, subcutaneous, and intramuscular routes. Prerequisite for Nursing 116, 222, 225, 226, 232.

115 Foundations of Nursing I (2 credits, Offered by St. Luke's)
This course is the first in a series of two nursing foundation courses. Nursing 115 introduces concepts that are fundamental to professional nursing. The concepts include terminology, safety, basic skills, principles of teaching and learning, health assessment, documentation, and the nursing process. Prerequisite for Nursing 116, 222, 225, 226.

116 Foundations of Nursing II (2 credits, Offered by St. Luke's)
This course is the second in a series of two nursing foundation courses. Nursing 116 builds on the concepts introduced in Nursing 112-Pharmacology in Nursing Practice and Nursing 115-Foundations of Nursing I. This course introduces the student to clinical nursing practice and focuses on the basic concepts of protective mechanisms, pain and sensation, mobility, sleep and rest, nutrition, elimination, oxygenation, circulation, and perioperative care. Prerequisite for Nursing 222, 225, 226.

220 Professional Development II (1 credit, Offered by St. Luke's)
This course is the second in a series of four professional development courses. Nursing 220 builds on the basic concepts of the health care team member, regulatory guidelines of nursing, therapeutic communication, evidenced-based practice, theory based decision-making, and cultural sensitivity. Prerequisite for Nursing 230, 235, 236.

222 Pharmacology in Nursing Practice II (1 credit, Offered by St. Luke's) This course is the second in a series of three pharmacology courses. Nursing 222 introduces the principles of intravenous therapy, and focuses on nursing responsibilities associated with the administration of antimicrobials, and drugs affecting the neurological and reproductive systems. The course builds on the concepts of pharmacodynamics and safe medication administration introduced in Nursing 112-Pharmacology in Nursing Practice I. Prerequisite for Nursing 232, 235, 236.

225 Reproductive and Childbearing Nursing (5 credits, Offered by St. Luke's)
This second-level course focuses on the care of families throughout the childbearing process from conception through the postpartum and neonatal period. Nursing 225 also addresses concepts related to the reproductive health of men and women, building on the principles of professional development, pharmacology, and foundations of nursing care introduced in prerequisite courses. Prerequisite for Nursing 235, 236.

226 Neurological and Psychiatric Nursing (5 credits, Offered by St. Luke's)
This second level course focuses on the care of adults and families experiencing neurological, psychiatric, and sensory alterations. Nursing 226 builds on the principles of professional development, pharmacology, and foundations of nursing care introduced in prerequisite courses. Prerequisite for Nursing 235, 236.

230 Professional Development III (1 credit, Offered by St. Luke's)
This course is the third in a series of four professional development courses. Nursing 230 builds on the concepts of the nursing roles, regulatory guidelines, therapeutic communication, evidence-based practice, critical thinking, and cultural sensitivity introduced in Nursing 110 and 220 -Professional Development I and II, respectively. The course focuses on nursing leadership skills, assertiveness, professional competency, and managing client care. Prerequisite for Nursing 240, 245.

232 Pharmacology in Nursing Practice III (1 credit, Offered by St. Luke's)
This course is the third in a series of three pharmacology courses. Nursing 232 focuses on nursing responsibilities associated with the administration of antineoplastic agents and drugs affecting the gastrointestinal, urinary, cardiovascular, respiratory, and endocrine systems, and the body's response to toxins. The course builds on the concepts of pharmacodynamics, safe medication administration, and intravenous therapy introduced in Nursing 112 and 222-Pharmacology in Nursing Practice I and II, respectively. Prerequisite for Nursing 245.

235 Nursing Care Across the Lifespan (5 credits, Offered by St. Luke's)
This third-level course focuses on the care of children, adults, and their families throughout the lifespan from childhood through death. Nursing 235 addresses concepts related to growth and development, pediatric and geriatric health alterations, death and dying, and basic community health nursing. This course builds on the principles of professional development, pharmacology, foundations of nursing care, and reproductive, childbearing, neurological, psychiatric, and sensory concepts introduced in prerequisite courses. Prerequisite for Nursing 245.

236 Medical-Surgical Nursing (5 credits, Offered by St. Luke's)
This third level course focuses on the care of adults experiencing gastrointestinal, musculoskeletal, urological, renal, hepatic, and homeostatic alterations and surgical intervention. Nursing 236 builds on the principles of professional development, pharmacology, foundations of nursing care, and reproductive, childbearing, neurological, psychiatric, and sensory concepts introduced in prerequisite courses. Prerequisite for Nursing 245.

240 Professional Development IV (1 credit, Offered by St. Luke's)
This course is the fourth in a series of four professional development courses. Nursing 240 builds on the concepts of nursing roles, regulatory guidelines, communication, evidenced-based practice, critical thinking, leadership, management, and cultural sensitivity introduced in Nursing 110, 220, and 230-Professional Development I, II, and III, respectively. This course focuses on current issues in nursing, advanced communication skills, clinical decision, and cultural competency.

Advanced Nursing Care ( 9 credits, Offered by St. Luke's)
This fourth-level course focuses on the care of individuals experiencing oxygenation, circulation, protective mechanism, metabolic and oncological alterations, and traumatic injury. Nursing 245 builds on the concepts of the prerequisite courses including: professional development, pharmacology, foundations of nursing care, maternal-child, psychiatric, pediatric, geriatric, and select medical-surgical nursing. Prerequisite for Nursing 246.

246 Transition to Practice (2 credits, Offered by St. Luke's)
This fourth level course is the final nursing course of the ASN curriculum. Nursing 246 includes summative review of nursing theory and practice aimed at facilitating the transition from student to novice nurse generalist. The course includes a clinical preceptorship with a registered nurse in clinical practice.

200 Healthcare Ethics I (2) Fall This course will provide the groundwork from which ethical issues can be analyzed and then considered in light of current ethical theories, as well as a Reformed framework. Nursing ethics and ethical decision making are explored. Ethics in professional nursing practice will be emphasized. Nursing ethics across the lifespan will be explored with emphasis on reproductive issues, infant/child, adolescent nursing ethics, and psychiatric/mental health.

300 Healthcare Ethics II (1) .Spring
This course builds upon the groundwork provided in Nursing 200 (Healthcare Ethics I) wherein ethical issues were analyzed and considered in light of current ethical theories as well as a Reformed framework. Nursing ethics inquiry continues across the lifespan with ethics pertinent to psychiatric/mental health, care of elders, community/public health, and issues in end-oflife care. Ethics in professional Christian nursing practice will be emphasized. Prerequisite: Nursing 200.

310 Faith and Cultural Aspects in Health Care (3). Fall
Students will engage in an introductory study of culture and its influence on behavior. Specific cross-cultural issues that affect health care delivery are discussed. Students will consider the worldviews of modern cultures and the implications for Christian discipleship; define health and illness as Christian individuals and part of the community as a whole; and comprehend traditional and alternative health care practices, incorporating religious beliefs, practices, and rituals. A phenomenological assessment is applied to the populations studied. Prerequisites: BSN major or junior standing; permission of instructor. [Cross-listed: CORE 275]

320 Foundations of Nursing Theory (2)
Foundation concepts and nursing theories are explored as they apply to professional nursing practice. Nursing philosophies, theories, and historical influences are examined. Nursing philosophies and theories will be explored for their consistency/inconsistency with a Christian view of nursing. Prerequisite: enrollment in BSN program; or permission of instructor.

325 Health Assessment (3) Fall
The knowledge and skills for professional assessment and health promotion across the lifespan are covered along with related physiologic concepts. Students will develop skills related to comprehensive health assessment of the individual client which will be used as the basis for decision making and intervention. Theory and laboratory practice provide guidance in assessing physical, psychological, sociocultural and faith dimensions of the individual. Two lecture hours and one laboratory period of three hours per week. Prerequisites: enrollment in BSN program; evidence of valid R.N. license to practice in Iowa; or permission of instructor.

330 Research and Scientific Inquiry (3). Spring The research process is introduced. A basic overview of research design, evidence-based practice and research utilization is presented. Students critique professional literature. Students develop an evidence based practice project that provides for application of research principles to nursing practice. Prerequisites: enrollment in BSN program; Nursing 320; or permission of instructor.

351 Family, Community, and Public Health I (3). Fall
This course focuses on the analysis of the family within the context of community-oriented nursing practice utilizing public health nursing and community health nursing strategies. It utilizes the study of the promotion of health along with the primary, secondary, and tertiary prevention of health problems of a population. The course focus is on the family as the client with nursing care of individuals, families and groups. The clinical component focuses upon utilizing a community-based nursing approach to health care delivery in the home setting. Two lecture hours per week and forty-five clinical hours per semester. Prerequisites: senior status in BSN nursing program; evidence of valid R.N. license to practice in Iowa.

352 Family, Community, and Public Health II (4) .Spring
 nursing research, process, and decision-making in assessing the community as the client; explore epidemiology, community empowerment, and community-nursing partnering for the health of the community; and collaborate with members of other disciplines and with consumers in planning for community health when applied to the community setting. The clinical experience emphasizes community based service learning within the context of a Christian perspective in professional nursing practice. Opportunities are provided to actively participate in various community settings and areas of service. Two lecture hours per week and ninety clinical hours per semester. Prerequisites: enrollment in BSN program; evidence of valid R.N. license to practice in Iowa.

An intensive clinical practicum in which the student will manage a client workload with all of its duties and responsibilities with the guidance of a professional nursing mentor. Students will work in a local area health care system, with an emphasis on learning while serving. Prerequisite: permission of instructor.

390 Professional Practice Development in Society (3) Spring
This capstone course concentrates discussion of Christian nursing practice within a broader perspective of a Reformed Christian worldview. It examines conflicting worldviews, prominent theoretical frameworks used to explain and guide professional nursing practice, and the integration of Christian caring while performing the various roles of the professional nurse. Students develop their individual philosophical perspective of nursing practice. The ability to conceptualize issues, apply critical thinking, theoretical reflection, and serviceable insight to political, economic, and psychosocial issues and trends affecting nursing and health care is facilitated. Prerequisites: CORE 200; enrollment in BSN program; or permission of instructor. [Cross-listed: CORE 317]

\section*{Philosophy}

General Major- CORE 200; Philosophy 301, 302, 303, 304, 309; five elective courses in philosophy; electives may include Engineering 390 and/or one course from Political Science 310 or 312.

General Minor- CORE 200; five elective courses in philosophy.

\section*{202 Logic (3)}
\(\qquad\) Fall Even An introduction to the study of logic, both deductive and inductive, focusing on its systematic, philosophical, and historical development.

206 Aesthetics (3) \(\qquad\) .Spring A study of the aesthetic dimension of creation, the nature and qualifying function of artistic activity, and artifacts, and an introduction to general aesthetic theory and its history. Prerequisite: CORE 200. [Cross-listed: CORE 316]

281- Service-Learning (1-3) .................................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
301 Ancient Philosophy: The Dawn of Western Thought (3) \(\qquad\)
A study of the pagan roots of the thought patterns that shape our contemporary world. Designed for students interested in the philosophical and historical origins of our modern scientific culture. Readings in primary sources and a paper.

302 Medieval Philosophy: Medieval Roots of Modern and Contemporary Thought (3). \(\qquad\) Spring Even A study of the medieval thought patterns that shaped our contemporary world. Designed for students interested in the history of philosophy, theology, and science. Readings in primary sources and a paper.

303 History of Modern Philosophy (3) \(\qquad\) Fall Even A survey of philosophical problems and movements in the Western world from the end of the 15th century to the middle of the 19th century. Readings in primary sources.

304 History of Contemporary Philosophy (3).
.Spring Odd
A survey of philosophical problems and movements in the Western world from the middle of the 19th century to the present. Readings mainly in primary sources.

309 History of Christian Philosophy (3). .Spring Odd
An analysis of the origin and development of Christian philosophy since the Reformation, in the context of Western thought. Prerequisite: CORE 200. Philosophy majors are advised to complete the history of philosophy sequence before taking Philosophy 309.

310 Systematics of Christian Philosophy (3) Spring Even
In-depth study of selected topics in the systematic philosophy of 20th century Christian philosophers. Specific attention will usually be given to the conceptions of such people as Dooyeweerd, Stoker, Vollenhoven and/or those who follow in their line. Prerequisite: CORE 200.

320 Place, Grace, and Humans in Community (3)
.Fall Odd
A study of the philosophical foundations of social relationships. Possible topics explored include the relationship between groups of people and their physical environment, the possibility of understanding people from different cultures than our own, and whether we can hold other communities to the standards of our own communities. Prerequisite: CORE 200. [Cross-listed: Community Development 320]
333 Philosophy of the Environment (3) ..... Fall Even
A historical and systematic study of the structure and normed character of the various relationships between human beings and their envi-ronment. Prerequisites: CORE 200; junior or senior standing. [Cross-listed: Environmental Studies 333]
Special Topics (3)
348 Each of these courses is designed to be a special interest course utilizing individual instructor strengths, interests, and competencies. Eachtopic will be concerned with material not usually treated to any great extent in regularly scheduled courses.
350 Faith, Emotions, and Being Human (3) ..... Fall EvenA survey of different non-Christian views about the nature, place, and task of man, and a study of the main themes of a Christiantheory of man. Prerequisite: CORE 200. Open to juniors and seniors in all disciplines. [Cross-listed: CORE 326]
391- Individual Studies (1-3)

\(\qquad\)
 Fall, Spring, Summer393 See page 113, Individual Studies

\section*{Physical Science}

201 Perspectives in Physical Science (3). Spring 2016 (Fall Odd beginning 2017-18) Historical, philosophical, and theological perspectives on the physical sciences are discussed and developed. The historical and contemporary roles of Christianity and other influential forces in science are considered. Prominent positions in the philosophy of science are examined. Aspects of the complex interactions between Christian faith and the physical sciences are discussed. Prerequisites: CORE 200; completion of the Core Program natural science requirement with a physical science course (Astronomy, Chemistry, Physics, or CORE 220-229). [Cross-listed: CORE 315]

\section*{Physics}
\begin{tabular}{ll} 
General Major- & \begin{tabular}{l} 
Physics 201, 202, 203, 325, 326, 331, 337; Physical Science 201; Chemistry 109 or 111; Computer Science 110; Mathemat- \\
ics 152, 153, 201, 204; three courses from (but not more than one 200-level mathematics course) Chemistry 333, Com- \\
puter Science 112, Engineering 202, Mathematics 203, 209, 212, 215 and 216, 304, 311, 315, Physics 206, 393.
\end{tabular} \\
General Minor- & \begin{tabular}{l} 
Physics 201, 202, 203; one course from Physics 325, 326, 331, 337. (Note: Mathematics 152, 153 are pre- or corequisites \\
for Physics 201, 202, 203; Mathematics 201, 204 are prerequisites for Physics 325, 326, 337; Chemistry 109 or 111 is a \\
prerequisite for Physics 331.)
\end{tabular}
\end{tabular}

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

201 Introductory Physics I (4) .....................................................................................................................................................................Spring
An introduction to the study of the physical aspect of reality for students intending to continue in the physical sciences and engineering. Linear and rotational kinematics and dynamics, statics, and gravitation will be covered. Three lectures and one laboratory period per week. Pre- or corequisite: Mathematics 152.

202 Introductory Physics II (4). Fall (Not offered Fall 2015) Continuation of Physics 201. Topics covered include fluid, oscillations, waves, heat and thermodynamics, and electricity. Three lectures and one laboratory per week. Prerequisite: Physics 201. Pre- or corequisite: Mathematics 153.

203 Introductory Physics III (4) .Fall 2015 (Spring beginning 2016-17)
Continuation of Physics 202. Topics covered include magnetism, Maxwell's equations, optics, quantum physics, and topics in modern physics. Three lectures and one laboratory per week. Prerequisite: Physics 202.

206 Linear Circuits and Electronics (4) Fall
Assumes a prerequisite knowledge of DC electrical circuits, including the definitions of electrical quantities, circuit elements (sources, resistors, capacitors, inductors), understanding of Kirchhoff's laws and basic concepts in AC circuits such as frequency and phase. Topics in this course include: general linear circuit analysis including Norton's and Thevenin's theorems; superposition; nodal and loop analysis; natural and forced responses in RLC circuits; and sinusoidal steady state analysis. The course also gives introductions to operational amplifier circuits, single stage BJT transistor circuits, and steady-state balanced 3-phase power calculations. The lab includes a formal design project. Prerequisite: Engineering 117 or Physics 202 or Physics 216. Corequisite: Mathematics 204. [Cross-listed: Engineering 220]

215 General Physics I (4)
Fall
An introduction to the study of the physical aspect of reality. Topics covered include mechanics, kinetic theory, heat, and thermodynamics. Three lectures and one laboratory per week.

Continuation of Physics 215. Waves, sound, light, electricity and magnetism, and topics in modern physics, e.g., quantum theory, relativity, physics of the atomic nucleus. Three lectures and one laboratory period per week. Prerequisite: Physics 215.
\(\qquad\)

325 Classical Mechanics (4) Fall Even Lagrangian and Hamiltonian dynamics, general rigid body motion, theory of vibrations and waves, planetary motion, and chaos are studied. Prerequisites: Physics 202; Mathematics 201, 204.

326 Electromagnetic Theory (4)
.Spring Odd
Review of vector calculus; divergence, curl, Gauss' and Stoke's theorems; electro- and magneto-statics; polarization; boundary conditions; Laplace and Poisson equations; magnetic vector potential; energy; Maxwell's equations for time varying fields; wave propagation; and Poynting's theorem. Prerequisites: Physics 203; Mathematics 201, 204. [Cross-listed: Engineering 326]

331 Thermodynamics and Statistical Mechanics (3) Spring Even The study of heat, the laws of thermodynamics, thermodynamic generating functions, Maxwell's relations, kinetic theory, partition functions, and classical and quantum statistics. Three lectures per week. Prerequisites: Chemistry 109 or 111; Mathematics 152, 153; Physics 201, 202, 203. [Cross-listed: Chemistry 331]

337 Modern Physics (4)
.Fall Odd
Developments in modern physics: special relativity, atomic nature of matter and electricity, wave and particle aspects of electrons and light, quantum theory and applications to the study of atomic and molecular structure, condensed matter physics, particle and nuclear physics. Three lectures and one laboratory period per week. Prerequisites: Physics 203; Mathematics 201, 204.

341- Special Topics (3)
...Occasional
348 These courses cover areas in physics not already discussed in other courses. They are special interest courses offered on the basis of student demand and instructor background and availability. The prerequisite(s) will depend on the topics covered.

391- Individual Studies (1-3) ............................................................................................................................................................Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Political Science}

General Major

General Minors-

Political Science:

International Politics: Political Science 201, 210, 312, 370; Economics 321 or Theology 322; one course from History 225, History 319, Political Science 319 or an off-campus international program pre-approved by department. [Note necessary prerequisites for non-departmental courses.]

Public Policy and Administration: Political Science 201, 202, 214, 245, 333; one from Agriculture 290, Communication 228, Criminal Justice 302, Economics 315, Political Science 373, Sociology 216, depending on vocational goals/interests. [Note necessary prerequisites for non-departmental courses.]

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

201 Introduction to Politics (3). ..Spring
An introduction to the political dimension of life from a biblically-oriented perspective. Laying the foundation for political thought and practice, the course will examine scripture, models of how the church relates to culture, and examples of Christian engagement with the political world. It will also provide a brief survey of each of the fields of political science and raise practical questions about political involvement. [Cross-listed: CORE 262]

202 American National Politics (3) Fall
A general introduction to the American political process-its foundations, external influences, institutions, political actors, and policymaking. [Cross-listed: CORE 264]

210 International Relations (3).
An introduction to the contemporary relations among states with a consideration of the issues of war and peace, international organizations, law, integration, political economy, interdependence, and relations among the superpowers.

214 Community Politics (3).
Spring Even
Provides a basic introduction to the political process at the state and municipal level, examining the role of the individual citizen, various groups, and governmental institutions. Attention is given to the special policy needs at the state and community level, their links with the federal government, and the particular character of local politics.

245 Introduction to Public Administration (3)
.Fall Odd
Provides an introduction to the interdisciplinary field of Public Administration. Subjects to be considered include the role of the public service in society, public service values and ethics, accountability and political control of the public service, the budgetary process, organizational forms in government, human resources, principles of public management, and new forms of delivering government services.

281- Service-Learning (1-3)
.Fall, Spring, Summer
283 See page 113, Individual Studies
310 Ancient and Medieval Political Thought (3)
.Fall Even
This course will examine the major ideas and trends in political thought from ancient times through the medieval period up to the early modern era. Philosophers to be studied include Plato, Aristotle, Augustine, Aquinas, Protestant reformers and Machiavelli. Relevance to the politics of our time will be included.

312 Modern Political Thought (3)
.Fall Odd
Major ideas and trends in political thought from the early modern era of the 1600 s to the present will be examined. The first portion of the course will be a survey of major political philosophers. This will set the stage for understanding modern ideologies (populism, libertarianism, conservatism, liberalism, totalitarianism, and other -isms).

319 Comparative Politics (3). .Spring Odd
This course will introduce the field of comparative politics. Nation-states will be compared to one another and to the United States. We will cover a range of topics including history, ethnic groups, political parties, and government structures. The diversity of nations and norms of human government will be examined from a Christian perspective. The course will focus on a specific region or continent of the world. Specific geographic focus to be announced.

322 American Constitutional Law (3) Spring This course focuses on the American Constitution as interpreted by the Supreme Court. Through analysis of landmark cases, this course will study both historical and recent developments in constitutional law with the goal of gaining deeper insight into the way our system works and the reasons for the freedoms we hold dear. Prerequisite: Political Science 202; junior standing; or permission of instructor. [Cross-listed: Criminal Justice 322]

333 Public Policy (3)
.Spring
Provides a general introduction to the public policy process in the United States, including an exploration of the socioeconomic and cultural context, the defining characteristics of the political system, and various phases in the policy process. Special attention is given to selected policy issues such as energy and the environment, criminal justice, poverty, health care, and immigration.

341- Special Topics (3) Occasional
348 Each of these courses is designed to be of special interest and value to students utilizing strengths and skills of individual instructors. Each topic is concerned with material not normally treated in depth in regularly scheduled courses.

370 Global Security Issues (3).......................................................................................................................................................Spring Odd This seminar course examines the challenges facing world security in the twenty-first century, including arms proliferation, ecological threats, economic globalization, ethnic conflict, resource scarcity, political economy, and human rights.

373 Field Experience in Politics (3) Fall, Spring
Students complete a limited field experience in a politics-related area. The experience is aimed at providing exposure to the type of activities in which political science graduates are likely to be involved as professionals. Three hours of course credit is to be based on the completion of 8-10 hours on the site per week plus one hour of work determined in consultation with the supervising member of the political science department for 14 weeks. Deadline for application for the spring semester is November 1 ; deadline for the fall and summer semester is April 1. Prerequisites: political science minor or major; junior or senior standing; approval of the department.

\section*{Psychology}
General Major- Foundation (common to both emphases): Psychology 201, 230, 366, 384; Statistics 131.
Students must select one of the following emphases:
General: \(\quad\) Foundation; seven psychology electives ( 20 or more credits), at least two of which must be at the 300-level.
Clinical: \(\quad\) Foundation; Psychology 224, 370, 371, 376, 378; two 3- or 4-credit psychology electives.
\begin{tabular}{l} 
The department encourages students to either plan an off-campus semester or double major in another program (e.g., Spanish, Business, Commu- \\
nication, Criminal Justice, Youth Ministry). \\
General Minor- \(\quad\) Psychology 201, 204, 224; four psychology electives ( 12 or more credits). \\
For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.
\end{tabular} l
\[
201 \text { Introduction to Psychology (3) ............................................................................................................................................................. Spring } \text {. } \begin{aligned}
& \text { Explaining human behavior is a wonderfully complex task, and this course introduces students to the scientific study of topics such as memory, } \\
& \text { personality, development, social influence, disorders, and others. Along the way, we will use a bio-psycho-social (spiritual) model to frame our } \\
& \text { study and will compare a biblical perspective on being human to several historical perspectives in psychology. } \\
& 204 \text { Lifespan Development (3).......................................................................................................................................................................ll, Spring } \\
& \text { This course studies the growth and maturation of persons throughout the entire lifespan, including examination of physical, cognitive, per- } \\
& \text { sonality, social changes, faith development, and other developmental tasks. This course will also focus on evaluating the theoretical issues } \\
& \text { and descriptive information portraying the growth of an individual from conception through late adulthood. Students will develop a biblical- } \\
& \text { ly-informed vision of who we are as image-bearers of God and what it means to be humans living in God's creation. [Cross-listed: CORE 251] }
\end{aligned}
\]

210 The Social Psychology of Persons (3)
Fall, Spring
We influence and are influenced by culture, social structures, groups, personality, family, and the media, just to name a few. Studying the situational and personal/interpretive factors that influence an individual's social behavior can reveal new insights about the grace and sin at work in our relationships and social situations. Utilizing a biblical perspective on the social psychology of persons, this class will explore how students can function as faithful Christians within all of these situations. [Cross-listed: CORE 252, Sociology 210]

218 Biopsychology (3) Fall This course is an introduction to the physiological/biological processes in human psychology. Primary emphasis will be on relating brain and nervous system functioning with basic psychological processes, such as motivation, emotion, sleeping, learning, memory, and abnormal behavior. In addition, several topical areas will be addressed, including alcohol dependence, drug addiction, homosexuality, physiology of sexual differences, and a Christian perspective on the mind-body-soul dilemma. Prerequisite: Psychology 201 or Biology 203.

224 Psychopathology (3).
.Fall, Spring
This course examines the development and symptoms of emotional and behavioral problems. Topics covered include the clinical assessment of affective disorders, schizophrenia, personality disorders, psychosomatic disorders, anxiety disorders, and the process of adjustment to stress. Attention will be given to personality, social, and religious factors, and their role in mental health. Prerequisite: Psychology 201 or 204 or 210.

230 Research Methods (3). Spring This course introduces students to the research process, including formulation of hypotheses, design, interpretation, and communication of results. The course will include a review of statistical procedures with an emphasis on selection and interpretation of analyses and an introduction to computer data analysis with SPSS. Methods of research are discussed from a reformed, Christian perspective. Students complete research proposals. Pre- or corequisite: Statistics 131. [Cross-listed: Statistics 230]

260 Ethics (1) Spring This seminar course considers the American Psychological Association's published "Ethical Principles of Psychology" and the practical application of those standards in reallife situations. Students also wrestle with how those standards fit with Christian ethics and the complexities of practice in a diverse social context. Prerequisite: Psychology 201.
\begin{tabular}{|c|c|}
\hline & Service-Learning (1-3) .............................................................................................................................Fall, Spring, Summer \\
\hline 283 & See page 113, Individual Studies \\
\hline \(341-\) & Special Topics (3) .................................................................................................................................................Occasional \\
\hline 348 & Each of these courses is designed to be a special interest course utilizing individual instructor strengths and interests. Each topic will be concerned with material not usually treated to any great extent in regularly scheduled courses. \\
\hline \multirow[t]{2}{*}{362} &  \\
\hline & A survey of contemporary research and theory on human cognition and higher mental functioning approached from an informationprocessing perspective. Topics include attention, concept formation, perception, language, mental representation, and problem solving. Students will be challenged to critique both theory and research methods from a reformed, Christian perspective. Two lectures and a twohour lab each week. Prerequisite: junior or senior standing. \\
\hline \multirow[t]{2}{*}{366} & Senior Research Project (4) .............................................................................................................................................................. \\
\hline & This highly interactive course develops students' collaborative, cognitive, and communication skills as they design, conduct, and present psychological research as a service to campus or community groups. Students also consider tensions that face Christian psychologists as they conduct research and enter the profession of psychology. Weekly labs involve opportunities to practice new learning in a just-in-time approach that prepares students for the next step in their own research. Satisfies Core Program writing-intensive requirement. Prerequisite: Psychology 230. \\
\hline \multirow[t]{2}{*}{370} & Helping Skills (3) ......................................................................................................................................................Spring \\
\hline & Class focus is on developing the foundational interpersonal and helping skills required for psychology students interested in human service practice. Topics include active listening, attending, problem-solving, challenging, brainstorming, and group counseling skills. The course is organized around an experiential learning model and students are given feedback on their helping skills. Prerequisites: Psychology 224; junior or senior psychology major or minor. \\
\hline
\end{tabular} juior or senior psychology major or minor.

371- Field Experience in Psychology (3).........................................................................................................................................Fall, Spring
372 The field experience is designed to provide a sample of the type of activities in which psychologists and other human service professionals are engaged; it is not intended to develop competence to the level of a beginning practitioner. Requirements include the completion of eight hours on site per week plus one hour of consultation with psychology department supervisor. Deadline for application for the spring semester is November 1; deadline for the fall (and summer) semester is April 1. Prerequisites: Psychology 224; junior or senior standing; approval of department. Psychology 370 strongly recommended

374 Counseling Theories (3).
.Fall Odd
This introductory course in counseling theory emphasizes the dynamics of the counseling process and characteristics of the counseling relationship in the light of biblical directives concerning human nature, purpose, responsibility, and conduct. Prerequisites: Psychology 224 ; junior or senior standing.

376 Personality Theories (3)...............................................................................................................................................................Fall Even
A comparative analysis of the major theoretical perspectives on personality in the field of psychology, including psychoanalytic, trait, learning, cognitive, humanistic, and existential views. Significant topic areas include disorders of personality, the principles and methods used to assess personality, and a reformed anthropological model of personality. Prerequisites: Psychology 224; junior or senior standing.

378 Psychometrics (2) .............................................................................................................................................................................................................
Course covers basic psychometric theories, principles of test construction, and a survey of common personality, achievement, and intelligence tests. Not open to non-majors. Prerequisite: Psychology 224.

382 Health Psychology (3)............................................................................................................................................................Spring Even Survey course examines the contributions of psychology to the understanding, prevention, and treatment of a variety of health concerns. Topics include stress, pain management, cancer, eating disorders, exercise, and health promotion. Prerequisites: Psychology 218 or 224; junior or senior standing; or permission of instructor.

384 History of Psychology and Worldview (3) Fall
A brief study of the historical development of psychological theories from the ancient world to the present, with extended treatment given to major contemporary movements or perspectives in psychology (such as psychoanalysis, behaviorism, and humanism) and to recent attempts by Christians to "integrate" theology and psychology. Prerequisites: CORE 200; Psychology 201; senior standing. [Cross-listed: CORE 324]

391- Individual Studies (1-3) \(\qquad\) .Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Social Work}

The social work program is built upon a strong liberal arts base and foundational courses in the social sciences. The program is designed to equip students with the requisite knowledge and skills for beginning social work practice. The program is fully accredited by the Council on Social Work Education (1986). Admission to the social work program and completion of the major will require a formal two-part application process. Graduates will receive the bachelor of social work degree.

Admission to the Program Application for admission to the program is required and should be filed during the spring semester of the sophomore year prior to spring break. Forms may be obtained from the chairperson of the Social Work Program Committee. The Social Work Program Committee reviews completed application forms, and admission to the program is based on the following criteria:
- A minimum cumulative GPA of 2.20; completion of at least 39 credits; completion of or current enrollment in CORE 120 or English 100, CORE 140, 150, 160, 180, 212, Psychology 201, Sociology 201, Statistics 131, CORE 200, CORE 110, CORE 266 or Political Science 201, Social Work 200, 215, 216, and 225.
- A written statement of personal interest that indicates an ability to communicate effectively and a commitment to social work as a vocation.
- A letter of reference indicating acceptable physical and psychological health.
- Enrollment in practice courses is limited to students who have been admitted to the program.

Upon review of the application, the committee will take one of the following actions:
- Accepted-meets all criteria
- Accepted conditionally-some criteria require further attention.
- Denied-some or all criteria inadequate.

The student will receive written notice of status.
Admission to the Professional Semester The second part of the application process is an application to participate in the professional semester that includes an intensive field work experience. This application should be filed during the spring semester of the junior year, prior to spring break. Forms may be obtained from the chairperson of the Social Work Program Committee. The Social Work Program Committee will review the application, and admission to the professional semester will be based on the student's meeting the following criteria:
- A minimum cumulative GPA of 2.50 .
- Completion of the required courses as listed under the major.
- Senior standing (anticipated).
- Professional letter of reference indicating acceptable physical, intellectual, and psychological suitability.
- A written statement that demonstrates acceptable communication skills and a mature and knowledgeable interest in social work.
- An interview that demonstrates the student's suitability to social work in terms of interest, knowledge, maturity, personality, and physical and mental health.

Upon review of the application, the committee will take one of the following actions:
- Accepted-meets all criteria.
- Accepted conditionally-some criteria require further attention.
- Denied-some or all criteria inadequate.

The student will receive written notice of status.
The Social Work Program Committee reserves the right to refuse admission or continuation in the program, to any student who does not maintain a 2.50 GPA , or who, in the judgment of the committee, has physical, mental, or personality handicaps that would be detrimental to the student and/or to the welfare of the clients to be served. Academic credit for life experience or previous work experience shall not be given, in whole or in part, in lieu of the field practicum or of the courses in the professional foundation areas.

\section*{Course Requirements, B.S.W. - Social Work Program}

Core Program (see page 23) Social work majors must complete all of the Core Program requirements for students seeking a bachelor's degree, with the following guidelines:
- Social work majors must take CORE 212 as part of the natural science requirement.
- Statistics 131 (Elementary Statistics) meets the quantitative reasoning requirement.
- Spanish is the recommended foreign language.

Major (54 credits)
\begin{tabular}{|c|c|}
\hline Social Wor & Freshman \\
\hline Social Work 215 (3) & Freshman or Sophomore \\
\hline Social Work 216 (3)... & Freshman or Sophomore \\
\hline Social Work 225 (3).. & ..Sophomore \\
\hline Social Work 307 (3).. & .......Junior \\
\hline Social Work 309 (3).. & ..... Junior \\
\hline Social Work 310 (3). & .........Junior \\
\hline
\end{tabular}

\section*{ACADEMIC OFFERINGS: SOCIAL WORK}
Social Work 311 (3) ..... Junior
Social Work 313 (3) ..... Junior
Social Work 304 (3) ..... Senior
Social Work 312 (3) ..... Senior
Social Work 315 (3) ..... Senior
Social Work 325 (3) ..... Senior
Social Work 374* (12) ..... Senior
*Social Work 374 (Field Work Experience) must be taken at Dordt College to receive graduation credit toward the social work major.

200 Introduction to Social Work (3) Fall A survey of the major fields of social work practice and of the problems with which they deal. It will include agency field visits. Overarching this survey will be a concern for the Christian's individual and collective responsibility for the health and welfare of his neighbor and community.

215 Vulnerable Populations (3). Spring
A historical and contemporary analysis of groups considered vulnerable by economic and social standards in American society. Causes, consequences, and implications for society are examined from a biblical view of humankind with an emphasis on social work practice. [Cross-listed: CORE 256, Sociology 215]

216 Diversity and Inequality (3) Fall
Students examine the historical and contemporary factors related to diversity and inequality in North America and increase their appreciation for the contributions of diverse groups in culturally-pluralistic societies. The course assumes that human diversity is created good and explores how to discern that goodness after the Fall. Students assess their own biases in light of course material and increase their sensitivity to diversity. [Cross-listed: CORE 276, Sociology 216]

225 Family System and Practice (3) .Spring This course examines the family system from sociological and practice-oriented viewpoints. Students will evaluate contemporary and traditional views of the family within a Christian perspective. Students will also be introduced to historical and contemporary child and family welfare practice and policy. [Cross-listed: Sociology 225]

281- Service-Learning (1-3). \(\qquad\) Fall, Spring, Summer
283 See page 113, Individual Studies
304 Aging and Social Work (3) Fall
An in-depth examination of the myths and realities of aging in Western culture. Combining sociological theory and practice, this course introduces the student to ageism, physiological and psychological change over time, and theories of social gerontology as well as current issues such as health policy, retirement, the extent of family support, institutionalization, and the aged in the political arena. Will include field work assignments with older persons, guest speakers, and site visits to programs for the aging. Prerequisite: senior standing; or permission of instructor.

307 Methods of Social Science Research (3) Fall
An introduction to the research process as applied to the study of problems/issues in social science. Problem selection, research design, measurement, methods of observation and data collection, data analysis and interpretation, and report writing will be emphasized. A module on microcomputer utilization and the application of descriptive statistics is presented for application in student projects. Prerequisites: Statistics 131; junior or senior standing. [Cross-listed: Sociology 307, Statistics 307]

309 Human Behavior and the Social Environment (3). Spring Presentation of a theoretical and conceptual framework for understanding socio-psycho-biological factors in human development across the life cycle. The focus is on the interrelationship between the individual, family, small groups, and society. Prerequisites: CORE 212, 261; Psychology 201.

310 Fundamentals of Social Work Practice (3)
The focus is on acquiring the foundation interpersonal and problem-solving skills for social work practice. Development of self-awareness and self-knowledge related to growth in skills and a beginning identity as a social work professional will also be emphasized. The course is organized around experiential learning models. Prerequisites: Social Work 200, 215; English 100 or CORE 120; CORE 110.

311 Practice Methods I: Social Work with Groups (3) .Spring
An overview of general systems theory as a basis for developing an integrated social work practice model. Special emphasis will be given to the development of problem-solving skills related to groups found within social work practice with a variety of intervention strategies presented. Prerequisite: Social Work 310.

312 Practice Methods II: Social Work with Organizations and Communities (3)
This course explores social change and organizational theories along with an emphasis on practice at the organizational and community level. A continuation of Social Work 310 and 311 with an emphasis on practice at the agency and community levels. Prerequisites: Social Work 310, 311.

313 Church, State, and Social Welfare (3) .Spring
This course examines the question of which societal sphere is responsible for protecting vulnerable people. The course will follow the historical path of development of the modern social welfare institution, with a particular focus on the Progressive Era and the birth of social work and public administration. Students will examine structure, development, and contemporary response through discussion, research and varied readings on the biblical call to care for our neighbor, charity, social justice, and the normative role of the state and the church. Students will wrestle with this fundamental question: "How must I, acting alone, or in combination with others, behave towards vulnerable people?" Prerequisite: CORE 200. [Cross-listed: CORE 313]

315 Social Welfare Policy (3) ..................................................................................................................................................................... Fall
Students work within a social welfare policy analysis framework that allows their critique and development of recommendations for current and past social welfare policies. The course explores both faith-based and secular attempts at addressing social problems through policy. Two special features within this are the analysis of welfare reform within the United States and political advocacy.

325 Integrative Seminar in Social Work (3) .Spring An opportunity for students to reflect on and integrate the academic and field work experience with a special emphasis on ethical and value dilemmas confronted by the student in the field. (Open only to senior social work majors who have completed the professional semester admission process.) Corequisite: Social Work 374.

374 Field Work Experience (12) .Spring
The field work course is designed to provide the student with the opportunity to apply classroom knowledge, principles, and skills in a community agency under the supervision of a professional social worker. (Open only to senior social work majors who have completed the professional semester admission process.) Corequisite: Social Work 325.

391- Individual Studies (1-3) \(\qquad\) Fall, Spring, Summer
See page 113, Individual Studies

\section*{Sociology}
\begin{tabular}{ll} 
General Minor- & Sociology 201, 210, 215, 216; two courses from Criminal Justice 101, Philosophy 320, Social Work 200, Sociology 202, \\
\(225,305,307\), Statistics 131.
\end{tabular}

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.

\section*{201 Sociology and Social Justice (3)}

Includes an examination of culture, socialization, social structure, group behavior, and inequalities (of class, race, and gender), as well as identifying and analyzing the pressing problems in our world that requires an understanding of social change that occurs through collective action and social movements. Through an exploration of predominant sociological theories, students are able to contrast those with a biblical worldview that challenges them to articulate how a reformed Christian understanding of creation (and norms) sin, redemption, and consummation may be used to positively affect social interaction, organizations, and institutions. [Cross-listed: CORE 261]

202 Criminology (3). Fall
A theory-based course that studies crime causation, typologies of crime, and crime control. It looks at both historical and modern theories, including those that look to individual, social, and structural causes. It also broadly analyzes the guardianship and enforcement functions of the criminal justice system. Students will be able to identify criminology theories in modern media and engage in theory-building exercises. Prerequisite: sophomore standing. [Cross-listed: Criminal Justice 202]

210 The Social Psychology of Persons (3) Fall, Spring We influence and are influenced by culture, social structures, groups, personality, family, and the media, just to name a few. Studying the situational and personal/interpretive factors that influence an individual's social behavior can reveal new insights about the grace and sin at work in our relationships and social situations. Utilizing a biblical perspective on the social psychology of persons, this class will explore how students can function as faithful Christians within all of these situations. [Cross-listed: CORE 252, Psychology 210]

215 Vulnerable Populations (3). Spring
A historical and contemporary analysis of groups considered vulnerable by economic and social standards in American society. Causes, consequences, and implications for society are examined from a biblical view of humankind with an emphasis on social work practice. [Cross-listed: CORE 256, Social Work 215]
216 Diversity and Inequality (3) Fall
Students examine the historical and contemporary factors related to diversity and inequality in North America and increase their appreciation for the contributions of diverse groups in culturally-pluralistic societies. The course assumes that human diversity is created good and explores how to discern that goodness after the Fall. Students assess their own biases in light of course material and increase their sensitivity to diversity. [Cross-listed: CORE 276, Social Work 216]
225 Family System and Practice (3) ..........................................................................................................................................................Spring
This course examines the family system from sociological and practice-oriented viewpoints. Students will evaluate contemporary and traditional views of the family within a Christian perspective. Students will also be introduced to historical and contemporary child and family welfare practice and policy. [Cross-listed: Social Work 225]
281- Service-Learning (1-3)................................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
305 Victimology and Family Violence (3) .Spring Odd The victimology section will look at the various harms suffered due to crime, how victims interact with various agencies and players, public reaction to victims, the victims' rights movement, and how to better serve the victims of crime through our criminal justice system. Students will also identify and describe the problem, measure its true dimensions, and review evidence and hypotheses of victimologists. In the Family Violence portion, theories on family violence will be analyzed, the consequences of family victimization will be considered, as well as how to recognize child abuse and understand the dynamics of partner violence. Students will analyze legal and enforcement responses, consider how institutional responses can prevent or lessen revictimization, and look to how a Restorative Justice model can alleviate some of the harms of victimization. Prerequisite: junior standing; or permission of instructor. [Cross-listed: Criminal Justice 305]
307 Methods of Social Science Research (3)
Fall
An introduction to the research process as applied to the study of problems/issues in social science. Problem selection, research design, measurement, methods of observation and data collection, data analysis and interpretation, and report writing will be emphasized. A module on microcomputer utilization and the application of descriptive statistics is presented for application in student projects. Prerequisites: Statistics 131; junior or senior standing. [Cross-listed: Social Work 307, Statistics 307]
341- Special Topics (3) \(\qquad\) Occasional
348 Each of these courses is designed to be a special interest course utilizing individual instructor strengths and interests. Each topic will be concerned with material not usually treated to any great extent in regularly scheduled courses.
391- Individual Studies (1-3)
Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Spanish}
\begin{tabular}{ll} 
General Major- & \begin{tabular}{l} 
Spanish 201, 202, 204, 206, 300, 301, 302, 304; Linguistics 201; one course from Spanish 102, 207, 208, 341-348, 393; \\
four semesters of Spanish conversation 251-258; six credits in study-abroad courses are required.
\end{tabular} \\
General Minor- & \begin{tabular}{l} 
Spanish 201, 202, 204, 206, 300 or 302, 301; Linguistics 201; three semesters of Spanish conversation 251-258. Three \\
credits in study-abroad courses are required.
\end{tabular} \\
For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.
\end{tabular}

101 Elementary Spanish I (4) Fall
An introductory study of the language and culture of Spanish-speaking people. Emphasis on the acquisition of oral and written language skills in a communicative context combined with the study of Hispanic cultures. The course includes a weekly session with advanced students or native speakers to practice oral skills.

102 Elementary Spanish II (3)
Continuation of Spanish 101. The course includes a weekly session with advanced students or native speakers to practice oral skills. Prerequisite: Spanish 101 or our on-line placement test score of 296-360.

201 Intermediate Spanish I (3). Fall
An intermediate course that continues the study of the language in a communicative context with considerable emphasis upon precision and expansion of linguistic skills. Some attention given to the nature of language. Emphasis on the development of cultural understanding and sensitivity, with a study of the people's values and beliefs as expressed in their economic, political, and religious systems. Comparison of this culture with our culture in the light of the cultural mandate. Prerequisite: Spanish 102 or our on-line placement test score of 361-439.

Intermediate Spanish II (3)
Spring
This is a second intermediate Spanish course that provides students with continued opportunities to strengthen their language skills, to develop their cultural competency, and to reinforce their knowledge and use of grammatical structures. Its focus is on communicating in meaningful contexts to further develop and consolidate students' speaking, listening, reading, and writing skills. This course will be conducted in Spanish. Prerequisite: Spanish 201 or our on-line placement test score of 440 and up.

204 Literary and Cultural Readings (3)
Fall
Designed to strengthen speaking, listening, reading and writing skills in Spanish through a variety of readings, to develop the ability to value diverse communities and an appreciation for Hispanic cultures and literature. This course will be conducted in Spanish. Prerequisite: Spanish 201 or 202 or equivalent; or permission of instructor.

206 Hispanic Cultures and Civilizations (3) .................................................................................................................................................................... Designed to give insight into Hispanic cultures and civilizations, and a more global understanding of the issues and challenges that the Spanish-speaking world has faced and is facing. Listening and speaking abilities will be enhanced through classroom activities. The course will be conducted in Spanish. Prerequisite: Spanish 201 or 202 or equivalent; or permission of instructor.
207 World Literature I (3) ..... Fall Odd
See English 207.
\(\qquad\)See English 208.
251- Conversation (1) ..... Fall, Spring
258 Designed to give the student practice in listening and speaking. The content of the courses will be altered each year. The class will meet two timeseach week. (Graded on a pass/no record basis.) Prerequisite: Spanish 201; or permission of instructor.
281- Service-Learning (1-3) .Fall, Spring, Summer complex grammatical structures that tend to present difficulties for learners of Spanish as a foreign or second language. The course will be conducted in Spanish. Prerequisite: Spanish 201, 202 or equivalent; permission of instructor.

301 Applied Linguistics and Spanish Phonology (3)
An in-depth study of specific areas of linguistics, such as neurolinguistics (brain and language), psycholinguistics (language acquisition), computational linguistics (computer processing and language), and language change (how language has changed and still changes). Onethird of the course is geared at the special interests of the students. Spanish students will study the phonology (the study of sound patterns) of Spanish and learn how to teach Spanish pronunciation. Prerequisites: Linguistics 201; Spanish 201 or 202.

301 L Spanish Phonology (1)
.Fall Odd
Students will study the phonology (the study of sound patterns) of Spanish and learn how to teach Spanish pronunciation. This one-credit lab is meant for students who are also registered for Linguistics 301 because they want to graduate with both a TESL and a Spanish education endorsement. The course should be taken concurrently with Linguistics 301. Prerequisites: Linguistics 201; Spanish 201 or 202.

302 Advanced Spanish Grammar and Composition II (3)
Fall Even
Continues an in-depth study and practice of Spanish grammar and a rigorous component in writing. The course will be conducted in Spanish. Prerequisite: Spanish 201, 202 or equivalent; permission of instructor.

304 Hispanic Literature (3) Spring Even An understanding and a historical introduction to Hispanic narrative, poetry, and drama. A study of each genre's origins, major developments, and figurative language will engage students in analytical exercises. An overview of periods, movements, significant authors, and literary currents in Spain and Latin America. This course will be conducted in Spanish. Prerequisites: Spanish 300 or 302.

341- Special Topics (3) ....................................................................................................................................................................Occasional
348 The topics for these courses will be chosen from areas of literature, advanced language studies, culture, or teaching methods. The offering of the course as well as the content will reflect student interest and need. Prerequisite: departmental approval.

391- Individual Studies (1-3) ............................................................................................................................................Fall, Spring, Summer
393 See page 113, Individual Studies

\section*{Statistics}

Applied Statistics Minor- Statistics 131 or 132, 201 or 202, 215, 216, 371; Mathematics 151 or 152; English 305 or Computer Science 111; one course from Statistics 230, 307, 371-374.

\section*{131 Introductory Statistics (4)} Fall, Spring
An introductory course in statistical techniques and methods and their application to a variety of fields. Topics include data analysis, design of experiments, and statistical inference including confidence intervals and hypothesis testing. Exposure to statistical software and a substantive student project are also part of this course. Prerequisite: an ACT mathematics score of 22 or higher or satisfactory completion of Mathematics 100 or 118 .

132 Accelerated Introductory Statistics (2). Spring This course covers the same content and learning objectives as Statistics 131 but in half the time. Offered first half of spring semester. Credit will not be given for both Statistics 131 and 132. Prerequisite: Mathematics 151 or 152 or significant prior experience with statistics.

148 Introduction to Financial Mathematics (2).
This course covers topics in basic interest theory including interest, annuities, and amortization as well as basic concepts in derivatives markets including stocks, bonds, forwards, puts, calls, spreads, and hedges. Course content is taught using a guided discovery approach focusing on student conceptual understanding. The course also includes discussion of Christian perspectives on investments and risk management. Offered first half of fall semester. Prerequisite: an ACT mathematics score of 22 or higher or satisfactory completion of Mathematics 100 or 118; strong algebra skills. [Cross-listed: Mathematics 148]

201 Applied Statistical Models (2)
Spring
This course surveys multivariable design and statistical methods used across various disciplines and seen in peer-reviewed research. Topics include multiple and non-linear regression, general linear models, multivariable statistical models, and multifactor experimental design. Emphasis is on active-learning using group activities and projects, critiquing research, and statistical software. Offered second half of spring semester. Credit will not be given for Statistics 201 and 202. Prerequisite: Statistics 131 or 132.

202 Econometrics (3) .Spring This course covers all of the topics in Statistics 201 and topics commonly used in economic applications of statistics: time series and forecasting, linear time series models, moving average, autoregressive and ARIMA models, data analysis and forecasting with time series models and forecasting errors. Meets at the same times as Statistics 201 plus two additional hours per week. Offered second half of spring semester. Credit will not be given for both Statistics 201 and 202. Prerequisite: Statistics 131 or 132. [Cross-listed: Economics 232]

215 Introduction to Univariate Probability (2) .Spring Odd An introduction to the theory and techniques of general probability and common univariate probability distributions. Topics include but are not limited to basic set theory, introductory probability rules (independence, combinatorials, conditionals, Bayes theorem, etc.), common univariate distributions (e.g., binomial and normal) and expected value/variance. Offered first half of the semester. Pre- or corequisite: Mathematics 152. [Cross-listed: Mathematics 215]

216 Introduction to Multivariate Probability (2) \(\qquad\) Spring Odd
An introduction to multivariate probability distributions. Topics include but are not limited to joint probability density functions, conditional and marginal probability distributions, moment generating functions, covariance and correlations, transformations and linear combinations of independent random variables. Offered second half of the semester. Prerequisite: Statistics 215. Pre- or corequisite: Mathematics 152. [Cross-listed: Mathematics 216]

218 Intermediate Financial Mathematics (2) Fall
This course covers intermediate topics in financial mathematics including progressing annuities, force of interest, duration, convexity, immunization, swaps, forwards and other topics on Actuarial Exam FM/2 that are not covered in Statistics 148 . Offered second half of fall semester. Prerequisite: Statistics 148. Pre- or corequisite: Mathematics 151 or 152. [Cross-listed: Mathematics 218]

230 Research Methods (3).
.Spring
This course introduces students to the research process, including formulation of hypotheses, design, interpretation, and communication of results. The course will include a review of statistical procedures with an emphasis on selection and interpretation of analyses and an introduction to computer data analysis with SPSS. Methods of research are discussed from a reformed, Christian perspective. Students complete research proposals. Pre- or corequisite: Statistics 131. [Cross-listed: Psychology 230]

307 Methods of Social Science Research (3) Fall
An introduction to the research process as applied to the study of problems/issues in social science. Problem selection, research design, measurement, methods of observation and data collection, data analysis and interpretation, and report writing will be emphasized. A mod
ule on microcomputer utilization and the application of descriptive statistics is presented for application in student projects. Prerequisites: Statistics 131; junior or senior standing. [Cross-listed: Social Work 307, Sociology 307]

351 Actuarial Financial Economics (3)
Fall Even This course covers the theoretical basis of actuarial models and the application of those models to insurance and other financial risks. This course also serves as preparation for Actuarial Exam MFE. Prerequisites: Statistics 148, 215, 216, 218.

352 Actuarial Life Contingencies (3) \(\qquad\)
This course covers the theoretical basis of life contingent actuarial models and the application of those models to insurance and other financial risks. This course also serves as preparation for SOA Actuarial Exam MLC and CAS Actuarial Exam LC. Prerequisites: Statistics 148, 215, 216, 218.

371- Data Analysis Internship (3) \(\qquad\) Fall, Spring, Summer
374 A semester-long research experience that involves a significant use of multivariable statistics in an applied research project. Students will identify and work with a primary faculty mentor to develop a project proposal prior to enrolling; students will also be supervised by a statistics professor. Part of the course will include an oral and written presentation of results. The course will be offered as needed and is run as an individual study. May be repeated for up to 12 credits. Permission of instructor required. Prerequisite: Statistics 201 or 202.

\section*{Theatre Arts}
\begin{tabular}{ll} 
General Major- & Foundation (common to all emphases): Theatre Arts 102, 103, 203, 365, 366, 371, 380, 382, 384, 386; one course from \\
Theatre Arts 204, 207, 208, 307; one course from Theatre Arts 233, 234, 235, 236; two enrollments in HHP 014; a mini- \\
mum of seven credits from Theatre Arts 001. Prerequisite for Theatre Arts 386 is junior status. Students should enroll \\
in the course in the fall of their junior year. Theatre Arts majors are required to complete the theatre subsection of Core \\
160.
\end{tabular}

Students must select one of the following emphases:

Acting/Directing: Foundation; Theatre Arts 204, 205, 207, 208, 307; English 210, 312. Theatre Arts 390 recommended.
Design and Technical Theatre: Foundation; Art 201, 202, 225; one course from Art 207, 208, 209, 210; Theatre Arts 233, 234, 235, 236. Individual study in design or technical theatre recommended.

Drama Ministry: Foundation; Theatre Arts 262; Theology 231, 331, 351; Theology 254 or 332.
Dramaturgy/Playwriting: Foundation; English 301 or 302; English 312; Philosophy 206; Theatre Arts 262; one course from Art 207, 208, 209, 210, English 333, History 280.

Theatre Management: Foundation; Business Administration 201, 205, 206, 207; Communication 260; CORE 266 or Economics 202. Business Administration 100, English 305, and Theatre Arts 391-393 recommended.
\begin{tabular}{ll} 
General Minor- & Theatre Arts 102, 103, 382; one course from Theatre Arts 204, 207, 208, 307; one course from Theatre Arts 233, 234, \\
235, 236; Theatre Arts 203 or 262; one course from English 312, Theatre Arts 365, 366; a minimum of four credits from \\
Theatre Arts 001. Theatre Arts 371 recommended.
\end{tabular}

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program.
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001 Theatre Practicum (1-3)

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``` Fall, Spring
Students apply for one to three hours of academic credit for work on a theatre production. Registration for credit is required in the semester in which the project is to be produced. In addition to rehearsal, performance, or technical work, regular meetings and some written work are required.
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102 Fundamentals of Acting (3) Fall Odd
This course introduces students to the fundamental principles of acting. They will gain knowledge and develop skills in character analysis, basic internal and external acting methods, characterization, listening, relaxation, concentration, and improvisation. May not be taken on a pass/fail basis.

103 Stagecraft (3) Fall An introduction to the theory and practice of stage lighting and set construction techniques, including introductory electrical and color theory.

203 Scenic Design (3) .Spring Odd
An introduction to scenic design that includes design theory, design process, and the technical skills related to scenic design. May not be taken on a pass/fail basis. Prerequisite: Theatre Arts 103.

204 Voice and Movement (1.5) .........................................................................................................................................................Spring Odd
In this course students apply voice, diction, ensemble, and movement fundamentals toward the development of clear stage speech and dialect creation, sensory awareness, ensemble performance, character movement, body control, and basic juggling and tumbling skills.

205 Acting for the Camera (3)
Spring Odd
The basic techniques of acting for the camera and strategies for adapting stage-acting methods for the camera. Students will perform on-camera in class and have the opportunity to perfect their craft through critical analysis of their recorded performances. Prerequisite: Theatre Arts 102; or permission of instructor.

207 Improvisation for Theatre and Life (1.5)
.Spring Odd
This class explores the history and techniques of improvisation from the renaissance through contemporary times. It challenges the student to grow in spontaneity and confidence in their creative capacities in all parts of life.

208 Stage Combat (1.5)
Spring Even
An introduction to stage combat focusing on the technique for safely creating and performing stage violence. This course covers hand-tohand combat and sword fighting methods for the stage.

233 Sound Design and Technologies (1.5).
Spring Even
Students will explore the physics and technology of sound. We will develop a basic understanding of how sound works in our day to day lives, discuss the technologies and tools used to control sound, and develop an understanding of how we might use this knowledge to create artistic, theatrical experiences.

234 Lighting Design and Technologies (1.5).
.Spring Even
Students will become aware of some theories about and engage the realities of lighting design for the theatre. The hands-on nature of the curriculum will enable students to feel comfortable with, and be employable in an introductory position in the field of lighting design.

235 Makeup Design (1.5)
Fall Even
This course covers the materials, principles, and practices of makeup design and application for theatre and film.
236 Costume Design (1.5)
.Fall Even
The purpose of this course is to introduce the student to costume design. Over the course of the semester the student will learn how to develop a costume design from the analysis of the script to the final color rendering. Students will gain a basic understanding of costume history, script analysis, design theory, and basic rendering skills. These goals will be achieved through assigned readings from the text, assigned plays, research projects, drawing assignments, in class projects, and class presentations.

262 Educational Theatre in the Classroom and Beyond (3).
.Fall Odd
An introduction to informal dramatics for the classroom, youth theatre programs, and other applications in fields such as youth ministry, social work, and psychology. Students interested in elementary, middle or high school teaching are encouraged to enroll. Emphasis is on dramatic activity requiring minimal equipment and facilities. Field experience required in area schools, churches, or after-school programs. Prerequisite: admission to the Teacher Preparation Program; or permission of instructor. [Cross-listed: Education 262]

281- Service-Learning (1-3)..............................................................................................................................................Fall, Spring, Summer
283 See page 113, Individual Studies
307 Acting Styles (1.5) ......................................................................................................................................................................Spring Even This course could be described as an integration of body, mind, and voice techniques for the purpose of developing a way to conventionalized period acting. Students will research period styles, practice script analysis, learn characterization techniques, participate in physical and vocal acting exercises, and apply this work in stylistic scene and monologue work. Period/Styles covered in this course could include the following: Greek, Shakespearean, Comedy of Manners, Farce.

341- Special Topics (3) $\qquad$ .Occasional
348 These courses are special-interest courses utilizing instructor strengths and student interests. Each topic will be concerned with material not usually treated to any great extent in regularly scheduled courses.

365 Theatre History and Literature I: Greek through Neo-Classicism (3).
Spring Even Students engage the literature of the theatre from Sophocles to Moliere as an introduction to the rise, decline, and rebirth of Western drama, as well as some forms of Eastern drama. May not be taken on a pass/fail basis. Not recommended for freshman students. Satisfies Core Program writing-intensive requirement. and various forms of postmodernism. May not be taken on a pass/fail basis. Not recommended for freshman students.

371 Applied Theatre: Capstone Production Project (3)
Fall, Spring
The course content (directing, design, acting, technical theatre, producing, or playwriting) will be designed for each individual in consultation with a departmental supervisor. Work on the project will be done in two or three semesters with enrollment in the final semester. May not be taken on a pass/fail basis. Open only to majors and minors.

380 Playwriting and Playscript Analysis (3).......................................................................................................................................Fall Even
This course provides basic instruction in writing dramatic scenes and a one-act play. It also provides advanced instruction in script analysis: theories, genre, style, methods of construction, and the implications for performance. Students will read what working playwrights say about their craft, read about and discuss the writing of plays of different styles, and workshop their script(s) in community.

382 Directing (3).
.Fall Odd
A study of some of the problems that are part of the directing process and of the techniques for shaping that process. Students will focus on staging techniques and apply their learning in the direction of a short one-act play. May not be taken on a pass/fail basis. Prerequisites: Theatre Arts major; junior or senior standing; and/or permission of instructor.

384 Devised Theatre (3). Spring Even A study of the theory and practice of theatre and drama used for human reflection or to raise awareness and affect social change. Students will learn to apply the core principles of facilitating, scripting, and play-building to real world contexts. Topics of study will depend on the focus of the course in a particular semester. The course may culminate in an original, devised performance piece that could be toured in local communities. May be repeated but may not count as more than one three-credit course towards the major or minor.

386 Professional Practices (1) .....................................................................................................................................................................Fall This course introduces theatre majors to such things as resume writing, portfolio creation, and interviewing and auditioning skills. Prerequisite: junior or senior standing.

391- Individual Studies (1-3) $\qquad$ Fall, Spring, Summer
393 See page 113, Individual Studies

## Theology

| General Major- | Foundation (common to all emphases): CORE 150; Theology 110, 111, 221, 324, 361. |
| :--- | :--- |
| Students must select one of the following emphases: |  | Biblical Studies: | Foundation; Theology 231; two courses from Theology 211-214; two courses from Theology 215-217; one additional |
| :--- |
| course from Theology 211-217; one course from Theology 254, 322, 323, 393, Greek 211. Strongly recommended for |
| those hoping to pursue further studies: Greek 111, 112, 211, 212, 241-244, Theology 253, 300-level philosophy courses, |
| History 220, modern foreign languages. |

## General Minors-

Bible Education:
Theology 222, 254, 322 or 323; two courses from Theology 211-214; two courses from Theology 215-217.

## ACADEMIC OFFERINGS: THEOLOGY

Biblical Studies: Theology 110; two courses from Theology 211-214; two courses from Theology 215-217; Theology 221 or 324; one additional course from Theology 211-217, 254, 361, 393, Greek 111, 112, 211.

Historical/Systematic: Theology 221, 222; one course from Theology 211-217; two courses from Theology 321, 323, 324; two courses from Philosophy 301-304, 309.

Missions and Evangelism: Theology 221, 231, 331, 332; three courses from Theology 322, 323, 324, 375, History 306.
Admission to the Youth Ministries Program: Formal application for admission to the youth ministries program is required. Application should be made to the theology department at the end of the Discernment of Ministry (Theology 111) course, which should be taken in the freshman or sophomore year. Application will be based on the various statements developed in this course.

The following are requirements for admission to the youth ministry program:

- Completed application form
- Minimum GPA of 2.00 in all theology courses to date
- Students may apply to the youth ministry program after their first academic year and must apply before their final academic year.

Once each year the members of the department will discuss each student's fitness to continue in the youth ministry program. A majority of the department members must approve a student to graduate with a youth ministry major. If a student's initial application is not accepted, the student may take additional courses for the major and reapply after each semester or may appeal to the division dean to have three professors outside of the theology department evaluate his/her application and supporting materials.

For descriptions of EDUCATION majors, minors, fields of specialization, and teaching endorsements, see pages 78-93, Teacher Preparation Program. For a description of the Worship Arts minor, see page 143.

110 Biblical Studies Methods (3) Fall
This course introduces interpretive approaches and practices for reading the Bible using a Reformed hermeneutical method. Students will become familiar with major resources for biblical study, interpret a variety of Old Testament and New Testament texts, and discuss the manner in which the varied contexts (e.g., social, cultural, theological) of the biblical world and contemporary readers inform exegetical study. This is a foundational course in the theology program to develop skills in biblical studies and theological writing. Open to all students seeking to develop their reading, understanding, and application of Scripture.

111 Spiritual Formation (3) ....................................................................................................................................................................Spring What does the Christian life of faith and discipleship look like? This course will explore the history and practice of the spiritual disciplines by studying the faith lives of important figures in the history of Christianity. The purpose of this exploration is to help students see how God is at work in the history of the church so they can begin to articulate their experience of God's work in their own lives. This is a foundational course in the theology program. It is open to any student interested in learning more about spirituality and discipleship.

211 Old Testament: Pentateuch (3).
Fall, every fourth year
This course will introduce students to detailed study of the content, themes, and purposes of the Torah (Genesis, Exodus, Leviticus, Numbers, and Deuteronomy), as well as to the scholarly tools commonly used to interpret them. Students will practice close readings of portions of the Pentateuch and discuss the ways that the varied contexts in which these texts are read (e.g., canonical, theological) inform meaningful interpretation within the context of a historical-redemptive approach to scripture.

212 Old Testament: Prophets (3) Fall, every fourth year This course will introduce students to detailed study of the content, themes, and purposes of the Prophetic books (Isaiah, Jeremiah, Ezekiel, Daniel, and the Book of the Twelve), as well as to the scholarly tools commonly used to interpret them. Students will practice close readings of portions of the Prophets and discuss the ways that the varied contexts in which these texts are read (e.g., canonical, theological) inform meaningful interpretation within the context of a historical-redemptive approach to scripture.

213 Old Testament: Wisdom and Writings (3)
Fall, every fourth year This course will introduce students to detailed study of the content, themes, and purposes of the Wisdom books and Writings (Job, Psalms, Proverbs, Song of Songs, Ruth, Ecclesiastes, Lamentations, and Esther), as well as to the scholarly tools commonly used to interpret them. Students will practice close readings of portions of these writings and discuss the ways that the varied contexts in which these texts are read (e.g., canonical, theological) inform meaningful interpretation within the context of a historical-redemptive approach to scripture.

214 Old Testament: Historical Books (3) Fall, every fourth year This course will introduce students to detailed study of the content, themes, and purposes of the Historical Books (Joshua, Judges, 1-2 Samuel, 1-2 Kings, 1-2 Chronicles, Ezra, and Nehemiah; as well as 1-2 Maccabees), as well as to the scholarly tools commonly used to interpret them. Students will practice close readings of portions of these books and discuss the ways that the varied contexts in which these texts are read (e.g., canonical, theological) inform meaningful interpretation within the context of a historical-redemptive approach to scripture.

This course will introduce students to detailed study of the content, themes, and purposes of each of the four canonical Gospels, as well as to the scholarly tools commonly used to interpret them. Students will practice close readings of portions of the Gospels and discuss the ways that the varied contexts in which these texts are read (e.g., canonical, theological) inform meaningful interpretation within the context of a historical-redemptive approach to scripture.

216 New Testament: Epistles (3)
Spring, every third year This course will introduce students to detailed study of the content, themes, and purposes of Paul's letters (Romans, 1-2 Corinthians, Galatians, Ephesians, Philippians, Colossians, 1-2 Thessalonians, 1-2 Timothy, Titus, Philemon) and the General Epistles (Hebrews, James, 1-2 Peter, 1-2-3 John, Jude), as well as to the scholarly tools commonly used to interpret them. Students will practice close readings of portions of the letters and discuss the ways that the varied contexts in which these texts are read (e.g., canonical, theological) inform meaningful interpretation within the context of a historical-redemptive approach to scripture.

217 New Testament: Acts, Revelation (3) $\qquad$ .Spring, every third year This course will introduce students to detailed study of the content, themes, and purposes of Acts and Revelation, as well as to the scholarly tools commonly used to interpret them. Students will practice close readings of portions of Acts and Revelation and discuss the ways that the varied contexts in which these texts are read (e.g., canonical, theological) inform meaningful interpretation within the context of a historical-redemptive approach to scripture.

221 History of Christian Confessions (3). Spring
A study of the major creeds and confessions that the Church has written over the past two thousand years as it has responded to challenges and defined its understanding of the Christian faith. The course emphasizes the history surrounding the writing of these confessions and their significance for today.

222 Theology of the Reformation (3). Fall
This course focuses on Luther and Calvin against their historical and theological backgrounds in order to understand the foundation of Protestant theology and thought. By studying both their classical works and secondary sources, students will critically understand how the fundamental doctrines began to be shaped in the 16th century and how they developed in the centuries following. Theological method, spirituality, and culture of the Reformation theology will be discussed along with the landmark doctrines concerning Scripture, sin and grace, salvation, and church. Prerequisites: CORE 150, 200. [Cross-listed: CORE 318]

231 Foundations of Missions and Evangelism (3). Fall
A study of the Bible's teaching about the mission of the people of God and how the traditions of the Christian Church have understood missions and evangelism. The course also examines and assesses current trends and issues in missions, explores the contextualization of the gospel in the Western Church, and considers the impact of the global Church on our understanding of missions.

241 Foundations of Worship (3) .......................................................................................................................................................Fall Even
A study of the Scriptural foundation for worship and of the components of worship. There will be a brief study of historic patterns of worship, leading to the preparation of liturgies and the practice of worship-leading skills. [Cross-listed: Worship Arts 241]

242 Worship in Contemporary Context (3)
Fall Odd
This course engages the theological and cultural issues that shape contemporary worship practices of the church. By exploring diverse worship practices students will develop a deeper understanding of the relationship between Christian worship and culture. The focus on this course is to help students cultivate discernment as they lead worship in a variety of cultural contexts. [Cross-listed: Worship Arts 242]

253 Theology and Popular Culture (3)
.Spring Odd
The purpose of this course is to explore the relationship between Christian faith and culture. We will begin by establishing a Biblical perspective with a Reformed emphasis upon the "creation, fall, redemption, new creation" paradigm, as well as a brief historical survey of how Christians have engaged cultural issues. An important part of this course will be the exploration of "cultural theory" and "popular culture" in dialogue with a reformed biblical perspective. Finally we will engage the "so what?" question: What does this mean for the Christian community as we seek to live faithfully in the world? Prerequisite: CORE 200. [Cross-listed: CORE 319]

254 Teaching Bible to Adolescents (3).
Fall Odd Discussion of a Reformed approach to the teaching of Bible. This course includes the study of the nature of faith, adolescent faith development, Reformed hermeneutics, pedagogical skills for teaching the Scriptures, and methods and content of the secondary (7-12) Bible curriculum. The course will cover theological and pedagogical foundations and the practical content of teaching Bible. Prerequisite: Education 202 or 203; or permission of instructor. [Cross-listed: Education 261]

281- Service-Learning (1-3) $\qquad$ Fall, Spring, Summer
283 See page 113, Individual Studies
321 Contemporary Theology (3). .Fall Even By surveying important theological trends from the turn of the 20th century to the present, students will critically engage major theological

## ACADEMIC OFFERINGS: THEOLOGY

issues that shape Christian thought and life today. The course will discuss neo-orthodoxy, neo-liberalism, fundamentalism, the Charismatic movement, and modern evangelicalism; global issues such as liberation theology and interfaith dialogue; and postmodern issues and public theology. Prerequisite: CORE 150.

322 Engaging World Religions (3) .................................................................................................................................................Spring Even An exploration of how the major world religions function in human life. Major topics will include systems of religious belief and worldview, sacred literature, symbols, rituals, and practices. Students will explore diverse religious practices by bringing the biblical and theological perspective of the Reformed tradition into dialogue with different religious systems. The goal of this exploration is to use the tools of the Reformed tradition to gain a practical understanding of different religions in order to engage people of different faiths with the gospel.

323 Christian Mind and Heart (3) ................................................................................................................................................Spring Even Students will deal with the issues of how they imagine, think, experience, and live in the world where Christ's redemption is present but not yet complete. We will discuss the biblical foundation for Reformed thinking, the responsibility of humans to fulfill our mission as image-bearers in God's world, and the development of a Reformed world and life view for actual Christian thinking and living. Students will explore significant issues of Christian life through personal and group projects that engage particular aspects of their major studies or life vision. Prerequisite: CORE 200. [Cross-listed: CORE 314]

324 Reformed Theology (3)
Fall Odd
This course examines the major thinkers, creeds, and theological development of Reformed theology. Beginning with John Calvin, we will discuss its late 19th century development in the Netherlands and its modern expressions in North America and other places in the world. Students will engage significant issues and documents of Reformed theology in the churches and broader Christian community.

331 History of Missions and Evangelism (3) .Spring Odd This course considers the views of missions and evangelism that have developed in the various traditions of the Christian Church over the past two thousand years. Students will assess the missiological and evangelical understandings and practices of the different ecclesiastical traditions in the past and the present and develop a more thoroughly biblical view of the Church and its mission in the modern world. Prerequisite: Theology 231.

332 Current Issues and Strategies in Missions and Evangelism (3)
Spring Even
An in-depth study of the contemporary issues that the Church faces in understanding and carrying out its mission in the 21st century. A selection of current issues will be made from such topics as contextualization, the gospel and Western culture; urban missions; the relation of verbal proclamation to social involvement; foundations for missions; missions to un-reached, resistant, and nominally Christian peoples; and tent-making ministries. Prerequisite: Theology 231.

333 Psalms, Hymns, and Spiritual Songs (3)
Spring Even
An overview of the role of music in worship, worship music repertoire, and information and skills needed to plan music for worship. [Crosslisted: Music 209, Worship Arts 333]

334 Elements of Praxis in Worship (3)..........................................................................................................................................Spring Odd The focus on this course is to equip students with the practical insight needed to lead worship in a contemporary context. This includes learning how to use equipment, how to organize and lead a practice, cultivating a stage presence, how to develop excellent sound, and incorporating a diversity of instruments into worship. Prerequisite: Theology 241, 242. [Cross-listed: Worship Arts 334]

337 ECHO Agricultural Conference (1)
.Spring

Participation in the major agricultural development conference held the second week in December in Fort Myers, Florida. The Educational Concerns Hunger Organization hosts this international conference, which focuses on agricultural development, cross-cultural issues, and community development. Prerequisite: sophomore standing. [Cross-listed: Agriculture 337]

341- Special Topics (3) $\qquad$ .Occasional
348 These courses will cover a different topic each semester and each is designed to be a special interest course utilizing individual instructor strengths, interests, and competencies. Each course will cover a topic in theology not usually treated in-depth in regularly scheduled courses.

351 The Church in Cultural Context (3)
.Fall Odd
Study of a Reformed approach to ministry in the context of the congregation and contemporary culture. The course includes the study of a Reformed philosophy of ministry, the nature of the church, cultural dynamics that affect both ministry and the church, and the character of leadership that takes all these factors into account.

352 Leadership for Discipleship and Formation (3). $\qquad$ Spring Even
This course explores leadership from a reformational perspective by focusing on such issues as discipleship, character formation, working with teams, conflict resolution, leading small groups, and communication. The purpose of this course is to help students cultivate the insight and discernment needed to develop a biblical approach to leadership in dialogue with the fields of communication, organizational theory, and Christian ethics. Business Administration 215 recommended.

Senior Seminar (3) Spring
This is the capstone course for Theology majors, but it is open to minors also. This course is to help those who have studied in theology consolidate their theological education to focus on contemporary issues in the church and develop the biblical message to address contemporary life in effective public address. [Cross-listed: Worship Arts 361]

371- Ministry Practicum (3-9) Fall, Spring, Summer
373 Students will engage in field experience in a ministry related area under the guidance of both a site and a department supervisor. Three hours of course credit will be based on 126 hours of involvement. This course requires instructor permission prior to pre-registration.

374 Youthfront Internship (12)
Fall, Spring
A 12 credit internship in partnership with Youthfront School of Formation in which students will spend the semester living and working in the Argentine neighborhood of Kansas City, Kansas. This internship will include coursework/reflection as well as practical ministry experience within an urban context. Prerequisites: CORE 150; Theology 111; junior or senior standing; or permission of department.

375 Practicum in Missions/Evangelism (1-3) $\qquad$ Fall, Spring, Summer A department-approved practicum in the field of missions or evangelism. This may take place during the academic year or during the summer break. Work equivalent to a three-hour course is required.

391- Individual Studies (1-3) $\qquad$ Fall, Spring, Summer
393 See page 113, Individual Studies

## Worship Arts

| General Major- | Business Administration 215; Communication 222; Theology 110, 111, 221, 351, 352; Worship Arts 241, 242, 333, 334, <br> 361 ; a minimum of six credits from: Worship Arts 018, 281, Music 010-020, 240-270, Music, Theology, or Worship Arts <br> Internship. |
| :--- | :--- |
| Students must select one of the following concentrations: |  | Art 201, 202; one course from Art 207, 208, 209, 210; one course from Art 216, 218, 225, 228, 230, 240.

018 Worship Arts Ensemble Participant (.5) $\qquad$ .Fall, Spring A worship music ensemble involving weekly participation, reflection, and coaching.

241 Foundations of Worship (3) .Fall Even
A study of the Scriptural foundation for worship and of the components of worship. There will be a brief study of historic patterns of worship, leading to the preparation of liturgies and the practice of worship-leading skills. [Cross-listed: Theology 241]

242 Worship in Contemporary Context (3)
.Fall Odd
This course engages the theological and cultural issues that shape contemporary worship practices of the church. By exploring diverse worship practices students will develop a deeper understanding of the relationship between Christian worship and culture. The focus on this course is to help students cultivate discernment as they lead worship in a variety of cultural contexts. [Cross-listed: Theology 242]

281 Worship Arts Ensemble Leader (1) Fall, Spring Develop knowledge, confidence, skill, and character as a worship leader and participant through leadership of a worship music ensemble.

333 Psalms, Hymns, and Spiritual Songs (3) $\qquad$ Spring Even An overview of the role of music in worship, worship music repertoire, and information and skills needed to plan music for worship. [Crosslisted: Music 209, Theology 333]

334 Elements of Praxis in Worship (3). Spring Odd The focus on this course is to equip students with the practical insight needed to lead worship in a contemporary context. This includes learning how to use equipment, how to organize and lead a practice, cultivating a stage presence, how to develop excellent sound, and incorporating a diversity of instruments into worship. Prerequisite: Worship Arts 241, 242. [Cross-listed: Theology 334]

361 Senior Seminar (3)

## .Spring

This is the capstone course for Theology majors, but it is open to minors also. This course is to help those who have studied in theology consolidate their theological education to focus on contemporary issues in the church and develop the biblical message to address contemporary life in effective public address. [Cross-listed: Theology 361]

391- Individual Studies (1-3) $\qquad$ Fall, Spring, Summer
393 See page 113, Individual Studies

## College Personnel

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## OTHER ADMINISTRATIVE STAFF

Adam Adams (2015), Director of Global Education; B.A., Truman State University; M.A., Union University; M.Div., Golden Gate Baptist Theological Seminary
Aaron Baart (2010), Dean of Chapel; B.A., Dordt College; M.Div., Regent College
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Susan Blom (2003), Theatre Arts Seamstress; B.A., Dordt College
James Bolkema (1983), KDCR Music Director; B.A., Dordt College
James Bos (1985), Registrar, Director of Institutional Research; B.A., Dordt College; M.S., Mankato State University
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Brenda Postma (2014), Accountant; B.A., Central College
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Gregory Youngblood (2012), Head Football Coach; B.A., Bates College; B.A., College of Santa Fe; M.S., University of New Mexico
Jeffrey Zomer (2009), Director of Recreation Center, Head Softball Coach; B.A., Dordt College

## Faculty

## FACULTY EMERITI

Charles Adams, Ph.D., Professor of Engineering, Dean of Natural Sciences, Emeritus 2010
Pamela Adams, Ph.D., Professor of Education, Emerita 2010
Joanne Alberda, M.S., Assistant Professor of Art, Emerita 2001
Willis Alberda, Ph.D., Professor of Mathematics, Emeritus 2001
Syne Altena, Ph.D., Professor of Health, Physical Education, and Recreation, Emeritus 2007
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Edwin Geels, Ph.D., Professor of Chemistry, Emeritus 2011
Christian Goedhart, Ph.D., Professor of Agriculture, Emeritus 2015
Merlyn Gulker, M.A., Associate Professor of Business Administration, Emeritus 1998
David Helmstetter, M.S.W., Assistant Professor of Social Work, Emeritus 2003
Robert Hilbelink, Ph.D., Professor of Accounting, Emeritus 2012
Richard Hodgson, Th.M., Associate Professor of Planetary Sciences, Emeritus 2002
Louise Hulst, M.A., Associate Director of the Library, Emerita 1992
Calvin Jongsma, Ph.D., Professor of Mathematics, Emeritus 2013

Arnold Koekkoek, M.A., Associate Professor of History, Emeritus 1998
John Kok, Ph.D., Dean for Research and Scholarship, Director of Andreas Center, Professor of Philosophy, Emeritus 2014
James Koldenhoven, Ph.D., Professor of Theatre Arts, Dean of the Humanities, Emeritus 1997
James Mahaffy, Ph.D., Professor of Biology, Emeritus 2014
Rockne McCarthy, Ph.D., Vice President for Academic Affairs, Emeritus 2008
Aaldert Mennega, Ph.D., Professor of Biology, Emeritus 2000
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James Schaap, Ph.D., Professor of English, Emeritus 2012
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John Struyk, Ph.D., Professor of Foreign Language, Emeritus 2000
Marlin Vanden Bosch, Ph.D., Professor of English, Emeritus 2000
Marian Vander Ark, Ed.D., Professor of Education, Emerita 1993
Richard Vander Berg, M.S., Director of Athletics, Assistant Professor of Health, Physical Education, and Recreation, Emeritus 2009
Daryl Vander Kooi, Ed.D., Professor of Communication, Emeritus 2002
Dennis Vander Plaats, Ed.D., Professor of Education, Emeritus 2013
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Louis Van Dyke, D.A.T., Professor of History, Emeritus 1994
Lorna Van Gilst, Ph.D., Professor of English, Emerita 2007
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Carl Zylstra, Ph.D., College President, Emeritus 2012
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| :--- | :--- | :--- |
| Office of Admissions | $722-6080$ | Admissions, catalogs, application forms |
| Office of Business Affairs | $722-6010$ | Payment of accounts, general business matters |
| Office of College Advancement | $722-6020$ | Alumni relations, career development services, church relations, development, <br> grants, news bureau, publications, public relations |
| Dean of Chapel | $722-6079$ | Pastoral counseling, spiritual activities |
| Office of Financial Aid | $722-6087$ | Scholarships, grants, loans, student employment |
| Office of Human Resources | $722-6011$ | Hiring, benefits, government compliance, immigration |
| Office of the Provost | $722-6333$ | Academic matters, curriculum, and instruction |
| Office of the Registrar | $722-6030$ | Student records, GPA |
| Office of Student Services | $722-6070$ | Housing, health and welfare of students, student organizations |
| Campus Health Services | $722-6990$ | Student health issues, immunizations, personal counseling |

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