

# **UNION COLLEGE BULLETIN**

**2008-2010**

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## PRESIDENT'S MESSAGE

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Union College holds long traditions: strong undergraduate education; encouraging altruistic service in local communities and foreign countries; and an intimate, supportive and spiritually-focused campus environment. School spirit marks this campus, and the alumni reflect that spirit in their enthusiastic support of their alma mater.

Union College welcomes students in 2008-2010 by building on these traditional strengths. Professors, not graduate students, teach our courses and offer personalized attention. Students who value personal connections appreciate smaller classes, and those who seek practical education value Union's growing emphasis on active, experiential learning. Beyond these academic qualities, I invite our new students to Experience the Spirit by joining a campus community whose student leaders encourage a vibrant spiritual journey and opportunities for a meaningful social life. Find out why Union students smile so much!

Students who attend Union College benefit from valuable experiences tied to the college's practical approach to learning and its location in a major city. Most academic programs involve an internship or practicum, many of them in Lincoln, the state capital. George Stone School, located on campus, provides education majors with the opportunity to practice teaching in a small-school setting. Drama productions; scientific research; a leadership program that trains students for assuming important roles in the future; and travels abroad for first-hand experiences of other cultures, history, and the natural world mark just a few of the ways that Union College offers real-life learning adventures.

By combining long-held traditions with progressive ideas, Union provides an educational experience to meet students' needs in an ever-changing world.



David Smith  
President

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**CONTACT INFORMATION**

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Enrollment Services	402.486.2504
	Toll free in the United States 800.228.4600
	Fax 402.486.2566
Admissions	ucenroll@ucollege.edu
International Students	international@ucollege.edu
Student Financial Services	402.486.2505
	Toll free in the United States 800.228.4600
	Fax 402.486.2592
	sfs@ucollege.edu
Cashier	402.486.2130
Non-current Loans	402.486.2133
Academic Dean	402.486.2501
Campus Ministries	402.486.2508
Career Planning and Testing	402.486.2540
Student Employment	
Information Systems (computer and telephone services)	402.486.2511
	Fax 402.486.2895
Library	402.486.2514
Student Housing	
Vice President for Student Services	402.486.2507
Men's Residence Halls	402.486.2533
Women's Residence Halls	402.486.2535
College-owned Apartments	402.486.2502
Student Records/Academic Information	402.486.2529
Transcript Request Information	402.486.2509
	Fax 402.486.2584
Teaching Learning Center	402.486.2506

**ACADEMIC YEAR CALENDAR 2008-2010**

For more complete listings, refer to the academic year calendar in the Schedule of Classes.

<b>2008</b>	<b>2009</b>	
May 13	May 12	Summer Classes Begin
Aug 29	Aug 31	Last Day to Complete Summer Graduation Requirements
Aug. 14-17	Aug. 13-16	New Student Orientation
Aug. 18	Aug. 17	Registration for Fall Semester
Aug. 19	Aug. 18	First Semester Classes Begin
Aug. 20-26	Aug. 19-25	Late Registration Period (\$50 Fee)
Aug. 26	Aug. 25	Last Day to Delete/Add/Audit Classes
Sept. 1	Sept. 7	Labor Day Holiday
Oct. 16-19	Oct. 15-18	Midterm Break
Oct. 29	Oct. 28	Last Day to Drop a Class/Receive a "W"
Nov 4	Nov. 3	Preregistration for Second Semester Begins
Nov. 24-30	Nov. 23-29	Thanksgiving Vacation
Dec. 15-17	Dec. 14-16	First Semester Examinations
Dec. 19	Dec. 18	Last Day to Complete December Graduation Requirements
<b>2009</b>	<b>2010</b>	
Jan. 5	Jan. 4	Registration for Spring Semester
Jan. 6	Jan. 5	Classes Begin with Monday Classes on Tuesday
Jan. 7-13	Jan. 6-12	Late Registration Period (\$50 Fee)
Jan. 13	Jan. 12	Last Day to Delete/Add/Audit Classes
Jan. 19	Jan. 18	Martin Luther King Day Holiday
Feb. 12-15	Feb. 11-14	Winter Break
Mar. 12	Mar. 11	Last Day to Drop a Class/Receive a "W"
Mar. 13-22	Mar. 12-21	Spring Vacation
Mar. 24	Mar. 23	Preregistration for Fall Semester Begins
May 4-6	May 3-5	Second Semester Examinations
May 8-10	May 7-9	Commencement Weekend

# MISSION AND VISION

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## MISSION

Inspired by faith in Jesus Christ and dedicated to a personal student-focused community, Union College empowers students for learning, service and leadership.

## VISION

Union College will be recognized as a passionately Christ-centered community where students excel in learning, gain professional competence, and prepare to influence the future with faith, confidence and integrity.

## VALUES

Core values are not expressions of who we want to become, but who we are. At Union College, our beliefs serve as the soil from which our vision and mission flower.

We believe...

- Life is best experienced by serving God, applying a biblical world-view, and sharing God's love with others. We commit time and energy to developing personal relationships with God that are genuine, creative and intentional.
- Learning is a life-long process rather than a graduation destination. We model continual learning and active exploration by uniting theory and practice and connecting the new with the familiar.
- Service is our privilege. We foster a culture of volunteerism, gladly reaching out to our local and global communities because we enjoy sharing and honor the example of servant leadership set for us by Jesus Christ.
- Union College has been entrusted by God with stewardship of His resources. We respect our students and care for our employees while maximizing our financial and physical capital in service of our mission.
- Mentoring provides support for development of the whole person. We inspire each other to achieve, believe, and make wise choices.
- We best learn and develop in the context of a diverse global community. We seek opportunities to strengthen our network of alumni, employees, families, church and business friends while welcoming new collaborative connections.

**DESCRIPTION**

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Founded in 1891, Union College is a four-year coeducational college offering programs leading to baccalaureate and associate degrees in arts and sciences, professional fields and a Master of Physician Assistant Studies. Selected programs are also available in cooperation with local universities and colleges. Owned and operated by the Mid-America Union Conference of the Seventh-day Adventist Church, Union is located in Lincoln, Nebraska, the state capital.

For more than a century, education at Union College has focused on the whole life of the student. The result is an academic style that includes small courses taught by professors, an emphasis on experiential learning, and active student leadership in spiritual and social activities. This emphasis draws hundreds of students each year from more than 40 states and nearly 30 countries. The college welcomes students whose ethnic and cultural backgrounds broaden campus perspectives.

Union's faculty and staff believe that God is the Creator, Sustainer and Savior of humankind; that human beings are the crowning act of His creation and that each person is imbued with intelligence and assets which should be dedicated to serving and glorifying God. The ultimate aim is that students will accept the assurance of eternal salvation offered through Jesus Christ and that this acceptance will foster a desire to honor God, to serve others, and to spread the good news of God's love.

## ACCREDITATION

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### **Union College Is Accredited by**

The Higher Learning Commission of the  
North Central Association  
30 North LaSalle Street, Suite 2400  
Chicago, IL 60602-2504 312.263.0456.

Accrediting Association of Seventh-day  
Adventist Schools, Colleges, and  
Universities, Incorporated

Accreditation Review Commission on  
Education for the Physician Assistant,  
Inc.

Commission on Collegiate Nursing  
Education

Council on Social Work Education

National Council for the Accreditation of  
Teacher Education

### **Union College Is a Member of**

American Alliance for Health, Physical  
Education, Recreation and Dance

American Association of Colleges for  
Teacher Education

American Association of Colleges of  
Nursing

American Association of Collegiate  
Registrars and Admissions Officers

American College of Sports Medicine

Adventist Library Information Cooperative  
Association of Independent Colleges and  
Universities of Nebraska

Association of Physician Assistant  
Programs

National Collegiate Honors Council

National Council on Social Work  
Education

NEBASE (Regional OCLC Consortium)

Nebraska Academy of Sciences

Nebraska Association of Colleges for  
Teacher Education

Nebraska Association of Collegiate  
Registrars and Admissions Officers

Nebraska Association of Student Financial  
Aid

Nebraska Council on Teacher Education

Nebraska Independent College Foundation

North Central Association of Colleges and  
Schools

SIRSI Midwest Users' Group

United States Gymnastics Federation

Upper Midwest Honors Council

### **Union College Is Approved by**

Nebraska Department of Education

Nebraska State Board of Nursing



# ADMISSION TO THE COLLEGE

Union College welcomes applicants who desire to study in a Christian environment and who demonstrate good moral character and social adjustment. Previous academic experience is a large factor in admission decisions, but not the only one. Most successful applicants earned average or better grades, ranked in the upper half of their class, and demonstrate average or better test scores. Signing a college application commits applicants to living in harmony with college regulations. All students are expected to respect the moral, ethical and doctrinal teachings of the Bible as understood by the Seventh-day Adventist Church.

## ADMISSION REQUIREMENTS

- A completed application for admission. Available from the Office of Admissions and on the Union College Web site [www.ucollege.edu](http://www.ucollege.edu), the application may be submitted as early as the first semester of the senior year of high school or its equivalent.
- Graduation from high school, completion of a comparable home school curriculum or GED (see below).
- A minimum grade point average (GPA) of 2.50 on a 4-point scale.
- A minimum ACT composite score of 18 with minimum English and math scores of 17, or combined SAT score of 870 (old SAT) or 1290 (new SAT). The ACT test may be taken on campus. For arrangements, contact the Career Center at 402.486.2540 or [career@ucollege.edu](mailto:career@ucollege.edu).
- Transcripts of all high schools and colleges or universities attended.
- Official transcripts should be mailed directly from the registrar of the institution attended to the Union College Admissions Office. Official final high school transcripts with date of graduation and transcripts of all previous

college coursework are required prior to enrollment.

- Home school students should submit official transcripts from any schools attended and/or a home school transcript along with an explanation of the home school curriculum with date of completion.
- Applicants who have not graduated from high school or completed a home school curriculum must submit minimum standard test scores of 450 on each of the five tests of the General Educational Development (GED) or an average score of 500 for all tests.
- Students whose native language is not English must either furnish proof of a current English proficiency with a standardized test taken within the past two years, or enter the ESL program (see the humanities section). The college accepts the following examinations and minimum scores:  
TOEFL: Internet-based (IBT), 80;  
International Paper-based, 550;  
computer-based, 213.  
IELTS 6.0  
SAT I (Critical Reading) 430  
ACT (English) 17
- Any applicant who has successfully completed 24 semester hours or equivalent from an accredited institution with a minimum GPA of 2.00 is considered a transfer student with a standing as a sophomore or above. Submission of ACT scores is not required for transfer student admission.

## CONDITIONAL ADMISSION

Applicants who do not meet the published admission requirements will be considered by the Admissions Committee, which may request further statements and other evidence indicating the likelihood of the applicant's success. If accepted by

committee action, the applicant may be required to enroll in an appropriate fee-based program offered through the Teaching Learning Center.

**Freshman Development** is designed to help new freshmen transition into college with the support of an academic coach.

Students on Freshman Development are required to

- sign a Freshman Development agreement and complete its requirements;
- limit their class loads to a maximum of 13 hours;
- complete the course TLMC 100 Bridge: Building Connections;
- pay an additional fee for Freshman Development.

**Academic Success and Advising Program (ASAP)** is designed to help students on academic probation.

The students are required to

- sign an ASAP agreement and complete its requirements;
- limit their class loads to a maximum of 12 hours;
- pay an additional fee for ASAP.

### **RECOMMENDED HIGH SCHOOL CURRICULUM**

A college preparatory diploma represents a better preparation for college than does a general diploma.

The recommendations below are provided as guidance for a quality preparation for college, not as admission requirements.

- English - four years of English is highly recommended, besides speech and drama courses.
- Mathematics - two years of algebra and one year of geometry. Precalculus/advanced math is required to enter some math and science courses.
- Science - two years of biology, chemistry or physics; one year of each is advantageous for science majors.

- Social Sciences - two years of history, or one year of history and another of a social science.
- Computer - a computer applications course which provides basic competency in word-processing, spreadsheets, presentations and file management.

### **NON-DEGREE STUDENTS**

Students from other institutions and individuals not seeking a degree from Union College may take six hours or less of classes per semester without meeting the regular admission requirements.

### **FAFSA FORMS**

Though not required for admission, prospective students seeking federal financial assistance should complete the Free Application for Federal Student Aid (FAFSA). Applications are available through high school guidance counselors, the Union College Office of Financial Services or at [www.fafsa.ed.gov](http://www.fafsa.ed.gov).

### **GUARANTEED EDUCATION PROGRAM**

As evidence of its commitment to academic quality, Union College created the Guaranteed Education program. It offers Union graduates who desire a degree in an additional discipline the opportunity to take courses toward that major with no charge for tuition.

### **ELIGIBILITY**

The Guaranteed Education program permits alumni who earned at least 64 semester hours in residence to receive free tuition between two years and six years after graduation. Some restrictions apply:

- Free tuition is limited to the major and contextual requirements for one additional major only. It does not apply to elective courses or general education courses.
- Most majors are covered under the program, but the professional phases of the Health Sciences, Nursing, and

International Rescue and Relief programs are not.

- Because personalized and general studies degrees are not college-designed programs, they are not eligible.
- Students paying full tuition will receive priority for registration in limited-enrollment classes and laboratory sections.

### **BACCALAUREATE BONUS PROGRAM**

Union's Baccalaureate Bonus program offers qualified students who hold a bachelor's degree or its equivalent the opportunity to take additional undergraduate classes or to complete another undergraduate degree at half the current tuition rate. Students electing to enter the program may carry either full- or part-time class loads. Applicants for the program must meet the academic and citizenship expectations of regular students, and submit an official transcript verifying completion of the previous degree.

The Baccalaureate Bonus program's half-tuition rate applies only to fall and spring semester courses. Discounts are applied to tuition only and do not apply to laboratory fees, the professional phases of the Health Sciences program, the Nursing program or the International Rescue and Relief program, clinical course work, off-campus courses (including those in affiliated programs), individual lessons, ESL program and/or courses, general fees, club fees, cafeteria charges, room rent and other miscellaneous charges.

Baccalaureate Bonus tuition discounts will be granted to international students only if the student holds a baccalaureate equivalent degree that meets the English language requirement through a satisfactory TOEFL or other score.

Baccalaureate Bonus program students may enroll in any course subject to the conditions outlined in this policy but must recognize that first-time undergraduate students paying full tuition will receive

priority for enrollment in limited-enrollment classes and laboratory sections.

### **FINANCIAL CONSIDERATIONS**

#### **Guaranteed Education and**

#### **Baccalaureate Bonus**

- Applicants to both the Guaranteed Education and Baccalaureate Bonus programs must have paid in full any previous accounts held with Union College.
- Students in the programs are not eligible to receive any other Union College scholarships or financial awards.
- Expenses that the student remains responsible for include summer school courses, laboratory fees, clinical course work, off-campus courses, individual lessons, general fees, ASB fees, club fees and all other miscellaneous charges.
- On-campus employment is not readily available to students in either program. However, based on campus employment needs, the Student Finance Committee may approve a student's application for employment.
- Students pursuing degrees assume full financial responsibility for classes that must be taken at other colleges or universities.
- Other restrictions may apply. Contact Enrollment and Student Financial Services.

### **ADMISSION OF INTERNATIONAL STUDENTS**

For information about application, passports and visas, employment, English language proficiency, finances, scholarships, housing and insurance, please contact the Director of Admissions, Union College, 3800 South 48<sup>th</sup> Street, Lincoln, Nebraska 68506 USA, or go to [www.ucollege.edu/international](http://www.ucollege.edu/international).

### **ENGLISH PROFICIENCY FOR INTERNATIONAL STUDENTS**

To be admitted as a regular student regardless of citizenship, applicants must

meet the requirements outlined in the Admission Requirements.

### **FEDERAL FINANCIAL AID FOR CERTAIN INTERNATIONAL ESL STUDENTS**

Some non-native English speaking student may be eligible for Federal financial aid from the U.S. government. Eligible students include

- American Samoans;
- students with refugee or asylum visa status; and
- permanent residents.

Students who are eligible for federal financial aid and whose written TOEFL score is between 475 and 550 may request admission as a regular student rather than an ESL student. The request must be submitted in writing prior to the last day to register for classes or upon achieving a TOEFL score of 475.

If accepted, the applicant will be admitted on provisional status for up to two semesters and must maintain good academic performance. If the student declares a major, an advisor will be provided for regular courses. In addition, an ESL advisor must approve registration for the ESL courses. The student must enroll in at least six semester hours of regular courses from a list of approved courses 200 level and below as well as at least three semester hours of ESL courses. Courses not on the list may be approved by the division chair of the discipline involved. Tuition will be charged at the regular rate.

To remain at Union College after two semesters, the student must either pass TOEFL with a minimum score of 550 or be reinstated as an ESL-only student and will not qualify for any federal or state financial aid.

### **NONDISCRIMINATION POLICY**

Union College was established by the Seventh-day Adventist Church as an integral part of its teaching ministry. It is committed to equal education and employment opportunities for men and women of all races and does not discriminate on the basis of disability, age, sex, race, color, or national origin in its educational and admissions policies, financial affairs, employment programs, student life and services or any college-administered programs.

To this end, the college is in compliance with Titles VI and VII of the Civil Rights Act of 1964 as amended and in substantial compliance with Title IX of the Education Amendments of 1972 (34 CFR 106 et seq.), and does not discriminate against any employees or applicants for employment because they are disabled veterans or veterans of the Vietnam era.

The college reserves constitutional and statutory rights as a religious institution and employer to give preference to Seventh-day Adventists in admissions and employment, including but not limited to 42 USC Secs. 2000e-1, 2000e-2; Sec. 6-15 of Federal Executive Order 11246; 41 DFR Sec. 60-1.5(5); 20 USC Sec. 1681(a)(3); 106.21, 106.31, 106.39, 106.40, 106.51, and 106.57; and the First Amendment to the United States Constitution.

The college believes that Title IX regulations are subject to constitutional guarantees against unreasonable entanglement without infringements on the religious teachings and practices of the Seventh-day Adventist Church. The college expects students and employees to uphold biblical principles of morality and deportment as interpreted by the Seventh-day Adventist Church. Union College claims exemptions from the provision of Title IX set forth in 34 CFR Secs. 106.21, 106.31, 106.39, 106.40, 106.51 and 106.5.

# ACADEMIC INFORMATION

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To fulfill its primary mission of undergraduate education, Union College offers programs leading to associate and bachelor's degrees in a number of fields. In addition, responding to health-care needs the college has inaugurated its first graduate program, in physician assistant studies. Specialized academic information for that degree is found in the physician assistant section of the Division of Health Sciences.

Academic policies are written to assist students in completing their academic programs as efficiently as possible and to support them in managing their course work from semester to semester.

## INTEGRITY OF SCHOLARSHIP

The Union College community values high academic and ethical standards. Inspired by both Christian and scholarly principles, its students and faculty commit to exhibit integrity and truth in all academic endeavors, including the preparation of class assignments and taking examinations. Scholarship thus carries the broad expectation that no unauthorized aids were used. Specific dishonesty includes cheating on assignments or examinations, plagiarism (copying of others' published works), excessive revision by someone other than the student, unauthorized collaboration, forgery of signatures, fabrication or unauthorized use of data, and the misuse of copyrighted material.

In addition to following personal honesty in creating their own work, students should refrain from suspicious behavior or allowing others to use their works in a dishonest manner. When allegations of academic dishonesty are substantiated beyond reasonable doubt, the consequences may range from receipt of a failing grade to dismissal from the course or even expulsion from the college.

Course syllabi spell out specific consequences of dishonesty in individual courses. If a student and professor are unable to resolve an issue involving standards of integrity, the incident should be reported to the division chair and if necessary the Academic Dean.

## ACADEMIC ADVISING

Beyond completing the courses appropriate for a major, graduation involves meeting a variety of requirements and deadlines. To assist in meeting these challenges, each Union College student is appointed a faculty advisor. However, ultimate responsibility for planning the academic program and fulfilling graduation requirements lies with the student. Besides guiding course selection and general academic planning, advisors assist a student's orientation to campus life and discuss broader personal concerns.

## ACADEMIC COURSE LOAD

Union College follows the semester system. Courses are expressed in semester hours, each hour consisting of one 50-minute class period per week and traditionally two hours of study outside class. A laboratory period of two and one-half to three hours equals one class period.

An average of 16 hours per semester over four years achieves the 128 hours needed for a bachelor's degree. However, the minimum full-time course load of 12 hours meets the requirements of financial aid, immigration, social security and veterans authorities. To provide greater study time per course, students in the freshmen development and academic probation programs are limited to 12, and the recommended freshman maximum is 16 hours. Registration for more than 17 hours requires permission of the academic advisor and the division chair.

**COURSE NUMBERS**

Courses numbered at the 100-level are typically structured for first-year students; the numbering system continues upward to the 500- and 600 levels for masters courses. Completion of ENGL 112 College Writing II and sophomore class standing are required before enrolling in 300- or 400-level courses. Courses numbered below 100 are considered developmental and do not count toward the 128 semester hours required for graduation. Similarly, grades in these courses do not affect a student's grade point average (GPA).

**CLASSIFICATION OF STUDENTS**

- Freshman—entrance requirements satisfied
- Sophomore—at least 24 semester hours
- Junior—at least 56 semester hours
- Senior—at least 92 semester hours
- Graduate—enrolled in master's degree courses
- Postgraduate—possess a baccalaureate degree but enrolled in undergraduate courses
- ESL—enrolled in English as a Second Language program
- Other—special students, guest students and others not seeking a degree enrolled for six hours or less

**ATTENDANCE**

Students are expected to attend all classes for which they are registered. Individual instructors are responsible for the manner in which this regulation is enforced and the degree to which work can be made up. The particular attendance policy for any course will be announced by the instructor in the course syllabus. This may include a failing grade for absence from 20% or more class periods.

**NEW STUDENT ORIENTATION**

Orientation for new students occurs before the fall semester registration and as

announced second semester. This program is designed to introduce students to the services and resources available at Union College. Information regarding academic planning, financial planning and spiritual and social programs is available to assist the transition to college. Upperclass peer advisors involved in the program help with registration and in the transition to college life.

**REGISTRATION**

Returning students and incoming students are encouraged to reserve courses during the preregistration periods designated in the college calendar. However, registration must be completed during the registration period. At the end of the second day of classes, course reservations are canceled for students who have not initiated registration or made other arrangements.

Students are officially registered when all items have been completed.

**LATE REGISTRATION**

A late fee will be applied to students beginning registration after the first day of classes. Late registrants may need to register for a reduced course load and will be required to make up work. Registration is allowed only during the first six days of a semester or two days of a summer course.

**CHANGES IN REGISTRATION DROP/ADD**

Students may add courses already in progress or drop courses from their schedule during the first six days of classes only. After this period students' permanent academic records are established. Changes in registration during summer school can be made through the end of the second day of classes without affecting the students' permanent records. Students considering changing courses should attend the new course as soon as possible.

**WITHDRAWAL**

Courses dropped up to five class days following the distribution of midterm grades will receive a designation of W for withdrawal. After that date, courses may not be dropped and letter grades will be assigned. Withdrawal deadlines vary for courses that do not meet for a full semester, and are set by the Records Office.

**ADMINISTRATIVE WITHDRAWAL**

An administrative withdrawal from a course or courses may be granted by the college administration for students in emergency or unexpected circumstances. Administrative withdrawals are not to avoid failing grades for circumstances that should have been addressed by a regular withdrawal. A student who receives an administrative withdrawal in all courses must reapply for admission to the college, including demonstrating evidence of recovery from the circumstances.

W is recorded which does not affect the GPA. The student should contact Student Financial Services .

**AUDITING COURSES**

Students may register to audit a course on a space-available basis by permission of the instructor and the division chair. Certain courses may not be audited. No credit is given for courses audited, and the tuition is reduced. Those wishing to change from credit to audit, or audit to credit, must do so during the first six days of classes each semester or the first two days of summer sessions.

**COURSE CANCELLATION**

While every attempt is made to provide classes as scheduled, the college reserves the right to cancel any course as it deems necessary. This may include courses with insufficient enrollment.

**TRANSFER CREDITS**

A student transferring from another regionally accredited college or university

may receive credit for course work elsewhere subject to the following conditions:

- an official transcript must be received directly from the other institution;
- credits must have a grade of “C-” (1.67) or above;
- remedial, developmental, or basic skills courses are not transferable;
- vocational and technical courses are not automatically transferred, but such courses may be accepted if approved by the appropriate academic division and the vice president for academic administration;
- transfer credits from two-year institutions are limited (56 hours must be taken from a four-year institution).

When transfer courses are not clearly comparable to Union College requirements, substitution of transfer credits for general education, major, contextual, or minor courses must receive the approval of the appropriate division chair. The student is expected to provide evidence such as course description or syllabus.

**COURSE TRANSFERS FROM UNACCREDITED INSTITUTIONS**

While courses from unaccredited institutions do not generally transfer, on occasion credits may be transferred if validated by the division chairs of both the discipline and the student’s major. Provision of a syllabus and other materials may be essential for the evaluation. It is the student’s responsibility to file academic petition forms in the Records Office documenting this validation. Credit is not granted for non-college sponsored instruction or life experiences.

**CREDIT BY EXAMINATION**

Three types of examinations are available for credit. Whether credit will be granted is based on the student’s performance level, and may not exceed credit granted for similar classes offered at Union College.

Credit will not be given if a student has taken the course or enrolled in the course beyond the first week of the semester, nor if the student has taken a more advanced course in the same subject with or without credit. Exams may be taken only once.

Applications for CLEP and Proficiency Examinations are available in the Records Office.

#### **ADVANCED PLACEMENT (AP)**

Advanced Placement (AP) credit may be granted to students who have passed the College Board AP Examinations with a score of 4 or higher. Language and Composition will substitute for College Writing I. Literature and Composition will substitute for literature. No AP course may substitute for College Writing II.

#### **COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)**

Union College grants credit for CLEP subject exams as recommended by the Commission on Educational Credit of the American Council on Education. Requests for CLEP tests should be directed to the Career Center. A recording fee is charged for credits earned on CLEP examinations (see fees).

- Prior to taking any CLEP examinations, permission must be obtained from the director of records.
- CLEP examinations are not available for students after the completion of 56 hours of college credit.
- Credit by CLEP examination is not available for College Writing I and II.
- Credit by CLEP is not available for the general tests in Humanities, Social Sciences and History, or Natural Sciences.
- While a satisfactory score on an approved CLEP examination provides college credit, CLEP credits will not necessarily satisfy requirements for a major or minor, and the student seeking to use CLEP credit for a major or minor

should obtain program approval before taking the test.

#### **PROFICIENCY EXAMINATIONS**

Proficiency examinations are given only for courses offered at Union College although credit is not available for all courses. A course already taken cannot be replaced by a proficiency examination.

#### **STUDENT MISSION AND TASK FORCE CREDITS**

Three semester hours of credit (UCSM 495 or UCTF 495) are granted for continuous service during the school year in either the student mission or task force programs provided prior arrangements are made with the college chaplain. Credit (with a grade designation of CR) is assigned on the basis of satisfactory service. No tuition is charged.

Student mission and task force workers are considered half-time students (see UCSM and UCTF in Course Descriptions section). UCSM 205 Introduction to Overseas Service is required of all students expecting to participate in the student mission program. Tuition is charged and completion of UCSM 205 earns two hours of elective credit.

#### **GRADES**

Grades are available at midterm and after the end of each semester. The midterm grade is a progress grade; only the final grade at the end of the semester is recorded on the official transcript.

<b>GRADE</b>	<b>DEFINITION</b>
A	The student demonstrated an excellent mastery of the material and met course objectives in an excellent manner.
B	The student demonstrated a commendable mastery of the material and met course objectives in a commendable manner.



- C The student demonstrated a satisfactory mastery of the material and met course objectives in a satisfactory manner. A grade of C- or below may not apply for a course in a major, minor, contextual or professional education.
- D The student has not demonstrated a satisfactory mastery of the material, but met course objectives in a minimal manner.
- F The student failed to master the material or meet course objectives.

GRADE	GRADE POINTS
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	.67
F	.00

#### OTHER DESIGNATIONS

- AU Audit
- CR Passing (C- or better) in a credit/no credit course
- NC Failing in a credit/no credit course
- W Withdrawal before the deadline to drop classes
- I Incomplete (see below)
- IP In progress (see below)
- NR No report from the instructor at the time the grades were processed

#### CALCULATING GRADE POINT AVERAGES

The grade point average is computed by totaling the grade points of all courses and dividing by the total semester hours for which grades are received. AU, CR, NC, W, I, IP, and NR are disregarded in computing the grade point average. When calculating graduation and honors requirements, GPAs are not rounded up. Thus, a student with a GPA of 1.997 does not meet the graduation requirement of 2.00; likewise, a GPA of 3.749 will not satisfy the requirements for the Dean's List (3.75).

#### REPEAT COURSES

When a course taken at Union College is repeated at Union College, the higher grade is used. Both the original and repeat grades become part of the student's permanent record, while only the highest grade and credits earned are computed in the cumulative grade point average and included in the total credits earned. If permission is granted to repeat a course at another institution, the new grade is averaged in the cumulative grade point average.

#### INCOMPLETE

Students may petition to receive the designation of incomplete (I) in case of illness or unavoidable circumstances. An I will be recorded only if the student has already completed the major requirements of the course. A request for an incomplete must be submitted before the final examination week with approval of the instructor and division chair. The deadline for course completion must be no later than the end of the following term (not including the summer term). Failure to meet this contract deadline will result in recording of the grade as indicated on the request. Forms are available in the Records Office.

**IN PROGRESS**

The designation in progress (IP) may be given for courses whose requirements are likely to extend beyond the given semester, typically due to extensive research, field or clinical experiences, or internships. The deadline for completion may vary but not exceed one year. If the work is not completed within the designated time, a grade based upon completed work will be submitted by the instructor. IP designations must be changed to letter grades prior to the student's graduation. Courses meeting the purpose of the IP designation are recommended by the division involved and approved by the Academic Council.

**CHANGES OF ASSIGNED GRADES**

After a final grade has been recorded, an instructor may request a change in the grade if there has been an error in calculating or recording the grade. Grade changes are not appropriate for assignments turned in beyond the end of the semester.

To dispute a grade, the student should follow the grievance procedures outlined in the Student Life and Services section.

**GRADUATION RATE**

In accordance with the Student Right to Know Act, Union College annually releases the graduation rates of all first-time, full-time students who matriculate at Union College. The graduation rate for the 2002 cohort is 54 percent.

**TRANSCRIPTS**

Requests for transcripts must be made in writing and signed by the student. Signed fax requests are accepted; however, electronic signatures are not. Transcripts are released only when the student's account has been paid in full. Transcripts may be withheld if any payments on loans through the college are delinquent. The Financial Information section lists the current transcript fees to be paid at the time of the request.

**FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)**

The Family Educational Rights and Privacy Act of 1974 (*Buckley Amendment*) provides for specific rights to students regarding the privacy of their educational records. The Privacy Act gives colleges the right to disclose directory information without student consent. However, students have the right to withhold disclosure of this information by notifying the director of records in writing.

Union College designates the following as directory information:

- name;
- home address;
- local address;
- e-mail address;
- home telephone number;
- local telephone number;
- birthday (month and day);
- class level and major;
- dates of attendance at Union College;
- degrees and awards received at Union College;
- academic recognition;
- photograph;
- institutions attended prior to admission to Union College;
- participation in recognized activities and sports at Union College.

Union College will not disclose the contents of students' educational records to other parties without student consent except under circumstances allowed by the Family Educational Rights and Privacy Act (FERPA).

Educational records kept by any office of the college and directly related to a student are available for review by that student in agreement with the act. Students should submit to the director of records, vice president for academic administration, vice president for student services, advisor, or other appropriate officials, written requests that identify the record(s) they wish to inspect. Students may ask Union College to amend their educational records if information in them is incorrect, misleading

or in violation of their privacy rights. Students have the right to challenge the contents of an educational record under prescribed procedures and to file a complaint with the U.S. Department of Education if there is a violation of the Act.

### **PARENTAL ACCESS TO ACADEMIC RECORDS**

Students have access to their own grades, but must sign a form giving name and address of either parent(s) or guardian(s) who should have access to the student's academic record.

Parents of Union College students who demonstrate legally that the student is a dependent may have access to their student's academic record.

### **DEAN'S LISTS**

Students who complete a minimum of 12 hours during the semester are recognized for academic performance in the following categories:

<b>Recognition</b>	<b>GPA Range</b>
Dean's Distinguished List	3.90 - 4.00
Dean's List	3.75 - 3.89
Students with designations or grades of I, NC, or below C- are not included.	

### **ACADEMIC PROBATION**

Students are placed on academic probation whose

- cumulative GPA is below 2.00, or
- most recent semester GPA is below 1.67, or
- semester GPA is below 2.00 and who completed less than 75 percent of graded credits.

To assist students in improving scholastic performance, students on academic probation will participate in the Academic Success and Advising Program (ASAP) through the Teaching Learning Center. Students on ASAP are required to

- sign an Academic Success Advising Program (ASAP) agreement and complete its requirements;

- limit their class load to a maximum of 12 hours;
- pay an additional fee for ASAP;
- renegotiate financial agreements in case of loss of financial aid.

Students on academic probation may be given up to two consecutive semesters to clear their probationary status.

### **ACADEMIC SUSPENSION**

A student may be suspended from the college, with possibility of appeal, after the GPA is below 2.00 for two consecutive semesters, or if the cumulative GPA is below the level indicated:

<b>Academic Year</b>	<b>GPA is Below</b>
Freshman	1.50
Sophomore	1.65
Junior	1.80
Senior	1.98

A student may also be suspended after one semester with a current GPA of less than 1.00.

Students who have been suspended for academic reasons may request readmittance to regular academic programs upon presentation of one of the following:

- 6 semester hours of college-level study with a "B" (3.00) average or above taken at another regionally accredited institution or in summer sessions at Union College;
- other convincing evidence of preparation to do acceptable academic work.

### **FINAL EXAMINATIONS**

Final examinations are given at the time indicated on the semester examination schedule. Requests for exceptions to the schedule must be made to the vice president of academic administration by Monday of the last week of classes. A rescheduling fee may be applied (see Financial Information section).

### **DEAD DAY POLICY**

The final Thursday and Friday of each semester are recognized as an opportunity for students to review material and prepare

for finals. Though new material may be presented, no tests or major assignments are to be due then, without prior approval from Academic Administration.

### **VETERANS' INFORMATION**

Most Union College course offerings have been approved by the Nebraska Department of Education State Approving Agency for benefits to veterans and other persons eligible under the various GI Bill programs administered by the department of Veterans Affairs (VA). Contact the local VA Regional Office to inquire about specific eligibility requirements.

Enrollment in 12 or more credit hours is considered full-time training. It is the student's responsibility to report any changes in enrollment. The college is also required to report promptly any changes in enrollment data affecting payment to the VA, such as students who are placed on academic suspension. The VA will not pay for any course for which the grade assigned does not count toward graduation requirements.

Union College holds no power-of-attorney agreements authorizing the school to negotiate VA educational assistance checks, and neither Union College nor any of its representatives have direct or indirect access to the proceeds of any such checks other than direct payment by the student holding the check.

### **STUDY ELSEWHERE DURING UNION COLLEGE RESIDENCY**

Students wishing to take a course at another institution while a registered student at Union College should first counsel with their academic advisor or division chair.

Students must be in good academic standing at Union College. An academic petition must be submitted to the director

of records prior to enrolling at the other institution. Failure to do so may result in credit not being applied toward graduation. Approval will insure that the course is taken from an accredited institution, that the credit will transfer to Union College and will apply toward graduation requirements.

### **ASSESSMENT**

Assessment is a vital part of progress and strategic planning and student learning is the central focus of not only assessment, but the mission of Union College. We strive to create an environment where students value education and value life-long learning.

The goal of the assessment program at Union College is to enhance the learning experience, to constantly improve the learning environment, and to ensure that resources for learning are adequate.

Assessment occurs in three areas:

- Courses Assessment: Professors assess their courses based on established program goals and objectives (or student learning outcomes);
- Program Review: Each academic program is reviewed and compared with external programs to ensure relevancy and currency. Each program is reviewed once every five years;
- Division Review: Each division conducts an annual review involving all division faculty. The review process assists each division in implementing change as a result of assessment.

### **CHANGES TO CURRENT BULLETIN**

At any time, the Academic Council in consultation with the faculty may modify, delete or add to the current bulletin. Changes are effective prior to the publication of a new bulletin when officially announced. Both these changes and the bulletin itself are available on the Union College Web site [www.ucollege.edu](http://www.ucollege.edu)

# GRADUATION REQUIREMENTS

The responsibility for meeting the requirements for graduation rests primarily upon the student. Students should acquaint themselves with the various requirements in this bulletin and, beginning with the freshman year, should plan their college courses to fulfill requirements.

Students who maintain continuous residence may meet the requirements in the bulletin current at the time of entry or any bulletin published during the time of residence. Students who have discontinued their residence longer than one year must meet the requirements in effect when they return.

## COMMENCEMENT

Commencement exercises are held annually in May, although diplomas are issued bearing August and December dates. Students who complete a program at the end of the spring semester will be expected to participate in the graduation exercises.

Exemption from participation in the annual exercises is granted only by the president. Graduates from the previous December are invited to participate. A fee will be charged to all graduates to cover the costs associated with graduation.

## Academic Recognition at Graduation

Students graduating from Union College will be awarded their degrees with the following designations appropriate to the minimum cumulative grade-point average attained:

Bachelor's Degrees	GPA
Summa Cum Laude	3.90
Magna Cum Laude	3.75
Cum Laude	3.50

## Prospective Summer Graduates Participation

Students who plan to complete requirements during the following summer

may apply to participate in the graduation ceremonies as prospective summer graduates if the remaining requirements are limited to a practicum or six semester hours of coursework. Students must present documented evidence that the remaining requirements can reasonably be completed prior to the August graduation date. To encourage timely completion, a deposit of \$200 will be charged to the student's account, and refunded or applied to any unpaid Union College charges if all graduation requirements are completed and recorded in the Records Office by the August graduation date. If the degree is not completed on time, the deposit will be forfeited.

## RESIDENCY REQUIREMENTS

For a baccalaureate degree, 30 of the final 36 hours or at least 100 semester hours and at least half of the 300-level or above hours in the major must be in residence. A minimum of 56 semester hours must be completed in four-year colleges or universities. A minimum of 12 semester hours in the major must be taken in residence. For a minor, at least three semester hours of the required courses numbered at the 300-level or above must be taken in residence.

For an associate degree, 24 of the final 30 hours or at least 50 semester hours and at least half of the hours in the major must be in residence.

## ASSOCIATE DEGREE REQUIREMENTS

Associate degrees are conferred upon student who have

- successfully completed at least 64 semester hours;
- fulfilled the specific requirements of an Associate of Science major described in the division sections of this bulletin, or

an Associate of Arts degree (completion of a minimum of 15 semester hours in an area of emphasis as specified by the academic division);

- earned a minimum of C (2.00) for all emphasis and related required courses;
- achieved a minimum cumulative grade point average of 2.00;
- completed the general education program, LEAD@Union, appropriate to the degree;
- met the residency requirement;
- participated in the assessment program as requested;
- applied for graduation giving the proposed schedule for the year;
- provided all official transcripts and completed courses designated I or IP.

#### **BACHELOR'S DEGREE REQUIREMENTS**

Bachelor's degrees are conferred upon students who have

- completed successfully at least 128 semester hours, with at least 40 hours at the 300-level or above;
- fulfilled the specific requirements of a major described in the division sections of this bulletin (general studies and personalized programs may have more individualized requirements);
- earned a minimum of C (2.00) for all major and contextual courses;
- achieved a minimum cumulative grade point average of 2.00, or higher as required by the individual major;
- completed the general education program, LEAD@Union, appropriate to the degree;
- met the residency requirements, including those for the major and any minors (see below);
- participated in the assessment program as requested;
- applied for graduation preferably by the end of their junior year giving the proposed schedule for the senior year;
- provided all official transcripts and completed courses designated I or IP.

#### **Second Degrees**

Graduates of accredited institutions may earn baccalaureate degrees from Union College by fulfilling all major requirements for the second degree and successfully completing a minimum of 30 hours in residence with a cumulative GPA of 2.00 (or higher if stipulated by the major). Students with an international bachelor's degree must complete the Union College general education requirements.

#### **Multiple Majors**

Students may complete multiple majors if they are offered for the same degree. When different degrees are involved, both degrees will be awarded.

#### **Academic Minors**

Completion of an academic minor is not required unless a specific major requires an accompanying minor. One or more minors may be elected from the minors outlined in this bulletin. At least three semester hours of the required courses numbered at the 300 level or above must be taken in residence. A minimum grade of C (2.00) is required for all minor courses.

#### **General Studies Program**

The Bachelor of Science degree in general studies allows students to develop academic skills in several areas of study not formally listed as a major. The general studies program focuses on a specific theme within general academic areas. All the graduation requirements for a baccalaureate degrees outlined above must be met. Because a bachelor's degree in general studies does not include a recognized major, Union College does not extend the Guaranteed Education option to students who graduate under this program.

A minimum of 24 semester hours must be in one academic division and 12 semester hours each from two other academic divisions. A minimum of 15 semester hours numbered at the 300 or 400 levels are required. Courses can not meet

requirements for both general studies and LEAD requirements.

**Personalized Degree Program**

The personalized program offers students the opportunity to design and fulfill a unique program of study that achieves individual educational goals. It is intended for a student who, in consultation with an advisor, wishes to design a personalized major. An individually designed program may prepare for employment or further study. However, the program carries no endorsement or recommendation for such results by the college. Union College does not extend the Guaranteed Education option to students who graduate under this program.

The student should present a proposed curriculum no later than the first semester of the junior year. This proposal must be approved by the Academic Council.

Requirements for a bachelor's degree in this program are the same as for a regular degree with the exception of some possible variation of the general education requirements. In some cases the program may require courses offered on other campuses for which the student is financially responsible. The residency requirement is that 64 hours of this degree must be taken at Union College.

Requirements for an Associate of Arts degree include completion of a minimum of 15 semester hours in an area as specified by the academic division.

**Post-Baccalaureate Professional Program**

On occasion, Union College students may be accepted into professional programs such as medicine, dentistry or law before completing a bachelor's degree. Union College will confer the appropriate bachelor's degree upon those who have

- applied for a Union College degree within two years after successfully completing the first-year of a post-baccalaureate professional program;
- completed the general education requirements as outlined in this bulletin;
- a minimum of 92 semester hours of college-level courses, including ten or more hours of 300-400 level;
- a minimum cumulative grade point average of 2.00;
- met the residency requirement at Union College prior to entering the post-baccalaureate program of the professional school;
- certification from the professional school that the applicant has successfully completed the first year of the professional program and is eligible to continue.

## LEAD@UNION

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### **“LIFETIME EDUCATION AND ACTIVE DISCIPLESHIP”**

#### **Statement of Purpose**

Through its LEAD@Union program, Union College offers its students opportunities to develop the broad thinking, knowledge, values, and skills essential to professionals in the twenty-first century.

True to its liberal arts origins, the college aims to prepare graduates who possess the ethical values, interests, abilities and analytical thinking needed for service as citizens and leaders. True to its Adventist heritage it emphasizes learning as preparation for eternal life in the Christian tradition of reflection on faith, values, His creation and His grace.

Given the global interactions of contemporary society, a Union graduate's knowledge and understanding must encompass the cultural, intellectual, and scientific traditions of Western society, the values and viewpoints of other cultures, and the Christian claim that the cross and the resurrection are the central acts of history. Study and service in another culture are optional aspects of the program that provide opportunities for experiencing compassion and understanding the broader human condition.

In the context of Union's calling to educate the whole person, personhood becomes complete only when an individual forms part of society. LEAD@Union thus stresses community building and leadership, and the long-standing symbolism of “The College of the Golden Cords” is reflected in Union's unique student-led service programs and its emphasis on developing students for leadership.

### **Student Goals for Lifelong Education and Active Discipleship**

Through LEAD@Union, students at Union College will

- acquire a knowledge of Holy Scripture, doctrines common to Christian faith, and distinctive Seventh-day Adventist beliefs;
- communicate clearly and persuasively, using effective listening, speaking, reading and writing skills;
- demonstrate a knowledge of global issues and an appreciation of diverse cultures;
- solve problems using mathematical and scientific methodology;
- think critically, including knowing how to access, use, and evaluate information;
- interact with the fine arts and understand how they enrich the human experience;
- use technology effectively and ethically;
- participate in civic, national and global society in an ethical and informed manner;
- demonstrate practices that promote lifelong good health;
- acquire a knowledge of the natural systems of the biosphere and how human being impact their environment;
- observe, evaluate and practice effective leadership skills;
- participate in service activities that connect learning to one's character, spirituality, work and society.

As several goals suggest, a Union College education extends beyond the classroom.

The philosophy of connected learning consciously infuses academic learning into the campus work environment, student government, service activities and spiritual endeavors□ and these in turn enhance the motivation to learn effectively.



**GENERAL EDUCATION REQUIREMENTS □ 4-YEAR**

Baccalaureate degrees require a minimum of 53 (59 for Bachelor of Arts) hours of general education courses in the total of 128 hours. Major, minor or contextual courses may also be used as general education requirements. In such cases the hours will be counted only once toward the minimum of 128 hours needed for graduation.

Before enrolling in any 300-400 level courses students must have completed ENGL 112 and have obtained sophomore standing. A minimum of 40 hours of 300-400 level courses are required.

**Religion □ 12 hours**

RELT 141 Christian Beliefs 3  
or RELT 205 Developing the Christian Mind (3)  
or RELT 110 Introduction to Christian Faith and Adventism (3)

RELB (Biblical Studies) 3

REL (Religion electives) 6

Students transferring from other than Seventh-day Adventist colleges as

- sophomores - 9 (omit 3 hours of REL);
- juniors - 6 (omit 6 hours of REL; may substitute RELT 300 or above for RELB);
- seniors - 3 (omit REL and RELB).

**Communication □ 8 hours**

ENGL 111 College Writing I 3

ENGL 112 College Writing II 3

COMM 105 Public Speaking 2

Satisfactory completion of at least three writing-designated (WR) courses, with a reduction of one course petitionable by transfer students.

**Fine Arts and Humanities—7 hours**

Literature course 3  
200-level literature course recommended;  
300-400 with permission of instructor

Two hours each from two of the following three areas: 4

Philosophy course

Fine arts academic course

ART 321, ART 322, HMNT 305,

MUHL 260 or MUHL 261

Applied fine arts courses from

MUPF (music performance) and/or

any applied ART course or CODR 229 or 329 Play Production.

**History and Social Science—9 hours**

History course 3

Students who completed a year each of American and world history in high school may choose a course from either area. A student lacking a year course in one area must complete that in college.

Three hours each from two of the following areas: 6

Economics, Geography, History,  
Political Science, Psychology, Sociology,  
or Leadership.

**Science—7 hours**

Life sciences 3-4

Recommended: BIOL 102, 111, 151,  
205, 207, or 377

Physical sciences 3-4

Recommended: ASTR 111, CHEM 101,  
151, PHYS 111, 151, or SCNC 377

One course (life science or physical science) above must be a laboratory course.

**Mathematics □ 3 hours**

MATH 111, 121, 165, 184, or 221 3

MATH 221 is highly recommended.

**Computer □ 3 hours**

CPTR 220 or equivalent 3

Students who demonstrate competency by a minimum grade of B in a high school applications course may substitute an approved computer applications course or FNCE 215 Personal Finance. Alternatively, students successful on a Union College

proficiency exam for CPTR 220 will receive three hours of credit.

**Health and Human Performance****□ 4 hours**

HHPA 155 Concepts of Wellness	2
HHPA (Two different one-hour activity courses)	2

**Foreign Language □ 6 hours**

(Required for B.A. degree only)

Beginning foreign language	3, 3
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Students who have completed two years of the same foreign language in high school have satisfied this requirement.

**TRANSFER OF GENERAL EDUCATION**

Transfer students who meet all the general education requirements a regionally-accredited Seventh-day Adventist college meet Union College requirements.

Transfer students who completed their general education requirements at an institution participating in the Nebraska Initiative meet Union College requirements for the 34 hours in the signed agreement, and will satisfy the Union College requirements with 19 hours additional hours: Computer, 3 hours; College Writing II, 3 hours; Health and Human Performance, 4 hours; and Religion, 9 hours. Details are on file in the Records Office and in the Office of the Vice President for Academic Administration.

**GENERAL EDUCATION REQUIREMENTS □ 2-year**

Associate degrees require a minimum of 28 (34 for Associate of Arts) hours of general education courses in the total of 64 hours.

**Religion □ 6 hours**

RELT 141 Christian Beliefs	3
or RELT 205 Developing the Christian Mind (3)	
or RELT 110 Introduction to Christian	

Faith and Adventism (3)	
RELB course	3
or RELT 305 Christian Ethics	

**Communication □ 5-6 hours**

ENGL 111 College Writing I	3
COMM 105 Public Speaking	2-3
or ENGL 112 College Writing II	

**Fine Arts and Humanities □ 2-3 hours**

One of the following four areas:	2-3
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Philosophy course

Fine arts academic course:

ART 321, ART 322, HMNT 305,  
MUHL 260 or MUHL 261

Applied fine arts courses from

MUPF (music performance) and/or  
any applied ART course or CODR  
229 or 329

Literature course, 200 level recommended □ ENGL 112 is a  
prerequisite to literature courses.

**History □ 3 hours**

History	3
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Students who completed a year each of American and world history in high school may choose a course from either area. A student lacking a year course in one area must complete that in college.

**Science □ 4 hours**

Science laboratory course	4
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**Mathematics □ 3 hours**

MATH 111, 121, 165, 184, or 221	3
MATH 221 is highly recommended	

**Computer □ 3 hours**

Students who demonstrate competency by a minimum grade of B in a high school applications course may substitute an approved computer applications course or FNCE 215 Personal Finance. Alternatively, students successful on a Union College proficiency exam for CPTR 220 will receive three hours of credit.

**Health and Human Performance**

□ **2 hours**

HHPA 155 Concepts of Wellness

2

Beginning foreign language

3, 3

Students who have completed two years of the same foreign language in high school have also completed this requirement.

***Foreign Language*** □ **6 hours**

(Required For A.A. Degree Only)

## UNION SCHOLARS

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### UNION COLLEGE HONORS PROGRAM

#### MISSION

The mission of Union Scholars is to inspire academically gifted students to excellence in learning, spirituality and service.

#### FOCUS

Union Scholars will discover the sources of major global issues and explore the resources for addressing them.

#### GOALS

Upon completion of the Union Scholars program, students will be able to

- conduct original research;
- write and speak proficiently;
- discover connections across disciplines;
- discuss societal issues with knowledge and cogency;
- connect life and learning with spiritual values;
- identify arguments, authors and perspectives in areas related to global issues;
- apply their learning in avenues of leadership and service.

#### SCHOLARS OFFICE

Office Don Love Building Atrium  
Telephone 402.286.2600 Ext. 2560  
E-mail [uscholar@ucollege.edu](mailto:uscholar@ucollege.edu)  
Web site [www.ucollege.edu/scholars](http://www.ucollege.edu/scholars)  
Edward Allen, D. Min., Program Director,  
Associate Professor of Religion  
Lynn Davis, M.A., Program Assistant

#### PROGRAM REQUIREMENTS

##### 46-52 hours

Baccalaureate degrees require a minimum of 46 (52 for Bachelor of Arts) hours of general education courses (Honors Concentration and General Concentration) in the total of 128 hours.

#### Honors Concentration—30 hours

##### Core □ 14 hours

HONS 125 Western Culture I	4
HONS 126 Western Culture II	4
HONS 215 Self and Society	3
HONS 325 Science and Religion	3

##### Seminars □ 9 hours

Select three of the following seminars:  
(One will be taken at a site outside of the United States. Students may take no more than one Topics course to fulfill this requirement.)

HONS 246 Authority and Responsibility	3
HONS 265 Conflict and Peacemaking	3
HONS 287 Topics	3
HONS 335 Wealth and Poverty	3
HONS 345 The Global Environment	3

##### Research □ 7 hours

HONS 112 Research and Composition	3
HONS 398 Research Methods	1
HONS 498 Honors Independent Study	3

#### General Concentration—16-22 hours

##### Religion □ 6 hours

RELT 205 Developing the Christian Mind 3 or RELT 141 Christian Beliefs (3)	
RELB course	3

##### Science □ 4 hours

Select a science laboratory course from BIOL 151, CHEM 151, PHYS 151	4
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##### Mathematics □ 3 hours

MATH 121 or above	3
MATH 122 recommended	

##### Health and Human Performance □ 3 hours

HHPA 155 Concepts of Wellness	2
HHPA ____Activity course	1

##### Foreign Language □ 6 hours

(Required for B.A. degree only)

Beginning foreign language 3, 3

Students who have completed two years of the same foreign language in high school have also completed this requirement.

### **Independent Study**

Graduates will employ critical thinking and/or creativity to pursue in-depth study in an area of their choice.

Each Union Scholar, in consultation with the director, will choose a study advisor for his or her field. A proposal for the independent study must be submitted to and approved by the Union Scholars Advisory Committee. Evaluation of the project will be done by a committee consisting of the director and the student's advisory committee

### **Union Scholars Service Component —12 Projects**

A Union Scholar will participate in three service projects each year. The Union Scholars Office will plan four service projects each school year and Scholars will elect to participate in at least two of the four projects. Individual projects may be done as one of the projects with the approval of the Director of Union Scholars.

### **Application Requirements**

- Completion of Union Scholars Application.
- A minimum high school cumulative GPA of 3.50 for entering freshmen.
- A minimum composite ACT score of 26 or equivalent.
- A minimum college cumulative GPA of 3.33 for transfer students and current Union College students.

To earn an honors diploma from Union College, students who transfer into the Union Scholars program must complete a minimum of ten hours in the Union Scholars Honors Concentration.

### **Maintaining Membership**

To continue as a Union Scholar a student must fulfill the following:

- Enroll in the appropriate honors sequence courses and receive a B average (3.00) or higher in these.
- Maintain a minimum cumulative GPA of 3.33.
- Report all volunteer service prior to final exams each spring.

A student who receives a notification of discontinuance in the program may reapply to Union Scholars after these membership conditions have been fulfilled.

## MASTER OF PHYSICIAN ASSISTANT STUDIES

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### OFFICE

<i>Location</i>	Larson Lifestyle Center
<i>Telephone</i>	402.486.2527
<i>E-Mail</i>	paprog@ucollege.edu
<i>Web site</i>	www.ucollege.edu/pa

### FACULTY

Michael Huckabee, Ph.D., PA-C,

*Associate Professor of Physician Assistant  
Studies; Program Director*

Cliff Korf, M.P.A.S., PA-C, *Associate*

*Professor of Physician Assistant Studies;  
Outreach Director*

Dwain Leonhardt, M.D., *Professor of Physician*

*Assistant Studies; Medical Director*

Rebecca Stafford, PA-C, *Instructor of*

*Physician Assistant Studies, Clinical Director*

Union College admitted its first class into the physician assistant program in 1998 as a baccalaureate degree granting program. To strengthen academic quality of the physician assistant program and provide greater employment opportunities for students, Union College requested approval from the Higher Learning Commission of the North Central Association and the Accreditation Review Commission on Education for the Physician Assistant, Inc., to offer its first and only graduate degree, the Master of Physician Assistant Studies (MPAS). After receiving approval in 2004, the first student enrolled in this program.

### Mission

The physician assistant program prepares students from diverse backgrounds for excellence in the physician assistant profession, developing their God-given abilities in harmony with the highest physical, mental, social and spiritual ideals.

### Description

The 33-month curriculum leads to the Master of Physician Assistant Studies (MPAS) professional graduate degree. The program is nationally accredited by the Accreditation Review Commission on

Education for the Physician Assistant, Inc. Graduates sit for the Physician Assistant National Certifying Examination.

The program builds on an extensive base of biological, chemical, behavioral and medical science courses for the first two years. Clinical practice rotations throughout the final year provide students with diverse and intensive patient care experience. The quality of the theoretical and clinical experiences prepares the students to become proficient and competent health care providers.

### Goals

The Union College physician assistant graduate will

- act in a professional manner, acknowledging the physician assistant as one member of the health care team, recognizing the privilege of serving others regardless of color, social, ethnic, religious, or economic status;
- proficiently perform the more routine duties of personal health care management typically provided by primary care physicians;
- possess competence in a balanced core of knowledge drawn from the fields of medical and behavioral sciences which enables lifelong learning, critical thinking, and effective communication;
- render service in the spirit of compassion and self-refraining love demonstrated by Christ in His ministry on Earth.

### Student Life Philosophy and Services

Based on its Biblical faith and traditions of health and lifestyle, Union College is deeply committed to belief in living a life informed by Scripture and inspired by Jesus Christ. These perspectives are central to the college's philosophy of graduate student life. The college seeks to provide an environment that is not only Christ-

centered, but that encourages self-discovery and development in community with other learners. Graduate students at Union College are expected to display greater maturity and focus than traditional undergraduates, and therefore to be more self-directed as they prepare for professional careers. While graduate student life policies are designed to address the needs and circumstances of the graduate community, all students are expected to respect the values of Union's Seventh-day Adventist heritage.

#### **APPLICATION and ADMISSION**

The MPAS program invites applications for admission from individuals who have completed a baccalaureate degree from an accredited college or university in the United States or an equivalent preparation from another country, or who expect to do so within the next year. A baccalaureate degree must be completed prior to enrollment in the MPAS program, except for selected Union College students pursuing the Bachelor of Science degree in health sciences, who may apply for admission subject to fulfilling both the college's graduation requirements and the prerequisites for the PA program.

Admission into the graduate curriculum of the physician assistant program is limited and competitive. While a minimum grade point average of at least 2.75 or higher on a 4.00 scale is required for all undergraduate credits, nearly all successful applicants have earned undergraduate grades with a grade point average of 3.00 or higher (grades averaging at the B level or better) in both the cumulative GPA for all credits and the GPA specific to all science credits.

#### **Application Procedure**

Prospective applicants should initiate the admission process by contacting the PA program's admission counsellors for advice. Applications to the PA program should be made through the Central Application Service for Physician Assistants (CASPA) at [caspaonline.org](http://caspaonline.org). Alternatively, Union

College students may submit a paper application. This provides no advantage in the selection process.

#### **Specific Admission Requirements**

While undergraduate grades are important, the PA program seeks students who have wide potential for achievement. Applicants will be evaluated on

- successful completion of the prerequisite coursework listed below;
- science (all biology and chemistry courses) and cumulative GPAs of at least 2.75 on a 4.00 scale for all college work;
- demonstrated proficiency in a variety of cognitive, problem solving, manipulative, communicative and interpersonal skills, as described in the PA program's technical standards (available at [ucollege.edu/pa](http://ucollege.edu/pa) or in the Admission Guidelines brochure available on request);
- three letters of recommendation;
- a written Motivational Statement and a signed Lifestyle Agreement;
- completion of a required physical exam upon acceptance into the program;
- meeting educational standards of the US Department of Education for non-US courses;
- at least three months (480 hours) of work experience related to direct patient care is required, including exposure to the PA role;
- obtaining the required personal health insurance (personal liability insurance is encouraged);
- submission of complete application materials and personal interview with PA program admissions committee;
- possession of a baccalaureate degree prior to entering the MPAS program for all applicants to the PA program who are not Union College students applying through the health science major (focus of the degree may vary, but studies must include the prerequisite courses of the PA program);

- application for admission by Union College to the PA program through the joint bachelors-MPAS program which allows selected students who fulfill all general education requirements of Union College as well as the MPAS prerequisites to obtain a Bachelor of Science degree in health sciences while completing the graduate PA curriculum.

**Application Deadlines**

Completed application forms must be submitted to CASPA by November 1 of the year prior to the desired enrollment. Approved paper applications submitted directly to the PA program are also due on November 1. Applicants will receive a formal notification of acceptance by March 15 of the year of admission. Applicants designed as alternates or who are not accepted also receive notification by this time. Admission admits student to the MPAS program only.

**International Students**

Once a student has been academically accepted into the PA program, all immigration procedures must be handled through the Union College Admissions Office. Applicants whose native language is not English and who do not present a degree from an accredited college or university in the United States that include a full year of composition or equivalent in English must demonstrate satisfactory skills in English understanding and use. Recent scores on the Test of English as a Foreign Language (TOEFL) normally suffice. Satisfactory scores are:

- Internet-based TOEFL (IBT): Score of 100 with a minimum score 20 on each section; or
- a total score of 600 on the paper TOEFL, with a score of 55 on Listening Comprehension;
- a level 112 from the ELS Language Centers or other recognized evidence will also be considered.

Information about the TOEFL, including test dates and locations in international countries, can be obtained from Educational Testing Service (ETS) at [www.ets.org](http://www.ets.org). Photocopies of TOEFL scores are not accepted.

Applicants with questions or needing additional information about the admission of international students should contact the Union College Admissions Office at (402) 486-2504; FAX (402) 486-2566.

**Academic Information**

Only courses numbered 500 and above carry graduate credit towards the MPAS degree. Courses numbered under 500 signify undergraduate credit. While they may be taken as supporting or prerequisite courses, they do not count toward a graduate degree and are not computed in a graduate student's grade point average. The same grade definitions as used for the undergraduate college apply for the graduate courses.

**Transfer of Courses**

Most students enrolled in professional graduate programs will complete all coursework for the degree at the same institution. Only courses specifically approved by the physician assistant program may be transferred to Union College. If transfer credits are approved, official transcripts must be received before application for a degree will be approved.

**Dismissal Policy**

A student may be dismissed from the MPAS program if the student

- receives a grade of C- or below;
- earns a cumulative GPA below 3.00 at the conclusion of the didactic portion of the PA program (first five semesters); or
- is found guilty of unprofessional or illegal behavior according to the guidelines in the PA program Student Handbook.

An overall 3.00 GPA is required for MPAS courses. The physician assistant program may accept a C grade as long as



the minimum semester GPA of 3.00 is maintained. Frequent C grades may cause the PA program to place a student on academic probation or dismiss students from the graduate degree program.

In all cases the student will be notified of the dismissal in writing, and will be informed of the right of appeal according to the Union College PA program Student Handbook. Students receiving letters of dismissal will automatically be dropped from the program, regardless of whether they choose to appeal; fees will be refunded in accordance with college policy. A withdrawal grade will then be entered on the transcript for all graduate courses not completed in that term.

Academic dishonesty includes, but is not limited to, cheating and plagiarism. Academic dishonesty at the graduate level is considered a serious offense and may result in dismissal from the college.

Whenever a faculty member suspects a graduate student of academic dishonesty, the instructor should present the evidence to the student and consider the student's response. If the instructor concludes after consultation with the student that academic dishonesty has indeed occurred, the instructor should report the matter in writing to the MPAS director. The instructor should accompany the report with any evidence used to draw the conclusion that academic dishonesty has occurred (e.g., copies of the student's written assignment, copies of documents thought to have been plagiarized, etc.), and should state clearly the penalty imposed within the course itself according to its syllabus.

The penalty should be in proportion to the severity of the offense. If the penalty is to be a failing grade, the instructor should first consult with the director of the program and the director should meet jointly with the student and faculty member to review the incident.

The student may appeal the penalty by following the procedures in the PA program Student Handbook.

## **PROGRESSION AND GRADUATION REQUIREMENTS**

Guidelines for progression and graduation include the following:

- individual course grades must be C or higher;
- overall GPA for all PHAS courses must be maintained at 3.0 or higher on a 4.0 scale;
- criminal background checks are required prior to clinical experiences;
- all assigned coursework and clinical rotations must be completed;
- no PHAS course may be repeated more than once;
- no more than one PHAS course may be repeated;
- additional graduation requirements established by the program and published in the PA program Student Handbook must be met;
- participation in assessment activities approved by the program;
- during the final year of study, an application for a graduate degree must be filed with the Records Office.

### **Academic Recognition at Graduation**

	<u>GPA</u>
High Distinction	3.90
Distinction	3.75

### **Academic Resources**

The following services are available to graduate students who experience academic, psychological or other difficulties:

#### Teaching Learning Center

The Teaching Learning Center (TLC) is Union's office for students with disabilities. Assistance is available for students needing academic adjustments and services necessary to make programs accessible. Union College honors section 504 of the

Rehabilitation Act of 1973, 29, USC.706, which forbids discrimination against all individuals with disabilities. In addition to assisting students with disabilities, the TLC offers academic coaching, study and writing labs, peer tutoring, and instruction on note-taking, study skills and stress management.

#### Academic Advising

The PA program participates in academic advising conducted by the PA program faculty and coordinated through the Office of Academic Administration.

#### Twelve-Step Program

Two of the counselors in Campus Ministries work with the twelve-step spiritual journey program. This adaptation of the Alcoholics Anonymous approach is effective in assisting individuals in recovering from addictions and discovering areas in life which hinder social, spiritual and academic success.

#### School Community Intervention Program (SCIP)

This community program is made available to students at Union College through the Office of the Vice President for Student Services. Students are assisted in dealing with dependencies and addictions, such as those related to drugs and alcohol. SCIP also provides diagnostic testing for students with learning difficulties.

#### **PROGRAM SPECIFIC FEE**

For the most recent information regarding fees and financial assistance, applicants should contact the PA program. In addition to regular college fees, a special fee is assessed each term for all students admitted to the graduate curriculum of the physician assistant program. These fees are published annually in the college's schedule of *Scholarships, Tuition and Fees*.

### **PHYSICIAN ASSISTANT STUDIES**

#### **Master of Physician Assistant Studies**

#### **MAJOR REQUIREMENTS—109 hours**

PHAS 505	Medical Literature Review	2
PHAS 510	Clinical Nutrition	2
PHAS 511	Human Anatomy	5
PHAS 514	Medical History and Physical Examination Skills	4
PHAS 515	Clinical Diagnostic Procedures	3
PHAS 518	Psychiatry and Behavioral Medicine	3
PHAS 519	Differential Diagnosis and Case Development	2
PHAS 525	Physician Assistant Professional Issues	3
PHAS 531	Clinical Medicine I	6
PHAS 532	Clinical Medicine II	7
PHAS 533	Preventive Health	1
PHAS 539	Christian Health Care and Bioethics	3
PHAS 542	Applied Medical Ethics	1
PHAS 546	Clinical Skills I	4
PHAS 547	Clinical Skills II	2

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PHAS 553	Cultural Competencies in Medicine	1
PHAS 557	Electrocardiography	2
PHAS 559	Clinical Pathophysiology	4
PHAS 564	Clinical Therapeutics	4
PHAS 584	Pharmacology	5
PHAS 585	Master's Research Seminar	1
PHAS 620	Family Practice I Rotation	6
PHAS 621	Family Practice II Rotation	4
PHAS 622	Internal Medicine Rotation	4
PHAS 623	Surgery Rotation	4
PHAS 624	Obstetrics and Gynecology Rotation	4
PHAS 625	Pediatrics Rotation	4
PHAS 626	Cardiology Rotation	4
PHAS 627	Emergency Medicine Rotation	4
PHAS 628	Orthopedics Rotation	2
PHAS 629	Psychiatry Rotation	2
PHAS 630	Elective Rotation (a minimum of three rotations – 2 hours each)	6

**PREREQUISITE REQUIREMENTS–50 hours**

BIOL 151, 152	General Biology	8
BIOL 205	Microbiology	4
BIOL 416	Mammalian Physiology	4
CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 445	Biochemistry I	4
HHPT 215	Emergency Health Care or evidence of CPR certification	1
HHPT 256	Medical Terminology	1
MATH 221	Elementary Statistics and Probability	3
PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
PSYC 415	Abnormal Psychology	3

Generally, science courses should be completed within seven years of admission to the physician assistant program. If the chemistry series is successfully completed through upper division biochemistry at the time of application to the program, consideration is given to waiving earlier individual chemistry courses listed as prerequisites.

## ACADEMIC RESOURCES

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### **ELLA JOHNSON CRANDALL MEMORIAL LIBRARY**

Sabrina Riley, M.I.L.S., *Associate Professor  
and Library Director*

Karla Britain, M.L.S., *Associate Professor*  
DeForest Nesmith, M.A., *Associate Professor*  
Web site: [www.ucollege.edu/library](http://www.ucollege.edu/library)

The library leads the Union College campus in the utilization of information resources, preservation of institutional heritage, and serves students, faculty, staff and community members in their intellectual and spiritual growth.

Within the library's 38,000-square-foot facility, librarians provide reference assistance, library instruction, and maintain a general academic collection of more than 160,000 items in a variety of formats. Current periodical subscriptions total almost 600 with online fulltext access to several thousand additional titles available through the Periodicals A to Z Web pages. The collection is also supplemented with approximately 30,000 electronic books available through the online public access catalog. The Lora McMahon King Heritage Room houses a large collection of Adventist books, periodicals and microforms, in addition to Union College archival materials.

Other library services include a photocopy machine, microform readers and printer, and a computer room. The library subscribes to approximately 20 article databases accessible via the Web from services such as EBSCOhost and OCLC FirstSearch. Library staff also provide mediated searching through DIALOG, an information retrieval service with approximately 200 databases.

Resources in other academic libraries in the area are available through reciprocal borrowing and on a wider spectrum through interlibrary loan. The latter service

provides access to materials through the more than 50,000 member libraries of OCLC, the Online Computer Library Center network.

### **COMPUTER SERVICES INFORMATION SYSTEMS**

Tom Becker, B.S., *Director*

Web site: [www.ucollege.edu/is](http://www.ucollege.edu/is)

Computer services are provided to Union students and employees through a campus-wide network maintained by Information Systems. Upon registration all students are provided a campus user and an e-mail address. All students are expected to comply with Union's computer policy. Misuse of the system could result in removal of computer privileges.

### **MICROCOMPUTER LABORATORY**

Greg Merchant, B.S., *Director*

Web site: [www.ucollege.edu/computerlabs](http://www.ucollege.edu/computerlabs)

The Division of Business and Computer Science maintains the largest general-use computer lab on campus. The micro lab contains the latest in programming languages, operating systems, software development tools, word processing, spreadsheets, databases and presentation software available for use by all students on campus.

### **GRAPHIC ARTS COMPUTER LABORATORY**

Bruce Forbes, M.F.A., *Director*

Web site: [www.ucollege.edu/computerlabs](http://www.ucollege.edu/computerlabs)

The graphic arts computer lab, an open lab located in Engel Hall, is maintained to support photo editing and printing, print production, and graphic design. Macintosh computers run drawing, page layout, and image editing software. Color and black and white printers, scanners, CD and DVD writers, stock photography and illustration

collections, and type collections support graphic design, photography, and illustration work. The Internet is available for these uses.

In addition, smaller labs with more specialized software are maintained in science and math, health sciences, the library, English as a Second Language, and the Teaching Learning Center.

### **CAREER CENTER**

Deborah Bogdon, M.S., *Director*

Web site: [www.ucollege.edu/careercenter](http://www.ucollege.edu/careercenter)

Union College Career Center assists students in making satisfying career and job choices.

### **CAREER PLANNING**

- Career advising: individual appointments with a career counselor
- Career inventories: interest, ability, strengths and personality profiles
- Career shadowing and internships

### **STUDENT EMPLOYMENT**

Web site: [www.ucollege.edu/careercenter/studentjobs](http://www.ucollege.edu/careercenter/studentjobs)

- On-campus employment: application online for more than 400 student jobs
- Off-campus employment and internships: job postings updated regularly

### **JOB PLACEMENT FOR SENIORS AND ALUMNI**

- Computerized job placement service: Nebraska Interview Consortium job database available at [www.monstertrak.com](http://www.monstertrak.com)
- Job search skills: assistance with resume writing, interviewing, salary negotiation and business etiquette
- Career fairs: more than 50 employers hosted each fall; information provided on internships and full-time employment
- Graduate program planning: assistance with entrance exams and program of study

### **TESTING**

- ACT & SAT: Alternate dates to national Sabbath testing: (Union College test center number and clergyman's letter available at the Career Center which must be sent with the registration form for these Sunday tests)
- CLEP tests: a computerized CLEP test available upon request (see Academic Information section for academic credit information)
- Online distance education or correspondence test proctoring: tests such as Home Study International as requested
- Graduate entrance exams: LSAT, MCAT and the DAT administered at Union College on alternative dates to the Sabbath

### **ADVENTIST COLLEGES ABROAD**

George Gibson, Ph.D., *Coordinator*

Ashley Barber, B.A., *Assistant*

Web site:

[www.ucollege.edu/humanities/aca](http://www.ucollege.edu/humanities/aca)

The Adventist College Abroad (ACA) program at Union College allows students to immerse themselves in the culture and life of the host country and become conversant in the language; mature socially, spiritually and intellectually; and develop sensitivity to cultural differences and a sense of responsibility for and mission to other people of the world. This opportunity is provided to qualified students for international study while completing degree requirements at their home colleges and universities.

Bachelor of Arts major and minors in French, German, Italian and Spanish may be earned through this program. Language studies are also available in Greek, Hebrew, Portuguese and Russian during the summer.

Union College is a member of Adventist Colleges Abroad (ACA), a cooperative arrangement between Adventist colleges and universities of the United States and

participating Adventist colleges and universities in other countries. ACA is operated by the Education Department and the Higher Education Cabinet of the North American Division of the Seventh-day Adventist Church.

The following institutions are international affiliates of ACA offering academic-year programs of study:

**Argentina**

Universidad Adventista del Plata

**Austria**

Seminar Schloss Bogenhofen

**France**

Campus Adventiste du Saleve

**Germany**

Friedensau Adventist University

**Italy**

Istituto Avventista Villa Aurora

**Spain**

Escuela Superior de Español

ACA also offers summer terms at the following international study centers:

**Austria**

Seminar Schloss Bogenhofen

**Brazil**

Brazil Adventist University

**France**

Campus Adventiste du Saleve

**Greece**

Athens Study Center

**Italy**

Istituto Avventista Villa Aurora

**Spain**

Escuela Superior de Español

**Ukraine**

Ukrainian College of Arts and Sciences

**Union College Adventist Colleges**

**Abroad Application Policies**

**Academic Year Study Abroad**

For Union College to process an application for academic year study abroad, the applicant must

- complete at least one full-time semester in residence at Union College;

- be in good and regular standing at Union College while maintaining an overall minimum GPA of 2.5;
- establish a financial payment contract with Union College Student Financial Services or pay for the program in full;
- if pursuing a major in French or Spanish, complete two high school years or one college year of classes in prerequisite language study with a minimum GPA of 3.0.

**Summer Study Abroad**

**College Applicants**

For Union College to process an application for summer study abroad, the college applicant must

- complete at least one full-time semester in residence at Union College;
- be in good and regular standing at Union College while maintaining an overall minimum GPA of 2.5;
- establish a financial payment contract with Union College Student Financial Services or pay for the program in full.

**High School Applicants**

For Union College to process an application for summer study abroad, the high school applicant must

- complete at least the sophomore year in high school;
- apply and enroll at Union College as a non-degree seeking student;
- submit tuition payment in full to Union College Student Financial Services;
- provide a letter from your high school registrar verifying minimum GPA of 3.0.

**TEACHING LEARNING CENTER**

Deborah Forshee-Sweeney, B.S.W., *Director*  
Elizabeth Anderson, M.A., *Academic*

*Coach/Assistant*

Web site: [www.ucollege.edu/tlc](http://www.ucollege.edu/tlc)

### **SUPPORT SERVICES FOR STUDENTS WITH DISABILITIES**

Union College is committed to providing educational opportunities to students with disabilities by honoring Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Both prohibit discrimination on the basis of disabilities.

The Teaching Learning Center (TLC) offers accommodations to college students as directed by these acts. Accommodations will be handled with confidentiality and based on the nature of the disability and the academic environment. Students requesting accommodations may contact the TLC for documentation guidelines or download them from the college Web site.

### **PERSONAL ACADEMIC COLLEGE COACHING (PACC)**

The Teaching Learning Center provides academic coaching for students through the Personal and Academic Coaching (PAAC) program. This service is required for students in the Academic Success and Advising Program (ASAP) and Freshman Development (FD). In addition, Students with Disabilities (SWD) and all other Union College students who desire to excel in their academics may participate. This program assists and supports students in addressing academic concerns through regular weekly academic coaching on time management, organizational assistance, test taking and study strategies.

Students participating in this program are eligible to receive peer tutoring. There is a fee each semester that a student is part of the PACC program.

### **THE STUDIO FOR WRITING AND SPEAKING**

Tanya Cochran, M.A., A.B.D., *Director*

Web site:

[www.ucollege.edu/humanities/thestudio](http://www.ucollege.edu/humanities/thestudio)

The process of invention, revision and delivery resembles the process of spiritual growth. Good writing and speaking are like sanctification: the work of a lifetime. Our purpose is to provide an environment where life-writing and life-speaking occurs.

The Studio for Writing and Speaking

- assists writers and speakers—through dialogue and personalized instruction—in producing innovative, reliable, and meaningful research and presentations in and across their disciplines and communities;
- encourages writers and speakers to touch both local and global communities through writing and speaking that ennobles humanity and honors God.

Because any written or oral text requires time and persistence, the Studio encourages students to make an appointment at the early stages of the process. Tutors are available to brainstorm before the writer or speaker puts one word on a notebook page or computer screen as well as to offer feedback on first, in-between, and final drafts of writing projects and oral presentations. As a later concern, tutors provide instruction in grammar and mechanics. While they are not trained as editors or proofreaders, tutors help students identify and correct their own errors. Ideally, tutors and the students they work with develop a trusting relationship within which both hone their communication skills.

Studio services are provided without charge. For more information on location and appointments, visit our Web site.

## STUDENT LIFE AND SERVICES

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### STUDENT LIFE

Union College is known as a friendly undergraduate environment that provides opportunities for leadership, socializing, learning and personal Christian growth. Student Services and the Associated Student Body (ASB) plan activities every Saturday night. The remodeled Student Center is a hub of campus life. The proximity of rivers, lakes and parks offers opportunities for group and individual activities. Nearly 20 clubs and organizations provide a variety of social and intellectual enrichment activities.

The college organizes more than 15 intramural sports and four varsity sports in addition to individual sports opportunities. Tennis courts, a 25-meter swimming pool, sand volleyball court, gymnasium and four-acre playing field are available on campus. The Gymnares, the college's student gymnastics team, tour academics and regularly attends AcroFest.

Union provides for student socialization and learning in the Student Center, Woods Auditorium, Cooper's Corner, Campus Store, Career Center, Teaching Learning Center, and Ella Johnson Crandall Memorial Library. The Student Center also provides study areas, games and television rooms. A lounge for students who live off campus is located on second floor of the Everett Dick Administration Building.

### STUDENT LIFE AGREEMENT

The college desires that students gain experience in making personal decisions based on Christian values. By choosing to enroll at Union College, students express a willingness to make decisions which are guided by the following principles:

- Honesty
- Modesty as expressed by appropriate and tasteful clothing
- Christian standards for the fine arts including, art, music and literature

- Graciousness demonstrated through tolerance for diversity
- Truth, as demonstrated in Scripture
- Respect for others' property, personal dignity, time and privacy
- Taste and decency in conduct, expression and citizenship
- Healthy lifestyle including nutrition, exercise, rest and abstinence from alcohol, tobacco, and illegal drugs on or off campus
- Moral purity
- Spiritual development and service to others.

### VIBRANT SPIRITUALITY

Love for God is shown through personal and community worship. The college believes that individual worship in a private setting is essential to Christian growth. To that end residence halls provide private meditation areas.

To enhance a sense of Christian community, Union College enables students to experience vibrant spirituality through a variety of worship opportunities. These include worships led by students or faculty, residence hall worships, spiritual emphasis weekends and Student Week of Prayer. Undergraduate students are required to attend a minimum number of these services depending on their class standing.

### SABBATH OBSERVANCE

To show love for God and His Sabbath, the seventh day is observed. The holiness of the Sabbath day is honored by giving special attention to worship, rest, Christian fellowship, service and seeking God.

### Volunteer Opportunities

To share the caring spirit of Union College, a wide variety of volunteer services are available for students. Student volunteer coordinators provide resources and find



opportunities to connect students and staff with service needs in the Lincoln area.

Project Impact, Union's annual community service day, begins the school year with more than 80 percent of students and employees working in service agencies. Ongoing volunteer activities include transportation for the elderly, disaster relief, house cleaning, yard work, care for the homeless and programs for children and youth.

### **Philosophy of Campus Conduct**

As a Christian college, Union seeks to integrate Christian teachings with academic pursuits, extracurricular activities, social development and lifestyle choices.

The guiding philosophy holds that the Scriptures establish a framework of values which should guide the development of Christian character, behavior and thought. The administration, faculty and students of Union are expected to embrace these principles.

Students are encouraged to deepen their commitment to Christian values and cultivate intellectual and creative powers through participation in campus worship and fellowship.

### **RESIDENCE LIFE POLICY**

Students who live on campus are more likely to graduate, experience higher satisfaction with their college experience, obtain higher grades and have more friends than those living off campus. For these reasons Union maintains a residential campus and requires undergraduates not living with their parents to live in the residence halls.

Recognized exceptions include:

- students who are 22 years of age at the beginning of a semester;
- students taking five semester credit hours (other than first year freshmen);
- students living with parents or grandparents whose primary residence is Lincoln as verified by their income tax statement;
- students who are married, divorced, separated or widowed;

- with Deans= Council approval, seniors who are 21 and have obtained three semesters of worship credits and good citizenship;
- students showing financial need who are offered free room and board with a family in exchange for labor may request approval to live with that family.

Arrangements for moving off campus should be approved by Deans' Council before signing any rental or lease agreement.

Questions or requests regarding the housing policy should be directed to the vice president for Student Services or residence hall dean.

Students 22 years or older at the beginning of a semester may arrange to live in a residence hall through the appropriate dean.

There are three residence halls: Rees Hall for women, Prescott and Culver Halls for men. Rooms are equipped for two students and furnished with a phone line, Internet and cable TV connections, a bookcase, closets, two single beds, dressers, desks and chairs. Further information is available at [www.ucollege.edu](http://www.ucollege.edu) under Student Services.

### **Room Reservations**

Room reservations can be made online at [www.ucollege.edu/enroll/forms](http://www.ucollege.edu/enroll/forms) or by writing or calling the dean of women (402.486.2535) or dean of men (402.486.2533) as appropriate. Under certain conditions, students taking classes at a local college or university may apply for on-campus housing to the vice president for Student Services.

### **College-Owned Apartments**

The college owns a number of apartments within close proximity to the college campus suitable for student families and students who are 22 years of age by the beginning of the semester. Monthly rental rates vary with apartment size. Correspondence concerning college-owned housing should be addressed to the Housing Manager in the Financial Administration Office well in advance of attendance or call 402.486.2502.

**Personal Effects**

College-carried insurance does not insure the personal effects of any individual even if it is required for use on campus. Therefore, the college recommends that students consider carrying insurance to cover such losses.

**Residence at Union College while Studying Elsewhere**

Opportunities are available for students to pursue programs that are not offered at Union College, while having the spiritual and social advantages that come from living on the campus of Union College. Students have access to facilities, services and events offered by the college, while not being registered students at Union College.

**STUDENT SERVICES  
CAMPUS DINING SERVICES**

Union Market provides a vegetarian menu with vegan options in a market-style setting from early morning to late evening. Cooper's Corner, a snack shop in the Student Center, provides additional food options. A food service minimum is charged per semester for residence hall students.

**STUDENT HEALTH SERVICES**

Student Health Services, directed by a registered nurse, provides clinical services and health education. Health care options include regular access to a physician assistant. Referrals may be made to physicians and other health care professionals. Additional fees may apply.

To register, each student must complete a health form and provide an official record of immunizations. Forms are available on the college Web site. Union College urges all students to comply with the minimum immunization guidelines established by the Nebraska State Department of Health. These immunizations include diphtheria-tetanus with a tetanus booster within the past ten years, polio, and two doses of measles vaccine.

Special health regulations apply to international students. For more information contact the director of admission.

**PHARMACEUTICAL OR CHEMICAL TRIALS**

Union College strongly recommends that students not participate in any commercial pharmaceutical or chemical evaluations. Weekend leaves will not be approved for such purposes. Any student who participates in such testing programs voluntarily assumes all risks involved and agrees to hold the college harmless for all resulting injuries, illness or damages, direct or consequential.

**FERPA**

In compliance with the Family Educational Rights and Privacy Act (FERPA), Union College reserves the right to notify a parent or guardian when a student who is under 21 and has been admitted to the hospital; has a serious health condition; has violated any federal, state or local law or campus rule or policy governing the use or possession of alcohol or a controlled substance; or for any conduct that poses a significant risk to the safety or well being of that student, other students, or other members of the college community. For the official college FERPA policy see [www.ucollege.edu](http://www.ucollege.edu).

**HEALTH INSURANCE**

Students attending Union College are responsible for obtaining personal health insurance. The college requires that full-time students (those taking 12 or more hours) be covered by health insurance. During registration students must furnish information regarding their health insurance coverage, or they may elect to purchase a health insurance plan available through the college. Though health insurance is not required for part-time students in most programs, it is highly recommended.

All international students and all students enrolled in nursing, physician assistant, and international rescue and relief courses are required to carry personal health insurance

and are encouraged to carry personal liability insurance.

### **MOTOR VEHICLES**

To park on campus, all students must register their vehicles with Student Services. There is no campus vehicle registration fee. Regulations governing the use of motor vehicles are outlined in the Student Handbook.

### **ATHLETICS PHILOSOPHY**

Union College's Christian approach to athletics develops sportsmanship, promotes academic excellence, enhances team and individual skills, cultivates teamwork and leadership abilities, and encourages service to others.

### **INTRAMURAL SPORTS**

Union College encourages students to become involved in the various recreational opportunities which are offered on campus. The intramural sports program provides traditional sport leagues such as basketball, flag football, floor hockey, volleyball and soccer along with other non-traditional activities. All participants are expected to follow the concepts of sportsmanship which should be displayed on a Christian campus.

Students enrolled in at least six hours of credit and meeting insurance requirements are eligible to participate in the intramural sports program. Students competing on intercollegiate athletic teams are not eligible to participate in the corresponding intramural sport if the seasons are concurrent (i.e. a varsity basketball player may not participate in the intramural basketball league).

### **INTERCOLLEGIATE SPORTS**

Teams that represent Union College on an intercollegiate level are men=s and women=s basketball, women=s volleyball and men=s golf varsity sports. All athletes are expected to follow the concepts of sportsmanship which should be displayed on a Christian campus.

### **ELIGIBILITY**

Students must have attained a 2.50 GPA for the past semester or cumulatively to be fully eligible to participate on an inter-collegiate team. First semester freshmen academic eligibility is based on their high school GPA. A one semester probationary period is available to team members whose GPA falls between 2.00 and 2.50 for the past semester. Those placed on probation may be allowed to practice, but will not play in games or travel with the team. Team members who do not reach a 2.50 GPA after one semester of probation will not be eligible until they have met this requirement.

Students who are taking a minimum of 12 hours on the Union College campus are eligible to participate in intercollegiate teams.

### **STUDENT GRIEVANCE PROCESS**

Union College attempts to follow Biblical principles when wrong is perceived by a student or employee. A student who feels treated unfairly or unjustly has the right to appeal according to approved procedures.

### **INFORMAL COMPLAINT PROCEDURE**

Most misunderstandings and difficulties are settled to mutual satisfaction when the student perceiving a wrong discusses the issue with the employee involved, whether course instructor, residence hall dean or staff member. A student who is not satisfied by discussion at this direct level should appeal to the instructor=s program director or division chair, head residence hall dean, or staff member's supervisor.

### **FORMAL COMPLAINT PROCEDURE**

If not satisfied at the supervisory level, the student should contact the appropriate vice president, and may provide a written summary of the complaint and a proposed resolution.

If not satisfied with the decision of the appropriate vice president, within seven working days the student should file a formal

written complaint with the president of Union College requesting a grievance hearing. Filing a formal grievance is a serious matter and should be done thoughtfully.

The recommendation of the Grievance Committee will provide the underlying context of the president's decision which constitutes the final action by the college.

#### **GRIEVANCE COMMITTEE**

Selected by the president, the Grievance Committee shall be composed of two students and three faculty or staff members, as appropriate. Either party may suggest one member of the committee. The chair and secretary of the committee shall be elected by the committee members at the first meeting.

Both the student and the college employees involved in the case are invited to appear before the committee and to present a written statement of the case. At the student's request, one advocate (a parent, spouse, student, or college employee) may accompany the student to the meeting. The advocate's role is to be moral support for the student and to be an observer of the process. The advocate may answer questions if asked.

Because this is an internal process, the presence of legal counsel is not appropriate for either party.

The student and the student's advocate may attend the committee presentation of all evidence and any related matter reviewed by the Grievance Committee. They also have the right to rebuttal all evidence and reasoning.

They may not attend the committee's final deliberation and vote, however.

The Grievance Committee may recommend that either the action taken should stand, that the matter should be reconsidered by the original deciding body, or a new action is warranted. The recommendations of the Grievance Committee shall be presented in writing to the President of Union College who will notify the student of the decision.

#### **Withdrawal of Grievance**

At any time during the grievance procedure, the student may withdraw the complaint in writing to the president. In addition, a failure by the student to appear for a requested hearing, without prior notification or evidence of extenuating circumstances, shall constitute withdrawal of the grievance or appeal.

#### **Matters Not Grievable**

College policies and regulations adopted by the college and/or the Board of Trustees are not subject to the grievance process. Students may request discussion and recommend changes to such policies but this dialogue is advisory and not grievable.

This grievance policy applies to Union College issues. Where other organizations are involved, the college may not be free to act. For example, where patient safety or child protection is involved, or where state regulations and other institutional policies may supersede college guidelines, the complaint may not be grievable.

# FINANCIAL INFORMATION

## STUDENT FINANCIAL SERVICES

All financial plans are completed in the office of Student Financial Services. Students are required to make financial plans and complete all financial arrangements before school begins.

To better serve students, parents, sponsors, and others who plan to travel long distance to the campus for business purposes, appointments are recommended (see Contact Information in the front section of this bulletin or the Union College Web site [www.ucollege.edu](http://www.ucollege.edu)).

Complete financial information about Union (including tuition charges) is available in the schedule of *Scholarships, Tuition and Fees* which is published annually.

### Tuition and Fees

A schedule of *Scholarships, Tuition and Fees* may be obtained from Enrollment and Student Financial Services.

Typically used services include tuition for classes, housing in dormitories, meals in the cafeteria, books and supplies for classes.

A variety of other services include health insurance, special academic attention and testing, social and service clubs, and music lessons. Additional services are listed in the Miscellaneous Charges section.

### International Student Deposit

International students needing an I-20 are required to pay a \$1,000 deposit. The deposit may be returned after a student leaves the college if the account is paid in full and the student completed at least one semester, but will not be returned before then. Citizens of Mexico and Canada are exempt from this deposit. Applicants must have written financial arrangements and a mutually acceptable plan for keeping their accounts current before an I-20 is issued.

## PAYMENT PLAN

Student charges at Union College are calculated on a yearly basis. The student and/or family payment plan is based on the estimated amounts remaining after deducting other financial resources such as scholarships, grants and loans. Students who require a monthly payment plan may request to pay their amount due in nine (9) installments due on the first of each month (August-April).

### International Student Options

A \$1,000 advance deposit and an "Affidavit of Support" are required of all international students, except Canadian and Mexican citizens, prior to the issue of an I-20 form.

A monthly payment option is available in cases where advance arrangements are pre-approved. Provisions include

- \$1,000 advance deposit;
- \$4,000 initial payment due upon arrival;
- eight (8) remaining monthly payments due the first of each month (September - April).

## CONSUMER INFORMATION

A prospective or continuing student at Union College is entitled to information on applying for, receiving and continuing with financial aid; educational costs and refunds; and transportation costs for commuting students living off-campus.

This information is accessed at Student Financial Services in addition to information on special facilities and services available to students with disabilities.

## REFUND POLICY

Union College offers a 100% refund of tuition and required fees should a student drop some classes or completely withdraw from the college on or before the published "Last Day to Add/Delete Classes." After that date, required fees are non-refundable and the following refund policy applies to tuition.

Calendar days are referenced according to the number of days following the *Last Day to Add/Delete Classes*.

<u>Refund</u>	<u>Calendar Days</u>
100%	Up to and including <i>Last Day to Add/Delete Classes</i>
80 %	days 1 to 7
60 %	days 8 to 21
40 %	days 22 to 35
20 %	days 36 to 42
None	Exceeding 42 days

Refunds for sessions or classes with durations other than the regular 15-week semester will be prorated using the above as a guideline. Federal Financial Aid is prorated based on a calculation prescribed in federal regulation which is slightly different from that used for institutional aid. The calculation determines the amount of federal aid the student earned while enrolled. Contact Student Financial Services with questions about this policy.

### **KEEPING CURRENT**

Students may register for classes only when arrangements have been made to cover past due accounts and the full amount estimated for the current school year through financial aid, loans, and student and parent participation.

If students are unable to meet their payment agreements, they must make prompt arrangements or they will forfeit the right to attend classes and their registration will be cancelled.

### **Cash Withdrawals**

Students whose accounts show credit balances greater than called for by the payment agreement are allowed to make cash withdrawals.

### **Transcripts and Diplomas**

It is a policy of the college to withhold transcripts and diplomas if a student has an unpaid account at the school. Under provisions of federal loan programs, Union College withholds all records when payments for student loans become past due.

This policy applies to all student account charges and all other educational related expenses. To expedite the release of these transcripts and diplomas, the student should send a money order or certified check, or make a cash or credit card payment to cover the balance of the account when requesting the documents. Payments should be sent to Student Financial Services.

### **Interest**

Interest charged at one percent per month (approximately 12% per year) is added to any non-current student's account which is ninety (90) days or more past due.

### **Collection Policy**

Students completing or terminating their studies with the college are responsible for paying any amounts due. Satisfactory arrangements must be made within ninety (90) days after studies are completed or discontinued. The college reserves the right to seek collection help from third-party agencies for non-current accounts more than ninety (90) days in arrears.

### **OTHER CHARGES**

#### **Music Lessons**

College students are charged a fee each semester for each one-half hour lesson per week. If academic credit is desired, tuition is also charged. The charge for this fee is printed in the schedule of *Scholarships, Tuition and Fees*. There are scholarships available to qualified music majors who meet certain requirements.

#### **Program Fees**

Several programs have additional fees that are required to help cover the cost of program maintenance; the specific costs are listed

annually on the schedule of *Scholarships, Tuition and Fees*:

- International Rescue and Relief;
- Nursing
- Physician Assistant.

#### **Charges per Usage**

Art and photography lab fees will be charged to cover the cost of special laboratory services, supplies consumed and use of equipment.

Laboratory usage fees are charged for damage to, or loss of, equipment, nonreturnable special supplies and special laboratory services not ordinarily required.

#### **College Level Examination Program (CLEP)**

\$ 65.00	Testing fee (each test)
15.00	Proctor fee
5.00	Cancellation fee
15.00	Recording fee (per credit)

#### **Miscellaneous Charges**

The following charges will be made when appropriate and are subject to change: (The list below is not all inclusive)

\$ 30.00	ACT residual testing
25.00	Diploma replacement
100.00	Dormitory room deposit
5.00	Dormitory key deposit
10.00	Drop/add fee
50.00	Examination rescheduling
60.00	Graduation fee
50.00	Late registration (after first day of classes)
25.00	Nursing application fee
170.00	PPST (education majors)
25.00	Proficiency Examinations (per course by division)
15.00	Recording fee (per credit)
50.00	Registration cancellation
5.00	Transcript fee *
	(fee waived for graduates)
10.00	FAX copy and mailed official transcript *
	*Account must be paid.

#### **OTHER SERVICES AND INFORMATION**

##### **Summer School Sessions**

Union College offers summer school courses which are substantially discounted from the regular tuition rates. Some exceptions to discounted rates do apply. Information and tuition rates for summer sessions may be obtained from Enrollment and Student Financial Services.

##### **Multi-Campus Enrollment**

Students who are required by their program to take classes at another institution while attending Union College must (1) obtain approval from the Academic Dean's Office and (2) make financial arrangements with Student Financial Services prior to enrolling for classes.

##### **Affiliated Off-Campus Programs**

Courses taken through an affiliated off-campus program (1) must have prior approval from the Academic Dean's Office and (2) must be paid for at the non-discounted tuition rate of Union College or the affiliated institution rate. Summer or special session rates do not apply. This policy applies to all students including those participating in cooperative, Guaranteed Education and Baccalaureate Bonus programs.

##### **Family Educational Rights and Privacy Act (FERPA)**

Financial records are included as part of students' educational record and therefore are subject to FERPA regulations. Union College's FERPA policy is found at [www.ucollege.edu/ferpa](http://www.ucollege.edu/ferpa).

##### **RESOURCES AVAILABLE**

Union College has a comprehensive package of financial assistance. This financial assistance is an outgrowth of Union's deeply rooted philosophy that quality Christian instruction should be available to everyone at a reasonable price.

Financial assistance for educational costs at Union College is available from the college, federal, state and private agencies, as well as family and student resources to help enable the opportunity to attend Union.

Most financial aid is awarded on financial need as determined by the Free Application for Federal Student Aid (FAFSA), although some scholarships and unsubsidized loans are non-need based. Students are encouraged to file early to receive the maximum financial awards. The earliest date to file is January 1 for the following school year. March 15 is the priority deadline for Union College applicants to be eligible for the maximum amount of federal funding.

The FAFSA may be completed prior to acceptance to the college, but the student must be officially accepted through the UC Admissions Office before receiving an official financial aid award. Financial Aid awards are calculated on the basis of full-time enrollment. Awards are credited to the student's account for each term in which the student is enrolled. Awards are made without regard to gender, race, religion, nationality, or ethnic origin, age, or disability.

Following are summaries of resources that may be available to you to help finance the education you want. The general categories of assistance, in order of appearance, are Scholarships, Government Grants and Loans, and Employment Opportunities.

### **SCHOLARSHIPS**

Scholarships are reviewed by source of funds – External, Donor, and Union College scholarship and financial aid programs.

#### **External Scholarships**

Students can access scholarships from national and community organizations. Many businesses, philanthropies, service clubs, and religious organizations sponsor scholarships. Contact your high school counselor, public library, Chamber of Commerce, pastor and bookstores for more information.

EdQuest offers free planning tools to help plan for college, to apply for financial assistance and obtain loan information via 800.303.3745 or [www.educationquest.org](http://www.educationquest.org). For other resources like scholarships, ACT practice testing and financial planning call 866.866.7372 or visit [www.collegeplanning.nelnet.net](http://www.collegeplanning.nelnet.net).

### **Nebraska Foundations**

Several scholarships are available yearly from Nebraska philanthropic organizations. Preference is given to upper division students who are residents of designated Nebraska counties.

### **Veterans**

A student who has been accepted and is eligible to receive veteran's benefits under the 1966 enactment should contact the Records Office for information about these benefits.

### **Donor Scholarships**

The college administers numerous scholarships from endowments and annual donations which are funded by alumni, philanthropic and business organizations and friends of the college. Contact Student Financial Services for more information.

### **Union College Scholarships and Aid**

The college funds a wide variety of scholarships and financial assistance to help students meet their education expenses. Examples include merit and financial need scholarships. The college reserves the right to substitute institutionally funded assistance with donor scholarships. Total scholarships, subsidies and other assistance (excluding loans) cannot exceed tuition. Eligibility for Union College scholarships and financial assistance is based upon full-time enrollment (12 or more hours per semester). Awards will be reduced or cancelled if a student's load drops below this amount. Details are available from Student Financial Services.



**National Merit scholarships** are applied to Union College tuition and are renewable at 100% of the initial award for up to three additional years.

Students must maintain a 3.50 GPA to renew annually. Recipients of full-tuition awards are ineligible for other Union College sponsored scholarships and awards. These scholarships may be funded with other awards, scholarships, grants and subsidies and are offered for up to four years of attendance:

- Finalist                                      full tuition
- Semi-finalist                                25% of tuition
- Commendation                              20% of tuition

**Church Grant Matching** is sponsored jointly by the student's local church and Union College. Union College will match fifty cents on each dollar provided by the church up to the Union College yearly cap. A student's immediate family may not contribute to the fund for matching purposes. Contact Student Financial Services to obtain the Church Matching Form and for additional information.

**Summer Camp Scholarships** are generous scholarships for students employed in a Seventh-day Adventist conference summer camp program. The scholarships are sponsored jointly by the local and union Seventh-day Adventist conferences and Union College. Students should contact their local conference office for applications.

**Literature Evangelism Scholarship** is available to students who enter the literature evangelist work for the purpose of applying earnings toward current school expenses. Union College matches summer earnings as a 100% scholarship up to the Union College cap.

**Task Force Scholarships** are for students who participate in qualified Task Force assignments through local Seventh-day Adventist conferences. Higher scholarship awards are granted for assignments within the

Mid-America Union Conference territory. Awards range between \$1,500 and \$3,000 for a full school year assignment. Contact Student Financial Services for details.

**Student Missionary Scholarships** are awarded to participants in qualified student missionary assignments after they return to Union College.

### FEDERAL FINANCIAL AID

Title IV Federal Student Financial Aid programs include Federal Pell Grants, Federal Work-Study Employment, Federal Perkins Loans, Federal Supplemental Educational Opportunity Grants, State Scholarships Award Programs, Scholarship Assistance Programs, Federal Stafford Student Loans, Federal Graduate PLUS Loans and Federal Parent PLUS Loans.

In order to qualify for Title IV Federal Student Financial Aid, students must be enrolled and working toward a degree in an eligible program. Other eligibility criteria include: being a U.S. citizen or eligible non-citizen; having a valid Social Security number; making satisfactory academic progress; and, if required, register with the Selective Service. International Students are not eligible for federal aid.

In order to determine eligibility amounts, students must file the Free Application for Federal Student Aid (FAFSA) annually. Students are encouraged to file the FAFSA online at [www.FAFSA.ed.gov](http://www.FAFSA.ed.gov). Help is accessed on that site, through Nelnet at 866.866.7372, or by Student Financial Services at 800-228-4600.

### GOVERNMENT GRANTS

Grants are awarded to students whose families demonstrate exceptional financial need.

#### Federal Pell Grant

A Federal Pell Grant is a federal assistance grant awarded to undergraduate students who are United States citizens or permanent

residents and have not earned a bachelor's or professional degree. The amount of this grant is based on student and family resources and determined by the information submitted on the FAFSA.

#### **Federal Supplemental Educational Opportunity Grant (FSEOG)**

FSEOG awards provide assistance to students who are eligible for the Pell grant and have exceptional financial need. The amount of the award is based on the availability of funds and awarded on a first-come, first-served basis.

#### **Federal Academic Competitiveness Grant (ACG)**

The ACG grant is awarded to first and second year undergraduate students who have completed a rigorous program of study in high school (as designated by the state), who are U.S. citizens, and who are eligible to receive the Pell grant. Students are required to maintain a 3.0 GPA in order to qualify for the second year award.

#### **Federal SMART Grant**

The SMART grant is awarded to third and fourth year undergraduate students who are U.S. citizens, are eligible for Pell grants, and who are maintaining at least a 3.0 GPA in certain majors (as designated by the federal government) in mathematics, science or critical languages.

#### **State of Nebraska Grant**

Awards are made to qualified Nebraska residents with low Pell grant indexes via the state's colleges and universities. Funding is from federal and Nebraska sources.

### **GOVERNMENT LOANS**

The federal government's loan program provides low-interest loans to students enrolled at least half-time at Union College. Access to these loan funds also requires an annual FAFSA. See government grants for information of help with the FAFSA filing.

#### **Federal Stafford Loan**

This program enables students to borrow from eligible lenders at low interest rates and repay the loan after leaving school over a number of years. *Subsidized loan* means the federal government pays the interest while the student is in school and during deferment periods. *Unsubsidized loans* are interest bearing to the student.

#### **Federal Perkins Loan**

This program offers low-interest, long-term loans to degree-seeking students who are United States citizens or permanent residents, demonstrating financial need for the amount of the loan and accepted or currently enrolled at Union College.

Interest on this loan is forgiven (subsidized) during enrollment and deferment periods. Because of the large demand for this loan, Union College implements a maximum award for its qualifying applicants.

#### **Federal Nursing Loan**

This loan program is available for students enrolled in the nursing program (sophomores or above). The Perkins loan may be available to qualified pre-nursing students.

#### **Federal Parent PLUS Loan for Undergraduate Students**

PLUS loans enable parents with good credit histories to borrow funds to pay the education expenses of each student who is a dependent undergraduate student enrolled at least half time. The maximum PLUS loan is the cost of attendance less other financial aid received. Interest begins to accrue immediately upon disbursement. Repayment generally begins within 60 days after the final loan disbursement for the academic year, with a maximum repayment period of ten years.

#### **Federal Graduate PLUS Loan for Graduate Students**

PLUS loans enable graduate students with good credit histories to borrow funds to pay the educational expenses which are not

covered by other funds. The maximum PLUS loan is the cost of attendance less other financial aid received. Repayment is deferred as long as the student is enrolled at least half time.

### EMPLOYMENT OPPORTUNITIES

Full-time students are encouraged to participate in a work program. Earnings often are an important component of students' financial resources. Students are considered "at will" employees in harmony with Nebraska state laws and guidelines.

#### Finding Campus Employment

The Student Employment Office assists students in finding work and by posting employment openings on the campus computer bulletin board. Full-time students are given preference in filling campus work program positions.

#### Federal Work-Study Employment

This campus employment program is for those who qualify for federal financial assistance. Preference is given to students with the greatest financial need and who meet program guidelines. Students are paid at the legal minimum rate but may be given raises as their skill and competence increase.

#### 20 Hours per Week Maximum

Campus employment is limited to 20 hours per week during active terms. Exceeding this restriction requires approval from Student Financial Services.

#### Worker's Comp Insurance

Per Nebraska law, Union carries worker's compensation insurance to protect all employees in case of work-related accidents.

#### International Students

U.S. Citizenship and Immigration Services approves campus work only (some exceptions apply).

### Documents for Employment

Students working on-campus must complete appropriate documents before starting work. International students must present valid visa and work documents before employment is authorized.

#### Summer Employment

Meaningful summer employment is a key to a successful financial plan for the coming year. Following are three programs to consider when making summer break plans.

*Campus* earnings are available for students who work on campus during the summer months. Also, *generous summer employment scholarships* are available for students who meet required employment hours and apply the work earnings to their account. To qualify for the scholarship, an application must be submitted. For details, contact the Student Employment Office.

*Summer camp* earnings are for student employees of a Seventh-day Adventist conference summer camp program. The earnings are paid from funds contributed by the local and union Seventh-day Adventist conferences. Students should contact their local conference office for employment applications.

*Literature evangelism* earnings are for student employees who enter the literature evangelist work. Students receive a portion of their sales as a commission. Campus Ministries has more information.

### SATISFACTORY PROGRESS TO KEEP FINANCIAL AID

Students receiving Title IV federal financial assistance must maintain satisfactory academic progress toward their degrees. This progress is measured at the end of each semester both qualitatively (GPA) and quantitatively (semester hours completed).

An undergraduate student must maintain an overall cumulative grade point average of at least 2.0 and must satisfactorily complete two-thirds of the credit hours attempted each year. In addition, a student will become ineligible if the student exceeds 150% of the credit hours necessary to complete the student's program, as listed in the bulletin. In calculating the 150% all credit hours attempted, even those with grades of F, I, repeated courses, remedial courses, ESL courses and courses taken at other institutions, whether financial aid was received or not, count toward the quantitative total.

A graduate student must maintain an overall cumulative grade point average of at least 2.8 and must satisfactorily complete two-thirds of the credit hours attempted each year.

Evaluation of a students' eligibility to continue to receive federal aid will be made each year. Freshmen will also be evaluated each semester during their first year of attendance. A student who does not meet satisfactory academic progress standards will not be eligible for federal, state or institutional aid until additional academic work is satisfactorily completed.

A student may file a written appeal with the Director of Student Financial Services to seek an additional semester to meet the required standards. Contact the office of Student Financial Services for more information.

Students who are disqualified from receiving financial aid may choose to re-enroll. However, any previous balance and all tuition and fees for the current term must be paid or guaranteed prior to enrollment.

### **Master's Programs**

Students in master's programs are granted 30 months to complete the program and clinical assignments.

### **Baccalaureate Programs**

Students in baccalaureate programs have 12 semesters to complete their programs.

### **Associate Programs**

Students in associate programs (minimum of 64 hours) have six semesters to complete their programs.

### **Part-time Enrollment**

Students not classified as full time must satisfactorily complete a prorated number of credits.

### **Appealing Financial Suspension**

Students may appeal denial of federal financial assistance by submitting the Satisfactory Academic Progress (SAP) Appeal Form to Student Financial Services. The appeal should include statements

- explaining the reasons for not making satisfactory progress;
- indicating how satisfactory progress will be achieved, and
- all supporting documentation for reasons for not making satisfactory progress.

### **REQUIREMENTS WHEN ACCEPTING FINANCIAL ASSISTANCE**

Financial awards are typically based on full-time (12 hours or more) enrollment. If students enroll for less than 12 hours each semester or drop to less than 12 hours, their award will be reduced or cancelled. Students who plan to register for less than 12 hours in a semester should notify Student Financial Services in advance.

# DIVISION OF BUSINESS AND COMPUTER SCIENCE

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## MISSION

The Division of Business and Computer Science prepares professionals for Christian service in the business world by providing a quality, student-oriented education that emphasizes ethics and balances practice and theory.

## GOALS

Students graduating with degrees in business or computing will be prepared to

- apply a Christian philosophy to business and technology ethics;
- demonstrate Christian involvement through volunteering in community activities;
- apply theory to practical situations;
- experience student/teacher involvement through personalized advising and career planning as well as social and professional activities;
- integrate technology into the workplace through appropriate use of computer software;
- work together in effective teams;
- demonstrate professional communication and business decorum;
- be prepared for advanced study.

The divisional assessment plan helps meet these goals by collecting, evaluating and responding to input from division students, internship evaluations and alumni. Student preparation for careers and graduate school will be measured through tracking graduates' job placement, graduate school acceptance, and nationally recognized tests.

## DIVISION OFFICE

<i>Location</i>	Dick Building, Room 301 and Room 404
<i>Telephone</i>	402.486.2521
<i>E-Mail</i>	baforbes@ucollege.edu
<i>Web site</i>	www.ucollege.edu/businesscomputer

## FACULTY

Barry Forbes, M.B.A., Chair, *Associate Professor of Business*  
Gary Dickerson, M.S., M.B.A., *Associate Professor of Computing*  
Lisa Forbes, M.B.A., C.P.A., *Associate Professor of Accounting/Finance*  
Malcolm Gaskin, M.A., C.P.A., *Associate Professor of Accounting*  
George Gibson, Ph.D., *Professor of Economics*  
Roger Schmidt, M.S., *Lecturer of Computing*  
Kent Stahly, M.A., *Associate Professor of Finance*  
Kim Steiner, M.A., *Assistant Professor of Marketing/Management*  
Debra Unterseher, M.A., *Associate Professor of Computing*

### Adjunct Faculty

Marsha Bartulec, M.A.  
Arlie Fandrich, M.A.T., *Associate Professor of Computing*  
G. Mark Smith, M.B.A., J.D.

Faculty who have experience in both academics and in the business world provide the balance between practice and theory in the Division of Business and Computer Science.

**DEGREES AND PROGRAMS****Bachelor of Science**

Business Administration

*Emphases: Accounting**Finance**Management**Marketing**Science**Small Business Management*

Business Education, Secondary Subject Endorsement

Computing

*Emphases: Business**Computer Information Systems**Computer Science**Graphic Design*

Information Technology Education, Supplemental Endorsement

**Associate of Science**

Accounting

Business Administration

Computing

**Minors**

Accounting

Business Administration

Computer Information Systems

Computer Science

Marketing

Small Business Management

**BUSINESS ADMINISTRATION****BUSINESS CORE—45 hours**

ACCT 211, 212	Principles of Accounting	3, 3
BUAD 376	Human Resources Management	3
BUAD 405	Business Ethics	1
BUAD 425	Business Communications	3
BUAD 428	Business Policies	3
BUAD 445	Business Law	4
CPTR 220	Microcomputer Applications	3
ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3
FNCE 325	Business Finance	3
MATH 165	Calculus for Managers	3
MATH 221	Elementary Statistics and Probability	3

MRKT 327	Marketing	3
RELT 305	Christian Ethics	3
____ 475	Internship in ACCT, BUAD, FNCE, or MRKT	1

Admission to some graduate programs may require additional classes such as  
 BUAD 316 Operations and Resource Management 3

## BUSINESS ADMINISTRATION

### *Accounting Emphasis*

#### Bachelor of Science

The accounting emphasis prepares students for careers as professional accountants in the areas of taxation, auditing, financial, managerial and not-for-profit accounting. Both managerial and certified public accountants serve as consultants and advisors to business management and public officials.

#### MAJOR AND CONTEXTUAL REQUIREMENTS—72 hours

BUSINESS CORE	45
ACCT 313, 314 Intermediate Accounting	4, 4
ACCT 315 Federal Income Tax□ Individual	3
ACCT 316 Federal Tax□ Corporate, Partnership and Fiduciary	3
ACCT 325 Cost and Managerial Accounting	3
ACCT 443 Governmental and Not-for-Profit Accounting	3
ACCT 449 Advanced Accounting	3
ACCT 455 Auditing	4

Many students choose to obtain certification as Certified Public Accountants (CPAs). Most states require completion of an undergraduate degree in accounting before the CPA exam may be written. Nebraska and many other states have a minimum education requirement of 150 semester hours after high school.

The Union College Accounting Curriculum has been approved by the Nebraska State Board of Public Accountancy as satisfying the accounting and general business requirements for the 150 hours. Close consultation is necessary between the student and the accounting faculty to ensure that state requirements to sit for the exam are met. Students may complete this requirement by taking undergraduate class work with the option of completing a second major or emphasis or by attending graduate school. Careful planning by the student is needed to ensure compliance with the various state requirements for specific classes which must be taken to fulfill the 150-hour requirement. Courses required to sit for the CPA exam in Nebraska in addition to the BUSINESS CORE include:

ACCT 335	Accounting Information Systems	3
BUAD 316	Operations and Resource Management	3

**BUSINESS ADMINISTRATION***Finance Emphasis***Bachelor of Science****MAJOR AND CONTEXTUAL REQUIREMENTS □ 68 hours**

BUSINESS CORE	45
ACCT 313, 314     Intermediate Accounting	4, 4
FNCE 330           Financial Institutions and Markets	3
FNCE 332           Investments	3
FNCE 370           International Finance	3
Select additional courses from ACCT, BUAD, FNCE, or MRKT 333	6

**BUSINESS ADMINISTRATION***Management Emphasis***Bachelor of Science****MAJOR AND CONTEXTUAL REQUIREMENTS □ 69 hours**

BUSINESS CORE	45
BUAD 310           Quality Management	3
BUAD 316           Operations and Resource Management	3
BUAD 430           Conflict Management	3
BUAD 455, 456     Advanced Human Resource Management	2, 2
CPTR                Additional CPTR course(s) 200 level or above	2
Select additional courses from (at least one must be ACCT 313 or 325)	9
ACCT 313           Intermediate Accounting (4)	
ACCT 325           Cost and Managerial Accounting (3)	
FNCE 332           Investments (3)	
Any ACCT, BUAD, FNCE or MRKT course(s) (3-6)	

**BUSINESS ADMINISTRATION***Marketing Emphasis***Bachelor of Science****MAJOR AND CONTEXTUAL REQUIREMENTS □ 66 hours**

BUSINESS CORE	45
COPR 241           Public Relations Principles	3
MRKT 333           Professional Selling	3
MRKT 443           Consumer Behavior	3
MRKT 456           Marketing Research	3
PSYC 105           Introduction to Psychology	3
Select additional courses from	6



COMM 365	Institutional Development (3)
COPR 316	Advertising Practices (3) Recommended
COPR 332	Rhetoric (3)
COPR 445	Public Relations Campaigns (3)
GRPH 150	Intro to Graphic Arts (3)

## BUSINESS ADMINISTRATION

### *Science Emphasis*

#### **Bachelor of Science**

The degree in business with a science emphasis trains the student for employment in careers which encourage or require knowledge in both business and scientific principles. Students taking this major should work with both divisions to plan classes that will be the most beneficial for their career goals. Students planning to attend graduate school should be aware that the minimum major requirements will not prepare them for graduate school in science and courses should be chosen carefully to meet business graduate school requirements.

Students with a science emphasis will

- appreciate the balance between the business and scientific fields;
- learn how to incorporate effective business principles into the scientific environment.

## **MAJOR AND CONTEXTUAL REQUIREMENTS □ 84 hours**

### **Business Courses**

ACCT 211, 212	Principles of Accounting	3, 3
BUAD 219	Small Business Management	3
BUAD 425	Business Communications	3
BUAD 428	Business Policies	3
CPTR 220	Microcomputer Applications	3
ECON 235	Principles of Microeconomics	3
FNCE 332	Investments	3
MATH 165	Calculus for Managers	3
MRKT 327	Marketing	3
RELT 305	Christian Ethics	3
Select four courses from		12
BUAD 376	Human Resources Management (3)	
BUAD 445	Business Law (4)	
ECON 236	Principles of Macroeconomics (3)	
FNCE 215	Personal Finance (3)	
FNCE 325	Business Finance (3)	
MATH 221	Elementary Statistics and Probability (3)	
MRKT 333	Professional Selling (3)	

**Science Courses**

BIOL 151, 152	General Biology	4, 4
CHEM 151, 152	General Chemistry	4, 4
PHYS 151, 152	General Physics	4, 4
	or PHYS 251, 252 College Physics (4.5, 4.5)	
Select four science courses numbered 200 or above (two must be 300 or 400 level)		
BIOL, CHEM, PHYS		15

**BUSINESS ADMINISTRATION***Small Business Management Emphasis***Bachelor of Science****MAJOR AND CONTEXTUAL REQUIREMENTS □ 63 hours**

BUSINESS CORE		45
ACCT 315	Federal Income Tax □ Individual	3
	or ACCT 313 Intermediate Accounting (4)	
ACCT 335	Accounting Information Systems	3
BUAD 219	Small Business Management	3
BUAD 310	Quality Management	3
FNCE 215	Personal Finance	3
FNCE 332	Investments	3
	or BUAD 316 Operations Management (3)	

**BUSINESS EDUCATION***Secondary Subject Endorsement***Bachelor of Science**

The teaching major in business prepares candidates for secondary teaching by providing

- an appreciation for and understanding of the American private enterprise business system;
- a broad perspective of the principles, rules, laws and regulations which govern the business world;
- the ability to describe the relationships of individuals, business, government, labor and professional groups in the business world;
- knowledge of the opportunities for influencing or affecting the American private enterprise system;
- the ability to describe the theories and applications of accounting and bookkeeping principles;
- the ability to describe the art and techniques involved in recording, analyzing, classifying and interpreting financial data;
- proficiency in keyboarding and applications software on a personal computer.

**TEACHING MAJOR REQUIREMENTS □ 33 hours**

ACCT 211, 212	Principles of Accounting	3, 3
BUAD 376	Human Resources Management	3

BUAD 425	Business Communications	3
BUAD 445	Business Law	4
CPTR 220	Microcomputer Applications	3
ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3
MRKT 327	Marketing	3
OFFT 116	Keyboarding 3 (1.67 – Available at Southeast Community College) or demonstrate competency in keyboarding and take 2 hours electives in BUAD, CPTR, FNCE, or MRKT	2
Select additional courses from		3
BUAD 138	Dynamics of Business (3)	
BUAD 310	Quality Management (3)	
FNCE 215	Personal Finance (3)	
FNCE 332	Investments (3)	

**CONTEXTUAL REQUIREMENTS—3 hours**

MATH 111	College Algebra	3
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**PROFESSIONAL EDUCATION—51 hours**

EDUC 411	Methods: Business Teacher Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division--Secondary Education Endorsements).

**COMPUTING**

<b>COMPUTING CORE—21 hours</b>		
CPTR 225	Web Development Basics	1
CPTR 226	Computer Science I	4
CPTR 227	Computer Science II	4
CPTR 240	Linux Administration and Security	3
CPTR 327	Systems Analysis and Design	3
CPTR 424	Database Systems	3
Select one capstone course:		3
CPTR 475	Internship in Computing (3)	
CPTR 476	Applied Systems Development Project (3)	

**COMPUTING*****Business Emphasis*****Bachelor of Science****MAJOR REQUIREMENTS □ 64 hours**

COMPUTING CORE		21
ACCT 211, 212	Principles of Accounting	3, 3
BUAD 376	Human Resource Management	3
BUAD 405	Business Ethics	1
BUAD 435	Business Communications	3
BUAD 428	Business Policies	3
CPTR 220	Microcomputer Applications	3
ECON 235	Principles of Microeconomics	3
	or ECON 236 Principles of Macroeconomics (3)	
FNCE 325	Business Finance	3
MRKT 327	Marketing	3
Select six hours from 300-400 level ACCT, BUAD, FNCE		6
Select nine hours from		9
CPTR 320	Networking (3)	
CPTR 325	Computer Science III (3)	
CPTR 335	Web Technologies (3)	
CPTR 405	Software Engineering (3)	
CPTR 420	Windows Administration and Security (3)	

**CONTEXTUAL REQUIREMENTS □ 6 hours**

MATH 165	Calculus for Managers	3
	or MATH 221 Elementary Statistics & Probability (3)	
RELT 305	Christian Ethics	3

**COMPUTING*****Computer Information Systems Emphasis*****Bachelor of Science****MAJOR REQUIREMENTS □ 43 hours**

COMPUTING CORE		21
CPTR 190	PC Technology Fundamentals	1
CPTR 220	Microcomputer Applications	3
CPTR 320	Networking	3
CPTR 325	Computer Science III	3

CPTR 335	Web Technologies	3
CPTR 420	Windows Administration and Security	3
Select three hours from		3
CPTR	300-400 level computer courses	
Select three hours from		3
CPTR 310	Data Structures and Algorithms (3)	
CPTR 405	Software Engineering (3)	
CPTR 451	Operating Systems Principles (3)	

**CONTEXTUAL REQUIREMENTS □ 28 hours**

ACCT 211, 212	Principles of Accounting	3, 3
BUAD 138	Dynamics of Business	3
BUAD 405	Business Ethics	1
BUAD 425	Business Communications	3
ECON 235	Principles of Microeconomics	3
	or ECON 236 Principles of Macroeconomics (3)	
RELT 305	Christian Ethics	3
Select three hours from		3
MATH 165	Calculus for Managers (3)	
MATH 184	Calculus I (4)	
MATH 221	Elementary Statistics and Probability (3)	
MATH 331	Statistics and Probability (3)	
Select six hours from 300-400 level ACCT, BUAD, FNCE		6
Recommended		
ACCT 335	Accounting Information Systems (3)	
BUAD 376	Human Resource Management (3)	
BUAD 445	Business Law (4)	
FNCE 325	Business Finance (3)	
FNCE 332	Investments (3)	

**COMPUTING**

*Computer Science Emphasis*

**Bachelor of Science**

**MAJOR REQUIREMENTS □ 42 hours**

COMPUTING CORE		21
CPTR 230	Computer Organization	3

CPTR 310	Data Structures and Algorithms	3
CPTR 320	Networking	3
CPTR 325	Computer Science III	3
CPTR 405	Software Engineering	3
CPTR 451	Operating Systems Principles	3
Select three hours from		3
CPTR 335	Web Technologies (3)	
CPTR 420	Windows Administration and Security (3)	

**CONTEXTUAL REQUIREMENTS □ 29 hours**

MATH 121	Precalculus	5
MATH 184	Calculus I	4
MATH 285	Calculus II	4
MATH 286	Calculus III	4
MATH 331	Statistics and Probability	3
MATH 340	Discrete Mathematics	3
RELT 305	Christian Ethics	3
Select three hours from		3
MATH 352	Linear Algebra (3)	
MATH 351	Abstract Algebra (3)	
MATH 486	Numerical Analysis (3)	

**COMPUTING*****Graphic Design Emphasis*****Bachelor of Science****MAJOR REQUIREMENTS □ 54 hours**

COMPUTING CORE		21
CPTR 220	Microcomputer Applications	3
CPTR 320	Networking	3
CPTR 335	Web Technologies	3
CPTR 420	Windows Administration and Security	3
GRPH 150	Introduction to Graphic Arts	3
GRPH 225	Digital Photography	3
GRPH 250	Digital Imaging	3
GRPH 252	Computer Design	3
GRPH 301	Web Design/Dreamweaver	3

GRPH 358	Typography	3
GRPH 487	Interactive Web Design	3

**CONTEXTUAL REQUIREMENTS—16 hours**

ART 115	Design I	2
ART 225	Color Theory	2
BUAD 425	Business Communications	3
MATH 221	Elementary Statistics and Probability or MATH 165 Calculus for Managers (3)	3
MRKT 327	Marketing	3
RELT 305	Christian Ethics	3

**INFORMATION TECHNOLOGY EDUCATION**  
*Supplemental Secondary Endorsement* (Requires another endorsement)  
 Bachelor of Science

**TEACHING MAJOR REQUIREMENTS—22 hours**

CPTR 190	PC Technology Fundamentals	1
CPTR 220	Microcomputer Applications	3
CPTR 225	Web Development Basics	1
CPTR 226	Computer Science I	4
CPTR 227	Computer Science II	4
CPTR 240	Linux Administration and Security	3
Select six hours from 300-400 level computer courses		6

**PROFESSIONAL EDUCATION—51 hours**

EDUC 411	Methods: Business Teacher Education	3
	Additional Professional Education	48

Must accompany another teaching major to qualify for a Nebraska teaching certificate (see Human Development Division—Secondary Education Endorsements).

**ACCOUNTING**

**Associate of Science**

**MAJOR AND CONTEXTUAL REQUIREMENTS—32 hours**

ACCT 211, 212	Principles of Accounting	3, 3
ACCT 313	Intermediate Accounting	4
ACCT 314	Intermediate Accounting or ACCT 455 Auditing (4)	4
ACCT 315	Federal Income Tax—Individual	3

ACCT 335	Accounting Information Systems	3
FNCE 325	Business Finance	3
MATH 221	Elementary Statistics and Probability	3
Select two additional courses from ACCT, BUAD, ECON		6

## **BUSINESS ADMINISTRATION**

### **Associate of Science**

The Business Administration Associate of Science is designed to allow some latitude in course selection to fit the needs of individual students. The courses should be selected in consultation with the student's advisor.

### **MAJOR AND CONTEXTUAL REQUIREMENTS—27 hours**

ACCT 211, 212	Principles of Accounting	3, 3
BUAD 138	Dynamics of Business	3
BUAD 425	Business Communications	3
ECON 235	Principles of Microeconomics	3
	or ECON 236 Principles of Macroeconomics (3)	
MATH 165	Calculus for Managers	3
	or MATH 221 Elementary Statistics & Probability (3)	
	or MATH 340 Discrete Mathematics (3)	
Select additional courses from		9
ACCT	Any ACCT course above 212 (3-4)	
BUAD 376	Human Resources Management (3)	
BUAD 445	Business Law (4)	
CPTR 220	Microcomputer Applications (3)	
FNCE	Any FNCE 300-400 level course (3)	
MATH	Any MATH course above 111 (3)	

## **COMPUTING**

### **Associate of Science**

### **MAJOR REQUIREMENTS—24 hours**

CPTR 190	PC Technology Fundamentals	1
CPTR 220	Microcomputer Applications	3
CPTR 226	Computer Science I	4
CPTR 227	Computer Science II	4
CPTR 240	Linux Administration and Security	3
CPTR 335	Web Technologies	3
Select six hours from 300-400 level computer courses		6



**CONTEXTUAL REQUIREMENTS—9 hours**

ACCT 211	Principles of Accounting	3
BUAD 138	Dynamics of Business	3
Select three hours from		3
MATH 165	Calculus for Managers (3)	
MATH 184	Calculus I (4)	
MATH 221	Elementary Statistics & Probability (3)	
MATH 331	Statistics & Probability (3)	

**ACCOUNTING**
**MINOR REQUIREMENTS—19 hours**

ACCT 211, 212	Principles of Accounting	3, 3
ACCT 313	Intermediate Accounting	4
ACCT 315	Federal Income Tax—Individual	3
Select 6 hours from any ACCT courses		6

**BUSINESS ADMINISTRATION**
**MINOR REQUIREMENTS—18 hours**

ACCT 211	Principles of Accounting	3
BUAD 138	Dynamics of Business	3
ECON 235	Principles of Microeconomics	3
	or ECON 236 Principles of Macroeconomics (3)	
Select nine hours from		9
(at least two courses from)		
BUAD 445	Business Law (4)	
BUAD 376	Human Resources Management (3)	
FNCE 325	Business Finance (3)	
MRKT 327	Marketing (3)	
(additional courses if more hours needed from)		
ACCT 212	Principles of Accounting (3)	
CPTR 220	Microcomputer Applications (3)	

**COMPUTER INFORMATION SYSTEMS**
**MINOR REQUIREMENTS—21 hours**

CPTR 190	PC Technology Fundamentals	1
CPTR 220	Microcomputer Applications	3

CPTR 226	Computer Science I	4
CPTR 227	Computer Science II	4
CPTR 240	Linux Administration and Security	3
CPTR 335	Web Technologies	3
Select three hours from 300-400 level computer courses		3

**COMPUTER SCIENCE**  
**MINOR REQUIREMENTS—24 hours**

CPTR 226	Computer Science I	4
CPTR 227	Computer Science II	4
CSCE 230	Computer Organization at UN-L	3
CPTR 240	Linux Administration and Security	3
CPTR 335	Web Technologies	3
MATH 184	Calculus I	4
Select three hours from 300-400 level computer courses		3

**MARKETING**  
**MINOR REQUIREMENTS—19 hours**

COPR 445	Applied Public Relations	3
MRKT 327	Marketing	3
MRKT 333	Professional Selling	3
MRKT 443	Consumer Behavior	3
MRKT 456	Marketing Research	3
MRKT 475	Internship in Marketing	1
PSYC 105	Introduction to Psychology	3

**SMALL BUSINESS MANAGEMENT**  
**MINOR REQUIREMENTS—21 hours**

ACCT 211	Principles of Accounting	3
ACCT 335	Accounting Information Systems	3
BUAD 219	Small Business Management	3
BUAD 475	Internship in Management	3
ECON 235	Microeconomics	3
Select two courses from		6
ACCT 212	Principles of Accounting (3)	
BUAD 138	Dynamics of Business (3)	

BUAD 445	Business Law (4)
CPTR 220	Microcomputer Applications (3)
FNCE 325	Business Finance (3)
FNCE 332	Investments (3)
MRKT 327	Marketing (3)

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## DIVISION OF FINE ARTS

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### MISSION

The mission of the Division of Fine Arts is to help each student grow artistically, intellectually, and spiritually through a comprehensive program based on Christian principles of service and education.

### GOALS

Students obtaining degrees from the Division of Fine Arts will be prepared to

- pursue careers and professions in art and music;
- pursue graduate degrees in a variety of art or music fields;
- be artistic leaders and contributors to the community and church;
- serve God and humanity through the gifts of art and music.

### DIVISION OFFICE

<i>Location</i>	Engel Hall
<i>Telephone</i>	402.486.2553
<i>Fax</i>	402.486.2528
<i>E-Mail</i>	b2forbes@ucollege.edu
<i>Web site</i>	www.ucollege.edu/fineart

### FACULTY

Bruce Forbes, M.F.A., *Associate Professor of Art and Graphic Design*

Daniel Lynn, D.M.A., *Professor of Music*

James D. McClelland, M.A., *Professor of Art*

Frank Restesan, D.M.A., *Associate Professor of Music*

Ryan Wells, D.M.A., *Professor of Music*

### DEGREES AND PROGRAMS

#### Bachelor of Arts

Music  
Studio Art

#### Bachelor of Music

Music Education, K-12 Field Endorsement

*Emphases:*     *Instrumental*  
                         *Keyboard*  
                         *Vocal*

Music Performance

*Emphases:*     *Conducting*  
                         *Instrumental*  
                         *Keyboard*  
                         *Vocal*

#### Bachelor of Science

Art Education Field Endorsement K-12

General Art Subject Endorsement K-6

Graphic Design

*Emphases:*     *Business*  
                         *Communication*

Music Education Instrumental Subject Endorsement K-8; 7-12

Music Education Vocal Subject Endorsement K-8; 7-12

**Associate of Science**

Art  
Graphic Design  
Music Pedagogy

**Minors**

Art  
Graphic Design  
Music

**ART**

Students graduating with a degree in art will be able to

- understand aesthetic literacy in which they perceive formal relationships in works of art, interpret meanings and judge significance;
- develop skills in observation and perception, creative thinking and artistic problem solving;
- value the role of the arts in society and to recognize the impact of the arts on themselves and others.

**ART CORE □ 17 hours**

ART 105	Drawing I	2
ART 115	Design I	2
ART 225	Color Theory	2
ART 235	Drawing II	2
ART 315	Design II	2
ART 321	European Art History	3
ART 322	American Art History	3
ART 485	Senior Exhibit	1

**Auxiliary Requirements for All Baccalaureate Degrees in the Visual Arts**

- Presentation of a senior exhibit;
- Participation each year in other exhibitions;
- Regular attendance at professional conferences and/or seminars;
- Participation in regularly scheduled interviews and portfolio reviews;
- The development of a personal and a professional portfolio as a capstone educational record of academic experiences.

**GRAPHIC DESIGN**

Students graduating with a degree in graphic design will be prepared to

- promote creative ideas to clients;
- design in a broad spectrum of ways;
- understand the historical perspective in the visual arts;
- share and communicate their knowledge and skills;
- demonstrate professionalism and a thorough knowledge of the field;
- apply knowledge of fundamental business and marketing practices.

**GRAPHIC DESIGN****Bachelor of Science****MAJOR REQUIREMENTS—60-61 hours**

ART CORE		17
ART 175, 275, 375, 475 Art Seminar (.5 each)		2
ART 347	Illustration Techniques I	2
GRPH 150	Introduction to Graphic Arts	3
GRPH 210	Page Layout: Quark/InDesign	3
GRPH 225	Digital Photography	3
GRPH 250	Digital Imaging	3
GRPH 252	Computer Design	3
GRPH 254	Publication Design	3
GRPH 301	Web Design/Dreamweaver	3
GRPH 350	History of Graphic Design/Contemporary Design	3
GRPH 358	Typography	3
GRPH 460	Prepress Production	3
GRPH 464	Advertising Design	3
GRPH 487	Topics	3
GRPH 476	Internship	3-4

Select one emphasis below: Business or Communication

**BUSINESS EMPHASIS □ 12 hours** (\*Recommended)

Select 12 hours from		12
BUAD 138	Dynamics of Business (3)	
BUAD 219	Small Business Management (3)*	
BUAD 376	Human Resources Management (3)*	
BUAD 425	Business Communications (3)	
BUAD 430	Conflict Management (3)	
COMM 465	Interpersonal Communication (3)*	
MRKT 327	Marketing (3)*	
MRKT 333	Professional Selling (3)	
MRKT 443	Consumer Behavior (3)	

**COMMUNICATION EMPHASIS—12 hours** (\*Recommended)

Select 12 hours from		12
COMM 125	Media and Meaning (3)*	
COMM 335	Video Production (3)	

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COMM 465	Interpersonal Communication (3)*
COJR 221	Reporting (3)
COJR 245	Editing (3)*
COJR 457	Magazine Writing (3)
COPR 241	Public Relations Principles (3)
COPR 316	Advertising Practices (3)*

**STUDIO ART****Bachelor of Arts**

Students in Studio Art will develop

- skills in the areas of the visual arts in which they are focusing;
- skill in marketing and exhibiting their works;
- a historical perspective in the visual arts;
- potential for creative expression;
- capacities for sharing and communicating their knowledge and skills (exhibition, participation and appreciation);
- professionalism, including ethics;
- a knowledge of fundamental business and marketing practices;
- the necessary social and personal attributes, Christian and business or professional ideals to successfully promote their creative works.

**MAJOR REQUIREMENTS—37HOURS**

ART CORE		17
ART 125	Oil Painting	2
ART 135	Pottery	2
ART 145	Watercolor	2
ART 245	Sculpture	2
ART	Area of Emphasis	12

**CONTEXTUAL REQUIREMENTS—9 hours**

Select 9 hours from		9
ACCT 211	Principles of Accounting (3)	
BUAD 138	Dynamics of Business (3)	
BUAD 219	Small Business Management (3)	
BUAD 376	Human Resources Management (3)	
BUAD 425	Business Communications (3)	
MRKT 327	Marketing (3)	
MRKT 443	Consumer Behavior (3)	
PSYC 105	Introduction to Psychology (3)	
SOCI 105	Introduction to Sociology (3)	

**ART****Associate of Science****EMPHASIS REQUIREMENTS—24-25 hours**

ART 105	Drawing I	2
ART 115	Design I	2
ART 125	Oil Painting	2
ART 135	Pottery	2
ART 145	Watercolor	2
ART 235	Drawing II	2
GRPH 150	Introduction to Graphic Arts	3
ART/GRPH	Electives	9-10

**GRAPHIC DESIGN****Associate of Science****MAJOR REQUIREMENTS—31-32 hours**

ART 105	Drawing I	2
ART 115	Design I	2
ART 225	Color Theory	2
GRPH 150	Introduction to Graphic Arts	3
GRPH 252	Computer Design	3
GRPH 254	Publication Design	3
GRPH 358	Typography	3
GRPH 460	Prepress Production	3
GRPH 464	Advertising Design	3
ART/GRPH	Electives	7-8

**ART****MINOR REQUIREMENTS—20-21 hours**

ART 105	Drawing I	2
ART 115	Design I	2
ART 125	Oil Painting	2
ART 135	Pottery	2
GRPH 150	Introduction to Graphic Arts	3
ART/GRPH	Electives (3 hours must be 300 or 400 level)	9-10

**GRAPHIC DESIGN****MINOR REQUIREMENTS—21 hours**

ART 105	Drawing I	2
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ART 115	Design I	2
ART 225	Color Theory	2
GRPH 150	Introduction to Graphic Arts	3
GRPH 252	Computer Design	3
GRPH 254	Publication Design	3
GRPH 358	Typography	3
GRPH	Elective	3

## ART EDUCATION

### *K-12 Field Endorsement*

#### **Bachelor of Science**

Students graduating with a degree in art education will be able to

- develop a knowledge of the field of art, including principles and current methods in the visual arts;
- have competence in at least one art medium;
- use pencil, ballpoint and felt tip pen, charcoal, conte crayon, scratchboard, ink, wash, oil, watercolor, acrylic and silk screen, and airbrush;
- work with thrown and hand-built forms of pottery, the additive and subtractive approaches to sculpture and design sculpture;
- design by computer;
- utilize pertinent professional journals and other printed resources;
- develop planned units of instruction in art concepts and skills which incorporates a historical and appreciative perspective;
- share and communicate their knowledge and skills (teaching, exhibiting, participation and appreciation);
- oversee an art program which includes creation and innovation of programs, promotion, media, and fiscal responsibility;
- develop social and personal attributes, Christian ideals and attitudes to successfully promote Christ and to successfully generate continued support for the arts and for continued support for future professional responsibilities.

## **TEACHING MAJOR REQUIREMENTS—45 HOURS**

ART CORE		17
ART 125	Oil Painting	2
ART 135	Pottery	2
ART 145	Watercolor	2
ART 215	School Art	2
ART 245	Sculpture	2
ART 335	Airbrush Techniques	2
ART 347	Illustration Techniques I	2
ART 445	Illustration Techniques II	2
GRPH 150	Introduction to Graphic Arts	3

GRPH 252	Computer Design	3
GRPH 254	Publication Design	3
GRPH 358	Typography	3

**CONTEXTUAL REQUIREMENTS—4 hours**

COJR 151	Photography	4
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**PROFESSIONAL EDUCATION—51 hours**

EDUC 410	Methods: Art Education	3
	Additional Professional Education	48
(See Human Development Division □ Secondary Education Endorsements)		

**GENERAL ART EDUCATION**

***K-6 Subject Endorsement*** (Available as a second major only)

**Bachelor of Science**

The teaching major in general art education is designed to prepare candidates for teaching grades K-6 by providing knowledge and appropriate experiences in the following areas:

- aesthetics,
- art criticism,
- art history,
- art production,
- child and adolescent development in art, and
- interaction both in and out of the studio and classroom.

**TEACHING MAJOR REQUIREMENTS—25 hours**

ART 105	Drawing I	2
ART 115	Design I	2
ART 125	Oil Painting	2
ART 135	Pottery	2
ART 215	School Art	2
ART 235	Drawing II	2
ART 245	Sculpture	2
ART 145	Watercolor	2
ART 321	European Art History	3
ART 322	American Art History	3
GRPH 150	Introduction to Graphic Arts	3

**PROFESSIONAL EDUCATION** (Requires another teaching major)

## MUSIC

Students graduating with a degree in music will be prepared to

- show improvement in the areas of technical proficiency and artistic musicianship;
- analyze musical materials and structures;
- organize musical thoughts through composition and arranging;
- articulate historical and theoretical perspective with an understanding of stylistic trends and their evolution;
- communicate musical ideas and knowledge;
- demonstrate proficiencies in the use of current music technologies.

### Auxiliary Requirements for All Baccalaureate Degrees in Music

(except K-8 subject endorsements)

- Presentation of senior recital.
- Participation during each semester of residence in a large or small ensemble which features the student's principal performing medium, i.e., band, choir or orchestra. Credit for ensembles is optional.
- Regular attendance at all division-sponsored recitals and concerts.
- Functional piano proficiency. All students will reach the required minimum proficiency level. An outline of requirements containing illustrative models is available from the piano instructors.
- Performance area. All music majors are required to take a minimum of nine hours of performance studies in at least one performance area. Some majors require up to 18 hours in a major performance area and six hours in a minor area. Students are expected to take private lessons in a principal performance area each semester.

MUSIC CORE–30 HOURS		
MUHL 351	Music History I	2
MUHL 352	Music History II	2
MUHL 353	Music History III	2
MUHL 354	Music History IV	2
MUPF 257	Introduction to Conducting	2
MUTH 151	Theory I	3
MUTH 152	Theory II	3
MUTH 161	Sight-Singing and Ear Training I	1
MUTH 162	Sight-Singing and Ear Training II	1
MUTH 253	Theory III	3
MUTH 254	Theory IV	3
MUTH 263	Form and Analysis	2
MUTH 362	Introduction to Counterpoint	2
MUTH 365	Orchestration	2

**MUSIC****Bachelor of Arts****MAJOR REQUIREMENTS—42 HOURS**

MUSIC CORE		30
MUPF	Performance Studies	12
MUPF 451	Senior Recital (1)	
MUPF	Concentration of 8 hours in one area (8) (4 hours advanced level)	
MUPF	Performance electives (3)	
MUPF	Participate in a large ensemble each semester; elect additional experiences in chamber ensembles.	

**MUSIC PERFORMANCE****Bachelor of Music****MAJOR REQUIREMENTS—62-65 hours**

MUSIC CORE		30
MUED 307	Keyboard Pedagogy or MUED 317 Instrumental Pedagogy (2) or MUED 327 Vocal Pedagogy (2)	2
MUPF 341	Choral Conducting	1
MUPF 342	Instrumental Conducting	1
<u>Major Performance Area</u>		19-22

MUPF 351 Junior Recital (1)

MUPF 451 Senior Recital (1)

Select one emphasis:

*Conducting Emphasis*

MUPF 12 hours in major performing area (12) (6 hours must be 300-400 level)

MUPF 8 hours in secondary performing area (8) (4 hours must be 300-400 level)

*Vocal Emphasis*

MUPF 266 English/Italian Diction (1)

MUPF 267 German/French Diction (1)

MUPF 201, 401 Voice (15) (6 hours must be 300-400 level)

*Instrumental or Keyboard Emphasis*

MUPF Performance Studies (17) (6 hours must be 300-400 level)

Minor Performance Area

Select four hours from 4

MUAP Techniques and Materials (1-4)

	(and/or MUPF Performance Studies (1-4)	
MUPF	Music electives	5
MUPF	Participate in a large ensemble each semester; elect additional experiences in chamber ensembles	

**MUSIC****MINOR REQUIREMENTS—21-22 hours**

MUHL	Select Music history in consultation with advisor	2-3
MUTH 151	Theory I	3
MUTH 152	Theory II	3
MUTH 161	Sight-Singing and Ear Training I	1
MUTH 162	Sight-Singing and Ear Training II	1
MUPF	Performance Studies	8
	(6 hours in a field of concentration - 2 at 300 level)	
	Performance electives (2)	
	Partial recital	
MUPF	Electives: ensembles (recommended)	3

**MUSIC EDUCATION**

Student graduating with a degree in music education will be able to

- Develop a conceptual understanding of the elements of music in order to form a basis for listening, composing, performing, conducting and teaching;
- perform in a variety of ways in the role of listener, composer, performer, conductor, scholar and teacher;
- develop a repertoire in musical styles that embraces different cultures and historical periods;
- develop an understanding of music within its historical framework, including knowledge of the major periods of music.

**MUSIC EDUCATION*****K-12 Field Endorsement*****Bachelor of Music****MAJOR REQUIREMENTS—55-56 hours**

MUSIC CORE		30
MUED 307	Keyboard Pedagogy	2
	or MUED 317 Instrumental Pedagogy (2)	
	or MUED 327 Vocal Pedagogy (2)	
MUED 347	Music in the Elementary School	2
MUPF 341	Choral Conducting	1
MUPF 342	Instrumental Conducting	1

Major Performance Area

MUPF 451	Senior Recital	1
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Select one emphasis:	12-13
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*Instrumental Emphasis*

MUPF	12 hours in one instrument (12) (6 hours must be 300-400 level)
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*Vocal Emphasis*

MUPF 201, 401	Voice (12) (6 hours must be 300-400 level)
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MUPF 266	English/Italian Diction (1)
	or MUPF 267 German/French Diction (1)

*Keyboard Emphasis*

MUPF	12 hours on a keyboard instrument (12) (6 hours must be 300-400 level)
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Minor Performance Area

MUAP 207	Brass Techniques and Materials	1
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MUAP 217	Guitar Techniques and Materials	1
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MUAP 227	Percussion Techniques and Materials	1
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MUAP 237	String Techniques and Materials	1
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MUAP 247	Vocal Techniques and Materials	1
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MUAP 257	Woodwind Techniques and Materials	1
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Candidates are strongly encouraged to take up to six hours in a second performance area. Example: voice majors take instrumental, or instrumental majors take voice. Candidates must participate in a large ensemble each semester. They may choose to gain additional experiences in chamber ensembles.

**PROFESSIONAL EDUCATION—51 hours**

EDUC 414	Methods: Music Education	3
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	Additional Professional Education	48
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(See Human Development Division □ Secondary Education Endorsements)

**INSTRUMENTAL MUSIC EDUCATION*****K-8 or 7-12 Subject Endorsement*****Bachelor of Science****MAJOR REQUIREMENTS □ 47 hours**

MUSIC CORE	30
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MUED 347	Music in the Elementary School (Required for K-8 only)	2
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MUPF 451	Senior Recital	1
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MUED 317	Instrumental Pedagogy	2
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MUPF 342	Instrumental Conducting	1
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Select three courses from MUAP 207-257	3
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MUAP 207	Brass Techniques and Materials (1)	
MUAP 217	Guitar Techniques and Materials (1)	
MUAP 227	Percussion Techniques and Materials (1)	
MUAP 237	String Techniques and Materials (1)	
MUAP 247	Vocal Techniques and Materials (1)	
MUAP 257	Woodwind Techniques and Materials (1)	
<u>Major Performance Area</u>		8
MUPF	Concentration in one instrument (4 hours must be 300-400 level.)	
MUPF	Participate in a large ensemble each semester; Select additional experiences in chamber ensembles.	

**PROFESSIONAL EDUCATION—51 hours**

EDUC 414	Methods: Music Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (See Human Development Division □ Secondary Education Endorsements).

**VOCAL MUSIC EDUCATION*****K-8 or 7-12 Subject Endorsement*****Bachelor of Science****MAJOR REQUIREMENTS □ 48 hours**

MUSIC CORE		30
MUED 347	Music in the Elementary School (Required for K-8 only)	2
MUPF 451	Senior Recital	1
MUAP 247	Vocal Techniques and Materials	1
MUED 327	Vocal Pedagogy	2
MUPF 341	Choral Conducting	1
Select one course from		1
MUAP 207	Brass Techniques and Materials (1)	
MUAP 217	Guitar Techniques and Materials (1)	
MUAP 227	Percussion Techniques and Materials (1)	
MUAP 237	String Techniques and Materials (1)	
MUAP 257	Woodwind Techniques and Materials (1)	
<u>Major Performance Area</u>		10
MUPF	Concentration in voice or keyboard instrument (8) (4 hours must be 300-400 level)	

MUPF 266	English-Italian Diction (1)	
MUPF 267	German-French Diction (1)	
MUPF	Participate in a large ensemble each semester; Select additional experiences in chamber ensembles.	

**PROFESSIONAL EDUCATION—51 hours**

EDUC 414	Methods: Music Education (Required for 7-12 only)	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (See Human Development Division □ Secondary Education Endorsements).

**MUSIC PEDAGOGY****Associate of Science****MAJOR REQUIREMENTS—32 hours**

MUED 307	Keyboard Pedagogy	2
	or MUED 317 Instrumental Pedagogy (2)	
	or MUED 327 Vocal Pedagogy (2)	
MUTH 151	Theory I	3
MUTH 152	Theory II	3
MUTH 161	Sight-Singing and Ear Training I	1
MUTH 162	Sight-Singing and Ear Training II	1
MUTH 253	Theory III	3
MUTH 254	Theory IV	3
MUTH 263	Form and Analysis	2
	<u>Major Performance Area</u>	8
MUPF	Concentration in instrument, voice or keyboard instrument (2 hours must be 300-400 level)	
MUPF	Ensembles	6

**CONTEXTUAL REQUIREMENTS—10 hours**

BUAD 138	Dynamics of Business	3
MUED 287	Practicum	4
PSYC 215	Developmental Psychology	3



## DIVISION OF HEALTH SCIENCES

The programs offered by the Division of Health Sciences promote a multidisciplinary approach to health care, thus supporting holistic concepts in restoration of humanity to God's ideal. Placed within the context of the God-centered Christian philosophy, the Division of Health Sciences promotes mental, physical, social and spiritual development of students for competent Christ-like service in their professions.

### DIVISION OFFICE

<i>Location</i>	Larson Lifestyle Center
<i>Telephone</i>	402.486.2167 Health and Human Performance Program 402.486.2980 International Rescue and Relief Program 402.486.2524 Nursing Program
<i>E-Mail</i>	jejoiner@ucollege.edu
<i>Web sites</i>	www.ucollege.edu/healthscience www.ucollege.edu/hhp www.ucollege.edu/rescueandrelief www.ucollege.edu/nursing

### FACULTY

Jeff Joiner, M.S.N., Chair, *Associate Professor of Nursing; Program Director*  
 Michael Duehrssen, M.D., *Associate Professor of International Rescue and Relief; Program Director*  
 Eugena Foster, M.S.N., APRN, FNP-BC, *Assistant Professor of Nursing*  
 Debbie Heinrich, M.S.N., *Assistant Professor of Nursing*  
 Laura Karges, M.S., *Associate Professor of Nursing*  
 Valeree Krueger, M.S.N., *Associate Professor of Nursing*  
 Dwain Leonhardt, M.D., *Professor of Physician Assistant Studies; Medical Director*  
 Ruth Mendenhall, M.S.N., *Associate Professor of Nursing*  
 Nicole Orian, B.S.N., *Instructor of Nursing*  
 Seth Perkins, M.S., *Assistant Professor of Health and Human Performance*  
 Nancy Petta, Ed.D., *Professor of Health and Human Performance, Program Director*  
 Charlotte Schober, M.S.N., *Associate Professor of Nursing*  
 Vicki Smith, M.S., *Associate Professor of Nursing*  
 Ric Spaulding, M.Ed., *Assistant Professor of Health and Human Performance; Director of Larson Lifestyle Center*  
 Gregory Steiner, M.A.M., *Director of Intramural Sports, Health and Human Performance*  
 Doug Tallman, M.S.Ed., *Associate Professor of International Relief and Rescue; Associate Program Director*  
 John Thomas, M.Ed., *of International Rescue and Relief; Administrative Director*

### DEGREES AND PROGRAMS

#### Bachelor of Science

Exercise Science  
 Fitness and Wellness  
 Health and Human Performance  
*Emphasis: Business/Sport Management*  
 Physical Education Secondary Subject Endorsement  
 Health Sciences  
 International Rescue and Relief

<i>Emphases:</i>	<i>Business</i>
	<i>Communication</i>
	<i>Global Ministries</i>
	<i>Human Services and Counseling</i>
	<i>Paramedical</i>
	<i>Pre-Physician Assistant</i>
	<i>Pre-Professional (Medicine, Dentistry)</i>
	<i>Project Development</i>
Bachelor of Science in Nursing	
Nursing	
Minors	
Disaster Preparedness	
Emergency Management	
Health and Human Performance	
Survival and Rescue	

## **HEALTH AND HUMAN PERFORMANCE**

### **MISSION**

The mission is to promote the holistic development of students and to prepare them for roles in the health and human performance professions.

### **GOALS**

Graduates of the program will be able to

- demonstrate an understanding of human movement and its relationship to the physical activities necessary for healthful living;
- practice leadership, teamwork and Christian service in their daily lives;
- apply an understanding of the curriculum and fitness/recreation programs that are suitable for various maturity and ability levels;
- pursue advanced study.

## **EXERCISE SCIENCE**

### **Bachelor of Science**

The degree in exercise science is designed for students who are planning for graduate studies in exercise physiology, athletic training, physical therapy, wellness or sports medicine. Participation in an annual fitness test is required.

### **MAJOR REQUIREMENTS—67-67 hours**

#### **Health And Business Courses**

BUAD 376	Human Resources Management	3
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	2
HHPT 256	Medical Terminology	1
HHPT 350	Practicum	1, 1
HHPT 356	Physiology of Exercise	3
HHPT 360	Biomechanics	3
HHPT 370	Personal Training	3

HHPT 437	Measurement and Evaluation	3
HHPT 475	Internship	4
HHPT 485	Seminar in Health and Human Performance	1
HHPT 486	Senior Capstone	1
NUTR 227	Nutrition	3

**Science Courses**

BIOL 111	Human Anatomy & Physiology	4
BIOL 112	Human Anatomy & Physiology	4
CHEM 151	General Chemistry	4
CHEM 152	General Chemistry	4
CHEM 211	Organic Chemistry	4
CHEM 212	Organic Chemistry	4
CHEM 445	Biochemistry I	4
PHYS 151	General Physics	4
	Science Electives (300-400 level)	3-4

**CONTEXTUAL REQUIREMENTS—6 hours**

CPTR 220	Microcomputer Applications	3
PSYC 215	Developmental Psychology	3

**FITNESS AND WELLNESS****Bachelor of Science**

The degree in fitness and wellness is designed for students who are planning to seek employment in the fitness marketplace, work-site wellness or community health promotion. Participation in an annual fitness test is required.

**MAJOR REQUIREMENTS—64 hours**

BIOL 111, 112	Human Anatomy and Physiology	4, 4
BUAD 138	Dynamics of Business	3
GRPH 150	Introduction to Graphic Arts	3
GRPH 252	Computer Design	3
	or GRPH 210 Page Layout: Quark/InDesign (3)	
	or GRPH 254 Publication Design (3)	
HHPA 235	Weight Training	1
HHPA 316	Lifeguard Training	1
HHPA 317	Water Safety Instructor	1
HHPT 129	Intro to Fitness/Wellness Management	3

HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	2
HHPT 235, 236	Principles of Sports Officiating	1.5, 1.5
HHPT 335	Administration of Intramural Sports	3
HHPT 350	Practicum	1, 1
HHPT 356	Physiology of Exercise	3
HHPT 357	Motor Learning	3
HHPT 360	Biomechanics	3
HHPT 366	Adapted Physical Education	2
HHPT 370	Personal Training	3
HHPT 475	Internship	4
HHPT 476	Wellness Methods, Materials and Management	3
HHPT 485	Seminar in Health and Human Performance	1
HHPT 486	Senior Capstone	1
NUTR 227	Nutrition	3
PSYC 311	Christian Counseling	3

**CONTEXTUAL REQUIREMENTS—3 hours**

CPTR 220	Microcomputer Applications	3
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**HEALTH AND HUMAN PERFORMANCE*****Business/Sport Management Emphasis*****Bachelor of Science**

The Business/Sport Management Emphasis is designed to prepare students to work in fitness/racquet clubs, retail sporting goods stores, YMCA/YWCA's or other recreational businesses. Students can tailor-make part of the emphasis and internship to meet their own specific goals. Participation in an annual fitness test is required.

**MAJOR REQUIREMENTS—61 hours**

ACCT 211, 212	Principles of Accounting	3, 3
BUAD 138	Dynamics of Business	3
BUAD 376	Human Resources Management	3
BUAD 425	Business Communications	3
HHPA 147	Beginning Tennis	1
HHPA 149	Beginning Golf	1
HHPA 215	Intermediate/Advanced Swimming	1
	or HHPA 316 Lifeguard Training (1)	
	or HHPA 317 Water Safety Instruction (1)	

HHPA 235	Weight Training and Physical Conditioning	1
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	2
HHPT 235, 236	Principles of Sports Officiating	1.5, 1.5
HHPT 335	Administration of Intramural Sports	3
HHPT 340	Introduction to Coaching Theory	2
HHPT 350	Practicum	1, 1
HHPT 360	Biomechanics	3
HHPT 356	Physiology of Exercise	3
HHPT 357	Motor Learning	3
HHPT 366	Adapted Physical Education	2
HHPT 437	Measurement and Evaluation in HHP	3
HHPT 475	Internship	4
HHPT 485	Seminar in Health and Human Performance	1
HHPT 486	Senior Capstone	1
MRKT 327	Marketing	3
SOCI 210	Group Dynamics	3
	or PSYC 215 Developmental Psychology (3)	
	Two HHPA electives selected from	2
	HHPA 137 Gymnastics for Everyone (1)	
	HHPA 145 Beginning Badminton (1)	
	HHPA 151 Beginning Volleyball (1)	
	HHPA 270 Racquetball (1)	

**CONTEXTUAL REQUIREMENTS—14 hours**

BIOL 111, 112	Human Anatomy and Physiology	4, 4
CPTR 220	Microcomputer Applications	3
NUTR 227	Nutrition	3

**HEALTH AND HUMAN PERFORMANCE*****Physical Education K-6, 7-12 Subject Endorsement*****Bachelor of Science**

The teaching degree in physical education is designed to prepare candidates for elementary and secondary teaching in physical education. The following competencies are required:

- a general knowledge of the history, philosophy and basic purpose of health and physical education;
- a basic understanding of the structural, physiological, mechanical and psychological factors affecting human movement and the relationships of physical activity to effective living;

- an understanding of the nature of the curriculum and programs that are suitable for various maturity and ability levels and a minimal level of proficiency in specific activities;
- knowledge of and experience with a variety of methods and techniques suitable for teaching including adapted physical activities for the disabled;
- an understanding of appropriate evaluative techniques and the utilization of these for motivation and for the determination of progress and outcomes;
- an understanding of the value of research and its implication for the improvement of the profession and the development of skill in the scientific method and in the reporting of research.

Participation in annual fitness test is required.

**TEACHING MAJOR REQUIREMENTS—42 hours**

EDUC 245	Physical Education in Elementary School	2
HHPA 147	Beginning Tennis	1
HHPA 149	Beginning Golf	1
HHPA 215	Intermediate/Advanced Swimming or HHPA 316 Lifeguard Training (1) or HHPA 317 Water Safety Instruction (1)	1
HHPA 151	Beginning Volleyball or HHPA 137 Gymnastics for Everyone (1) or HHPA 145 Beginning Badminton (1) or HHPA 245 Cycling (1) or HHPA 270 Racquetball (1)	1
HHPA 235	Weight Training and Physical Conditioning	1
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	2
HHPT 235, 236	Principles of Sports Officiating	1.5, 1.5
HHPT 316	Leisure and Recreational Activities	2
HHPT 326	Team Activities	2
HHPT 335	Administration of Intramural Sports	3
HHPT 337	Gymnastics for Teachers	1
HHPT 340	Introduction to Coaching Theory	2
HHPT 350	Practicum	1, 1
HHPT 356	Physiology of Exercise	3
HHPT 357	Motor Learning	3
HHPT 360	Biomechanics	3
HHPT 366	Adapted Physical Education	2
HHPT 437	Measurement and Evaluation in HHP	3

HHPT 485	Seminar in Health and Human Performance	1
HHPT 486	Senior Capstone	1

**CONTEXTUAL REQUIREMENTS–14 hours**

BIOL 111, 112	Human Anatomy and Physiology	4, 4
CPTR 220	Microcomputer Applications	3
NUTR 227	Nutrition	3

**PROFESSIONAL EDUCATION–51 hours**

EDUC 416	Methods: Physical Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education Endorsements).

**HEALTH AND HUMAN PERFORMANCE****MINOR REQUIREMENTS–28 hours**

Participation in an annual fitness test is required.

HHPA 147	Beginning Tennis	1
HHPA 235	Weight Training and Physical Conditioning	1
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	2
HHPT 226	Leisure and Recreational Activities	2
HHPT 235, 236	Principles of Sports Officiating	1.5, 1.5
HHPT 326	Team Activities	2
HHPT 335	Administration of Intramural Sports	3
HHPT 340	Introduction to Coaching Theory	2
HHPT 350	Practicum	1, 1
HHPT 356	Physiology of Exercise	3
Select two HHPA courses from		2
HHPA 137	Gymnastics for Everyone (1)	
HHPA 145	Beginning Badminton (1)	
HHPA 149	Beginning Golf (1)	
HHPA 245	Cycling (1)	
Select one HHPA course from		1
HHPA 317	Water Safety Instruction (1)(recommended)	
HHPA 215	Intermediate/Advanced Swimming (1)	
HHPA 316	Lifeguard Training (1)	
Select one HHPT course from		3

HHPT 360	Biomechanics (3)
HHPT 357	Motor Learning (3)
HHPT 437	Measurement/Evaluation in HPER (3)

**CONTEXTUAL REQUIREMENTS—8 hours**

BIOL 111, 112	Human Anatomy and Physiology	4, 4
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**INTERNATIONAL RESCUE AND RELIEF**

The International Rescue and Relief program is uniquely designed for the adventurous student seeking to serve in times of disaster and humanitarian need. Each emphasis includes the two highlights of the program: a summer session in Colorado dedicated to survival and rescue training, and a semester spent abroad studying and providing humanitarian relief. Union College offers this program in its long-standing tradition of Christian service.

**Mission**

In a world of increasing human conflict, ecological challenges, and natural disasters, the IRR program educates students who desire to respond to humanity's needs during disaster and tragedy. Through their traditional coursework, experiential knowledge, and training in a developing country, students will prepare to survive in challenging circumstances, rescue others, and provide compassionate humanitarian relief.

**Goals**

Students graduating with a major in International Rescue and Relief will be prepared to

- serve effectively and compassionately in other cultures;
- respond to disasters as trained first responders;
- formulate and implement disaster plans;
- pursue advanced study.

**Admission, Progression and Graduation Requirements**

Admission to Union College and completion of EMS prerequisites, including evidence of state registry, precede official acceptance into the IRR program. Students should apply by April 1 to be admitted into the program for the fall semester and to register for the summer survival and rescue session. All applicants must undergo criminal background checks through Union College. This is normally completed prior to registering for INRR 100 EMT Basic. A personal interview may be requested.

Recommended high school preparation for admission includes full-year courses in both biology and chemistry, two years of algebra, and two years of the same foreign language.

Minimum criteria for admission in the IRR program are the following:

- Physical, mental, and emotional capacity to function as a professional emergency responder
- Ability to hike, swim, run, adapt and function well in multi-conditional climates and settings
- Acceptance into Union College
- Completion of the required prerequisite courses and certifications:
  - INRR 100 – EMT Basic
  - National Registry Emergency Medical Technician Basic certification
  - Nebraska or other State Emergency Medical Technician Basic certification
- Completion of the IRR application, including a 200-300 word essay that demonstrates the applicant's interest in joining the program
- Evidence of successful criminal background check through the IRR program



- Evidence of meeting health policy requirements, specifically
    - Up-to-date immunizations
    - Completion of the Hepatitis B series
    - Annual TB Test
- Progression in the program requires the student to
- obtain all advanced EMT II certifications;
  - successfully complete the summer advanced survival and rescue certifications before junior year;
  - maintain certifications for CPR, NREMT-B, and NEEMT-B;
  - maintain strong physical, mental and emotional health;
  - comply with health policy requirements;
  - fulfill at least eight hours per year of approved community service;\*
  - complete HHPA 217, certification, and a minimum of five additional dives prior to enrolling in INRR 350 Dive Rescue;
  - complete the international training semester during the junior or senior year, according to the selected emphasis;
  - at the time of graduation, hold current certifications for CPR, NREMT-B, Advanced EMT II and NEEMT-B.

\*Approved community service has included volunteering with local EMS providers, or at hospitals, churches, schools, community service or shelter centers, or providing skills evaluation for EMT-B classes.

#### **General Education and Prerequisites**

IRR students may meet the LEAD/General Education requirement for science by BIOL111 Human Anatomy and Physiology and BIOL205 Microbiology.

The physical activity requirement is satisfied by the summer experience of INRR110, 112, 114, and 116.

Several LEAD/general education courses serve as important prerequisites for courses in the program.

BIOL 111 Anatomy and Physiology is a prerequisite for INRR 310 Emergency Care I.

One year of college-level Spanish or French (equivalent to two years of high school language) is a prerequisite for INRR 311 Emergency Care II and to the overseas semester.

BIOL 205 Microbiology is also a prerequisite for INRR 311 Emergency Care II.

INRR 285 Firefighter I is recommended for all IRR students.

#### **Program Specific Fees**

Additional fees are charged for the summer training courses, diving, and the overseas semester. A program fee is also assessed for all students admitted to the program, with the exception of the overseas semester. The IRR Program Office can supply information regarding current fees.

<b>INTERNATIONAL RESCUE AND RELIEF CORE □ 43 HOURS</b>		
HHPA 217	Skin and Scuba Diving	1
INRR 100	EMT Basic	7
INRR 110	Search and Rescue Technician II	2
INRR 112	Swift Water Technician I/Advanced	1
INRR 114	Rope Rescue Technician	1

INRR 116	Basic Survival	1
INRR 200	Critical Incident Stress Management	2
INRR 202	EMT II	4
INRR 302	HIV & Emerging Diseases	1
INRR 310	Emergency Care I	3
INRR 311	Emergency Care II	3
INRR 320	Public Health	3
INRR 330	Travel/Tropical Medicine	3
INRR 340	Jungle, Coastal, Ocean Survival	3
INRR 350	Dive Rescue	1
INRR 360	Medical/Conversational Spanish	1
PSYC 105	Introduction to Psychology	3
RELT 147	World Religions	3

**INTERNATIONAL RESCUE AND RELIEF*****Business Emphasis*****Bachelor of Science****MAJOR REQUIREMENTS □ 81 hours**

INTERNATIONAL RESCUE AND RELIEF CORE 43

INRR 420 IRR Preceptorship 3

INRR 450 Hazardous Materials Awareness and Operations 2

INRR 491 Disaster Management 3

**Business Courses**

ACCT 211, 212 Principles of Accounting 3, 3

BUAD 219 Small Business Management 3

BUAD 376 Human Resource Management 3

CPTR 220 Microcomputer Applications 3

ECON 236 Principles of Macroeconomics 3

or ECON 235 Principles of Microeconomics (3)

Select 12 hours from 12

ACCT 313, 314 Intermediate Accounting (4, 4)

ACCT 315 Federal Income Tax □ -Individual (3)

ACCT 335 Accounting Information Systems (3)

BUAD 310 Quality Management (3)

BUAD 425	Business Policies (3)
BUAD 430	Conflict Management (3)
BUAD 445	Business Law (4)
BUAD 475	Internship in Management (1-3)
MRKT 327	Marketing (3)
PSYC 340	Research Methods (3)

**CONTEXTUAL REQUIREMENTS □ 3 hours**

REL 439	Christian Health Care and Bioethics	3
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**INTERNATIONAL RESCUE AND RELIEF**

*Communication Emphasis*

**Bachelor of Science**

**MAJOR REQUIREMENTS □ 79 hours**

**INTERNATIONAL RESCUE AND RELIEF CORE** 43

INRR 315	Global Communications Technology	3
INRR 420	IRR Preceptorship	3
INRR 450	Hazardous Materials Awareness and Operations	2
INRR 485	Seminar in International Service	3
INRR 491	Disaster Management	3

**Communication Courses**

COJR 221	Reporting	3
COMM 125	Media and Meaning	3
COMM 290	Sophomore Seminar	1
COMM 425	Intercultural Communication	3
	or COMM 465 Interpersonal Communication (3)	
GRPH 150	Introduction to Graphic Arts	3
Select three courses from (3 hours must be 300-level or above)		9
BUAD 219	Small Business Management (3)	
COJR 151	Photography (4)	
COJR 177	Fundamentals of Broadcasting (3)	
COJR 245	Editing (3)	

COJR 448	Advanced Reporting (3)
COJR 457	Magazine Writing (3)
COJR 458	In-Depth Reporting (3)
COMM 335	Video Production (3)
COPR 241	Public Relations Principles (3)
COPR 316	Advertising Practices (3)
GRPH 254	Publications Design (3)

**CONTEXTUAL REQUIREMENTS □ 6 hours**

RELP 439	Christian Health Care and Bioethics	3
Select one course from		3
ECON 236	Principles of Macroeconomics (3)	
GEOG 137	Introductory Geography (3)	
GEOG 227	World Geography (3)	
PLSC 327	Comparative Governments (3)	

**INTERNATIONAL RESCUE AND RELIEF*****Global Ministries Emphasis***

(This major is not designed to prepare church pastors.)

**Bachelor of Science****MAJOR REQUIREMENTS □ 76 hours****INTERNATIONAL RESCUE AND RELIEF CORE 43**

INRR 315	Global Communications Technology and	3
INRR 325	Relief Infrastructure	3
	or INRR 285 Firefighter I (6)	
INRR 420	IRR Preceptorship	3
INRR 450	Hazardous Materials Awareness and Operations	2
INRR 485	Seminar in International Service	3
INRR 491	Disaster Management	3

**Global Ministries Courses**

PSYC 311	Christian Counseling	3
	or RELP 465 Personal Witnessing (3)	
RELP 361	Church Leadership	3
RELP 375	Mission Internship	2

RELP 439	Christian Health Care and Bioethics	3
SOCI 105	Introduction to Sociology	3
UCSM 205	Introduction to Overseas Service	2

## INTERNATIONAL RESCUE AND RELIEF

### *Human Service and Counseling Emphasis*

#### Bachelor of Science

#### MAJOR REQUIREMENTS □ 75 hours

#### INTERNATIONAL RESCUE AND RELIEF CORE 43

INRR 315	Global Communications Technology and	3
INRR 325	Relief Infrastructure	3
	or INRR 285 Firefighter I (6)	
INRR 420	IRR Preceptorship	3
INRR 450	Hazardous Materials Awareness and Operations	2
INRR 485	Seminar in International Service	3
INRR 491	Disaster Management	3

#### Human Service and Counseling Courses

SOCI 105	Introduction to Sociology	3
SOCI 210	Group Dynamics	3
SOWK 388	International Social Services	3
Select two courses from		6
PSYC 340	Research Methods I (3)	
PSYC 341	Research Methods II (3)	
PSYC 415	Abnormal Psychology (3)	
SOCI 315	Marriage and Family (3)	
SOWK 415	Crisis and Resilience (3)	

#### CONTEXTUAL REQUIREMENTS □ 6 hours

PSYC 311	Christian Counseling	3
	or RELP 465 Personal Witnessing (3)	
RELP 439	Christian Health Care and Bioethics	3

## INTERNATIONAL RESCUE AND RELIEF

### *Paramedic Emphasis*

#### Bachelor of Science

Students who complete an academically accredited paramedic program verified by an official transcript sent to Union College and meet the requirements below will be awarded a Bachelor of Science degree. However, completion of a certificate program will not count toward the BS degree. Students must submit a copy of their National Registry EMT-P Certificate to demonstrate

their successful completion of the NREMP-T exam. Students who complete the paramedic portion of the program after the junior year at Union College may meet the residency requirement for graduation during the junior year (see Graduation Requirements). Thirty-six hours are granted for the paramedic program and the upper division courses in IRR plus the paramedic coursework will satisfy the Union College upper division requirement.

**MAJOR REQUIREMENTS** 79 hours

INTERNATIONAL RESCUE AND RELIEF CORE	43
Completion of an Accredited Paramedic Program	36

**CONTEXTUAL REQUIREMENTS** 16 hours

BIOL 111, 112	Anatomy and Physiology	4, 4
BIOL 205	Microbiology	4
HHPT 256	Medical Terminology	1
SOCI 105	Introduction to Sociology	3

**INTERNATIONAL RESCUE AND RELIEF***Pre-Physician Assistant Emphasis***Bachelor of Science****MAJOR REQUIREMENTS** 97 hours

INTERNATIONAL RESCUE AND RELIEF CORE		43
INRR 450	Hazardous Materials Awareness and Operations	2
INRR 491	Disaster Management	3

**Pre-Physician Assistant Courses**

BIOL 151, 152	General Biology	4, 4
BIOL 205	Microbiology	4
	or BIOL 345 Biology of Bacteriology (4)	
BIOL 416	Mammalian Physiology	4
CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 445	Biochemistry	4
HHPT 256	Medical Terminology	1
MATH 221	Elementary Statistics and Probability	3
PSYC 215	Developmental Psychology	3
PSYC 415	Abnormal Psychology	3
RELP 439	Christian Health Care and Bioethics	3

**INTERNATIONAL RESCUE AND RELIEF***Pre-Professional Emphasis (pre-medical and pre-dental)*

Bachelor of Science

**MAJOR REQUIREMENTS** □ 92-94 hours

INTERNATIONAL RESCUE AND RELIEF CORE 43

INRR 450 Hazardous Materials Awareness and Operations 2

INRR 491 Disaster Management 3

**Pre-Professional Courses**

BIOL 151, 152 General Biology 4, 4

CHEM 151, 152 General Chemistry 4, 4

CHEM 211, 212 Organic Chemistry 4, 4

MATH 221 Elementary Statistics and Probability 3

PHYS 151, 152 General Physics 4, 4

RELP 439 Christian Health Care and Bioethics 3

Select six to eight hours from (as recommended by advisor) 6-8

BIOL 321 Genetics (4)

BIOL 345 Biology of Bacteriology (4)

BIOL 411 Human Anatomy (4)

BIOL 416 Mammalian Physiology (4)

CHEM 445 Biochemistry (4)

INRR 285 Firefighter I (6)

**INTERNATIONAL RESCUE AND RELIEF***Project Development Emphasis*

Bachelor of Science

**MAJOR REQUIREMENTS** □ 81 hours

INTERNATIONAL RESCUE AND RELIEF CORE 43

INRR 285 Firefighter I 6

or INRR 315 Global Communications Technology (3)  
and INRR 325 Relief Infrastructure (3)

INRR 420 IRR Preceptorship 3

INRR 450 Hazardous Materials Awareness and Operations 2

INRR 485 Seminar in International Service 3

INRR 491 Disaster Management 3

**Project Development Courses**

BUAD 138 Dynamics of Business 3

or PSYC 340 Research Methods (3)

BUAD 219	Small Business Management	3
BUAD 376	Human Resources Management	3
PSYC 311	Christian Counseling or RELP 465 Personal Witnessing (3)	3
SOCI 105	Introduction to Sociology	3
SOCI 210	Group Dynamics	3
Select one course from		3
ECON 236	Principles of Macroeconomics (3)	
GEOG 137	Introductory Geography (3)	
GEOG 227	World Geography (3)	
PLSC 327	Comparative Governments (3)	
SOWK 415	Crisis and Resilience (3)	

**DISASTER PREPAREDNESS**

(For Nursing Majors Only)

**MINOR REQUIREMENTS □ 19 hours**

INRR 110	Search and Rescue Technician II	2
INRR 112	Swift Water Technician I/Advanced	1
INRR 114	Rope Rescue Technician	1
INRR 116	Basic Survival	1
INRR 200	Critical Incident Stress Management	2
INRR 202	EMT II	4
INRR 302	HIV and Emerging Diseases	1
INRR 450	Hazardous Materials Awareness and Operations	2
INRR 491	Disaster Management	3
NRSG 391	Frontier Nursing	2

**EMERGENCY MANAGEMENT****MINOR REQUIREMENTS □ 19-20 hours**

INRR 100	EMT-Basic	7
INRR 110-116	Summer Survival Training (or INRR 202 EMT II) INRR 110 Search and Rescue Technician II (2) INRR 112 Swift Water Technician I/Advanced(1) INRR 114 Rope Rescue Technician (1) INRR 116 Basic Survival (1) or INRR 202 EMT II (4)	5
INRR 200	Critical Incident Stress Management	2



	or INRR 315 Global Communication Technology (3)	
	or INRR 325 Relief Infrastructure (3)	
INRR 302	HIV and Emerging Diseases	1
INRR 450	Hazardous Materials Awareness and Operations	2
INRR 491	Disaster Management	3

## **SURVIVAL AND RESCUE**

### **MINOR REQUIREMENTS □ 21 hours**

INRR 100	EMT-Basic	7
INRR 110	Search and Rescue Technician II	2
INRR 112	Swift Water Technician I/Advanced	1
INRR 114	Rope Rescue Technician	1
INRR 116	Basic Survival	1
INRR 200	Critical Incident Stress Management	2
	or INRR 450 Hazardous Materials Awareness and Operations (2)	
INRR 202	EMT II	4
INRR 491	Disaster Management	3

## **NURSING**

Union College offers a four-year curriculum in nursing, leading to a Bachelor of Science in Nursing degree. The program is approved by the Nebraska State Board of Nursing and is accredited by the Commission on Collegiate Nursing Education. Graduates are eligible to write National Council Licensing Examinations (NCLEX) for professional licensure.

### **MISSION**

The mission of the nursing program is to prepare students from diverse backgrounds to be competent, caring generalists in the profession of nursing. The program is based on professional standards and reflects a commitment to wholeness, Christian service and Seventh-day Adventist values.

### **GOALS**

Students earning a degree in nursing will be prepared to

- use Christian values as a foundation to provide caring service as modeled by Christ;
- synthesize knowledge acquired from humanities, natural and social sciences and nursing courses, for critical thinking and decision making;
- utilize the nursing process in the care of clients experiencing commonly occurring or multiple and complex stressors at all levels of acuity in diverse environments;
- develop and maintain competence in selection and use of technical, communication and assessment skills in all environments;
- promote client wholeness and high level of wellness in diverse populations within all cultures across the life span;
- function as a provider of care, a designer/manager/coordinator of care and a member of a profession to enhance client care and support the nursing profession;

- advocate for professional standards of practice within diverse environments and within the interdisciplinary health care team;
- evaluate and apply research findings to clinical nursing practice and be prepared for evidence-based practice;
- possess a foundation for advanced study and continued professional development.
- 

#### **ADMISSION, PROGRESSION AND GRADUATION REQUIREMENTS**

Admission to Union College and completion of the nursing prerequisites must precede acceptance to the nursing program. Students must apply for admission to the nursing program by April 1 to be considered for the fall semester and by November 1 for the spring semester. Students who have “stopped out” must confirm eligibility in writing to resume nursing courses by April 1 for admission to fall semester or December 1 for the spring semester.

#### **Minimum criteria for admission in the nursing program are**

- acceptance into Union College;
- complete required prerequisite courses (\*indicates courses that may be taken as corequisites with first level nursing courses);

	<u>Semester Hours</u>
Anatomy and Physiology	8
Chemistry (inorganic and organic/biochemistry)	6
Microbiology*	4
Psychology (intro)	3
Nutrition*	3
English (College Writing I and II)	6
Medical Terminology	1

- complete application process:
  - nurse entrance test
  - all college transcripts
  - three references
  - health policy requirements
- cumulative GPA of 2.75 or above on a 4.00 scale in general education and contextual courses;
- for students whose native language is other than English, an internet score of 83 or above, or a score of 560 or above on the Union College administered TOEFL (not including essay portion). A personal interview with the program director or a member of the Nursing Admissions and Academic Evaluation Committee may be required.

#### **Criteria for progression in the nursing program are**

- a grade of C (2.00) or above in all nursing and required contextual courses;
- a cumulative GPA and nursing course GPA of 2.50;
- passing grades in both theory and clinical portions of courses;
- no nursing course may be attempted more than twice;
- no more than two nursing courses may be repeated;
- regular and prompt attendance at all classes and clinical laboratory appointments (students are responsible for personal transportation to clinical assignments);
- compliance with health policy requirements as follows:
  - on admission into the program, a complete physical examination including TB Test or chest x-ray, up-to-date immunizations and vision and hearing assessment,
  - Hepatitis B vaccination required prior to first clinical course,
  - TB test annually;

- all students who have been admitted to the nursing program are required to carry personal health insurance;
- CPR certification (American Heart Association for health care providers).

Nursing courses are arranged in a progressive curriculum. Learning proceeds from the concrete and simple to the abstract and complex. It begins with conceptualization, then moves to application and, finally, to integration. In order to facilitate student learning the nursing program has organized the following sequence of nursing courses (students must successfully complete each semester before beginning any of the courses listed in the following semester):

#### Traditional Nursing Students

##### Level II

##### 1<sup>st</sup> Semester

NRSG 335 Physical Assessments  
NRSG 213 Fundamentals

##### Level III

##### 3<sup>rd</sup> Semester

NRSG 363 Medical Surgical II

##### Level IV

##### 5<sup>th</sup> Semester

NRSG 435 Mental Health  
NRSG 423 Childrearing Family  
NRSG 437 Management and Leadership

##### 2<sup>nd</sup> Semester

NRSG 359 Pathophysiology  
NRSG 263 Medical Surgical I

##### 4<sup>th</sup> Semester

NRSG 383 Junior Seminar  
NRSG 385 Childbearing Family  
NRSG 387 Nursing Research

##### 6<sup>th</sup> Semester

NRSG 439 Complex Care  
NRSG 447 Community Health  
NRSG 483 Senior Seminar  
NRSG 499 Preceptorship

The following sequence has been approved for students who elect to take the Level IV year part time over two academic years:

#### Part-time Track for Level IV Year

##### Level IV

##### 5<sup>th</sup> Semester

NRSG 435 Mental Health

##### Level IV

##### 7<sup>th</sup> Semester

NRSG 423 Childrearing Family  
NRSG 437 Management and Leadership

##### 6<sup>th</sup> Semester

NRSG 439 Complex Care

##### 8<sup>th</sup> Semester

NRSG 447 Community Health  
NRSG 483 Senior Seminar  
NRSG Preceptorship

Sequencing is slightly varied for the second-step degree completion program. See following:

#### Licensed Practical Nurses

##### Level III

##### 1<sup>st</sup> Semester

NRSG 335 Physical Assessments  
NRSG 359 Pathophysiology

##### Level IV

##### 3<sup>rd</sup> Semester

NRSG 435 Mental Health  
NRSG 423 Childrearing Family

##### 2<sup>nd</sup> Semester

NRSG 383 Junior Seminar  
NRSG 385 Childbearing Family  
NRSG 387 Nursing Research

##### 4<sup>th</sup> Semester

NRSG 439 Complex Care  
NRSG 447 Community Health

NRSB 437 Management and Leadership

NRSB 483 Senior Seminar

NRSB 499 Preceptorship

## Registered Nurses

## Level IV

1<sup>st</sup> Semester

NRSB 335 Physical Assessments

NRSB 359 Pathophysiology

NRSB 387 Nursing Research

NRSB 437 Management and Leadership

2<sup>nd</sup> Semester

NRSB 439 Complex Care

NRSB 447 Community Health

NRSB 483 Senior Seminar

NRSB 499 Preceptorship

**Criteria used for graduation and eligibility for state board licensure examination are**

- a cumulative GPA of 2.50 and nursing courses GPA of 2.50 with no grade lower than C (2.00).

Upon selection of nursing as a major, students will be assigned an academic advisor from among the nursing program faculty to give guidance in planning their academic program.

All traditional nursing students are required to take the Watson-Glaser Critical Thinking Appraisal exam upon acceptance into the program and within their final semester prior to graduation. The Academic Profile is given every other year as a college-wide assessment tool.

**PROGRAM SPECIFIC FEE**

In addition to regular college fees, a fee is assessed each semester for all students admitted in the nursing program. Part-time students will be assessed this fee for each semester they are taking clinical nursing courses. These fees are published annually in the college's schedule of *Scholarships, Tuition and Fees*.

**BACHELOR OF SCIENCE FOR LICENSED PERSONNEL (Second-step)**

Licensed practical nurses (LPNs) and diploma and associate degree RNs may progress in the baccalaureate nursing program on a part-time or full-time basis. Each applicant is individually evaluated for placement in the program as space is available. Tuition scholarships are given to eligible individuals licensed in Nebraska reducing the cost by half the usual rate. Students are not generally eligible for other institutionally funded aid, scholarships or discounts.

The following non-nursing requirements or their equivalents must be completed before acceptance into the nursing program and may be taken at Union College:

	<u>Semester Hours</u>
Anatomy and Physiology	8
Chemistry (inorganic and organic/biochemistry)	6
Microbiology	4
Psychology (introduction and developmental)	6
Sociology	3
Nutrition	3
English (College Writing I and II)	6
Medical Terminology (LPN's only)	1

If necessary, Microbiology may be taken as a co-requisite with Pathophysiology.

To allow more flexibility, Second-step program students are required to take six hours of religion (nursing contextual requirement RELT 305 or RELP 439; and general education requirement RELT 141 or RELT 110), and two hours of physical activity instead of the general education requirements for traditional students of twelve hours of religion and four hours of physical education activities. The eight hour difference must be made up by taking electives to complete the 128 hours required for graduation. RN second-step students may substitute any

nursing elective for NRSG 483 Senior Seminar. LPN second-step students will complete both NRSG 383 and NRSG 483.

The LPN and RN student can complete the program on a full-time or part-time basis provided it is within the six-year allotted time frame. A schedule will be designed to meet the needs of each candidate on an individual basis. Thirty of the last thirty-six hours must be taken at Union in order to graduate from Union College. Transfer courses will be evaluated for content equivalency by Union College course instructors and clinical skills may require validation. LPNs and RNs who are admitted to the Second-step program must transfer in to Union College their previous nursing education courses and document successful completion of the NCLEX-RN or NCLEX-PN. The transferred courses will then be considered equivalent to the UC courses and apply to both the upper division minimum and the amount of credits required from a four-year institution.

### **Licensed Practical Nurses**

Each candidate is evaluated individually for placement in the program based on previous nursing education. LPN graduates from Southeast Community College with a “B” average may petition to receive without challenge five semester hours credit for NRSG 213 Fundamentals, ten semester hours credit for Medical-Surgical Nursing, and two semester hours credit for Nutrition based on the comparable courses at SCC to those at Union College and grades received. Other nursing courses such as Pathophysiology, Physical Assessment, Childbearing, and Mental Health Nursing, etc. must be taken at Union College, unless evidence is provided to support a petition for the course to be challenged.

### **Registered Nurses**

Associate degree or diploma RNs who have graduated from an accredited nursing program are eligible to receive 31 hours of credit for Fundamentals, Medical-Surgical, OB, Junior Seminar, Pediatrics, and Mental Health from their previous nursing education after successfully completing nine semester hours of NRSG courses at Union College.

Non-US educated RNs not licensed in the US must pass mobility exams for Medical-Surgical, OB, Pediatrics, Mental Health, and successfully validate their clinical performance in other nursing courses to receive challenge credit for their previous nursing education.

## **NURSING**

### **Bachelor of Science**

#### **MAJOR REQUIREMENTS—57 hours**

NRSG 213	Fundamentals	5
NRSG 263	Medical-Surgical I	5
NRSG 335	Physical Assessment	3
NRSG 359	Pathophysiology	3
NRSG 363	Medical-Surgical II	5
NRSG 383	Junior Seminar	1
NRSG 385	Childbearing Family	5
NRSG 387	Nursing Research	3
NRSG 423	Childrearing Family	5
NRSG 435	Mental Health	5
NRSG 437	Management and Leadership in Health Care	3

NRSG 439	Complex Care	5
NRSG 447	Community Health Nursing	5
NRSG 483	Senior Seminar	1
NRSG 499	Preceptorship	3

**CONTEXTUAL REQUIREMENTS—37 hours**

BIOL 111, 112	Human Anatomy and Physiology	4, 4
BIOL 205	Microbiology	4
CHEM 101	Introduction to Inorganic Chemistry	3
CHEM 102	Introductory Organic and Biochemistry	3
HHPT 256	Medical Terminology	1
MATH 221	Elementary Statistics and Probability	3
NUTR 227	Nutrition	3
PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
RELT 305	Christian Ethics	3
	or RELP 339 Christian Health Care and Bioethics (3)	
SOCI 105	Introduction to Sociology	3

**Recommended**

NRSG 208	Pharmacology	1
NRSG 391	Frontier Nursing	2
NRSG 392	Frontier Nursing—Field Experience	2-3
NRSG 491	Disaster Management	2

In addition to the above requirements, the student will select other courses to fulfill the general education curriculum (see Graduation Requirements section). A minimum of 128 semester hours is necessary for a bachelor's degree at Union College.

**PART-TIME TRACK FOR LEVEL IV YEAR**

The following sequence has been approved for students who elect to take the Level IV year part-time over two academic years:

Fall (year 1) Level IV

NRSG 435      Mental Health

Spring (year 1) Level IV

NRSG 439      Complex Care

Fall (year 2) Level IV

NRSG 423      Childrearing Family

NRSG 437      Management and Leadership in Health Care

Spring (year 2) Level IV

NRSG 447      Community Health Nursing

NRSG 483      Senior Seminar

NRSG 499      Preceptorship

## HEALTH SCIENCES

### Bachelor of Science

The major in Health Sciences combines courses at the undergraduate and masters levels to enable exceptional, qualified Union College students to enter the Master of Physician Assistant Studies (MPAS) program after three years of undergraduate study and receive the bachelor's degree during graduate MPAS studies.

### ADMISSION REQUIREMENTS

By the fall semester of the junior year, Union College students must have completed

- application for MPAS program (See Physician Assistant Studies above);
- 240 hours of health care experience;
- CHEM 151, 152 General Chemistry;
- CHEM 211 Organic Chemistry;
- BIOL 151, 152 General Biology.

### PROGRESSION REQUIREMENTS

Before entering the PHAS graduate courses, health sciences majors must have

- acceptance into MPAS program (students who have been denied may reapply only after completion of a baccalaureate degree with another major);
- 480 hours of health care experience;
- 30 semester hours of credit at Union College;
- all major and prerequisite requirements except PHAS courses;
- all general education requirements;
- electives as needed for a total of 100 semester hours (only 28 hours of PHAS courses apply toward the B.S. degree);
- all progression and graduation requirements associated with the MPAS degree.

### MAJOR REQUIREMENTS □ 67 HOURS

BIOL 151, 152	General Biology	4, 4
BIOL 205	Microbiology	4
BIOL 416	Mammalian Physiology	4
CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 445	Biochemistry	4
PSYC 415	Abnormal Psychology	3
PHAS 510	Clinical Nutrition	2
PHAS 511	Human Anatomy	5
PHAS 514	Medical History and Physical Examination Skills	4
PHAS 525	Physician Assistant Professional Issues	3
PHAS 533	Preventive Health	1
PHAS 542	Applied Medical Ethics	1
PHAS 539	Christian Health Care and Bioethics	3
PHAS 559	Clinical Pathophysiology	4

PHAS 584	Pharmacology	5
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**PREREQUISITE REQUIREMENTS □ 11 HOURS**

HHPT 215	Emergency Health Care or evidence of CPR certification	1
HHPT 256	Medical Terminology	1
MATH 221	Elementary Statistics and Probability	3
PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3



# DIVISION OF HUMAN DEVELOPMENT

## MISSION

The mission of the Division of Human Development is to prepare exemplary teachers, psychology majors and social workers. The programs are driven by a commitment to holistic development, scholarship, multicultural clinical experiences and dedication to a life of service that helps others in achieving their God-given potential.

The Division of Human Development offers courses and experiences to prepare students for entry-level career positions, or for graduate study.

## DIVISION OFFICE

<i>Location</i>	Dick Building, Room 403
<i>Telephone</i>	402.486.2522
<i>E-Mail</i>	joalliso@ucollege.edu
<i>Web sites</i>	www.ucollege.edu/humandev www.ucollege.edu/education www.ucollege.edu/psychology www.ucollege.edu/socialwork

## FACULTY

Joseph R. Allison, Ed.D, Chair, *Professor of Education*  
 Kathy Bollinger, M.Ed., *Associate Professor of Education*  
 Melanie Gabbert, M.A., *Assistant Professor of Psychology*  
 Joann Herrington, M.A., *Associate Professor of Education*  
 Trudy Ann Holmes-Caines, Ph.D., *Professor of Psychology*  
 Lorri Merchant, M.S.W. *Associate Professor of Social Work*  
 Y. J. Moses, Ph.D., *Professor of Education*  
 Bruce Schlieder, M.S.W., *Associate Professor of Social Work*  
 Jacquelyn Simpson, M.A., *Instructor; George Stone Elementary School*  
 Susan Zimmermann, M.A., *Instructor; George Stone Elementary School*

## DEGREES AND PROGRAMS

### Bachelor of Science

Elementary Education (Field Endorsement) K-8  
 Psychology  
 Secondary Education Endorsements (see major division section)  
 Art Education (Field) K-12 Fine Arts  
 Biology Education (Subject) 7-12 Science and Mathematics  
 Business Education (Subject) 7-12 Business and Computer Science  
 Chemistry Education (Subject) 7-12 Science and Mathematics  
 English Education (Subject) 7-12 Humanities  
 English as a Second Language (ESL) K-12 (Supplemental) Humanities  
 General Art (Subject) K-6 Fine Arts  
 History Education (Subject) 7-12 Humanities

Information Technology Education K-12 (Supplemental) Business and Computer Science  
Instrumental Music Education (Subject) K-8; 7-12 Fine Arts  
Language Arts Education (Field) 7-12 Humanities  
Mathematics Education (Field) 7-12 Science and Mathematics  
Music Education (Field) K-12 Fine Arts  
Natural Science Education (Field) 7-12 Science and Mathematics  
Physical Education (Subject) K-6 and 7-12 Health Sciences  
Physics Education (Subject) 7-12 Science and Mathematics  
Religious Education (Subject) 7-12 Religion  
Social Science Education (Field) 7-12 Humanities  
Vocal Music Education (Subject) K-8; 7-12 Fine Arts

**Bachelor of Social Work**

Social Work

**Minor**

Psychology

**PSYCHOLOGY****Bachelor of Science****Mission**

The psychology program at Union College prepares students to be seekers of knowledge, and thinkers who practice service to all humanity with a Christ-centered attitude.

**Goals**

Upon completion of the psychology program at Union College, graduates will be able to

*Knowledge*

- exhibit knowledge of the major concepts and theoretical perspectives in the general field of psychology and its sub-fields;
- identify ways in which psychological research and application impact everyday functioning;

*Skills*

- integrate psychological theory with practice;
- carry out the research process;
- critically assess data and general information;
- successfully pursue graduate studies;

*Values*

- evaluate psychological theories from a Christian perspective;
- demonstrate interest, respect and concern for others, regardless of religion, race, gender, sexual orientation or any other differences;
- exhibit ethical behavior when interacting with others in all settings;
- demonstrate integration of Christian compassion and psychological application.

**MAJOR REQUIREMENTS—48 hours**

PSYC 100	Careers in Psychology	.5
PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
PSYC 225	Psychology of Religion	3
PSYC 300	Career and Graduate School Preparation	.5
PSYC 337	History and Systems of Psychology	3

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PSYC 340	Research Methods I	3
PSYC 341	Research Methods II	3
PSYC 475	Current Issues in Psychology	2
PSYC 476	Senior Research	3
Select five courses from the following two groups:		15
Select at least one course from		
PSYC 315	Social Psychology (3)	
PSYC 338	Cognitive Psychology (3)	
PSYC 380	Biopsychology (3)	
Select at least two courses from		
PSYC 311	Introduction to Counseling Theory and Techniques (3)	
PSYC 375	Theories of Personality (3)	
PSYC 415	Abnormal Psychology (3)	
PSYC 425	Human Sexuality (3)	
PSYC 427	Clinical Assessment (3)	
PSYC 450	Psychological Testing (3)	
Select at least nine additional hours from PSYC or SOCI electives		9
Recommended		
PSYC 455	Internship (1-3)	
SOCI 210	Group Dynamics (3)	
SOCI 315	Marriage and Family (3)	
SOWK 415	Crisis and Resilience (3)	
Participate in department senior assessment.		

**CONTEXTUAL REQUIREMENTS—6 hours**

SOCI 105	Introduction to Sociology	3
SOCI 321	Issues of Diversity	3

**PSYCHOLOGY****MINOR REQUIREMENTS—18 hours**

PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
PSYC 337	History and Systems of Psychology	3
Select 9 hours of approved PSYC electives (3 hours must be 300-400 level)		9

## **SOCIAL WORK**

### **Bachelor of Social Work**

The social work program prepares students for entry-level generalist social work practice and graduate-level education. The program trains and educates people from all walks of life to be empowering agents of healing and change for individuals, families and communities. Students who successfully complete this program, which is accredited by the Council on Social Work Education, receive a Bachelor of Social Work (B.S.W.) degree.

### **Mission**

With a foundation of Christian values the social work program at Union College trains students to be competent general practitioners, empowering agents of healing and change for individuals, families and communities; professionals who value service, social justice, human rights and self-determination.

### **Goals**

Students graduating from the social work program will be develop critical thinking skills with a broad liberal arts foundation and be prepared to

- apply the knowledge and skills of generalist social work practice with systems of all sizes;
- practice within the values and ethics of the social work profession and with an understanding of and respect for the positive value of diversity;
- understand the forms and mechanisms of oppression and discrimination and the strategies of change that advance social and economic justice;
- apply a Christian perspective to social problems, social work practice and to promote the worth of all people;
- enter graduate social work programs with advanced standing.

For complete list of program goals see the Union College social work Web page at [www.ucollege.edu/humandev/socialwork](http://www.ucollege.edu/humandev/socialwork) or the social work program manual.

### **Admission to the Social Work Program**

Students interested in attaining a bachelor's degree in social work should apply and be approved for candidacy status at the end of the sophomore year or before beginning field placement.

The Union College social work program does not allow for the creation of credits for life experience or work experience.

Continued participation in the program is based upon

- maintenance of an overall minimum 2.00 GPA;
- minimum of 2.50 GPA in the social work (SOWK) courses;
- demonstration of oral and written communication skills, professional social work ethics and values, and capacity to function in social work settings.

### **Auxiliary Requirements**

Social work majors are required to

- take the ACAT standardized comprehensive examination during their senior year;
- participate in program assessment survey and evaluation conference;
- take the BEAP test in the freshman and senior years;
- file a felony/misdemeanor statement regularly (previous convictions may influence program admission, field placement, and licensing decisions).

Students are encouraged to belong to

- National Association of Social Work (annual membership fee);
- Social Work Club (membership fee).

**MAJOR REQUIREMENTS—44 hours (A minimum grade of C is required)**

SOWK 115	Introduction to Social Work	4
SOWK 227	Human Behavior in the Social Environment I	3
SOWK 228	Human Behavior in the Social Environment II	3
SOWK 316	Social Welfare Policy	3
SOWK 336	Social Work Practice I	3
SOWK 337	Social Work Practice II	3
SOWK 390	Research Seminar	1
SOWK 475	Field Practicum	12
Select 12 hours from		12
SOWK 320	Child Welfare (3)	
SOWK 345	Social Work in Healthcare (3)	
SOWK 388	International Social Services (3)	
SOWK 415	Crisis and Resilience (3)	
SOWK 438	Gerontology (3)	

**CONTEXTUAL REQUIREMENTS—21 hours**

PSYC 105	Introduction to Psychology	3
PSYC 340	Research Methods I	3
PSYC 341	Research Methods II	3
SOCI 105	Introduction to Sociology	3
SOCI 210	Group Dynamics	3
SOCI 321	Issues of Diversity	3
Select three hours from		3
PSYC 311	Christian Counseling (3)	
PSYC 415	Abnormal Psychology (3)	
PSYC 425	Human Sexuality (3)	
SOCI 315	Marriage and Family (3)	

**TEACHER EDUCATION PROGRAM****Mission**

The Union College education program prepares caring, exemplary teachers who possess exceptional dedication to the profession. They respond to diversity and function effectively in multiple educational settings to help all students develop to their God-given potential. The program is driven by a commitment to holistic development, scholarship and dedication to a life of service that helps others achieve. This happens when the graduate's mental, physical, social and spiritual capabilities are harmoniously developed.

**Goals**

Students graduating with a degree in education will be able to

- demonstrate academic excellence;
- practice healthful living;
- practice spiritual and social caring in their own lives;
- demonstrate commitment to growth in the lives of their students;
- respond effectively to diversity in multiple educational settings;
- perform professional roles with a high degree of competency;
- pursue advanced study.

**ELEMENTARY EDUCATION****Bachelor of Science****MAJOR REQUIREMENTS—75 hours** (A minimum grade of C is required)

EDUC 125	Introduction to Teaching	3
EDUC 218	Philosophy of Education	3
EDUC 225	Seminar in Ed Diversity: Multicultural/HRT	1
EDUC 245	Physical Education in the Elementary School	2
EDUC 345	Learning Theories and Measurement	3
EDUC 346	Special Education in the Classroom	3
EDUC 357	Literature for Children and Adolescents	2
EDUC 425	Education Organization and Administration	3
EDUC 445	Reading Methods K-8	4
EDUC 446	Reading Assessment	2
EDUC 457	Methods in Language Arts K-8	4
EDUC 458	Methods in Religion, Health, Science and Social Studies K-8	4
EDUC 465	Math Methods and Materials K-8	3
EDUC 475	Student Teaching	16
ART 215	School Art	2
MATH 320	Mathematical Concepts for Elementary School Teachers	3
MUED 347	Music in the Elementary School	2
PSYC 215	Developmental Psychology	3
RELH 310	History of the Seventh-day Adventist Church	3
RELT 141	Christian Beliefs	3
RELT 455	Prophetic Guidance in the Advent Movement	3
REL	Religion elective	3

**SPECIFIC PROGRAM REQUIREMENTS—35 hours**

BIOL 102	Environment and Life Science	3
CHEM 101	Introductory Inorganic Chemistry	4

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CPTR 220	Microcomputer Applications	3
ENGL 236	Approaches to Literature: World	3
GEOG 137	Introductory Geography	3
	or GEOG 227 World Regional Geography (3)	
HIST 157	The West and the World	3
HIST 255	Issues in Early American History	3
HIST 315	Economic History of the U.S.	3
	or HIST 455 Recent American History (3)	
MATH 111	College Algebra	3
PHYS 111	Principles of Physics	4
	or ASTR 111 Astronomy	4
PLSC 205	American Government	3

**SECONDARY EDUCATION****PROFESSIONAL EDUCATION—54 hours** (*A minimum grade of C is required*)

EDUC 125	Introduction to Teaching	3
EDUC 218	Philosophy of Education	3
EDUC 225	Seminar in Education Diversity: Multicultural/HRT	1
EDUC 345	Learning Theories and Measurement	3
EDUC 346	Special Education in the Classroom	3
EDUC 356	General Secondary Methods	3
EDUC 410-418	Special Methods—In area of Major	3
EDUC 475	Student Teaching	16
EDUC 476	Content Reading and Writing	3
EDUC 485	Issues in Education	1
PSYC 215	Developmental Psychology	3
RELH 310	History of the Seventh-day Adventist Church	3
RELT 141	Christian Beliefs	3
RELT 455	Prophetic Guidance in the Advent Movement	3
REL	Religion elective	3

**MAJOR REQUIREMENTS**

Number of hours dependent upon the content area(s). Bachelor of Science requirements are listed by major content area in division sections (see list of field and subject endorsements below).

**Field Endorsements**

Art Education K-12  
Language Arts Education 7-12  
Mathematics Education 7-12  
Music Education K-12  
Natural Science Education 7-12  
Social Science Education 7-12

**Subject Endorsements**

Biology Education 7-12  
Business Education 7-12  
Chemistry Education 7-12  
English Education 7-12  
General Art Education K-6  
History Education 7-12  
Instrumental Music Education K-8; 7-12  
Physical Education 7-12  
Physics Education 7-12  
Religious Education 7-12  
Vocal Music Education K-8; 7-12

**Supplemental Endorsements**

English as a Second Language (ESL) K-12  
Information Technologies Education K-12

It is strongly recommended that every student finish requirements for at least two subject endorsements.

**MINOR**

If pursuing a Religion minor, EDUC 415 Methods: Social Science and Religious Education is required to obtain an SDA Religion teaching endorsement.

**ADMISSION, PROGRESSION AND PROGRAM COMPLETION REQUIREMENTS****Admission to the teacher education program**

Admission into teacher education at Union College is not automatic. The checkpoints of Provisional, Full and Student Teaching Admission are carefully monitored by advisors and the Teacher Preparation Committee (TPC). A self-tracking chart listing all checkpoints is supplied for the teacher candidate to monitor his or her progress.

The four steps of the teacher education program are

- provisional admission;
- full admission;
- student teaching;
- program completion, certification and competencies.

**PROVISIONAL ADMISSION****Permission to enter the teacher education program**

- Students who wish to enroll in the teacher preparation curriculum are required to apply for provisional admission to the Teacher Preparation Committee (TPC) during EDUC 125 Introduction to Teaching generally taken during the freshman year. Transfer students should apply at the division office at the time of their first registration at the college.
- Students must present
  - an application for provisional admittance by the end of EDUC 125 Introduction to Teaching course;
  - evidence of minimum cumulative GPA of 2.50 and no grade lower than C (2.00) in major and professional requirements;
  - a felony/misdemeanor statement (Nebraska law requires that every teacher candidate must affirm under oath that he or she has no felony nor misdemeanor convictions involving abuse, neglect or injury to any person, nor any other convictions. A person



with a felony conviction shall not be allowed to participate in pre-student teaching or student teaching experiences without approval by the State Board.);

- no incomplete grades;
- evidence of completion of requirements of EDUC 125 Introduction to Teaching which include
  - three recommendations giving moral, ethical, and professional character references (one from a current or former residence hall dean or pastor, one from a teacher and one from a work supervisor);
  - 20 clock hours of field experience;
  - an autobiographical sketch which includes a statement of career goals and rationale for requesting admission into the program;
  - speech and hearing clearance;
  - Myers-Briggs test report.

The above records will be examined by the teacher education program faculty who will then recommend to the TPC provisional acceptance or denial of admission into the program.

- Candidates must move from provisional admission to full admission status within three academic years, or must again apply for provisional admission by repeating the previous steps.
- Any time the cumulative GPA falls below 2.50 or a grade is below a C (2.00) in major and professional requirements, the teacher candidate may not enroll for further professional education classes until the GPA is raised to 2.50 or above, the class is retaken with a grade of C or higher or permission is granted by the TPC.

## **FULL ADMISSION**

### **Permission to enter upper division professional education classes**

- Students who have been provisionally admitted within the past three years and who wish to continue in teacher preparation must appear before the Candidacy Committee, usually while enrolled in EDUC 218 Philosophy of Education during the spring semester of the sophomore year. Any student in the second year of the education program who is off-schedule should seek the advisor's guidance in applying for Full Admission.
- The Candidacy Committee will be made up of the student's advisor(s) and a member of the education faculty.
- A student eligible for candidacy will have
  - a completed application for full admission submitted by February 15;
  - a 2.50 GPA or above and no grade lower than C (2.00) in professional education and content courses;
  - have no incomplete (I) or in progress (IP) grade;
  - pass the Pre-Professional Skills Test (PPST) with minimal scores of Reading 170, Mathematics 171, and Writing 172 as required by the State of Nebraska;
  - a detailed plan showing how all remaining classes are scheduled to guarantee successful completion of the program;
  - complete a portfolio with a rating of 2 or above on each outcome;
  - a recommendation from content area division(s);
  - a report of 20 hours of observation in a diverse setting.

The Candidacy Committee will review all records and schedules, discuss goals and character expectations, and recommend to the TPC acceptance or denial of the candidate to full admission status.

The Teacher Preparation Committee each spring semester will

- review the recommendation of the Candidacy Committees;
- review candidate's progress and vote to confer or deny full admission;

- report decision to the candidate and, if denial is voted, a written explanation of cause will be given to the candidate;
- review the candidate's GPA.

Any time the ending semester cumulative GPA falls below 2.50 or a grade below a C (2.00) in any professional or major requirement or content course required for the endorsement major, the teacher candidate may not enroll for further professional education classes until the GPA is raised to 2.50 or above, the class is retaken, or permission is granted by the TPC.

Failure to gain Full Admission to the program by the end of the spring term of year two usually significantly delays a student's progress through the program.

If more than two years elapse between Full Admission and Student Teaching, candidates must have an additional candidacy meeting and reapply for Full Admission.

## **STUDENT TEACHING**

### **Authorization to Student Teach**

To become authorized to student teach, the candidate must make application to the TPC prior to the student teaching semester or year. The candidate must review the following criteria with his or her advisor to ensure that these requirements have been met. Application forms are available for teacher candidates in the Division of Human Development.

By April 1 in the spring semester of the junior year all candidates planning to student teach in their senior year must meet with their education advisor to review and provide documentation of

- a completed Student Teaching Application;
- a GPA of 2.50 or above with no grade lower than C (2.00) in professional or major courses,
- no incomplete (I) or in progress (IP) grades;
- a completed portfolio with rating of 2.0 or above on each outcome;
- a completed application for a full background check;
- two recommendations that show evidence of maintenance of moral and ethical standards;
- health appraisals□ physicals and TB tests;
- completion of a minimum of 100 clock hours of field experience;
- completion of at least 80% of course work in major area(s) for secondary candidates;
- completion of 100% of course work other than senior professional education courses for elementary majors.

The Executive Committee will examine all evidence, review progress, and recommend to the TPC approval or denial of the application to student teach. The TPC will vote and report its decision to the student teacher candidate and if denial, will provide the student with a written explanation of cause.

### **Program Completion, Certification and Competencies**

To qualify for program completion each candidate will have

- earned a minimum of a baccalaureate degree and completed all requirements of the "approved program" for which recommendation is desired;
- met a minimum 2.50 GPA standard of scholarship;
- passed the PPST with minimum scores set by the State of Nebraska;
- successfully completed student teaching assignment;
- completed a portfolio with rating of 2 or above on each outcome;
- taken the PRAXIS II – Elementary Education: Curriculum, Instruction, and Assessment;
- a background free of criminal convictions as shown by a professional background check.

#### **Certification**

Nebraska State Certification: Application for certification is made through the Union College Certification Officer using the forms provided by the Nebraska Department of Education. These

forms can be obtained in the division office or on the Nebraska Department of Education Web site at <http://www.nde.state.ne.us>

To qualify for Nebraska State Certification each candidate will have

- earned a minimum of a baccalaureate degree and completed all requirements of the “approved program” for which recommendation is desired;
- attained a minimum of 18 years of age;
- shown evidence of physical fitness, emotional maturity and moral character;
- met a 2.50 minimum GPA standard of scholarship;
- passed the PPST with minimum scores set by the State of Nebraska
- taken the PRAXIS II - Elementary Education: Curriculum, Instruction, and Assessment;
- successfully completed student teaching assignment;
- completed a portfolio with rating of 2.0 or above on each outcome;
- shown a background free of criminal convictions by a background check.

Seventh-day Adventist Denominational Certificate: Application for SDA certification is made in the division office using the form provided by the Mid-America Union Conference (MAUC).

To qualify for Seventh-day Adventist certification in the North American Division each candidate will

- meet all state certification requirements;
- have taken RELT 455 Prophetic Guidance and RELH 310 History of the SDA Church;
- hold membership in good standing at a Seventh-day Adventist church;
- affirm a willingness to subscribe to and teach within the framework and philosophy of the church.

Upon graduating, the teacher candidate will receive a Union College transcript which indicates completion of a Nebraska, NCATE and an NAD accredited bachelor’s degree program in teacher education and will be recommended to the State and MAUC for certification.

### **Change of Certification Requirements**

In case of changes in Nebraska state certification requirements, it may be necessary for a student who wishes to be recommended for certification to meet certain requirements different from those published in the bulletin or listed above. This is not to be construed to abridge teacher candidates’ right to graduate under any bulletin in force during the time they are in continuous residence as defined in the current bulletin. However, since certification and graduation are two different end goals, candidates for certification may encounter certification law changes they will be required to meet.

### **Transfer Students and Credits**

Transfer students wishing to be endorsed for teaching and who meet the requirements for admission into the teacher education program must complete requirements for their chosen teaching major (field or subject areas) in harmony with the pertinent “approved program” on file.

The teacher education program may selectively accept lower division (general but not professional education) transfer credit from regionally accredited two-year institutions of higher education; credit from regionally accredited four-year institutions also may be accepted.

A transferring student who expects to be recommended for certification must earn a minimum of 30 semester hours of credit at Union College, 22 for secondary and 26 for elementary shall be in Education. Exceptions to this policy may be made by action of the TPC.

## DIVISION OF HUMANITIES

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### MISSION

The Division of Humanities serves to aid its disciplines: Communication, English, Drama, History, Social Science, Modern Language, ESL, and International Studies. The division prepares students for a lifetime of meaningful interaction with their world. Our disciplines focus on refining students' ability to use language for utilitarian and aesthetic purposes, to understand and create patterns of meaning through archetype, symbol, and metaphor in poetry, to keep abreast of developments in the world, and/or to understand the present in light of the past.

### DIVISION OFFICE

<i>Location</i>	Dick Building, Room 409
<i>Telephone</i>	402.486.2523
<i>E-mail</i>	gegibson@ucollege.edu
<i>Web sites</i>	www.ucollege.edu/humanities www.ucollege.edu/esl

### FACULTY

**George Gibson, Ph.D., Chair, *Professor of History and Economics***

Osa-Karin Berg, M.A., *Associate Professor of French*

Chris Blake, M.A., *Associate Professor of English*

Tanya R. Cochran, M.A., *Assistant Professor of English and Communication*

William D. Fitts, Ph.D., *Professor of English*

Bruce Forbes, M.F.A., *Associate Professor of Art and Graphic Design*

Katie Lechler, M.A., *Visiting Instructor of Composition*

Laurel McClelland, M.A., *Assistant Professor of ESL*

Michael Mennard, M.A., *Assistant Professor of Communication and English*

Michelle Velázquez Mesnard, M.S., *Associate Professor of Communication*

Mark Robison, M.A., *Associate Professor of English*

Malcolm Russell, Ph.D., *Professor of Economics and History*

Karl-Heinz Schroeder, M.A., *Professor of History*

Peggy Wahlen, M.L.S., M.A., *Associate Professor of English and ESL Director*

<h3>DEGREES AND PROGRAMS</h3>
<b>Bachelor of Arts</b> Communication <i>Emphases: Journalism</i> <i>Public Relations</i>  English <i>Emphases: Literature</i> <i>Writing and Speaking</i>  French History International Studies Social Science Spanish

**Bachelor of Science**

English as a Second Language Education, Secondary Supplemental Endorsement  
 English Education, Secondary Subject Endorsement  
 History Education, Secondary Subject Endorsement  
 Institutional Development  
 International Studies  
 Language Arts Education, Secondary Field Endorsement  
 Social Science Education, Secondary Field Endorsement

**Associate of Science**

English as a Second Language

**Minors**

Communication  
 Drama  
 English  
 French  
 German  
 History  
 Italian  
 Pre-Law  
 Social Science  
 Spanish

**English as a Second Language Program****COMMUNICATION****Mission**

The communication program encourages students to become active and ethical participants in shaping modern culture.

**Goals**

Students graduating from the communication program will be prepared to

- be active and ethical participants in shaping modern culture;
- disseminate written, spoken, and visual information;
- incorporate leadership and ethics as key components to communication practice;
- write and edit effectively within a communication framework;
- understand the processes, effects, and theories of human communication;
- draw on a wide-ranging liberal arts education when engaged in the diverse demands of journalism, public relations, or institutional development;
- explore a variety of perspectives in the lifelong process of becoming a Christian scholar and practitioner in the field of communication.

**COMMUNICATION CORE—27 HOURS**

COJR 151	Photography	4
COJR 221	Reporting	3
COJR 245	Editing	3
COJR 457	Magazine Writing	3
COMM 125	Media and Meaning	3

COMM 290	Sophomore Seminar	1
COMM 320	Communication Theory and Research	3
COMM 465	Interpersonal Communication	3
COMM 490	Senior Seminar	1
GRPH 150	Introduction to Graphic Arts	3

**COMMUNICATION*****Journalism Emphasis*****Bachelor of Arts****Specific General Education Requirement**

MATH 221 Elementary Statistics and Probability	3
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**MAJOR REQUIREMENTS—49 HOURS**

COMMUNICATION CORE	27
COJR 177 Fundamentals of Broadcasting	3
COJR 448 Advanced Reporting	3
COJR 458 In-Depth Reporting	3
COJR 474 Journalism Practicum	4
Select nine hours from	9
COMM 335 Video Production (3)	
COMM 425 Intercultural Communication (3)	
COMM 480 Advanced Communication Seminar (3)	
COPR 316 Advertising Practices (3)	
COPR 332 Rhetoric (3)	
ENGL 378 Technical Writing and Grant Proposals (3)	
GRPH 254 Publication Design (3)	

**CONTEXTUAL REQUIREMENT**

Major or minor required from another discipline	Minimum of 18
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**COMMUNICATION*****Public Relations Emphasis*****Bachelor of Arts****Specific General Education Requirement**

MATH 221 Elementary Statistics and Probability	3
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**MAJOR REQUIREMENTS—54 hours**

COMMUNICATION CORE	27
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COMM 365	Institutional Development	3
COPR 241	Public Relations Principles	3
COPR 377	Crisis Public Relations	2
COPR 445	Public Relations Campaigns	3
COPR 475	Public Relations Practicum	4
Select twelve hours from		12
COMM 335	Video Production (3)	
COMM 425	Intercultural Communication (3)	
COMM 480	Advanced Communication Seminar (3)	
COPR 316	Advertising Practices (3)	
COPR 332	Rhetoric (3)	
ENGL 378	Technical Writing and Grant Proposals (3)	
GRPH 254	Publication Design (3)	
MRKT 327	Marketing (3)	

**COMMUNICATION**  
**MINOR REQUIREMENTS—19 HOURS**

COJR 221	Reporting	3
COMM 125	Media and Meaning	3
COMM 290	Sophomore Seminar	1
GRPH 150	Introduction to Graphic Arts	3
Select nine from the following:		9
(3 hours must be 300 or 400 level)		
COJR 151	Photography (4)	
COJR 177	Fundamentals of Broadcasting (3)	
COJR 245	Editing (3)	
COJR 448	Advanced Reporting (3)	
COJR 457	Magazine Writing (3)	
COJR 458	In-Depth Reporting (3)	
COMM 335	Video Production (3)	
COMM 425	Intercultural Communication (3)	
COMM 465	Interpersonal Communication (3)	
COPR 241	Public Relations Principles (3)	
COPR 316	Advertising Practices (3)	
GRPH 254	Publication Design (3)	

**DRAMA****MINOR REQUIREMENTS—20 hours**

Theatre courses are available through Nebraska Wesleyan University or the University of Nebraska-Lincoln.

Theatre	Introduction to Theatre	3
Theatre	Approved Acting Course	3
Theatre	Technical Theatre	3
CODR 210	Religious Drama	2
CODR 229	Play Production I	3
CODR 329	Play Production II	3
CODR 471	Play Direction	3

**ENGLISH****Mission**

The program in English fosters students' endeavors to be creative and critical readers, writers and thinkers.

**Goals**

Students who graduate from the English program will be able to

- understand and analyze the relevance of texts through the lens of literary and rhetorical criticism;
- write effectively in a range of genres because students understand the relationship of audience, author and subject.

**Portfolio Requirement**

All English majors should begin assembling, by their sophomore year, a portfolio of selected scholarly, creative and professional work. The completed portfolio is to be presented in the final semester before graduation. Advisors may opt for a senior assessment exam. More information is available from English advisors.

<b>ENGLISH CORE—16 hours</b>		
COMM 355	Advanced Speech and Oral Interpretation	3
ENGL 235	Approaches to Literature: British and American	3
ENGL 277	Grammar and Linguistics	4
ENGL 378	Technical Writing and Grant Proposals	3
ENGL 379	Creative Writing	3

**ENGLISH*****Literature Emphasis*****Bachelor of Arts**

Designed for those who desire a second major or plan for graduate study in English.



**Specific general education requirements:**

ENGL 236	Approaches to Literature: World	3
RELB 366	Biblical Literature	3
Select one American history course		3

**MAJOR REQUIREMENTS—31 hours**

ENGLISH CORE		16
Select five courses (300-400 level) from		15
ENGL 345	Studies in Early American Literature (3)	
ENGL 348	Studies in British Literature (3)	
ENGL 352	Women and Minority Writers (3)	
ENGL 436	Studies in American Literature (3)	
ENGL 445	Early British Literature (3)	
ENGL 475	Twentieth-Century Writers (3)	
ENGL 485	Advanced Studies Seminar (3)	

**ENGLISH*****Writing and Speaking Emphasis*****Bachelor of Arts**

Designed for students interested in law, medicine or free-lance writing.

**Specific general education requirements**

RELB 366	Biblical Literature	3
Select one American history course		3

**MAJOR REQUIREMENTS—31 hours**

ENGLISH CORE		16
COJR 457	Magazine Writing	3
COMM 125	Media and Meaning	3
COPR 332	Rhetoric	3
Select two courses (299-400 level) from		6
ENGL 299	Seminar in Non-Western Literature (3)	
ENGL 348	Studies in British Literature (3)	
ENGL 352	Women and Minority Writers (3)	
ENGL 436	Studies in American Literature (3)	
ENGL 445	Early British Literature (3)	
ENGL 475	Twentieth-Century Writers (3)	

ENGL 485      Advanced Studies Seminar (3)

## ENGLISH

### MINOR REQUIREMENTS—19 hours

ENGL 277	Grammar and Linguistics	4
ENGL 345	Studies in Early American Literature	3
	or ENGL 436 Studies in American Literature (3)	
Select twelve hours from		12
ENGL 235	Approaches to Literature: British and American (3)	
ENGL 236	Approaches to Literature: World (3)	
ENGL 299	Seminar in Non-Western Literature (3)	
ENGL 348	Studies in British Literature (3)	
ENGL 352	Women and Minority Writers (3)	
ENGL 366	Biblical Literature (3)	
ENGL 445	Early British Literature (3)	
ENGL 475	Twentieth-Century Writers (3)	

## ENGLISH EDUCATION

### *Secondary Subject Endorsement*

#### Bachelor of Science

Students who plan to teach only writing and literature on the secondary level may pursue this subject endorsement major.

The teaching major in English is designed to prepare candidates for secondary teaching by providing

- an understanding of the structure and development of the English language sufficiently comprehensive to provide teaching competence in traditional and transformational grammars and a general knowledge of other modern grammars;
- writing skills developed through courses in basic composition, critical, creative and/or journalistic writing;
- a comprehensive knowledge of the different styles of American and British literature;
- the scholarly skills of evaluating various types of literature, including interpretive readings;
- the special knowledge and skills relevant to the teaching of English at the secondary level, developed through a course in the methods of teaching high school and junior high school English, a course in the methods of teaching reading and a course in literature of particular interest and value to adolescents;
- experience in the integration of faith and learning, particularly in the teaching of imaginative literature.

#### Auxiliary Requirement

English education majors are required to serve on *The Clock Tower* staff for a minimum of one semester.

#### Specific general education requirement

RELB 366	Biblical Literature	3
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**TEACHING MAJOR REQUIREMENTS—33 hours**

COJR 457	Magazine Writing	3
COPR 332	Rhetoric	3
EDUC 357	Literature for Children and Adolescents	2
ENGL 112	College Writing II	3
ENGL 235	Approaches to Literature: British and American	3
ENGL 236	Approaches to Literature: World	3
ENGL 277	Grammar and Linguistics	4
ENGL 378	Technical Writing and Grant Proposals	3
ENGL 379	Creative Writing	3
ENGL	One British Literature (300 level or above)	3
ENGL	One American Literature (300 level or above)	3
Recommended		
	Beginning College Modern Language (6)	

**PROFESSIONAL EDUCATION—51 hours**

EDUC 412	Methods: Language Arts Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education Endorsements).

**ENGLISH AS A SECOND LANGUAGE (ESL)****MISSION**

The ESL program welcomes students from diverse backgrounds and cultures and equips them with language skills sufficient for academic work in American colleges and universities. The program encourages in students an appreciation for spiritual, cultural and social values.

**Goals**

Students exiting the ESL program will be prepared to

- succeed in undergraduate or graduate pursuits;
- be ambassadors of a positive example of American culture and Christian values;
- serve globally through intellectual, social and spiritual means.

**Placement**

The English as a Second Language curriculum consists of three levels of instruction, from beginning to advanced. Students whose first language is not English are tested when they arrive to determine the level at which they should begin studies. Students with a current (within the last six months) minimum institutional TOEFL score of 550 with no single score lower than 52, and a passing score on the test of written English will be exempt from ESL requirements (International TOEFL scores are also accepted).

**Advancement**

The Institutional TOEFL and a test of written English are administered at the end of each semester to determine students' advancement. Advancement to the next level in a specific skill is determined by the TOEFL score of a particular skill (grammar, reading, writing, listening) and by a minimum grade of C (2.00) in the current course of the particular skill.

**Dual Enrollment**

Dual enrollment is limited to 100- and 200-level courses concurrently with ESL courses. Dual enrollment depends on students' language skills (475 TOEFL minimum). Continuing dual enrollment depends on a minimum grade of C (2.00) in each ESL course taken during the most recent semester. If students fall below this standard, they must return to full-time ESL work. Students must check with course instructors prior to enrolling in specific courses since some departments and courses require a minimum TOEFL score of 550 for admission.

**ESL Suspension/Probation Policy**

ESL students whose overall GPA in ESL classes for the current semester is lower than C (2.00) and/or whose TOEFL scores have not increased may be placed on probation or suspended from the college. Performance is evaluated at the end of each semester.

**Exiting ESL**

An ESL student in good standing (a minimum grade of C [2.00] in each ESL course taken during the current semester) may exit the ESL program and receive a favorable recommendation for admission as a regular student on meeting the English standard for admission, for example by achieving a paper TOEFL score of 550, with no single score lower than 52. Some majors set a higher TOEFL score requirement for entrance into their programs.

**Financial Information**

Financial information regarding tuition, fees, medical insurance, books and supplies as well as other information can be obtained on the Web site [www.ucollege.edu/esl](http://www.ucollege.edu/esl) or by addressing Admissions or ESL, Union College, 3800 South 48th Street, Lincoln NE 68506 or by e-mailing Huda McClelland at [humcclel@ucollege.edu](mailto:humcclel@ucollege.edu).

**ENGLISH AS A SECOND LANGUAGE****Associate of Science**

The prerequisite for these courses is a minimum TOEFL score of 475. A TOEFL score of 550 is required for graduation from this program. As in other associate degrees, a minimum grade of C (2.00) is required for all emphasis and contextual courses with an overall grade-point average (GPA) of 2.00, a minimum of 64 semester hours, and completion of the general education requirements for an Associate of Science degree (see Graduation Requirements).

**MAJOR REQUIREMENTS—22 hours**

COMM 105	Public Speaking	2
ENGL 112	College Writing II	3
ENGL 235	Approaches to Literature: British and American or ENGL 236 Approaches to Literature: World (3)	3
ENGL 277	Grammar and Linguistics	4
ENSL 132	Grammar III	4

	or ENSL 187 TOEFL Preparation (4)	
ENSL 134	Reading III	3
ENSL 136	Writing III	2
ENSL 138	Speaking/Listening III	2

**CONTEXTUAL REQUIREMENTS** 9 hours

Select three courses from		9
COMM 125	Media and Meaning (3)	
EDUC 302	ESL Teaching Methodology and Materials (3)	
ENGL ____	Literature elective (3)	
HIST 255	Issues in American History (3)	
PLSC 205	American Government (3)	
SOCI 105	Introduction to Sociology (3)	

**ENGLISH AS A SECOND LANGUAGE EDUCATION***Supplemental Secondary Endorsement (Requires another endorsement)***Bachelor of Science****MAJOR REQUIREMENTS** 16-17 hours

EDUC 225	Seminar in Education Diversity: Multicultural/HRT	1
EDUC 302	ESL Teaching Methodology and Materials	3
EDUC 457	Methods in Language Arts (K-8)	4
	or EDUC 476 Content Reading and Writing (3)	
ENGL 202	Language and Culture	1
ENGL 302	TESL Grammar and Linguistics	3
ENGL 303	Second Language Acquisition	3
ENGL 304	Second Language Assessment	2

**PROFESSIONAL EDUCATION** (Requires another teaching major.)

Must accompany another teaching major to qualify for a Nebraska teaching certificate (see Human Development Division—Secondary Education Endorsements).

**HISTORY****Goals**

Student graduating with a degree in history will

- develop a knowledge of American and European history appropriate for admission to graduate school;
- become prepared for law or professional schools;
- undertake independent study and research;
- be able to discuss schools of historical thought and understand the contributions of significant historians.

**Bachelor of Arts****MAJOR REQUIREMENTS—30 hours**

HIST 157	The West and the World	3
HIST 255	Issues in Early American History	3
HIST 485	Seminar in History	3
Select 21 hours from		21
HIST 307	History of Bible Times (3)	
HIST 315	Economic History of the U.S. (3)	
HIST 335	Civil War and Reconstruction, 1840-1877 (3)	
HIST 349	Medieval Civilization (3)	
HIST 378	Modern Europe (3)	
HIST 428	Renaissance and Reformation (3)	
HIST 445	American Frontier (3)	
HIST 455	Recent American History (3)	
HIST 457	History of Rome (3)	

**CONTEXTUAL REQUIREMENTS—18 hours**

BIOL 377	Origins	3
	or SCNC 377 Origins (3)	
GEOG 137	Introductory Geography	3
	or GEOG 227 World Regional Geography (3)	
PLSC 205	American Government	3
PLSC 327	Comparative Governments	3
Select six hours from humanities or social science 300-400 level:		6

**HISTORY****MINOR REQUIREMENTS—18 hours**

HIST 157	The West and the World	3
HIST 255	Issues in Early American History	3
HIST	Choose HIST 300 level and above	12

**HISTORY EDUCATION*****Secondary Subject Endorsement*****Bachelor of Science**

The teaching major in history is designed to prepare candidates for secondary teaching by

- providing a general knowledge of American and world history with each student having a detailed knowledge of American and/or European history;
- a basic undergraduate historical knowledge that prepares a student for graduate or law school;

- an understanding of democracy as exemplified in the political process of the government of the United States and other countries;
- the basic skills to undertake independent study and research, to be effective in the use of a library, to have the ability to analyze documents and to be able to write fluently;
- the ability to contribute to more responsible citizenship of students through a broader understanding of history;
- a physical and human geographical approach to the world;
- the special knowledge and skills pertinent to the effective teaching of history at the secondary level, supplied through a course in the methods of teaching high school and junior high school social studies, a course in secondary methods and a course in methods of historical research.

**TEACHING MAJOR REQUIREMENTS—30 hours**

HIST 157	The West and the World	3
HIST 255	Issues in Early American History	3
HIST 485	Seminar in History	3
Select 21 hours from		21
HIST 307	History of Bible Times (3)	
HIST 315	Economic History of the U.S. (3)	
HIST 335	Civil War and Reconstruction, 1840-1877 (3)	
HIST 349	Medieval Civilization (3)	
HIST 378	Modern Europe (3)	
HIST 428	Renaissance and Reformation (3)	
HIST 445	American Frontier (3)	
HIST 455	Recent American History (3)	
HIST 457	History of Rome (3)	

**CONTEXTUAL REQUIREMENTS—9 hours**

GEOG 137	Introductory Geography	3
	or GEOG 227 World Regional Geography (3)	
PLSC 205	American Government	3
PLSC 327	Comparative Government	3

**Recommended** Beginning College Modern Language (6)

**PROFESSIONAL EDUCATION—51 hours**

EDUC 415	Methods: Social Science and Religious Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education Endorsements).

**INSTITUTIONAL DEVELOPMENT**

As a part of the communication program, the institutional development major works within the mission and goals of the communication program.

**Bachelor of Science****MAJOR REQUIREMENTS—32 hours**

ACCT 211	Principles of Accounting	3
BUAD 138	Dynamics of Business	3
BUAD 376	Human Resources Management	3
COMM 365	Institutional Development	3
COMM 375	Development Practicum	3
COMM 485	Senior Fundraising Project	2
COPR 241	Public Relations Principles	3
COPR 332	Rhetoric	3
MRKT 327	Marketing	3
PSYC 105	Introduction to Psychology	3
SOCI 105	Introduction to Sociology	3

**CONTEXTUAL REQUIREMENTS—27 hours**

Select 9 hours from 9

ACCT 212	Principles of Accounting (3)
ACCT 315	Federal Income Tax—Individual (3)
CPTR 220	Microcomputer Applications (3)
ECON 235	Principles of Microeconomics (3)
ECON 236	Principles of Macroeconomics (3)
FNCE 325	Business Finance (3)
GRPH 150	Introduction to Graphic Arts (3)
PSYC 335	Psychological Statistics (3)

Select 9 hours from 9

BUAD 425	Business Communications (3)
COMM 125	Media and Meaning (3)
COMM 425	Intercultural Communication (3)
COMM 465	Interpersonal Communication (3)
COPR 316	Advertising Practices (3)
COPR 377	Crisis Public Relations (3)
ENGL 378	Technical Writing and Grant Proposals (3)
GRPH 254	Publication Design (3)



GRPH 358	Typography (3)	
GRPH 460	Prepress Production (2)	
Select 9 additional hours from either group above or a combination		9

## INTERNATIONAL STUDIES

### Goals

Students with a major in international studies will be prepared for

- careers in global service for church related groups, international business corporations, government service, and/or other enterprises requiring a background in global issues;
- graduate study in related fields.

The student will select one area from disciplines such as agriculture, economics, political relations, marketing, management, or modern language. A combination of disciplines might be arranged. Courses selected should reflect an international emphasis. Student and advisor will submit a list of courses from offerings at Union College, other area colleges, or Adventist Colleges Abroad. The program must be approved by the International Studies Committee, consisting of the program coordinator and chairpersons of the Division of Business and Computer Science and the Division of Humanities. At least 15 hours of the concentration must be at or above the 300 level.

## INTERNATIONAL STUDIES

### Bachelor of Arts

#### Specific general education requirement:

RELT 147	World Religions	3
RELT 305	Christian Ethics	3

### MAJOR REQUIREMENTS—48 hours

_____ 201, 202	Intermediate Foreign Language	3, 3
BUAD 445	Business Law	4
ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3
GEOG 227	World Regional Geography	3
HIST 378	Modern Europe	3
PLSC 327	Comparative Governments	3
SOCI 221	Issues of Diversity	3
Select an area of concentration (see above).		20

### CONTEXTUAL REQUIREMENTS—12 hours

Select 12 hours from		12
ACCT 211	Principles of Accounting (3)	

1ANTH	Introductory Anthropology (3)
CPTR 220	Microcomputer Applications (3)
1ECON	International Economics Course (3)
GEOG 137	Introductory Geography (3)
HIST 315	U.S. Economic History (3)
1MRKT	International Marketing (3)

**INTERNATIONAL STUDIES****Bachelor of Science****Specific general education requirements**

RELT 147	World Religions	3
RELT 305	Christian Ethics	3

**MAJOR REQUIREMENTS—54 hours**

_____ 101, 102	Beginning Foreign Language	3, 3
BUAD 445	Business Law	4
COPR 241	Public Relations Principles	3
ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3
GEOG 227	World Regional Geography	3
HIST 378	Modern Europe	3
MRKT 327	Marketing	3
PLSC 327	Comparative Governments	3
SOCI 221	Issues of Diversity	3
Select an area of concentration (see BA):		20

**CONTEXTUAL REQUIREMENTS—12 hours**

Select 12 hours from		12
ACCT 211	Principles of Accounting (3)	
*ANTH	Introductory Anthropology (3)	
CPTR 220	Microcomputer Applications (3)	
*ECON	International Economics Course (3)	
GEOG 137	Introductory Geography (3)	
HIST 315	U.S. Economic History (3)	
*MRKT	International Marketing (3)	

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\* Available through Nebraska Wesleyan University or the University of Nebraska-Lincoln.

**LANGUAGE ARTS EDUCATION*****Secondary Field Endorsement*****Bachelor of Science**

This endorsement qualifies an individual to teach and to direct curricular and extracurricular activities in composition/language, literature, speech, drama, public media, journalism and reading in grades 7-12.

The teaching major in Language Arts Education is designed to prepare candidates for secondary teaching by providing them with

- a knowledge of the evolution of the English language;
- teaching competence in traditional and transformational grammars and a general knowledge of other modern grammars;
- a knowledge of classical and modern rhetoric;
- skill in writing developed through courses in basic composition, critical, creative and journalistic writing;
- an awareness of the impact of the mass media;
- skill in the basics of directing and presenting a stage production;
- the ability to produce school publications;
- a broad and sound knowledge of literature through selected courses, a required core of "period" courses in British and American literature and a required "major figures" course;
- the ability to read, analyze and discuss literature with critical intelligence;
- a knowledge of the historical context of British and American letters;
- the ability to carry on independent research in language and literature;
- the special knowledge and skills pertinent to the effective teaching of English at the secondary level, supplied through a course in the methods of teaching high school and junior high school English, a course in the oral interpretation of literature, a course in the methods of teaching reading and a course in literature of particular interest and value to adolescents;
- experience in the integration of faith and learning, particularly in the teaching of imaginative literature.

**Specific general education requirement**

RELB 366 Biblical Literature	3
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**TEACHING MAJOR REQUIREMENTS—68-69 hours**

CODR 229	Play Production I	3
COJR 457	Magazine Writing	3
COJR 221	Reporting	3
COJR 245	Editing	3
COMM 105	Public Speaking	2
COMM 125	Media and Meaning	3
COMM 355	Advanced Speech and Oral Interpretation	3
COMM 465	Interpersonal Communication	3
COPR 332	Rhetoric	3
EDUC 357	Literature for Children and Adolescents	2
EDUC 476	Content Reading and Writing	3

ENGL 112	College Writing II	3
ENGL 235	Approaches to Literature: British and American	3
ENGL 236	Approaches to Literature: World	3
ENGL 277	Grammar and Linguistics	4
ENGL 299	Seminar in Non-Western Literature	3
ENGL 352	Women and Minority Writers	3
ENGL 378	Career Writing	3
ENGL 379	Creative Writing	3
ENGL	British literature 300 level or above	3
ENGL	American literature 300 level or above	3
Select two courses from		6-7
CODR 329	Play Production II (3)	
COJR 151	Photography (4)	
COJR 458	In-Depth Reporting (3)	
ENGL 345	Studies in Early American Literature (3)	
ENGL 348	Studies in British Literature (3)	
ENGL 436	Studies in American Literature (3)	
ENGL 445	Early British Literature (3)	
ENGL 475	Twentieth-Century Writers (3)	
ENGL 485	Advanced Studies Seminar (3)	
GRPH 150	Introduction to Graphic Arts (3)	
GRPH 358	Typography (3)	

**Auxiliary Requirement**

Language arts majors are required to serve on the *Clocktower* staff for a minimum of one semester and direct, produce and/or coordinate curricular and extracurricular school speech and theater activities.

**PROFESSIONAL EDUCATION—51 hours**

EDUC 412	Methods: Language Arts Education	3
	Additional Professional Education	48

(See Human Development Division □ Secondary Education Endorsements)

**MODERN FOREIGN LANGUAGE**

Majors in French and Spanish can be acquired through Union College's participation in Adventist Colleges Abroad. A modern foreign language major is to be taken as a second major. This major is designed for students who want proficient speaking skills along with an appreciation of the culture, history and literature associated with the language. Students should participate in a minimum of two semesters on an ACA campus (see Academic Resources section).

**MODERN FOREIGN LANGUAGE****Bachelor of Arts****MAJOR REQUIREMENTS—30 hours**

Available as a second major only. Thirty semester hours of courses with LANG\* prefix beyond 102, twelve hours of which must be at or above the 300-level, including

LANG*	History and/or civilization	2-3
LANG	Literature (300 level or above)	3
LANG	Language or grammar (300 level or above)	3
LANG	Modern language electives	21-22
	300-400 level approved courses if not a second major*	15

\*LANG is replaced by the language studied.

**MODERN FOREIGN LANGUAGE****Minor**

Minors in French, German, Italian and Spanish can be acquired through participation in the Adventist Colleges Abroad program by living and studying on an ACA campus (see Academic Resources section).

**MINOR REQUIREMENTS—20 hours**

Twenty semester hours of courses with LANG\* prefix beyond 102. To include, at or above the 300-level, two of the following:

LANG*	History and/or civilization (3)	
LANG	Language or grammar (3)	
LANG	Literature (3)	
LANG	Modern language electives	14

\*LANG is replaced by the language studied.

**PRE-LAW****Minor**

The pre-law minor allow the student to pursue an interdisciplinary program of study, taking courses in philosophy, political science, writing, history and business. The pre-law minor requires a minimum of 18 semester hours of which 12 must be 300-400 level distributed as follows:

**MINOR REQUIREMENTS—18 Hours**

(12 hours must be 300-400 level)

<i>Writing and Communication</i>		3-9
COPR 332	Rhetoric	3
Select 0-6 hours from		
COMM 355	Advanced Speech and Interpretation (3)	
COMM 465	Interpersonal Communication (3)	
ENGL 378	Career Writing (3)	
<i>History and Political Science</i>		3-9

HIST 315	Economic History of the US	3
	or PLSC 205 American Government (3)	
	or PLSC 327 Comparative Governments (3)	

Select 0-6 hours from HIST and PLSC not chosen above

*Sociology and Philosophy* 0-6

PHIL 335	Introduction to Philosophy (2)
SOCI 210	Group Dynamics (3)
SOCI 321	Issues of Diversity (3)

*Business, Economics and Marketing* 4-10

BUAD 445	Business Law	4
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Select 0-6 hours from

BUAD 430	Conflict Management (3)
BUAD 425	Business Communications (3)
ECON 236	Principles of Macroeconomics (3)
MRKT 333	Professional Selling (3)

## **SOCIAL SCIENCE**

### **Bachelor of Arts**

Students graduating with a degree in social science will have

- a general knowledge of world and American history;
  - adequate preparation for graduate or law school;
  - an understanding of political theory as exemplified in the political process of the governments of the United States and of other nations;
  - basic skills needed to undertake independent study and research and the ability to clearly write the results of that research;
  - an awareness of a Christian perspective regarding the problems of society and its environment.
- Assessment will be accomplished through
- the history capstone course (HIST 485) in which students will research and write a historiographical paper;
  - focus groups of humanities majors, including social science majors;
  - questionnaires given to alumni who earned majors from the humanities division, including social science majors.

### **MAJOR REQUIREMENTS—39 hours**

ECON 235	Principles of Microeconomics	3
GEOG 137	Introductory Geography	3
GEOG 227	World Regional Geography	3
HIST 157	The West and the World	3
HIST 255	Issues in Early American History	3
HIST 455	Recent American History	3
HIST 485	Seminar in History	3

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HIST	History electives	6
PLSC 205	American Government	3
PLSC 327	Comparative Governments	3
SOCI 105	Introduction to Sociology	3
Select electives from economics or sociology (300 level or above)		3

**SOCIAL SCIENCE****MINOR REQUIREMENTS—18 hours**

HIST 157	The West and the World	3
HIST 255	Issues in Early American History	3
HIST	History electives (300 level or above)	3
Select three hours each from three of the following fields: economics, geography, political science, and sociology.		9

**SOCIAL SCIENCE EDUCATION*****Secondary Field Endorsement*****Bachelor of Science**

The teaching major in social science is designed to prepare candidates for secondary teaching by providing them with

- a general knowledge of American and world history;
- a basic knowledge that would enable students to go into advanced training such as law, teaching or other professional fields;
- an understanding of political theory as exemplified in the political process of the governments of the United States and other nations;
- a knowledge of the social problems of the modern community through courses in sociology, geography, economics and psychology;
- the basic skills to undertake independent study and research, which include a technical vocabulary, effective use of a library, the ability to analyze documents and to write fluently;
- an awareness of the Christian perspective toward the problems of society and its environment;
- the special knowledge and skills pertinent to the effective teaching of social science at the secondary level.

The program for a comprehensive studies endorsement consists of seven components: anthropology, economics, geography, history, political science, psychology, sociology.

The hours shall be distributed as follows:

A minimum of 24 hours in history;

A minimum of 12 hours in one other area;

A minimum of 24 hours distributed over the remaining areas with at least three hours in each.

**TEACHING MAJOR REQUIREMENTS—60 hours*****Anthropology* - 3 hours**

*ANTH	Introductory Anthropology	3
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***Economics* - 6 hours**


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\*Available through Nebraska Wesleyan University or the University of Nebraska -Lincoln.

ECON 235	Principles of Microeconomics	3
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ECON 236	Principles of Macroeconomics	3
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*Geography* - 3 hours

GEOG 137	Introductory Geography	3
	or GEOG 227 World Regional Geography (3)	

*History* - 24 hours

HIST 157	The West and the World	3
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HIST 255	Issues in Early American History	3
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HIST 485	Seminar in History	3
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HIST	World-European history electives	6-9
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HIST	American history electives	6-9
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*Political Science* - 6 hours

PLSC 205	American Government	3
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PLSC 327	Comparative Governments	3
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*Psychology* - 3 hours

PSYC 215	Developmental Psychology	3
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*Sociology* - 3 hours

SOCI 105	Introduction to Sociology	3
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*Approved Electives* - 12 hours

Approved electives	12
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Select with the advisor's approval sufficient ANTH, ECON, GEOG, PLSC, PSYC, or SOCI electives to reach a total of 12 hours in one area, and a grand total of 60 hours for the program.

**PROFESSIONAL EDUCATION—51 hours**

EDUC 415	Methods: Social Science Education	3
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Additional Professional Education	48
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(See Human Development Division □ Secondary Education Endorsements)



# DIVISION OF RELIGION

## MISSION

The Division of Religion empowers students to serve as Christian disciples, leaders and professionals sharing the Gospel in preparation for Jesus Christ's return.

## GOALS

The general goals of the Division of Religion are to enable students to

- express an informed commitment to Jesus Christ as Savior and Lord;
- cultivate and model Christian discipleship;
- demonstrate knowledge of the teachings of the Bible common to the Christian faith, and of distinctive Seventh-day Adventist beliefs;
- interpret and apply biblical principles to their lives.

## DIVISION OFFICE

*Location* Dick Building, Room 412  
*Telephone* 402.486.2526  
*E-Mail* rofetric@ucollege.edu  
*Web site* www.ucollege.edu/religion

## FACULTY

Robert Fetric, M.Div., Chair, *Associate Professor of Religion*

Edward Allen, D.Min., *Associate Professor of Religion*

Sylvester Case, M.A., M.Div., *Associate Professor of Religion*

John Kurlinski, D.Min., *Associate Professor of Religion*

### Adjunct Faculty

Richard Carlson, Ph.D., Union College Vice-President for Spiritual Life

Shane Daughenbaugh, M.Div., Associate Pastor for Youth Ministries

Charles W. Drake III, Ph.D., Mid-America Union Conference Vice-President for Administration

Stan Hardt, M.A., Union College Director of Spiritual Discovery

Van Hurst, M.Div., Mid-America Union Conference Director of Youth and Church Ministries

Dan Wysong, M.Div., Associate Pastor for Youth Ministries

## DEGREES AND PROGRAMS

### Bachelor of Arts

Theology

### Bachelor of Science

Religion

*Emphases:* *Business*  
*Missions Service*  
*Pastoral Care*

Religious Education, Secondary Subject Endorsement

**Minors**

Biblical Languages  
Missions  
Religion  
Youth Ministry

**THEOLOGY****Bachelor of Arts****Goal**

The goal of the theology major is to prepare students for gospel ministry in the Seventh-day Adventist church.

In addition to the general goals of the Division of Religion students graduating with this major will

- cultivate proficiency in biblical languages;
- demonstrate competency in the knowledge and interpretation of the Bible;
- apply skills of pastoral ministry in preaching, personal and public evangelism, and interpersonal dynamics;
- demonstrate substantial knowledge of the history, mission and theological beliefs of the Seventh-day Adventist church;
- demonstrate knowledge of Christian theology and church history;
- be prepared to pursue graduate studies.

**CANDIDACY FOR MINISTRY**

A call to gospel ministry is a divine calling from God, affirmed by the church, and demonstrated in the practical skills of ministry. This calling develops a high level of spiritual commitment and an exemplary lifestyle. The Bachelor of Arts degree with a theology major helps to prepare students to fulfill their call to gospel ministry. Because ministry involves more than the completion of a course of study, the Division of Religion has established a program of candidacy for ministry. Participation in the candidacy program includes:

- Freshman year – In Introduction to Ministry class students begin the religion division portfolio.
- Sophomore year – In the second semester of the sophomore year students formally apply for candidacy to ministry. In evaluating applicants, faculty will consider spiritual commitment, academic progress, emotional stability, and social and professional skills in order to determine the student's overall potential for success in ministry. Transfer students with sophomore standing or above must apply to enter the candidacy program during the second semester of their college residency.
- Junior year – In Biblical Preaching and Church Leadership classes students are assigned to serve in local congregations for two years.
- Senior year – In Personal Witnessing and Public Evangelism classes students will participate in a capstone experience.
- Completion of the Bachelor of Arts degree with a major in theology with a cumulative GPA of 2.5, the required GPA for recommendation to seminary.

If after being admitted into the candidacy program a student fails to meet the criteria of a candidate for ministry, the candidate forfeits the standing and privilege of being recommended for pastoral ministry.

**Specific general education requirements**

In the B.A. degree with a major in theology, the general education requirement RELT 141 Christian Beliefs is met in RELT 337 Christian Theology I, RELT 338 Christian Theology II.

The language requirement is met by the required biblical languages minor.

### MAJOR REQUIREMENTS—57 HOURS

RELB 175	How to Study the Bible	3
RELB 226	Old Testament Survey or RELB 325 Prophets (3)	3
RELB 255	Jesus and the Gospels	3
RELB 335	New Testament Epistles	3
RELB 348	Daniel	3
RELB 349	Revelation	3
RELH 310	History of the SDA Church	3
RELH 410	History of the Christian Church	4
RELP 125	Introduction to Ministry	2
RELP 321, 322	Biblical Preaching	3, 3
RELP 361, 362	Church Leadership	3, 3
RELP 465	Personal Witnessing	3
RELP 466	Public Evangelism	3
RELT 305	Christian Ethics	3
RELT 337, 338	Christian Theology I and II	3, 3
RELT 455	Prophetic Guidance in the Advent Movement	3

### CONTEXTUAL REQUIREMENTS—26 HOURS

	Biblical Languages Minor (see below)	20
PSYC 105	Introduction to Psychology	3
PSYC 311	Christian Counseling or COMM 465 Interpersonal Communications (3)	3

### RECOMMENDED

EDUC 218	Philosophy of Education (3)
ENGL 366	Biblical Literature (3)
FNCE 215	Personal Finance (3)
HIST 307	History of Bible Times (3)
RELB 246	Sanctuary and Salvation (3)
SOCI 315	Marriage and Family (3)

**RELIGION****Bachelor of Science****Goal**

The goal of the religion major is to prepare students for graduate studies leading to Christian service in a professional setting.

In addition to the general goals of the religion division students graduating with this major will

- demonstrate substantial knowledge of the Old and New Testaments;
- demonstrate substantial knowledge of the history, mission and doctrinal beliefs of the Seventh-day Adventist church;
- be prepared to pursue graduate studies.

<b>RELIGION CORE □ 45 hours</b>		
RELB 175	How to Study the Bible	3
RELB 226	Old Testament Survey	3
	or RELB 325 Prophets ( 3)	
RELB 255	Jesus and the Gospels	3
RELB 335	New Testament Epistles	3
RELB 348	Daniel	3
RELB 349	Revelation	3
RELH 310	History of the SDA Church	3
RELP 465	Personal Witnessing	3
RELT 141	Christian Beliefs	3
	or RELT 205 Developing the Christian Mind (3)	
RELT 147	World Religions	3
	or RELB 246 Sanctuary and Salvation (3)	
RELT 149	Dynamics of Christian Living	3
RELT 305	Christian Ethics	3
RELT 455	Prophetic Guidance	3
HIST 307	History of Bible Times	3
LEAD 225	Creative Leadership	3
	or RELP 361 Church Leadership (3)	
Requires a Business, Mission Service, or Pastoral Care emphasis, or a minor (minimum of 18 hours) from another discipline		

**RELIGION*****Business Emphasis*****Bachelor of Science**

This preprofessional degree prepares students for graduate work in an M.B.A. program with an opportunity for a career in Christian service as a school or church business administrator.

**MAJOR REQUIREMENTS** 66 hours

RELIGION CORE		45
ACCT 211, 212	Principles of Accounting	3, 3
BUAD 376	Human Resource Management or MRKT 327 Marketing (3)	3
BUAD 430	Conflict Management or BUAD 445 Business Law (4)	3
ECON 235	Microeconomics	3
ECON 236	Macroeconomics	3
MATH 221	Elementary Statistics and Probability or MATH 165 Calculus for Managers (3)	3

**Specific general education requirement**

CPTR 220	Microcomputer Applications	3
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**RELIGION*****Mission Service Emphasis*****Bachelor of Science**

This degree provides a strong biblical foundation for students to prepare for Christian service in mission work with frontier missions and international development and relief ministries.

**MAJOR REQUIREMENTS** 64 hours

RELIGION CORE (RELB 246 Sanctuary and Salvation is required for this emphasis)		45
COMM 425	Multicultural Communication	3
COMM 465	Interpersonal Dynamics	3
FNCE 215	Personal Finance	3
RELP 375	Mission Internship*	2
RELT 147	World Religions	3
SOCI 315	Marriage and Family	3
UCSM 205	Introduction to Overseas Service or INRR 485 Seminar in International Service (3)	2
UCSM 490, 491	Student Mission Service I and II (6 and 3 non-credit)*	0
UCSM 495	Student Mission Service III (3 elective hours only)*	0

**CONTEXTUAL REQUIREMENTS** 6 hours

_____ 101, 102 Beginning Foreign Language*	6
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\*RELP 375 Mission Internship must be taken in conjunction with UCSM 490 and 491 (credits do not apply toward graduation) and UCSM 495. Students who have completed two years of the same language in high school have also completed this requirement.

**RELIGION*****Pastoral Care Emphasis*****Bachelor of Science**

This preprofessional degree enables students to pursue graduate studies and prepare for opportunities in Christian counseling careers such as an academy dean, guidance counselor, psychologist or marriage and family counselor.

**Specific general education requirement**

PSYC 105	Introduction to Psychology	3
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**MAJOR REQUIREMENTS—66 hours**

RELIGION CORE		45
COMM 465	Interpersonal Communication	3
PSYC 215	Developmental Psychology	3
PSYC 225	Psychology of Religion	3
PSYC 311	Christian Counseling	3
PSYC 415	Abnormal Psychology	3
SOCI 105	Introduction to Sociology	3
SOCI 315	Marriage and Family	3

**RELIGIOUS EDUCATION*****Secondary Subject Endorsement*****Bachelor of Science****Goal**

The goal of the major in religious education is to prepare students for state and church certification for teaching biblical studies classes on the secondary level.

In addition to the general goals of the Division of Religion students graduating with this major will

- demonstrate substantial knowledge of the Old and New Testaments;
- demonstrate substantial knowledge of the history, mission and doctrinal beliefs of the Seventh-day Adventist church;
- demonstrate knowledge of Christian church history;
- apply skills in communicating biblical faith and values to adolescents through preaching and personal evangelism;
- be prepared to pursue graduate studies.

**TEACHING MAJOR REQUIREMENTS—37 HOURS**

RELB 175	How to Study the Bible	3
RELB 226	Old Testament Survey	3
	or RELB 325 Prophets (3)	
RELB 255	Jesus and the Gospels	3
RELB 335	New Testament Epistles	3

RELB 348	Daniel	3
RELB 349	Revelation	3
RELH 310	History of the Seventh-day Adventist Church	3
RELH 410	History of the Christian Church	4
RELP 235	Introduction to Youth Leadership or RELP 465 Personal Witnessing (3)	3
RELP 321	Biblical Preaching	3
RELT 141	Christian Beliefs	3
RELT 455	Prophetic Guidance in the Advent Movement	3

**PROFESSIONAL EDUCATION—51 HOURS**

EDUC 415	Methods: Social Science and Religious Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education).

**BIBLICAL LANGUAGES****MINOR REQUIREMENTS—20 HOURS**

RELL 171, 172	New Testament Greek I and II	4, 4
RELL 273, 274	New Testament Greek III and IV	3, 3
RELL 385, 386	Biblical Hebrew I and II	3, 3

**MISSIONS****MINOR REQUIREMENTS—19 HOURS**

COMM 425	Multicultural Communication	3
COMM 465	Interpersonal Dynamics	3
FNCE 215	Personal Finance	3
RELP 375	Missions Internship*	2
RELT 147	World Religions	3
SOCI 315	Marriage and Family	3
UCSM 205	Introduction to Overseas Service	2
UCSM 490, 491	Student Mission Service I and II (6 and 3 non-credit)*	0
UCSM 495	Student Mission Service III (3 elective hours only)*	0

\*RELP 375 Mission Internship must be taken in conjunction with UCSM 490 and 491 (credits do not apply toward graduation) and UCSM 495.

**RELIGION****MINOR REQUIREMENTS—18 HOURS**

RELT 141	Christian Beliefs	3
	or RELT 205 Developing the Christian Mind (3)	
RELT 455	Prophetic Guidance in the Advent Movement	3
Select two RELB courses		6
Select two courses from RELB, RELH or RELT		6

**YOUTH MINISTRY****MINOR REQUIREMENTS—18 hours**

Youth ministry is an enhancing minor to be combined with a major such as theology or secondary education, for those who would like additional training in counseling and specific youth ministry techniques.

PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
PSYC 311	Christian Counseling	3
RELP 235	Introduction to Youth Leadership	3
RELP 335	Youth Leadership in the SDA Church	3
RELP 336	Youth Leadership Practicum*	3

\*Students who take the Youth Ministry minor must establish a portfolio with Campus Ministries in their first year at Union College.



# DIVISION OF SCIENCE AND MATHEMATICS

The Division of Science and Mathematics has traditionally attracted and produced outstanding students. The division concentrates on helping students to know God as the Creator while providing plenty of practical experience. Because of Union's small size, students receive hands-on experience with scientific equipment much more readily than they would in a larger college or university.

## MISSION

Founded upon a firm belief in the Creator and guided by a Christian worldview, the Division of Science and Mathematics prepares students for service and leadership.

Baccalaureate degree candidates in the Division of Science and Mathematics must complete departmental assessment examinations. These senior exit testing experiences consist of nationally standardized major-field exams. Results from assessment activities are reviewed by the department as part of the college's commitment to the continuous improvement of student learning.

## DIVISION OFFICE

*Location* Jorgensen Hall, Room 204  
*Telephone* 402.486.2515 or 402.486.2548  
*E-Mail* doabbey@ucollege.edu  
*Web site* www.ucollege.edu/scimath

## FACULTY

Don H. Abbey, Ph.D., Chair, *Professor of Biology*  
 Veneracion Cabana, Ph.D., *Professor of Biology*  
 Thomas Dunion, D.A., *Professor of Mathematics*  
 Charles E. Freidline, Ph.D., *Professor of Chemistry*  
 Nicholas Madhiri, Ph.D., *Assistant Professor of Chemistry*  
 Salvador Moguel, Ph.D., *Associate Professor of Biology*  
 Larry Ray, Ph.D., *Professor of Mathematics*  
 Keith A. Riese, M.S.E.E., *Professor of Engineering*  
 Benjamin J. Thornton, M.S., *Associate Professor of Biology*  
 Richard L. Webb, Ph.D., *Professor of Physics*  
 Carrie Wolfe, Ph.D., *Professor of Chemistry*

### Adjunct Faculty

Marcia A. Kilsby, M.S., M.T.(ASCP) S.B.B., C.L.S. (NCA),  
 Program Director, Clinical Laboratory Sciences

## DEGREES AND PROGRAMS

### Bachelor of Arts

Biology  
 Chemistry  
 Mathematics  
 Physics

**Bachelor of Science**

Biology  
Biology Education, Secondary Subject Endorsement  
Chemistry  
    *Emphases:     Biochemistry*  
                    *General Chemistry*  
Chemistry Education, Secondary Subject Endorsement  
Clinical Laboratory Science (Medical Technology)  
Mathematics  
Mathematics Education, Secondary Subject Endorsement  
Natural Science Education, Secondary Subject Endorsement  
Physics  
Physics Education, Secondary Subject Endorsement

**Associate of Science**

Engineering  
Pre-Allied Health

**Minors**

Biology  
Chemistry  
Mathematics  
Physics

**AFFILIATIONS**

In order to strengthen the programs offered and increase the options available to our students, the Division has established affiliations and coordinated programs with several institutions. These include Andrews University, Nebraska Wesleyan University, Loma Linda University and Walla Walla College. These arrangements are described along with the applicable major.

**BIOLOGY****Goals**

Students graduating with a bachelor's degree in biology will be able to

- independently access and organize relevant data in the biological sciences;
- independently synthesize and communicate relevant data in the biological sciences;
- demonstrate familiarity with basic techniques of investigation in varied fields of biological research;
- apply knowledge acquired from varied aspects of biological sciences to critical thinking in research and everyday life;
- apply knowledge acquired from varied aspects of biological sciences to ethical decision making in stewardship and everyday life;
- demonstrate knowledge of past contributions and awareness of current progress in the biological sciences;
- engage in senior-level research
- pursue graduate studies.

**BIOLOGY****Bachelor of Arts****MAJOR REQUIREMENTS—39-41 hours**

BIOL 151, 152	General Biology	4, 4
BIOL 296	Research Methods I	1

	or MATH 221 Elem Statistics & Probability (3)	
	or MATH 331 Statistics & Probability (3)	
BIOL 310	Seminar in Biology	1
BIOL 321	Genetics	4
BIOL 326	Developmental Biology	4
BIOL 365	Plant Biology	3
	or BIOL 375 Ecology (4)	
BIOL 386	Research Methods II	1
BIOL 406	Cell and Molecular Biology	4
BIOL 416	Mammalian Physiology	4
BIOL 477	Issues in Origins and Speciation	3
BIOL	Biology Electives	6-8

**CONTEXTUAL REQUIREMENTS—32-33 hours**

CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CPTR 220	Microcomputer Applications	3
	or proficiency or higher level course	
MATH 121	Precalculus	5
	or MATH 184 Calculus I (4)	
PHYS 151, 152	General Physics	4, 4
	or PHYS 251, 252 College Physics (4.5, 4.5)	

**BIOLOGY**
**Bachelor of Science**
**MAJOR REQUIREMENTS—45-47 hours**

BIOL 151, 152	General Biology	4, 4
BIOL 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	
	or MATH 331 Statistics & Probability (3)	
BIOL 310	Seminar in Biology	1
BIOL 321	Genetics	4
BIOL 326	Developmental Biology	4
BIOL 365	Plant Biology	3
BIOL 375	Ecology	4
BIOL 386	Research Methods II	1

BIOL 396	Research Methods III	1
BIOL 406	Cell and Molecular Biology	4
BIOL 416	Mammalian Physiology	4
BIOL 477	Issues in Origins and Speciation	3
BIOL 496	Research Methods IV	1
BIOL	Biology Electives	6-8

**CONTEXTUAL REQUIREMENTS–31-32 hours**

CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CPTR 220	Microcomputer Applications	3
	or proficiency or higher level course	
MATH 184	Calculus I	4
PHYS 151, 152	General Physics	4, 4
	or PHYS 251, 252 College Physics (4.5, 4.5)	

The affiliation with Walla Walla College involves the summer program at the marine station. Courses offered there are primarily oriented toward the biology major, but included are courses which would strengthen any major.

Students attending the summer session at the station may enroll in either BIOL 101, 102, or 103, or up to two upper division courses, one of which may be a marine-oriented course (designated by “marine course” in the course descriptions). All students, including Guaranteed Education and Baccalaureate Bonus recipients, will be charged tuition at the fall semester rate.

**BIOLOGY****MINOR REQUIREMENTS–24 hours**

BIOL 151, 152	General Biology	4, 4
BIOL 321	Genetics	4
BIOL 375	Ecology	4
BIOL	Biology electives	8

**CONTEXTUAL REQUIREMENTS–8 hours**

CHEM 151, 152	General Chemistry	4, 4
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**BIOLOGY EDUCATION*****Secondary Subject Endorsement*****Bachelor of Science**

The teaching major in biology is designed to prepare candidates for secondary teaching by providing

- the ability to recognize the fixed, the changing and the unrelated factors to experimental situations;

- the ability to recognize cause-and-effect relationships;
- the ability to test and evaluate evidence, to recognize and make reasonable assumptions, to distinguish between fact and theory, to apply generalizations and principles and to make valid conclusions;
- an ability to accept, clarify and use ideas, to state objectively a point of view, to reflect the ideas of others, to summarize ideas presented in group discussion and to use scientific vocabulary;
- the ability to use a knowledge of factual and theoretical results with precision and accuracy;
- the ability to interpret data and to use the nature of proof;
- skill in discerning and applying mathematical relationships;
- an ability to use scientific instruments, to dissect biological specimens and to treat live animals humanely.

**TEACHING MAJOR REQUIREMENTS—31 hours**

BIOL 151, 152	General Biology	4, 4
BIOL 205	Microbiology	
	or BIOL 345 Biology of Bacteria (4)	4
BIOL 321	Genetics	4
BIOL 375	Ecology	4
BIOL 406	Cell and Molecular Biology	4
BIOL 416	Mammalian Physiology	4
	or BIOL 111, 112 Human Anatomy & Physiology (4, 4)	
BIOL 477	Issues in Origins and Speciation	3

**CONTEXTUAL REQUIREMENTS—19 hours**

ASTR 111	Astronomy	4
CHEM 151, 152	General Chemistry	4, 4
MATH 111	College Algebra	3
PHYS 111	Principles of Physics	4
	or PHYS 151 General Physics (4)	

**PROFESSIONAL EDUCATION—51 hours**

EDUC 418	Methods: Science Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education Endorsements).

**CHEMISTRY****Goals**

- Students graduating with a bachelor's degree in chemistry will be able to
- independently access and organize relevant data in the chemical sciences;
  - independently synthesize and communicate relevant data in the chemical sciences;

- demonstrate familiarity with basic techniques of investigation in varied fields of chemical research;
- apply knowledge acquired from varied aspects of chemical sciences to critical thinking in research and everyday life;
- apply knowledge acquired from varied aspects of chemical sciences to ethical decision making, in stewardship and everyday life;
- demonstrate knowledge of past contributions and awareness of current progress in the chemical sciences;
- engage in senior-level research;
- pursue graduate studies.

**CHEMISTRY****Bachelor of Arts****MAJOR REQUIREMENTS—36-38 hours**

CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	
	or MATH 331 Statistics & Probability (3)	
CHEM 311	Analytical Chemistry	3
CHEM 312	Instrumental Analysis	3
CHEM 386	Research Methods II	1
CHEM 411	Physical Chemistry I (Quantum Mechanics-Kinetics)	4
CHEM 412	Physical Chemistry II (Thermodynamics)	4
CHEM	Chemistry Electives	4-6

**CONTEXTUAL REQUIREMENTS—27-28 hours**

CPTR	An approved computer language	3-4
MATH 184, 285	Calculus I, II	4, 4
PHYS 251, 252	College Physics	4.5, 4.5
Divisional or approved electives (at least 3 hours must be non-chemistry)		7
Recommended	German as foreign language general education requirement	

**CHEMISTRY*****General Chemistry Emphasis*****Bachelor of Science****MAJOR REQUIREMENTS—42 hours**

CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	

	or MATH 331 Statistics & Probability (3)	
CHEM 311	Analytical Chemistry	3
CHEM 312	Instrumental Analysis	3
CHEM 386	Research Methods II	1
CHEM 396	Research Methods III	1
CHEM 411	Physical Chemistry I (Quantum Mechanics-Kinetics)	4
CHEM 412	Physical Chemistry II (Thermodynamics)	4
CHEM 496	Research Methods IV	1
CHEM	Chemistry Electives	8

**CONTEXTUAL REQUIREMENTS—26-28 hours**

CPTR	An approved computer language	3-4
MATH 184, 285	Calculus I and II	4, 4
MATH 286	Calculus III	4
	or MATH 352 Linear Algebra (3)	
	or MATH 385 Differential Equations (3)	
	or MATH 486 Numerical Analysis (3)	
PHYS 251, 252	College Physics	4.5, 4.5
	Divisional or approved (non-chemistry) electives	3

**CHEMISTRY**
*Biochemistry Emphasis*
**Bachelor of Science**
**MAJOR REQUIREMENTS—37-39 hours**

CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	
	or MATH 331 Statistics & Probability (3)	
CHEM 311	Analytical Chemistry	3
CHEM 312	Instrumental Analysis	3
CHEM 386	Research Methods II	1
CHEM 412	Physical Chemistry II (Thermodynamics)	4
CHEM 445, 446	Biochemistry I, II	4, 3
CHEM	Chemistry elective	2-4

**CONTEXTUAL REQUIREMENTS—39-41 hours**

BIOL 151, 152	General Biology	4, 4
BIOL 321	Genetics	4
BIOL 406	Cell and Molecular Biology	4
CPTR	An approved computer language	3-4
MATH 184, 285	Calculus I, II	4, 4
PHYS 251, 252	College Physics	4.5, 4.5
Select one of the following courses:		3-4
BIOL 306	Histology (3)	
BIOL 314	Immunology (3)	
BIOL 326	Developmental Biology (4)	
BIOL 411	Human Anatomy (4)	
BIOL 416	Mammalian Physiology (4)	

**CHEMISTRY****MINOR REQUIREMENTS—19-20 hours**

CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 311	Analytical Chemistry	3
	or CHEM 412 Physical Chemistry II (4)	

**CHEMISTRY EDUCATION***Secondary Subject Endorsement***Bachelor of Science**

The teaching major in chemistry is designed to prepare the candidates for secondary teaching through a program which will

- allow them to develop a knowledge of the major concepts of chemistry, its historical development and its significance to the individual and to society;
- give them a concept of the logic and processes of scientific inquiry;
- provide a working knowledge of the mechanics of a chemistry teaching program including: ordering of materials and supplies, organizing and operating a laboratory, handling and storage of hazardous materials and safety procedures;
- acquaint them with professional agencies and professional journals and the value of these to their work.

**TEACHING MAJOR REQUIREMENTS—29 hours**

CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
CHEM 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	



	or MATH 331 Statistics & Probability (3)	
CHEM 311	Analytical Chemistry	3
CHEM 312	Instrumental Analysis	3
CHEM 386	Research Methods II	1
CHEM 396	Research Methods III	1
CHEM 445	Biochemistry I	4

**CONTEXTUAL REQUIREMENTS–25-26 hours**

ASTR 111	Astronomy	4
BIOL 151, 152	General Biology	4, 4
MATH 184	Calculus I	4
PHYS 151, 152	General Physics	4, 4
	or PHYS 251, 252 College Physics (4.5, 4.5)	
SCNC 301	Science and Society	1

**PROFESSIONAL EDUCATION–51 hours**

EDUC 418	Methods: Science Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education Endorsements).

**CLINICAL LABORATORY SCIENCE**
**Bachelor of Science**

The Bachelor of Science degree with a major in clinical laboratory science (medical technology) is granted after completion of the general education and clinical course requirements outlined below. The first three years are offered at Union College. The senior, clinical year, must be completed at an affiliated school of clinical laboratory science. Currently, affiliation is maintained with Andrews University, Berrien Springs, MI 49104, [medtech@andrews.edu](mailto:medtech@andrews.edu), [www.andrews.edu/ALHE](http://www.andrews.edu/ALHE)

**ACADEMIC REQUIREMENTS**

- A minimum of 92 semester hours of liberal arts credits must be earned with a minimum cumulative GPA of 2.50. These 92 hours must include all the bachelor's degree general education requirements, contextual requirements as outlined for the major and a minimum of 10 hours of courses numbered above 300.
- The residence requirement of 30 hours must be satisfied in the junior year at Union College.
- The major is satisfied in the senior year at an affiliated professional school.
- Specific requirements for entrance into the clinical program are found in the bulletin of the affiliated professional school. At the time of application to the clinical program, the student must also meet the current minimum prerequisites for admission to a clinical facility as prescribed by the National Accrediting Agency for Clinical Laboratory Science.
- Acceptance into the clinical program is on a competitive basis. Completion of the outlined requirements at Union College does not guarantee admission to the affiliated school of clinical laboratory science.

- A GPA of 3.00 or higher will, of course, increase the likelihood of acceptance into a clinical program.
- The degree is granted in December, May or August after all clinical experience has been completed.
- To be eligible for a degree at the completion of the clinical year, students must
  - register as a student at Union College for clinical year (no credit until completion);
  - make application for the degree by September for participation in May as an August graduate (applications must include the listing of any credits to be completed by correspondence or to be transferred from any other college);
  - send pictures or make arrangements with the yearbook editor.

**CLINICAL LABORATORY SCIENCE****(Medical Technology)****Bachelor of Science****MAJOR REQUIREMENTS—50 hours**

Clinical courses at Andrews University 50

**CONTEXTUAL REQUIREMENTS—34-35 hours**

BIOL 151, 152	General Biology	4, 4
BIOL 205	Microbiology	4
	or BIOL 345 Biology of Bacteria (4)	
BIOL	Biology electives (Immunology recommended)	3-4
CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
MATH	College level math (MATH 221 recommended)	3

**Recommended** (Choose from)

BIOL 306	Histology (3)
BIOL 321	Genetics (4)
BIOL 416	Mammalian Physiology (4)
CHEM 311	Analytical Chemistry (3)
CHEM 312	Instrumental Analysis (3)
PHYS 111	Principles of Physics (4)
	or PHYS 151, 152 General Physics (4, 4)

**ENGINEERING**

The engineering program at Union College prepares students to finish advanced studies leading to a baccalaureate degree in engineering. Union College is affiliated with the engineering program at Walla Walla College, College Place, Washington. Our program is designed to mesh with theirs, but prepares the student for entry into other engineering schools as well.

**Goals**

Students graduating with an associate degree in engineering will

- have a firm foundation in chemistry, physics and mathematics to solve engineering problems;
- demonstrate familiarity with basic techniques of investigation in the sciences and engineering
- successfully complete course work in preparation for the final two years of the Bachelor of Science degree in engineering.

**ENGINEERING****Associate of Science****REQUIREMENTS—14 hours**

ENGR 111, 112	Introduction to Engineering	2, 2
ENGR 211	Statics	3
ENGR 212	Dynamics	3
ENGR 228	Electric Circuit Analysis	4

**CONTEXTUAL REQUIREMENTS—35 HOURS**

CHEM 151, 152	General Chemistry	4, 4
CPTR	An approved computer language	3
MATH 184	Calculus I	4
MATH 285, 286	Calculus II, III	4, 4
MATH 352	Linear Algebra	3
PHYS 251, 252	College Physics	4.5, 4.5

ELECTIVES Consult engineering advisor for course selections.

GENERAL EDUCATION COURSES Consult engineering advisor.

**MATHEMATICS****Goals**

Through individual and cooperative learning experiences, mathematics majors will gain a deep understanding of mathematics and will be prepared to

- read mathematical literature and communicate mathematically and statistically;
- think logically and analytically based on methods of mathematical proof;
- solve a variety of problems using standard heuristic techniques;
- connect knowledge from one branch of mathematics to another and to other disciplines;
- pursue life-long learning of mathematically related concepts;
- value and enjoy mathematics through a growing understanding of its historical context and relationship to other sciences;
- value its power, and its application to societal needs.

**MATHEMATICS****Bachelor of Arts****MAJOR REQUIREMENTS—35 hours**

MATH 121	Precalculus	5
MATH 184	Calculus I	4

MATH 285	Calculus II	4
MATH 286	Calculus III	4
MATH 331	Statistics and Probability	3
MATH 340	Discrete Mathematics	3
MATH 351	Abstract Algebra	3
MATH 352	Linear Algebra	3
MATH 385	Differential Equations - recommended if supporting area is in science or engineering or MATH 486 Numerical Analysis - recommended if supporting area is in computer science ( 3)	3
MATH	Mathematics electives (numbered 300 or above)	3

**CONTEXTUAL REQUIREMENTS—20 hours**

CPTR 226	Computer Science I	4
CPTR 227	Computer Science II	4
Supporting Area -	(to be approved by the mathematics faculty)	12
A sequence of courses requiring extensive use of mathematics chosen from biology, chemistry, computer science, engineering, or physics.		

**MATHEMATICS****Bachelor of Science****MAJOR REQUIREMENTS—41 hours**

MATH 121	Precalculus	5
MATH 184	Calculus I	4
MATH 285	Calculus II	4
MATH 286	Calculus III	4
MATH 331	Statistics and Probability	3
MATH 340	Discrete Mathematics	3
MATH 351	Abstract Algebra	3
MATH 352	Linear Algebra	3
MATH 385	Differential Equations	3
MATH 491	Real Analysis	3
MATH 492	Complex Variables	3
MATH	Mathematics electives (numbered 300 or above)	3

**CONTEXTUAL REQUIREMENTS—20 hours**

CPTR 226	Computer Science I	4
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CPTR 227	Computer Science II	4
Supporting Area □	(to be approved by the mathematics faculty)	12
A sequence of courses requiring extensive use of mathematics chosen from biology, chemistry, computer science, engineering, or physics.		

**MATHEMATICS****MINOR REQUIREMENTS—23 hours**

MATH 121	Precalculus	5
MATH 184	Calculus I	4
MATH 285	Calculus II	4
MATH 286	Calculus III	4
MATH 331	Statistics and Probability	3
	or MATH 340 Discrete Mathematics (3)	
MATH	Mathematics electives (numbered 300 or above)	3

**MATHEMATICS EDUCATION*****Secondary Subject Endorsement*****Bachelor of Science**

The teaching major in mathematics is designed to prepare candidates for secondary teaching by providing

- the ability to inspire and motivate students in mathematics;
- an understanding of the cultural heritage and the place of mathematics in the school curriculum as a creative and expanding subject;
- an understanding of the interplay of mathematics and science in today's scientific society;
- the conceptualization of mathematics as a science built upon postulates;
- the investigation of the application of mathematics in order to:
  - interpret data, and
  - discern and apply mathematical relationships and understanding of the nature of proofs;
- a knowledge of the language of mathematics;
- the ability to give clear explanations of the meaning of certain fundamental concepts, statements and notations;
- the ability to read mathematical literature with understanding;
- the foresight to use present methods of teaching mathematics;
- the ability to make and test conjectures;
- acquisition of a degree of facility with selected mathematical techniques

**TEACHING MAJOR REQUIREMENTS—35 hours**

MATH 121	Precalculus	5
MATH 184	Calculus I	4
MATH 285	Calculus II	4
MATH 286	Calculus III	4
MATH 331	Statistics and Probability	3
MATH 340	Discrete Mathematics	3

MATH 351	Abstract Algebra	3
MATH 352	Linear Algebra	3
MATH 409	Modern College Geometry	3
MATH 451	Mathematical Connections for Secondary Teachers	3

**CONTEXTUAL REQUIREMENTS—4 hours**

CPTR 226	Computer Science I	4
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**PROFESSIONAL EDUCATION—51 hours**

EDUC 413	Methods: Mathematics Education	3
	Additional Professional Education	48
(See Human Development Division □ Secondary Education Endorsements)		

**NATURAL SCIENCE EDUCATION*****Secondary Subject Endorsement*****Bachelor of Science**

The teaching major in natural science is designed to prepare for secondary teaching by providing the ability to

- demonstrate knowledge and understanding and be able to teach the concepts, skills and processes of science;
- design and manage safe and supportive learning environments for science instruction;
- apply unifying concepts to help students integrate science with the natural world and relate science to their community;
- apply the processes of scientific inquiry, including the ability to design and conduct scientific investigations and evaluate and interpret data;
- apply physical and life science facts, concepts and theories;
- establish connections between science and technology;
- apply science concepts, principles and processes to personal and social decision making;
- understand the history and nature of science.

**TEACHING MAJOR REQUIREMENTS □ 32 hours**

ASTR 111	Astronomy	4
BIOL 151, 152	General Biology	4, 4
CHEM 151, 152	General Chemistry	4, 4
PHYS 151, 152	General Physics	4, 4
	or PHYS 251, 252 College Physics (4.5, 4.5) Required for Physics Emphasis	
BIOL 477	Issues in Origins and Speciation	3
	Science Elective	1

***Biology Emphasis* □ 16 hours**

BIOL 321	Genetics	4
BIOL 375	Ecology	4
BIOL 111, 112	Anatomy and Physiology	4, 4
	or BIOL 416 Mammalian Physiology (4) and Biology Elective (4)	

**Contextual Requirement □ 5 hours**

MATH 121	Precalculus	5
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**Chemistry Emphasis □ 16 hours**

CHEM 211, 212	Organic Chemistry	4, 4
CHEM 311	Analytical Chemistry	3
CHEM 312	Instrumental Analysis	3
CHEM	Chemistry Electives	2

**Contextual Requirement □ 5 hours**

MATH 121	Precalculus	5
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**Physics Emphasis □ 16 hours**

PHYS 228	Electric Circuit Analysis	4
PHYS 350	Modern Physics	4
PHYS 351	Quantum Mechanics	4
PHYS	Physics Elective	3
	Additional hour from PHYS 251, 252 listed in natural science above	1

**Contextual Requirement □ 4 hours**

MATH 184	Calculus I	4
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**PROFESSIONAL EDUCATION—51 hours**

EDUC 418	Methods: Science Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education Endorsements).

**PHYSICS****Goals**

Students graduating with a bachelor's degree in physics will be prepared to

- exhibit competence in understanding and application of physics principles;
- connect knowledge about physics to other disciplines;
- think logically and analytically;
- solve a variety of problems using standard techniques;
- value physics through an understanding of its historical context and its relationship to other sciences;
- value its power and its application to societal needs;
- pursue graduate studies.

**PHYSICS****Bachelor of Arts**

Union College offers its physics program in cooperation with Nebraska Wesleyan University in Lincoln, Nebraska. Students seeking a bachelor's degree in physics must take at least two courses on the NWU campus.

**MAJOR REQUIREMENTS—35 hours**

PHYS 228	Electric Circuit Analysis	4
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PHYS 251, 252	College Physics	4.5, 4.5
PHYS 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	
	or MATH 331 Statistics & Probability (3)	
PHYS 241, 242	Classical Mechanics (at Nebraska Wesleyan University)	3, 3
PHYS 350	Modern Physics	4
PHYS 351	Quantum Mechanics	4
PHYS 209	Electromagnetic Theory (at Nebraska Wesleyan University)	3
PHYS 386	Research II	1
PHYS	Electives (at Nebraska Wesleyan University)	3

**CONTEXTUAL REQUIREMENTS—26 hours**

CHEM 151, 152	General Chemistry	4, 4
CPTR	An approved computer language	3
MATH 184	Calculus I	4
MATH 285, 286	Calculus II, III	4, 4
MATH 385	Differential Equations	3

**PHYSICS****Bachelor of Science****MAJOR REQUIREMENTS—46 hours**

PHYS 228	Electric Circuit Analysis	4
PHYS 251, 252	College Physics	4.5, 4.5
PHYS 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	
	or MATH 331 Statistics & Probability (3)	
PHYS 241, 242	Classical Mechanics (at Nebraska Wesleyan University)	3, 3
PHYS 350	Modern Physics	4
PHYS 351	Quantum Mechanics	4
PHYS 261	Thermal Physics (at Nebraska Wesleyan University)	3
PHYS 386	Research Methods II	1
PHYS 396	Research Methods III	1
PHYS 209	Electromagnetic Theory (at Nebraska Wesleyan University)	3
PHYS 496	Research Methods IV	1
PHYS 210	Optics (at Nebraska Wesleyan University)	3
PHYS	Electives (at Nebraska Wesleyan University)	6



**CONTEXTUAL REQUIREMENTS—29 hours**

CHEM 151, 152	General Chemistry	4, 4
CPTR	An approved computer language	3
MATH 184	Calculus I	4
MATH 285, 286	Calculus II, III	4, 4
MATH 385	Differential Equations	3
MATH	Elective (above 310)	3

**PHYSICS****MINOR REQUIREMENTS—21 hours**

PHYS 228	Electric Circuit Analysis	4
PHYS 251, 252	College Physics	4.5, 4.5
PHYS 351	Quantum Mechanics	4
PHYS	Electives	4

**PHYSICS EDUCATION*****Secondary Subject Endorsement*****Bachelor of Science**

The teaching major in physics is designed to prepare candidates for secondary teaching by providing

- an understanding that the disciplines of physical science have a definite position in the society of today;
- an ability to demonstrate their observational, investigative competence in the successful completion of at least one experimental project;
- a competence in discussion of scientific problems in their field along with the ability to demonstrate impromptu reactions in drawing from their factual background;
- an ability to construct at least one unit of study, including selection of audiovisual material, laboratory type activities, field trips; construction of a model or other demonstration equipment to emphasize some area of the unit; a study guide; and an evaluative instrument for the unit.

**• TEACHING AREA REQUIREMENTS—35-37 HOURS**

PHYS 228	Electric Circuit Analysis	4
PHYS 251, 252	College Physics	4.5, 4.5
PHYS 261	Thermal Physics (at Nebraska Wesleyan University)	3
PHYS 296	Research Methods I	1
	or MATH 221 Elem Statistics & Probability (3)	
	or MATH 331 Statistics & Probability (3)	
PHYS 350	Modern Physics	4
PHYS 351	Quantum Mechanics	4
PHYS 386	Research Methods II	1

PHYS	Electives	9
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**CONTEXTUAL REQUIREMENTS—38 hours**

ASTR 111	Astronomy	4
BIOL 151, 152	General Biology	4, 4
CHEM 151, 152	General Chemistry	4, 4
CPTR	An approved computer language	3
MATH 184	Calculus I	4
MATH 285, 286	Calculus II, III	4, 4
MATH 385	Differential Equations	3

**PROFESSIONAL EDUCATION—51 hours**

EDUC 418	Methods: Science Education	3
	Additional Professional Education	48

It is strongly recommended that every student finish requirements for at least two subject endorsements (see Human Development Division □ Secondary Education Endorsements).

**PRE-ALLIED HEALTH**

Union College offers many of the courses necessary to prepare students for admission to professional schools. In addition there are certain minimum requirements relative to secondary school and college credits.

Students interested in entering a professional school should acquaint themselves with the particular requirements of that school and should pattern their preprofessional courses to be taken at Union College in harmony with such requirements. Advisors in the Division of Science and Mathematics will help plan your program of studies.

Preprofessional programs are available in

Dental Hygiene

Nutrition and Dietetics, Dietetic Technology

Occupational Therapy and Occupational Therapy Assistant

Pharmacy

Physical Therapy and Physical Therapy Assistant

Radiation Therapy

Respiratory Therapy

**PRE-ALLIED HEALTH****Associate of Science****REQUIREMENTS—20 hours**

HHPT 256	Medical Terminology	1
Select eight hours from		8
BIOL 111, 112	Anatomy and Physiology (4, 4)	
BIOL 151, 152	General Biology (4, 4)	
BIOL 205	Microbiology (4)	

Select four hours from	4
CHEM 101	Introductory Inorganic Chemistry (4)
CHEM 151	General Chemistry (4)
PHYS 111	Principles of Physics (4)
PHYS 151	General Physics (4)
Select four additional hours from	4
BIOL 111, 112	Anatomy and Physiology (4, 4)
BIOL 151, 152	General Biology (4, 4)
BIOL 205	Microbiology (4)
CHEM 101	Introduction to Inorganic Chemistry (4)
CHEM 102	Introductory Organic and Biochemistry (4)
CHEM 151	General Chemistry (4)
CHEM 152	General Chemistry (4)
PHYS 111	Principles of Physics (4)
PHYS 151	General Physics (4)
PHYS 152	General Physics (4)
Select one course from PSYC or SOCI	3

ELECTIVES Consult pre-allied health advisor for course selections.

GENERAL EDUCATION COURSES Consult pre-allied health advisor.

Students should consult with their advisor to verify that their program of study includes the requirements for the allied health major they wish to enter upon completion of Union's Associate of Science in pre-allied health.

### **ALLIED HEALTH PROFESSIONS-ANDREWS UNIVERSITY**

Andrews University offers a Doctor of Physical Therapy program. The first three years of pre-requisites may be taken at Union College.

**Advisor** Contact Chair, Division of Science and Mathematics

### **ALLIED HEALTH PROFESSIONS-LOMA LINDA UNIVERSITY**

The Division of Science and Mathematics works with the Loma Linda University School of Allied Health Professions to offer educational programs in

Dental Hygiene  
 Nutrition and Dietetics, Dietetic Technology  
 Occupational Therapy and Occupational Therapy Assistant  
 Physical Therapy and Physical Therapy Assistant  
 Radiation Therapy and Medical Radiography  
 Respiratory Therapy

One year of studies at Union College is required prior to admission into programs leading to the Associate of Science degree and two years of studies are required prior to admission to the programs leading to the Bachelor of Science degree at Loma Linda University. Consult the appropriate sections of Loma Linda University bulletins for information on these programs.

**Who Is Accepted?** In selecting students, the Admissions Committee looks for evidence of intellectual vigor, self-discipline, integrity and good health. Manual dexterity, aptitude in science, a sensitive concern for the sick and a capacity for unusual devotion and personal effort are essential.

Consideration is given first to applicants who are seeking to transfer from one of the colleges in the Seventh-day Adventist system of higher education. Other applicants are accepted as vacancies permit.

**Application** For the *Occupational Therapy* and *Physical Therapy* programs, application should be made early in the school year prior to admission. Application deadlines for other programs application are later. Students should consult their advisor or Loma Linda University for exact application information.

**Advisor** Contact Chair, Division of Science and Mathematics.

### **MEDICINE—LOMA LINDA UNIVERSITY**

**Application** Preference is given to applicants who will have completed the baccalaureate degree prior to starting medicine. The Medical College Admissions Test (MCAT), taken within the last two years, and a minimum of three years (85 semester hours) of collegiate preparation are required. Candidates should have demonstrated ability in the sciences.

Application to the Loma Linda University School of Medicine is made directly to the Association of American Medical Colleges through its application service (AMCAS). Applications are accepted from June 1 through November 1 for entry into the next first-year medical class.

Applicants are urged to take the MCAT in the spring of the year of application and to have the basic requirements completed at the time of application. Both AMCAS and MCAT application forms and deadline information are available from the premedical advisor.

#### **Requirements for admission in terms of Union College courses**

BIOL 151, 152	General Biology	4, 4
CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
PHYS 151, 152	General Physics	4, 4
	or PHYS 251 and 252 College Physics (4.5, 4.5)	
ENGL 111, 112	College Writing I and II	3, 3

CLEP and pass/fail performances are not acceptable for the required courses.

Although Loma Linda University does not have a list of recommended courses, most successful medical school candidates will have studied additional courses taken from histology, biochemistry, anatomy, physiology, genetics, and cell/molecular biology.

### **DENTISTRY—LOMA LINDA UNIVERSITY**

**Application** Preference is given to applicants who will have completed the baccalaureate degree prior to starting dentistry. The Dental Admissions Test (DAT), taken within the last two years, and a minimum of three years (96 semester hours) of collegiate preparation are required. Candidates should have demonstrated ability in the sciences.

Application to the Loma Linda University School of Dentistry is made directly to the American Dental Education Association through its application service (AADSAS). Applications are accepted from June 1 through January 1 for entry into the next first-year dental class. Applicants are urged to take the DAT in the spring of the year of application and to have the basic

requirements completed at the time of application. Both AADSAS and DAT application forms and deadline information are available from the predoctoral advisor.

**Requirements for Admission in terms of Union College courses**

BIOL 151, 152	General Biology	4, 4
CHEM 151, 152	General Chemistry	4, 4
CHEM 211, 212	Organic Chemistry	4, 4
PHYS 151, 152	General Physics	4, 4
	or PHYS 251 and 252 College Physics (4.5, 4.5)	
ENGL 111, 112	College Writing I and II	3, 3

CLEP and pass/fail performances are not acceptable for the required courses.

Strongly recommended electives include biochemistry and anatomy. Other recommended electives include calculus, genetics, histology, management, and physiology.

**Advisor and Information**    Contact Chair, Division of Science and Mathematics.

## COURSE DESCRIPTIONS

The descriptions of the various courses offered are listed under the following headings which begin on the page numbers listed:

Discipline	Prefix	Page	Discipline	Prefix	Page
Accounting	ACCT	167	Journalism	COJR	181
Art	ART	169	Leadership	LEAD	213
Astronomy	ASTR	171	Marketing	MRKT	217
Biblical Languages	RELL	236	Mathematics	MATH	214
Biblical Studies	RELB	235	Music Applications	MUAP	217
Biology	BIOL	171	Music Education	MUED	218
Business Administration	BUAD	176	Music History		
Chemistry	CHEM	177	and Literature	MUHL	219
Communication	COMM	182	Music Performance	MUPF	220
Computing	CPTR	184	Music Theory	MUTH	222
Drama	CODR	180	Nursing	NRSG	223
Economics	ECON	187	Nutrition	NUTR	226
Education	EDUC	187	Physician Assistant		
Engineering	ENGR	195	Studies	PHAS	226
English	ENGL	192	Philosophy	PHIL	229
English as a Second			Physics	PHYS	229
Language	ENSL	196	Political Science	PLSC	232
Finance	FNCE	198	Professional Training	RELP	237
French	FREN	198	Psychology	PSYC	233
Geography	GEOG	199	Public Relations	COPR	183
German	GRMN	199	Religious History	RELH	236
Graphic Design	GRPH	199	Science	SCNC	239
Health and Human Performance			Social Work	SOWK	240
Activity	HHPA	201	Sociology	SOCI	239
Theory	HHPT	203	Spanish	SPAN	242
Varsity	HHPV	206	Student Mission Service	UCSM	242
History	HIST	207	Task Force Service	UCTF	243
Honors Scholars	HONS	208	Teaching Learning	TLCM	242
Humanities	HMNT	210	Theological Studies	RELT	238
International Rescue					
and Relief	INRR	210			

Courses marked (WR) meet general education writing requirements.

### COURSE DESCRIPTIONS FOR TOPICS AND DIRECTED STUDIES

In addition to the courses described in this section, Topics and Directed Study courses are available for most disciplines. These and practicum courses that are not regularly listed in the class schedule booklet require *special procedures and division approval* before they can be taken. Forms with instructions for enrolling in these classes may be obtained from the Records Office.

Topics, Directed Readings and Directed Study courses are generally described as follows: (In actual practice a specific discipline prefix will be used.)

**\_\_\_\_\_ 195 Directed Readings 1**

Designed for students needing a lower division credit by summarizing assigned readings.  
*Written approval of the division chair is required before registration for Directed Readings courses.*

**\_\_\_\_\_ 287 Topics 1-3**

Designed for students needing a lower division course not listed in the regular course offerings.  
*Written approval of the division chair is required before registration for Topics courses.*

**\_\_\_\_\_ 295 Directed Study 1-3**

Designed for students doing library research or other special projects at the lower division level under faculty supervision. *Written approval of the division chair is required before registration for Directed Studies courses.*

**\_\_\_\_\_ 487 Topics 1-3**

Designed for students needing an upper division course not listed in the regular course offerings. *Written approval of the division chair is required before registration for Topics courses.*

**\_\_\_\_\_ 495 Directed Study 1-3**

Designed for students doing library research or other special projects at the upper division level under faculty supervision. *Written approval of the division chair is required before registration for Directed Studies courses.*

**ACCOUNTING****ACCT 211 Principles of Accounting 3**

An introduction to the basic principles of accounting. Students learn basic techniques for organizing and presenting financial data, using generally accepted accounting principles. Upon completion of this course, the students will be able to set up and maintain accounting records and prepare basic financial statements (Income Statement, Owner's Equity Statement, and Balance Sheet). *Fall semester.*

**ACCT 212 Principles of Accounting 3**

Prerequisite: ACCT 211 with a minimum grade of C

A continuation of ACCT 211 with additional discussion of the basic principles of accounting. The students gain additional experience in setting up and maintaining accounting records and the preparation of financial statements (including the statement of cash flows) with coverage of corporations and partnerships. Financial statement analysis is also introduced. *Spring semester.*

**ACCT 313 Intermediate Accounting 4**

Prerequisite: ACCT 212 with a minimum grade of C

Coverage of accounting principles concerning the preparation and interpretation of financial statements. Topics include cash, receivables, inventory, property, depreciation, intangible assets and current liabilities. Accounting research using FARS is also introduced. *Fall semester.*

**ACCT 314 Intermediate Accounting 4**

Prerequisite: ACCT 313 with a minimum grade of C

A continuation of ACCT 313. Students learn to apply and understand generally accepted accounting principles for the following areas: long-term liabilities, corporate equity, earnings per share, investments, deferred income taxes, pensions, leases, revenue recognition and the statement of cash flows. *Spring semester.*

**ACCT 315 Federal Income Tax—Individual 3**

Prerequisite: ACCT 212 or permission of instructor

An introductory course in U.S. income taxation of individuals. Upon successful completion of this course the student will have a fundamental understanding of the tax laws and regulations affecting individuals. The class focuses on preparation of a variety of income tax returns allowing the student to become acquainted with various scenarios common in the public accounting tax world. *Fall semester.*

**ACCT 316 Federal Tax—Corporate, Partnership and Fiduciary 3**

Prerequisite: ACCT 315

Study of U.S. income taxation of corporations, partnerships, estates, and trusts. Examines the federal internal revenue code and income tax regulations as they apply to basic federal gift and estate tax principles, corporation and partnership formation and operation, reorganizations, S Corporations, personal holding companies and the accumulated earnings tax. Emphasizes tax planning, including the timing of transactions, the election of methods when alternative tax methods are available, and other means to minimize the impact of taxation. *Spring semester.*

**ACCT 325 Cost and Managerial Accounting 3**

Prerequisites: ACCT 212 with a minimum grade of C

Students learn the uses of accounting information by managers in directing internal affairs of business and non-business organizations. Emphasizes: planning and controlling routine operations; non-routine decisions, policy-making and long-range planning; and inventory valuation and income determination. *Spring semester.*

**ACCT 335 Accounting Information Systems 3**

Prerequisite: ACCT 212 or permission of instructor

Study of the concepts of accounting information systems, especially those pertaining to managerial decision-making, internal control and information technology. Students are provided with hands-on experience in setting up and operating commercial accounting software packages. *Spring semester.*

**ACCT 443 Governmental and Not-for-Profit Accounting 3**

Prerequisite: ACCT 314 with a minimum grade of C

Study of fund accounting according to GASB accounting principles for governmental entities, as well as FASB accounting principles related to not-for-profit organizations. Financial statement reporting requirements under both models are also studied. *Fall semester.*

**ACCT 449 Advanced Accounting 3**

Prerequisite: ACCT 314 with a minimum grade of C

Accounting principles and financial statement concepts as they relate to business combinations, partnerships and international transactions. *Fall semester.*

**ACCT 455 Auditing 4**

Prerequisite: ACCT 314 with a minimum grade of C

Study of generally accepted auditing standards and rules of professional conduct as they relate to planning the audit, designing audit programs, performing tests of controls and substantive tests, and issuing audit reports. Students will complete a case-study audit. *Spring semester.*

**ACCT 475 Internship in Accounting 1-3**

Prerequisites: Junior or senior standing and permission of division chair



Real-life experiences in a wide variety of settings providing creative and conventional hands-on learning opportunities.

**ACCT 477 CPA Review****1-4**

Prerequisites: ACCT 314, 325, and 449; also ACCT 316, 455, BUAD 445 or concurrent enrollment; a minimum GPA of 3.00 in accounting courses.

A review of subjects covered on the Uniform Certified Public Accountant examination sections. Emphasizes study of example CPA examination questions, and techniques for preparation and passage of the CPA exam. *Spring semester.*

**ART****ART 104 Drawing for Everyone****2**

Introduction to principles and techniques of drawing. Students gain experience in using a number of drawing media such as pencil, ink, scratchboard, charcoal and pastel. Figures, animals, landscape and still life objects constitute the subject matter to be drawn. *May be repeated for additional credit. Fall/ spring semesters.*

**ART 105 Drawing I****2**

Exploration of principles and techniques of drawing. Student demonstrate a basic ability in such drawing media as pencil, ink, scratchboard, watercolor, conte crayon, charcoal and pastel. Figures, animals, landscape and still-life objects constitute the subject matter to be drawn. *Fall semester.*

**ART 115 Design I****2**

The study of two-dimensional design. Principles of design such as proportion, balance, rhythm, emphasis and unity are studied together with elements of design such as line, form, space, time, movement, texture, light and color. Projects are done in a variety of media. *Fall semester, alternate years.*

**ART 125 Oil Painting****2**

Exploration of the basic techniques and elements of painting in oil. Students demonstrate their mastery of such principles as style, line, color, texture, value and composition in a variety of paintings. *May be repeated for additional credit. Fall/ spring semesters.*

**ART 135 Pottery****2**

Introduction to ceramics by addressing clays, glazes, kilns and firing. Construction methods such as pinch, coil and slab are learned. Students develop a working vocabulary of ceramics tools, equipment and materials. Attention is given to form and function of individualized projects. *Fall/ spring semesters.*

**ART 145 Watercolor****2**

Beginning techniques and mechanics in working with watercolor as a transparent medium are stressed. A series of exercises is used for this purpose. Various techniques of watercolor painting are demonstrated in finished paintings. *May be repeated for additional credit. Fall/ spring semesters.*

**ART 175 Art Seminar****.5**

First in a series of courses designed to guide art majors through the ongoing process of building and developing a portfolio. Related issues include career decisions, networking, interviewing, portfolio packaging, matting, framing, photographing art work, exhibition display and self promotion. See ART 275, 375 and 475. *Spring semester.*

- ART 215 School Art** 2  
An exploration of the theory and practice of teaching art to children. Discussions and readings constitute a portion of the study. Students explore various media, resulting in a body of both two- and three-dimensional projects appropriate for teaching art in K-12 educational settings. *Fall semester.*
- ART 225 Color Theory** 2  
Prerequisites: ART 105, 115, a painting course, or permission of instructor  
Study of color as a communicator. Varied projects accompany the theory of color and how it affects the viewer, to determine the effects of value, intensity, ground, etc. in the visual experience. *Spring semester, alternate years.*
- ART 235 Drawing II** 2  
Prerequisite: ART 105 or permission of instructor  
A focus on composition in drawing includes a variety of subject matter, media and expression. Principles of design such as proportion, balance, rhythm, emphasis and unity are studied, together with elements such as line, form, space, time, movement, texture, light and color. Emphasis is given to the drawing of the human figure. *Spring semester, alternate years.*
- ART 245 Sculpture** 2  
Prerequisite: ART 115  
An exploration of media suitable for sculpture such as clay, wood, paper, plastic, plaster, stone, or metal. Emphasis is given to construction methods while allowing individual expression of three-dimensional design principles. *Fall semester, alternate years.*
- ART 275 Art Seminar** .5  
See ART 175 for description. *Spring semester.*
- ART 315 Design II** 2  
The study of both two- and three-dimensional design. Students explore the structural elements of design in a variety of media. Emphasis is on creative expression. The concepts of design principles and elements are stressed. *Fall semester, alternate years.*
- ART 321 European Art History (WR)** 3  
Prerequisite: HIST 157  
A study of the history of art in Europe from 1750 to the present time. Emphasis is on the study of art periods and artists within these periods. Paintings are stressed, as well as some study of sculpture and architecture. *Fall semester, alternate years.*
- ART 322 American Art History (WR)** 3  
A history of American art from the art of Native Americans to the present. Attention is given to a conceptual understanding of stylistic movements in America while emphasis is on individual painters and their specific works. *Fall semester, alternate years.*
- ART 335 Airbrush Techniques** 2  
Prerequisites: ART 105 and 115 or permission of instructor  
An introduction to the airbrush as a tool for design, illustration and painting. Basic principles, techniques and applications are explored. *Spring semester, alternate years.*

**ART 347 Illustration Techniques I** 2

Prerequisites: ART 105 and 115 or permission of instructor

An introduction to a wide variety of approaches to illustration style and technique. A variety of media is explored. *Spring semester, alternate years.*

**ART 375 Art Seminar** .5

See ART 175 for description. *Spring semester.*

**ART 445 Illustration Techniques II** 2

Prerequisites: ART 105, 125, 145, or 347 or permission of instructor

Advanced concepts of illustration focusing on a variety of techniques and the development of a personal style. Historical perspectives in illustration are taught. *Spring semester, alternate years.*

**ART 475 Art Seminar** .5

See ART 175 for description. *Spring semester.*

**ART/GRPH 476 Internship** 1-4

Prerequisites: Junior or senior standing; permission of supervising instructor

A real-life experience in a wide variety of settings proving a hands-on learning opportunity. Each hour of credit represents 50 clock hours of contact time. *For majors only. May be repeated for additional credit.*

**ART 485 Senior Exhibit** 1

The final event in an art major's college experience. Students exhibit a body of works, develop a statement of philosophy and a résumé, and present themselves to an oral examination. *Spring semester.*

**ASTRONOMY****ASTR 111 Astronomy** 4

Prerequisite: High school Algebra II with a C or better together with an ACT math score of 20 or higher or SAT math score of 480 or higher, or MATH 111 or above

An introduction for the general student to the basic elements of astronomy. Emphasizes the development of scientific ideas and models for the structure and contents of the universe. Laboratory activities emphasize personal observations of various astronomical objects, as weather permits. Three lectures and one evening laboratory weekly. *Fall semester.*

**BIOLOGY**

Prerequisites are listed for each course (grades must be C or higher) but in some cases permission may be granted by the instructor.

**BIOL 102 Environment and Life Science** 3

Designed to play a major role in the broad training of college students who are not science majors. Topics are structured as surveys of basic ecological principles, human biology (including cell biology, genetics and microbiology), and environmental pollution as well as challenges from a global perspective. Social, ethical and Christian stewardship views of environmental issues are discussed. *Does not apply toward a major or minor offered in the Division of Science and Mathematics. Fall semester.*

**BIOL 111 Human Anatomy and Physiology** 4

Recommended prerequisite: One year of high school chemistry

An introduction to the fundamentals of anatomy and physiology including the chemistry of life, cytology, histology, cellular respiration, skeletal, muscular, integumentary, and nervous systems of the body. Three lectures and one three-hour laboratory per week. *Does not apply toward a biology major or minor. Fall semester.*

**BIOL 112 Human Anatomy and Physiology** 4

Prerequisite: BIOL 111 with a minimum grade of C

Anatomy and physiology of the endocrine, digestive, respiratory, circulatory, excretory and reproductive systems of the human body. Three lectures and one three-hour laboratory per week. *Does not apply toward a biology major or minor. Spring semester.*

**BIOL 151 General Biology** 4

Prerequisites: One year of high school chemistry or CHEM 101 or 151 and one year of high school algebra with a minimum grade of C

An introduction to the science of biology including the chemistry of life, cell biology, cellular respiration, photosynthesis, Mendelian, population and molecular genetics, speciation and macroevolution versus creation as models for origins. Three lectures, one tutorial session and one three-hour laboratory per week. *Fall semester.*

**BIOL 152 General Biology** 4

Prerequisite: BIOL 151 with a minimum grade of C

A continuation of topics in BIOL 151 with coverage of protist diversity, plant and animal diversity; anatomy, physiology and reproduction in plants; animal anatomy and physiology including digestive, circulatory, respiratory, endocrine, nervous, reproductive, and immune systems; sensory specializations of humans; animal development; and principles of ecology. Three lectures, one tutorial session and one three-hour laboratory per week. *Spring semester.*

**BIOL 205 Microbiology** 4

Surveys major groups of bacteria, viruses, yeasts, molds and protozoa with relationships to health and disease. Introduces a variety of laboratory procedures including asepsis, culturing, isolation and identification of microorganisms especially bacteria. Microbial nutrition, ecology, metabolism, genetics, chemotherapy, and immunological principles are also considered. Three lectures and one three-hour laboratory per week. *Does not apply toward a biology major or minor. Fall semester and summer.*

**BIOL 207 Introductory Field Biology** 3

A field study of plants and/or animals in their natural settings. Identification by means of keys, field guides, etc. Special attention is given to ecological systems. Locale of study may vary from year to year. *Does not apply toward a major in biology. May apply as a life science laboratory course. Available only alternating summers.*

**BIOL 296 Research Methods I** 1

Prerequisite: ACT Math Score of 20 (SAT 480) or MATH 100

An introduction to the fields of descriptive and inferential statistics. Data sampling techniques, hypothesis testing and some applications of probability theory to business situations are examined. *Fall semester.*

**BIOL 306 Histology** 3

Prerequisite: BIOL 152

A study of the structure, organization and function of vertebrate tissues, with emphasis on identification. Two lectures and one three-hour laboratory per week. *Fall semester.*

**BIOL 307 Field Biology (WR)** 3

Prerequisite: BIOL 152 with a minimum grade of C

A field study of plants and/or animals in their natural settings. Identification by means of keys, field guides, etc. Special attention is given to ecological systems. A major paper or project is required. Locale of study may vary from year to year. *Available only alternating summers.*

**BIOL 310 Seminar in Biology (WR)** 1

Prerequisite: BIOL 152

Current topics in biology are presented by Union College faculty, students, and by guests. Students receiving seminar credit present a seminar. All biology majors are encouraged to attend these seminars while they are enrolled as Union College students. An evaluation of investigative methods of biologists, the development of techniques for oral presentations, the discussion of topics of current interest in biology, and the development of skills in critical evaluation and summarization of the biological literature are required. *May be repeated for credit. Spring semester.*

**BIOL 314 Immunology** 3

Prerequisite: BIOL 152

Biology of the immune response. Topics include organs and cells of the immune system, development and effector functions of immune cells and their chemical mediators, process of recognition of self and non-self antigens, medical immunology including autoimmune diseases, immune deficiencies, hypersensitivity, transplantation, and tumor immunology. Three lectures each week. *Spring semester.*

**BIOL 321 Genetics (WR)** 4

Prerequisite: BIOL 152

A study of molecular, classical and population genetics. Topics include the physical and chemical nature of genes, DNA replication, RNA transcription, protein translation, inheritance patterns, chromosome anomalies, behavior of genes in populations and speciation. Three lectures and one three-hour laboratory per week. *Spring semester.*

**BIOL 326 Developmental Biology (WR)** 4

Prerequisite: BIOL 321

Development of organisms from the formation of the germ cells in the parents to the completion of the early stages of organogenesis in the embryo. Includes molecular and genetic control of embryology as well as environmental effects on development. Three lectures and one three-hour laboratory per week. *Spring semester.*

**BIOL 345 Biology of Bacteria** 4

Prerequisite: BIOL 152

A study of microbial diversity, bacterial structure, nutrition and cultivation, metabolism and biosynthesis, genetics, ecology and major bacterial groups of significant medical and industrial interest. Three lectures and one three-hour laboratory per week. *Spring semester.*

**BIOL 365 Plant Biology** 3

Prerequisite: BIOL 152

A survey of plants in human life, plant ecology, physiology and anatomy, plant morphology and plant systems. Two lectures and one three-hour laboratory per week and one required four-day field trip. *Fall semester, alternate years.*

**BIOL 375 Ecology (WR) 4**

Prerequisite: BIOL 152

An analysis of the factors affecting the distribution and abundance of organisms. Emphasizes the structure and functions of populations, communities, and ecosystems. Three lectures and one three-hour laboratory per week and one required four-day field trip. *Fall semester.*

**BIOL/SCNC 377 Origins (WR) 3**

Prerequisites: Completion of one laboratory science course; junior standing

A study of issues in science and religion as they relate to origins. Consideration is given to interpretation of inspiration and scripture relating to evidence from nature and the scientific method. Data from the biological and physical sciences are evaluated as they relate to earth history and the origin of life. Evidence for change, mechanisms of change, speciation, the fossil record and issues of time are considered. *Class may be taken to meet the general education requirements for either the Life Sciences (BIOL 377) or Physical Sciences (SCNC 377). Does not apply toward a biology major or minor. Spring semester.*

**BIOL 386 Research Methods II 1**

Prerequisite: BIOL 296 or MATH 221

An introduction to the methods and mechanics of the research process. Topics include the nature, methods, literature, funding, limitations and strengths of scientific research. A proposal and literature search are required. *Spring semester.*

**BIOL 396 Research Methods III 1**

Prerequisite: BIOL 386

An emphasis upon research design. A research project is proposed, a research plan developed for the project and, depending upon the nature of the study, research initiated. *Fall/spring semesters.*

**BIOL 406 Cell and Molecular Biology 4**

Prerequisites: BIOL 321, CHEM 212 or concurrent enrollment in CHEM 212

Building on the basic cell functions and genetics principles learned in BIOL 151-152 and BIOL 321, this course, designed for advanced biology and biochemistry majors, deals primarily with cell structures and functions with emphasis on cell regulation at the molecular level. Students are exposed to methods of cellular research while learning about the appearance and operation of cellular organelles. Three lectures and one three-hour laboratory per week. *Spring semester.*

**BIOL 411 Human Anatomy 4**

Prerequisite: BIOL 152 with a minimum grade of C

A study of the structure and organization of the human body with particular emphasis on macroscopic anatomy. Three lectures and one three-hour laboratory per week. Cadaver work included. *Spring semester.*

**BIOL 416 Mammalian Physiology (WR) 4**

Prerequisite: BIOL 152

Studies the physiology of the musculo-skeletal, nervous, endocrine, cardiovascular, respiratory, digestive, reproductive, immune and renal systems and metabolism with emphasis on regulatory mechanisms and integration. Three lectures and one three-hour laboratory per week. *Fall semester.*

**BIOL 442 Techniques in Biological Research****4**

Prerequisites: BIOL 152, CHEM 152, BIOL 386

Applications of laboratory techniques and evaluation of the results in a laboratory setting. One class period and one formal laboratory session per week plus independent laboratory work in consultation with the instructor. Participation in field trips to research institutions is an integral part of the course. *Spring semester.*

**BIOL/CHEM 445 Biochemistry****4**

Prerequisite: CHEM 212 and BIOL 151 or 111

A study of the chemical properties and biological functions of amino acids, proteins, enzymes, nucleic acids, carbohydrates, lipids and cellular membranes. Covers metabolism including glycolysis, Krebs cycle and oxidative phosphorylation. The laboratory includes basic techniques and instruments used for biochemical research and biotechnology. Three lectures and one laboratory per week. *Fall semester.*

**BIOL 477 Issues in Origins and Speciation****3**

Prerequisite: One of BIOL/CHEM/PHYS 151 Designed for science majors or Union Scholars.

Examination of the biological, paleontological and geological factors affecting the study and interpretation of historical events in geological and biological systems. Evaluation of data, methods, assumptions, and theories relating to origins, the diversity of life, and historical biology are studied within the context of both a biblical and naturalistic world view.

**BIOL 496 Research Methods IV (WR)****1**

Prerequisite: BIOL 396

Emphasizes active research and both oral and written reporting of the results of research. The project proposed in BIOL 396 is carried out and both written and oral presentations of the research are made. *Spring semester.*

The following courses are offered during the summer at the Walla Walla College marine station. Each course is not necessarily offered every summer.

**BIOL 101, 102, 103 General Biology****2.67, 2.67, 2.67**

(equivalent to BIOL 151, 152 UC)

Prerequisite: High school chemistry strongly recommended

Study of the basic principles of biology of animals, plants, and micro-organisms. Topics include the cell, physiology, genetics, development, taxonomy, and ecology. Must be taken in sequence.

**BIOL 426 Systematic Botany****3.33**

Prerequisite: BIOL 101 (WWC) or BIOL 152 (UC)

Study of the principles of plant classification, together with a systematic survey of vascular plants, with emphasis on natural history and ecology.

**BIOL 460 Marine Ecology - "marine-oriented course"****3.33**

Prerequisite: BIOL 103 (WWC) or BIOL 152 (UC)

Study of interspecific, intraspecific and community relationships demonstrated by marine organisms.

**BIOL 468 Comparative Physiology - "marine-oriented course"****3.33**

Prerequisite: BIOL 392 (WWC) or BIOL 406 (UC)

Comparative study of the physiology and life processes of animals with emphasis on invertebrates.

**BIOL 475 Marine Invertebrates - "marine-oriented course" 3.33**

Prerequisite: BIOL 103 (WWC) or BIOL 152 (UC)

A study of the biology of selected groups of marine invertebrates.

**BUSINESS ADMINISTRATION****BUAD 101 Students in Free Enterprise 1**

Provides a framework for the Union College Students in Free Enterprise (SIFE) team to successfully meet the goals set forth by the International SIFE organization. Emphasizes project evaluation/analysis, preparation of an annual report, and a written and visual presentation. Upper division credit (BUAD 301) is given to students in leadership roles. *Course may be repeated for credit. Graded CR/NC. Does not apply toward a major or minor. Spring semester.*

**BUAD 138 Dynamics of Business 3**

Introductory exploration of the principles and practices of modern global business. Examines accounting, business law, computers, economics, ethics, finance, insurance, investments, management, marketing, and small business. *Credit will not be given for BUAD 138 taken after completing or while concurrently taking any upper division business course. Fall/ spring semesters.*

**BUAD 219 Small Business Management 3**

A practical course on the principles and problems of organizing and operating a small business. Topics include: procedures for starting a new business; physical facilities and layout; financing, organizing and managing a small business. Students complete a comprehensive business plan. *Spring semester.*

**BUAD 301 Students in Free Enterprise 1**

Prerequisite: Permission of instructor

See BUAD 101 for description. *Course may be repeated for credit.**Graded CR/NC. Does not apply toward a major or minor. Spring semester.***BUAD 310 Quality Management 3**

Familiarizes the student with ideas on how to be an innovative and effective manager. Students study a variety of management styles and learn principles to prepare for leadership positions. *Fall semester.*

**BUAD 316 Operations and Resource Management 3**

Prerequisite: MATH 111

Analysis of various decision-making models useful in making efficient managerial decisions. Topics covered include productivity, resource allocation, linear programming, inventory management, and queuing theory. Methods include the use of correct models and software. *Spring semester.*

**BUAD 376 Human Resources Management 3**

Prerequisite: junior standing or permission of instructor

Emphasizes the basics of human management in business organizations, and considers a variety of topics in human relations, personnel management, and organizational behavior. *Spring semester.*

**BUAD 405 Business Ethics 1**

Prerequisite: RELT 305



Using class discussion format, introduces the student to ethical concepts relevant to identifying and resolving moral issues in business. *Spring semester.*

**BUAD 425 Business Communications (WR) 3**

Prerequisites: COMM 105, CPTR 220; junior standing

Instruction in the principles and techniques of effective written and oral communication in business. Considers both individual and group communication skills. Includes the process of resume writing, interview preparation, and professional wardrobe selection. *Fall semester.*

**BUAD 428 Business Policies 3**

Prerequisite: 30 hours of business courses; senior standing

Designed as the capstone class for business administration majors. Includes study of the specific functions of top management with a particular focus on the elements of strategic planning. Students integrate the various functional areas of business through case study analysis and a comprehensive business simulation. *Spring semester.*

**BUAD 430 Conflict Management 3**

Prerequisite: Junior standing

Provides a framework for how to effectively manage conflict in the workplace. Time is spent contrasting situations involving both positive and negative conflict. Methods are introduced to help in dealing with difficult customers, peer-to-peer problems, and working with supervisors who are challenging. *Fall semester.*

**BUAD 445 Business Law 4**

Prerequisite: Junior standing or permission of instructor

Includes a discussion of the following: legal institutions and origins; laws of contracts; agency; employment; negotiable instruments; personal property; bailments; transportation; suretyship and guaranty; partnerships; corporations; real property; mortgages; leases; trusts; decedents' estates; bankruptcy; business torts and crimes. *Fall semester.*

**BUAD 455 Advanced Human Resource Management 2**

Prerequisites: BUAD 376; Management Emphasis

Implementation of topics covered in BUAD 376 through a project-based structure. Functions covered include managing and evaluating employees, designing a compensation plan, creating employee policies, and structuring orientation/training programs. *Fall semester.*

**BUAD 456 Advanced Human Resource Management 2**

Prerequisites: BUAD 455; Management Emphasis

Continuation of the topics covered in BUAD 455. *Spring semester.*

**BUAD 475 Internship in Management 1-3**

Prerequisites: Junior or senior standing and permission of the division chair

Real-life experiences in a wide variety of settings providing creative and conventional hands-on learning opportunities.

**CHEMISTRY**

Prerequisites are listed for each course (grades must be C or higher) but in some cases permission may be granted by the instructor.

**CHEM 101 Introduction to Inorganic Chemistry****4**

Prerequisite: An ACT math score of 18 or SAT math score of 430 or higher or first year algebra in high school with a minimum grade of *B*

Introduction to inorganic chemistry including atomic structure, chemical bonding, states of matter, chemical equations, mole problems and concepts, nomenclature, and energetics. Includes instruction on the metric system, the scientific method and some history of chemistry. Three lectures and one three-hour laboratory per week. *Does not apply toward a division major or minor. Fall semester.*

**CHEM 102 Introductory Organic and Biochemistry****4**

Prerequisite: CHEM 101 or 151

Covers those principles of organic and biochemistry essential to an elementary understanding of the chemistry of living cells and organisms. Topics include organic functional groups, nomenclature, and reactions of organic compounds with emphasis on the structure and role of carbohydrates, fats, and proteins. Glycolysis, the citric acid cycle, and oxidative phosphorylation are also included. Three lectures and one laboratory per week. *Does not apply toward a division major or minor. Spring semester*

**CHEM 151 General Chemistry****4**

Prerequisites: Two units of high school algebra or MATH 111 (a good math background is essential), high school chemistry or physics

Fundamental laws, theories and principles are studied and applied to descriptive chemistry. Covers specifically, fundamental concepts, chemical and physical changes, reaction chemistry, the mole concept and mole problems, periodic properties, thermochemistry, atomic theory, including its history, atomic structure, molecular bonding structural theories, and basic organic nomenclature. The laboratory emphasizes quantitative techniques and reaction chemistry. Three lectures and one laboratory per week. *Fall semester.*

**CHEM 152 General Chemistry****4**

Prerequisite: CHEM 151 with a minimum grade of *C*

A continuation of CHEM 151: molecular orbitals, gas laws, Kinetic Molecular Theory, states of matter, crystal structure, properties of solutions, kinetics, equilibria, thermodynamics and electrochemistry are studied. The laboratory includes a section on qualitative analysis. Three lectures and one laboratory per week. *Spring semester.*

**CHEM 211 Organic Chemistry****4**

Prerequisite: CHEM 152 with a minimum grade of *C*

A systematic study of the important classes of carbon compounds including their nomenclature, preparation, characteristic reactions and reaction mechanisms. Three lectures and one four-hour laboratory per week. *Fall semester.*

**CHEM 212 Organic Chemistry****4**

Prerequisite: CHEM 211

A continuation of CHEM 211. A systematic study of the physical and chemical properties of organic functional groups including aldehydes through amines and aromatic compounds. Includes an introduction to the theory and practice of Infrared spectroscopy, NMR, and Mass Spectrometry. Three lectures and one four-hour laboratory per week. *Spring semester.*

**CHEM 296 Research Methods I****1**

Prerequisite: ACT Math Score of 20 (SAT 480) or MATH 100

An introduction to the fields of descriptive and inferential statistics. Data sampling techniques, hypothesis testing and some applications of probability theory to business situations are examined. *Fall semester.*

**CHEM 311 Analytical Chemistry** 3

Prerequisites: CHEM 152

The principles and techniques of volumetric and gravimetric analysis are studied. A range of analytical methods are discussed and the ideas used by the class members to reason out the analysis of "real unknowns." Basic theory underlying analytical methods, such as equilibria and redox, are considered in detail. Also introduced are electrochemical and spectrophotometric methods of analysis. Principles are introduced in the two class meetings and the techniques are used in the analysis of "unknown" standards and real samples during the four-hour laboratory each week. *Fall semester.*

**CHEM 312 Instrumental Analysis (WR)** 3

Prerequisite: CHEM 311

Instrumental methods of analysis based primarily on electro-chemical reactions and interaction of matter with magnetic fields and electromagnetic radiation. Covered specifically in class and experienced in the laboratory are a range of chromatographic techniques, infrared and ultraviolet-visible spectro-photometry, Atomic Absorption spectrophotometry, NMR and Mass spectrometry and electrochemistry. A theoretical understanding is developed in the two lectures, while the four-hour laboratory gives hands-on experience with each of the instruments. Writing is developed through the laboratory reports. *Spring semester.*

**CHEM 386 Research Methods II** 1

Prerequisites: CHEM 151 and CHEM 296 or MATH 221

An introduction to the methods and mechanics of the research process. Topics include the nature, methods, literature, funding, limitations and strengths of scientific research. A literature search and proposal are required. *Spring semester.*

**CHEM 396 Research Methods III** 1

Prerequisite: CHEM 386

An emphasis upon research design. A research project is proposed, a research plan developed for the project and depending upon the nature of the study, experimental research initiated. Chemistry education majors complete the entire sequence of skills listed for Research Methods III and IV, but with a briefer project. *Fall semester.*

**CHEM 411 Physical Chemistry I** 4

Prerequisites: CHEM 152, MATH 286, PHYS 252. Class joins PHYS 351 for most of semester.

Introductory course in quantum mechanics including wave-particle duality, time-independent Schrödinger equation, harmonic oscillators, matrix treatment, and the wave treatment of the hydrogen atom. Uses and applications of differential equations and matrices are developed along with a historical perspective of the development of our understanding of quantum mechanics. Kinetics: The dynamics of chemical reactions are studied, as well as methods to determine rates, and common interpretations of mechanisms of chemical reactions from rate data. Four lectures per week. *Fall semester, alternate years.*

**CHEM/PHYS 412 Physical Chemistry II** 4

Prerequisites: CHEM 152, MATH 285, PHYS 252

Chemical thermodynamics is developed to describe energy and entropy changes in ideal and real gases and extended to a range of chemical systems. Manipulation of multiple variables is achieved by use of partial differential equations, and skill in identifying the conditions of the problem to derive the appropriate equations for a particular application are developed. Attention is given to the results of applying Gibbs Energy and other thermodynamic constructs to a variety of uses including electrochemistry and phase equilibria. Three lectures and one laboratory per week. *Spring semester, alternate years.*

**CHEM 423 Advanced Inorganic Chemistry** 4

Prerequisites: CHEM 311, MATH 184

A theoretical study of the reactions, mechanisms and structures of inorganic chemical systems with emphasis on coordination compounds of the transition elements, including an in-depth comparison of the three major bonding theories applicable to inorganic complexes. Theory and laboratory synthesis and study of a variety of inorganic compounds by different techniques. Three lectures and one four-hour laboratory per week. *Spring semester, alternate years.*

**CHEM/BIOI 445 Biochemistry I** 4

Prerequisites: CHEM 212 and BIOI 151 or 111

A study of the chemical properties and biological functions of amino acids, proteins, enzymes, nucleic acids, carbohydrates, lipids and cellular membranes. Covers metabolism including glycolysis, Krebs cycle and oxidative phosphorylation. The laboratory includes basic techniques and instruments used for biochemical research and biotechnology. Three lectures and one laboratory per week. *Fall semester.*

**CHEM 446 Biochemistry II** 3

Prerequisite: CHEM/BIOI 445

A continuation of Chem 445 Biochemistry I. An in-depth study of metabolism including the catabolism and biosynthesis of glycogen, fatty acids, amino acids, and nucleotides.. In addition, the class examines other aspects of biochemical systems. Three lectures per week. *Spring semester, alternate years.*

**CHEM 496 Research Methods IV (WR)** 1

Prerequisite: CHEM 396

Emphasizes active research and both oral and written reporting of research. The project proposed in CHEM 396 is carried out and both written and oral presentations of the research made. *Spring semester.*

**COMMUNICATION—DRAMA**

**CODR 210 Religious Drama** 2

Surveys religious drama from ancient times to modern day. In addition to exploring the history of religious drama and reading significant texts from various time periods, students focus on creating, interpreting, and performing scripts. *Fall semester, alternate years.*

**CODR 229 Play Production I** 1-3

Prerequisite: Permission of instructor

Emphasizes a team-based approach to producing a play. Class members form a production company in which each student contributes to the success of the production by fulfilling responsibility in several aspects which include stage management, acting, lighting, sound, costuming, props management, set design and construction, publicity, and house management. Instruction in theater terminology, elements and practice is delivered within the context of

preparing a show for public performances. *CODR 229 and 329 offered concurrently: appropriate course level is based on the student's experience level and is selected in consultation with the instructor. Number of credits is determined by the instructor based upon the extent of the student's involvement in a production. May be repeated for credit with permission of the instructor. Spring semester.*

**CODR 329 Play Production II** 1-3

Prerequisite: Permission of instructor  
Continuation of CODR 229.

**CODR 471 Play Direction** 3

Prerequisite: CODR 229, 329 and permission of instructor

Provides instruction and practice in the skills needed to direct a play: script selection; script preparation; budgeting; casting; conducting rehearsals; and overseeing various production elements. Culminates in public performance of a student-directed play.

**COMMUNICATION—JOURNALISM**

**COJR 151 Photography** 4

Provides the basic techniques in black-and-white photography, including camera usage, composition and darkroom skills. *Fall semester.*

**COJR 177 Fundamentals of Broadcasting** 3

An introductory course in broadcast journalism. Topics include principles and practice in journalistic broadcast writing; development of basic announcing skills for radio and television. Additional emphasis is given to writing, announcing and producing radio news, television news, and documentary programming. *Spring semester, alternate years.*

**COJR 221 Reporting (WR)** 3

Prerequisite: Sophomore standing

Introduces the student to basic newspaper reporting and writing. Students are encouraged to submit articles to *The Clocktower*. *Fall semester.*

**COJR 245 Editing** 3

Covers principles of editing, copy editing, layout, headline writing, handling of pictures, achieving editorial balance and integrity. Students concentrate on practical applications for actual publications. *Fall semester.*

**COJR 448 Advanced Reporting (WR)** 3

Prerequisite: COJR 221

Provides a comprehensive examination of news gathering skills with an emphasis on assimilating material derived from interviews, observation, public records and other documents. Class assignments involve extensive field research and article preparation. *Spring semester, alternate years.*

**COJR 457 Magazine Writing (WR)** 3

Prerequisite: COJR 221 or permission of instructor

Covers techniques for writing and marketing publishable magazine articles on secular and religious topics. Students are encouraged to submit at least three articles to periodicals. *Spring semester.*

**COJR 458 In-Depth Reporting (WR)** 3

Prerequisite: COJR 221

Advanced reporting skills developed by guiding the student in utilizing fact-finding and research methods. *Spring semester, alternate years.*

**COJR 474 Journalism Practicum** 1-4

Prerequisite: 16 hours of journalism and communication courses

Represents 200 clock hours of on-the-job training with authorities in a particular field off campus. *Open only to majors.*

**COMMUNICATION**

**COMM 105 Public Speaking** 2

Combines basic theories of public speaking, listening, and interpersonal communication with actual speaking experiences in the classroom. *Fall/spring semesters.*

**COMM 125 Media and Meaning** 3

Surveys mass communication in the U.S. (radio, television, film and print) and looks at the history, content, economics and social impact of these media. *Fall semester.*

**COMM 157 Introduction to Signing** 2

Introduction for hearing persons to the culture of the deaf primarily through the various communication modes: gesture, finger spelling and sign language. *This course is not designed to prepare one to be an interpreter for the deaf. Spring semester, alternate years.*

**COMM 290 Sophomore Seminar** 1

Prepares students to apply for internships with specific attention given to resume preparation, preparation for job interviewing, development of a portfolio, and assistance in the job search process. *Fall semester.*

**COMM 320 Communication Theory and Research** 3

Students learn both the conceptual foundation for studying the human communication process and the application of these theories to communication research. Students develop skills in planning and implementing communication research. Topics include communication theories and models, research methods, survey techniques, research instruments design, content analysis, tabulation procedures and report findings. *Spring semester.*

**COMM 335 Video Production** 3

Introduction to video production including electronic news gathering, electronic field production, video editing and television graphics. Each student produces a completed video program. *Fall semester.*

**COMM 355 Advanced Speech and Oral Interpretation** 3

Prerequisite: COMM 105

Emphasizes: understanding and employment of effective rhetoric in public speaking events; and improving skills in oral interpretation of varied texts through enhancing personal versatility in body language, vocal control and delivery. *Spring semester, alternate years.*

**COMM 365 Institutional Development** 3

A practical approach to the basic principles of fundraising for nonprofit organizations. Familiarizes students with annual giving programs, capital campaigns, deferred giving plans and common sources of financial support. Includes specific instruction on writing grant proposals,

maintaining donor records, using direct mail and planning special events. *Spring semester, alternate years.*

**COMM 375 Development Practicum 3**

Participation in the activities of a development office which put into practice principles learned in COMM 365. Students are involved with prospect research, direct mailings, phonathons and similar work. *Open only to institutional development majors.*

**COMM 425 Intercultural Communication 3**

The effects of both verbal and nonverbal communication between cultures are studied. The course provides assessments of the media and business cultures around the world with an emphasis on how professionals can effectively function in other cultural settings. *Spring semester, alternate years.*

**COMM 465 Interpersonal Communication 3**

Prerequisite: COMM 105

Explores traditional and contemporary models of communication theory, with special application to the psychology of communication and human relations on an interpersonal level. *Spring semester.*

**COMM 480 Advanced Communication Seminar 3**

The configuration of the course varies each time the class is taught: employee communication, event planning, public relations and the Web, or topics not covered in another course. May be repeated for credit with permission of the instructor. *Fall semester, alternate years.*

**COMM 485 Senior Fundraising Project 2**

Selected readings and practical work focused on an aspect of the institutional development field relevant to each student's career objectives.

**COMM 490 Senior Seminar 1**

As the capstone for all communication majors, this course: prepares students to enter the job market, with specific attention given to résumé preparation, preparation for job interviewing, and development of a portfolio; discusses selected topics in communication; and discusses current events and their journalistic ramifications. The setting is informal with a discussion-centered format. *Spring semester.*

**COMMUNICATION—PUBLIC RELATIONS**

**COPR 241 Public Relations Principles 3**

Examines the philosophy, objectives and methods of an effective public relations program, with an emphasis on the role of public relations in a formal setting. Uses tools and techniques of communication which build positive relationships with an organization's various publics. Provides opportunities for practical experiences. *Spring semester.*

**COPR 316 Advertising Practices 3**

An introduction to advertising, especially in the print, broadcast, direct mail and out-of-home media. Also covers marketing strategies and operations of advertising agencies and similar organizations. *Spring semester.*

**COPR 332 Rhetoric (WR) 3**

Explores the classical approaches to rhetoric and logic; discusses modern avenues of persuasion as found in politics, advertising, and social issues. *Fall semester, alternate years.*

**COPR 377 Crisis Public Relations 2**

Applications of public relations in a crisis situation. Students learn how to prepare for a crisis and what to do when a crisis occurs. In addition, students learn about assessment strategies following a crisis. Case studies take a central role in instruction. *Spring semester, alternate years.*

**COPR 445 Public Relations Campaigns (WR) 3**

Prerequisite: COPR 241

Practical applications of public relations principles including: case studies; planning of campaigns and special events; and specific communication techniques for internal and external audiences. Students create material for newsletters, media publicity and audio-visual pieces that contribute to portfolio development. *Spring semester, alternate years.*

**COPR 475 Public Relations Practicum 1-4**

Prerequisite: 16 hours of public relations and communication courses

Represents 200 clock hours of on-the-job training with authorities in a particular field off campus. *Open only to majors.*

**COMPUTING****CPTR 125 Introduction to Computers 3**

Prerequisite: Skill to type at least 20 words per minute

A look at the fundamentals of computers (hardware, software, privacy, ethics, etc.) with the majority of time being devoted to hands-on projects in the Internet, word processing, spreadsheets and databases in the Windows environment. Designed for students with limited knowledge of computer applications. *Fall/spring semesters.*

**CPTR 190 PC Technology Fundamentals 1**

Prerequisite: CPTR 125 or permission of the instructor

Explores hardware components of the PC in terms of troubleshooting, maintaining, upgrading, installing peripheral devices and understanding the PC architecture. *Spring semester.*

**CPTR 220 Microcomputer Applications 3**

Prerequisite: High school course in computer applications or equivalent

Extensive hands-on experience in word processing, electronic spreadsheets, presentations software, database management and basic Windows operating system commands. Designed for students with working knowledge of word processing (tables, formatting, graphics), spreadsheet basics and the Internet. *Fall/spring semesters.*

**CPTR 225 Web Development Basics 1**

An introduction to Web publishing. Major emphasis is placed on designing and creating Web sites using XHTML. *Fall semester.*

**CPTR 226 Computer Science I 4**

Prerequisites: CPTR 125 or permission of instructor; MATH 111 or ACT math score 20 (SAT of 480)



Introduction to computer science, programming, and problem solving. Structured and object-oriented programming techniques are presented and applied through the creation of programming assignments. *Fall semester.*

**CPTR 227 Computer Science II** 4

Prerequisite: CPTR 226 with a minimum grade of C

Advanced programming principles and problem solving techniques are applied in an object-oriented programming environment. Abstraction and data structures (stacks, queues, linked lists, etc.) are explored. *Spring semester.*

**CPTR 230 Computer Organization** 3

Prerequisite: CPTR 226

An introduction to hardware design concepts including: Boolean Logic, Digital Arithmetic, Processor Organization, Machine Language Programming, Input/Output, Memory Organization, System Support Software, and Communication. *Spring semester, alternate years.*

**CPTR 240 Linux Administration and Security** 3

Overview of how to interact with, install and administer the Linux operating system and Apache Web server. Also covers the basic of computer security both from an IT and user perspective. *Spring semester.*

**CPTR 310 Data Structures and Algorithms** 3

Prerequisites: CPTR 227, MATH 340

An extension to the abstraction and algorithm design and analysis introduced in CPTR 227. Topics may include analysis of algorithms, asymptotic complexity bounds, fundamental algorithmic strategies, dynamic programming, introduction to complexity theory, data structures (tree structures, hash tables, queues, graphs). *Fall semester, alternate years.*

**CPTR 320 Networking** 3

Prerequisite: CPTR 240

Overview of networking including networking hardware and software, local area networks, wide area networks and network communication. Hands-on experience designing a network, configuring CISCO routers, setting up LAN and configuring network software. *Fall semester.*

**CPTR 325 Computer Science III** 3

Prerequisites: CPTR 227, 240

Explores the newer programming languages and techniques used in traditional, object-oriented, and Web-based application environments. Possible languages and topics include: Java, PHP, Perl, NET and graphics C++. The focus is on comparing languages and evaluating their strengths and weaknesses. This course is periodically updated for newer languages and technologies. *Fall semester.*

**CPTR 327 Systems Analysis and Design** 3

Prerequisite: CPTR 220 or 226

An introductory systems analysis and design course for those who want to be an information systems analyst, consultant, or project manager; and for those who will be users or managers involved in systems development projects. Covers information systems concepts, and the systems analysis and design methodologies and techniques, as well as techniques used during the development of information systems. Also explores project management concepts and issues that impact the development and acceptance of information systems. *Spring semester.*

**CPTR 335 Web Technologies** 3

Prerequisites: CPTR 225, 226

Topics may include ASP.NET, Java servlets, ISPs, PHP, Perl, Web services, database connectivity, application security and an introduction to Web publishing. Major emphasis is placed on designing and creating Web sites using XHTML. *Fall semester.*

**CPTR 405 Software Engineering** 3

Prerequisites: CPTR 227, 240, 327

Explores contemporary methodologies used in software development. Includes a major software development project that applies one of the methodologies studied. *Fall semester, alternate years.*

**CPTR 420 Windows Administration and Security** 3

Prerequisite: CPTR 320

Explores advanced server and network applications (including Windows Server installation), management of profiles and policies, security issues (including Active Directory, .Net security model and various permissions) and application services such as Internet Information Server, SQL/MySQL server, and MS Exchange Server. *Spring semester.*

**CPTR 424 Database Systems** 3

Prerequisites: CPTR 227, 240, 327; junior standing

Covers both a theoretical and practical understanding of database management systems. Emphasizes the relational database model. Implementation of a database application that uses a relational database and SQL is required. *Fall semester.*

**CPTR 451 Operating Systems Principles** 3

Prerequisites: CPTR 230, 310

Organization and structure of operating systems. Control, communication, and synchronization of concurrent processes. Process management including asynchronous concurrent processes and deadlock. Memory organization and management including paging, segmentation and virtual memory. Job and process scheduling. File system concepts and structure. Performance, protection and security. *Spring semester, alternate years.*

**CPTR 475 Internship in Computing (WR)** 1-3

Prerequisites: Junior or senior standing (must have completed a substantial amount of the degree requirements) and permission of the division chair

A capstone course that integrates knowledge and abilities gained through the computer curriculum with “real-life” work experiences in a computer related field.

**CPTR 476 Applied Systems Development Project (WR)** 1-3

Prerequisites: Junior or senior standing (must have completed a substantial amount of the degree requirements) and permission of the division chair

A capstone systems course integrating the knowledge and abilities gained through the programming, systems analysis and design, and database courses. A comprehensive systems development project is required.

**CPTR 477 Applied Systems Management Project (WR)** 1-3

Prerequisites: Junior or senior standing (must have completed a substantial amount of the degree requirements) and permission of the division chair

A capstone systems course integrating the knowledge and abilities gained through the microcomputer and management courses. Students supervise the work of others and oversee the appropriate utilization of resources in a management area of computer information systems.

## **ECONOMICS**

### **ECON 235 Principles of Microeconomics 3**

Prerequisites: ENGL 112, MATH 111

Emphasizes basic economic concepts and problems, the capitalistic system, markets, price systems, allocation of resources, production, consumption, and employment. *Fall semester.*

### **ECON 236 Principles of Macroeconomics 3**

Prerequisites: ENGL 112, MATH 111; may be taken before ECON 235

An introduction to the principles of economic analysis, economic institutions and issues of economic policy. Emphasizes aggregative economics, including national income, monetary and fiscal policy and international trade. *Spring semester.*

## **EDUCATION**

### **EDUC 125 Introduction to Teaching 3**

Includes a study of the historical and philosophical backgrounds, aims, curriculum, organization, finance and current issues of American public and nonpublic education. Also provides training in the use of audiovisual equipment/technology. Twenty hours of field experience required. *Fall semester.*

### **EDUC 218 Philosophy of Education (WR) 3**

Prerequisites: ENGL 112, Provisional admission to the teacher preparation program

Includes a survey of the traditional and modern philosophies and their influence on educational practices, and the relationship of educational theories to their philosophic sources. Helps students understand the need for and develop a personal philosophy of Christian education. The missions of the Seventh-day Adventist Church and Union College influence the content of this course. Up to ten hours of field experience required. *Spring semester.*

### **EDUC 225 Seminar in Education Diversity: Multicultural/HRT 1**

Prerequisite: Provisional admission to the teacher preparation program or permission of division chair

Focuses on three major areas: the ability to recognize personal and societal dehumanizing biases including, but not limited to, sexism, racism, prejudice and discrimination; the ability to recognize the ways these biases may be reflected in instructional materials and processes; and the ability to translate this knowledge into attitudes and strategies which result in favorable experiences for all students. Gives education majors opportunity to interact with diverse school populations, especially those of other cultures. Twenty hours of field experience required. *Fall semester.*

### **EDUC 245 Physical Education in Elementary School 2**

Prerequisite: EDUC 125

Investigates the sequence of development of fundamental motor patterns and perceptual motor skills, factors influencing this development, assessment and evaluation, and methods, activities and technology for developing these skills. Up to 20 hours of field experience required. *Spring semester.*

**EDUC 302 ESL Teaching Methodology and Materials** 3

Prerequisite: EDUC 345 or permission of division chair

Explores strategies and practical methods for teaching non-native English speaking students. Training includes techniques for the development of the K-12 ESL student's listening, speaking, reading, writing, grammar, vocabulary and pronunciation skills. Up to 20 hours of field experience required. *Spring semester.*

**EDUC 342 Human Relations** 1

Prerequisite: Practicing Teacher

Focuses on three major areas: the ability to recognize personal and societal dehumanizing biases including, but not limited to, sexism, racism, prejudice and discrimination; the ability to recognize the ways these biases may be reflected in instructional materials and processes; and the ability to translate this knowledge into attitudes and strategies which result in favorable experiences for all students. *Summer.*

**EDUC 345 Learning Theories and Measurement** 3

Prerequisites: EDUC 125, PSYC 215, successful completion of the Pre-Professional Skills Test (PPST), and full admission to the teacher preparation program or permission of division chair

An intradisciplinary approach to fundamentals of learning and measurement. Includes a survey of behavioral, cognitive, social learning, constructivist, and humanistic learning theories; teaching, motivational strategies, management and discipline, and assessment. Up to 20 hours of field experience required. *Fall semester.*

**EDUC 346 Special Education in the Classroom** 3

Prerequisite: EDUC 345 or permission of division chair

Causes of developmental patterns, behavioral characteristics and educational alternatives associated with specific exceptionalities which include the visually impaired, speech and language impaired, hearing impaired, orthopedically handicapped and other health impaired, mentally impaired, learning disabled, behavior disordered, gifted and talented, bicultural child and the abused and neglected are studied. Overview of PL 94-1442 is included. Course does not apply toward psychology minor. Twenty hours of field experience required (15 hours special needs; 5 hours gifted). *Spring semester.*

**EDUC 355 Secondary Methods** 2

Prerequisite: Practicing Teacher

Helps the teacher translate teaching/learning theory into practice on the secondary level. Includes study of lesson planning, scheduling, managing the learning environment, discussion techniques, legal responsibilities, state and denominational standards and working with various publics. A choice of up to two subject areas methods EDUC 361-370 may be taken concurrently. *Summer.*

**EDUC 356 General Secondary Methods** 3

Prerequisite: EDUC 345

Designed to help the teacher candidate translate teaching/learning theory into practice. Includes study of lesson planning, instruction, management, assessment, selected instructional strategies, legal responsibilities, state and denominational standards, and working with education's various publics. Students demonstrate micro-teaching competence. Up to 20 hours of field experience required. *Spring semester.*

<b>EDUC 357 Literature for Children and Adolescents</b>	<b>2</b>
Prerequisite: EDUC 345 or permission of division chair	
A survey of youth literature and teaching strategies to encourage application of languages and literacy genre, to foster personal-social growth and to encourage life-long enjoyment of literature. <i>Fall semester.</i>	
<b>EDUC 360 General Elementary Methods</b>	<b>2</b>
Prerequisite: Practicing Teacher	
Helps the teacher translate teaching/learning theory into practice. Includes study of lesson planning, scheduling, managing the learning environment, discussion techniques, legal responsibilities, state and denominational standards and working with education's various publics. A choice of up to two subject areas methods EDUC 361-370 may be taken concurrently. <i>Summer.</i>	
<b>EDUC 361 Art Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	
Prerequisite or corequisite: EDUC 355 or 360	
Directed specific assignments in subject area as applications of EDUC 355 or 360. <i>Summer.</i>	
<b>EDUC 362 Health Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	
Prerequisite or corequisite: EDUC 355 or 360	
Directed specific assignments in subject area as applications of EDUC 355 or 360. <i>Summer.</i>	
<b>EDUC 363 History Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	
Prerequisite or corequisite: EDUC 355 or 360	
Directed specific assignments in subject area as applications of EDUC 355 or 360. <i>Summer.</i>	
<b>EDUC 364 Language Arts/English Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	
Prerequisite or corequisite: EDUC 355 or 360	
Directed specific assignments in subject area as applications of EDUC 355 or 360. <i>Summer.</i>	
<b>EDUC 365 Math Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	
Prerequisite or corequisite: EDUC 355 or 360	
Directed specific assignments in subject area as applications of EDUC 355 or 360. <i>Summer.</i>	
<b>EDUC 366 Music Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	
Prerequisite or corequisite: EDUC 355 or 360	
Directed specific assignments in subject area as applications of EDUC 355 or 360. <i>Summer.</i>	
<b>EDUC 367 Elementary Reading Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	
Prerequisite or corequisite: EDUC 355 or 360	
Directed specific assignments in subject area as applications of EDUC 355 or 360. <i>Summer.</i>	
<b>EDUC 368 Religion Methods</b>	<b>1</b>
Prerequisite: Practicing Teacher	

Prerequisite or corequisite: EDUC 355 or 360

Directed specific assignments in subject area as applications of EDUC 355 or 360. *Summer.*

**EDUC 369 Science Methods** 1

Prerequisite: Practicing Teaching

Prerequisite or corequisite: EDUC 355 or 360

Directed specific assignments in subject area as applications of EDUC 355 or 360. *Summer.*

**EDUC 370 Social Science Methods** 1

Prerequisite: Practicing Teaching

Prerequisite or corequisite: EDUC 355 or 360

Directed specific assignments in subject area as applications of EDUC 355 or 360. *Summer.*

**EDUC 410 Methods: Art Education** 3

Prerequisite: EDUC 218

An exploration of the theory and practice of teaching art in grades 7-12 as well as assessment strategies. Includes approximately 20 hours of classroom experiences and use of appropriate technology. *Spring semester.*

**EDUC 411 Methods: Business Education** 3

Prerequisite or corequisite: EDUC 218

Explores history of business subjects, techniques for teaching secondary students, textbook and resources selection, use of technology, organization, motivation, assessment, planning and ethics. Includes 20 hours of classroom experiences. *Fall semester.*

**EDUC 412 Methods: Language Arts Education** 3

Prerequisite or corequisite: EDUC 218

A study of various teaching methods appropriate for the secondary classroom. Attention is given to planning, motivation, instruction, assessment, technology, textbook and resource selection. Includes 10 to 20 hours of classroom experiences. *Fall semester.*

**EDUC 413 Methods: Mathematics Education** 3

Prerequisite: EDUC 218

Includes the theoretical and practical aspects of secondary mathematics education. Students study current journals, teaching and assessment strategies, textbook selection and use of technology. Includes 10 to 20 hours of classroom experiences. *Spring semester.*

**EDUC 414 Methods: Music Education** 3

Prerequisite or corequisite: EDUC 218

Goals, objectives, organization, interrelationships between music and the entire curriculum. Includes 10 to 20 hours of classroom experiences and use of technology. *Fall semester.*

**EDUC 415 Methods: Social Science and Religious Education** 3

Prerequisite: EDUC 218

An exploration of secondary social science, teaching strategies, textbook selection criteria, planning and assessment. Also emphasizes techniques for teaching secondary religion. Includes 10 to 20 hours of classroom experiences and use of technology. *Fall semester.*

**EDUC 416 Methods: Physical Education** 3

Prerequisite or corequisite: EDUC 218

Study strategies for teaching secondary students physical fitness, individual skills and team sports. Includes 10 to 20 hours of planning, assessment and classroom experiences and use of technology. *Fall semester.*

**EDUC 418 Methods: Science Education** 3

Prerequisite or corequisite: EDUC 218

An exploration of secondary science teaching strategies, materials, textbooks, planning, assessment, ethics and preparation and supervision techniques for selected laboratory activities. Includes 10 to 20 hours of classroom experiences and use of appropriate technology. *Fall semester.*

**EDUC 420 Elementary Bible Methods** 1

Prerequisite: Practicing Teacher

Designed to help practicing elementary teachers strengthen their walk with Christ, gain insights into the importance of Bible lessons, develop Bible lessons that inform and inspire, search the Web for resources to enhance Bible lessons, develop a unit of study and lead their students to Christ. This course fulfills denominational certification requirements.

**EDUC 421 Secondary Bible Methods** 1

Prerequisite: Practicing Teacher

Designed to help practicing secondary teachers strengthen their walk with Christ, gain insights into the importance of Bible lessons, develop Bible lessons that inform and inspire, search the Web for resources to enhance Bible lessons, develop a unit of study and lead their students to Christ. This course fulfills denominational certification requirements.

**EDUC 425 Educational Organization and Administration (K-8)** 3

Prerequisite: EDUC 345

An overview of curriculum development: basic concepts and principles of educational organization and administration, classroom management and pupil adjustment, and legal aspects of teaching. *Spring semester.*

**EDUC 445 Reading Methods (K-8)** 4

Prerequisite: EDUC 345

Instruction in the method of teaching fundamental reading proficiencies: readiness, vocabulary instruction, locational and study skills, comprehension, questioning, management, diagnostic skills and assessment. A survey of reading programs and approaches and appropriate technology is included. Opportunity is given to plan and use varied instructional approaches in the development of oral language, reading and writing. Up to 20 hours of field experiences are included. Can be used to meet the reading methods requirement for those receiving both an elementary and a secondary endorsement. *Spring semester.*

**EDUC 446 Reading Assessment (K-8)** 2

Prerequisite: EDUC 345

Instruction in assessing the reading abilities and progress of elementary students. Emphasizes stages of literacy and techniques of informal reading, spelling and writing assessment. Students gain experience by conducting assessments and planning literacy activities in field-based, one-on-one sessions with elementary learners. *Fall semester.*

**EDUC 457 Methods in Language Arts (K-8)** 4

Prerequisite: EDUC 345

Emphasis is placed on elementary (K-8) language arts skills (viewing, listening, reading, speaking, visually representing, and writing). Spelling, grammar, handwriting and reference skills are specifically included. Traditional and whole language approaches are studied, as are multicultural literature and the evaluation and use of the Internet and other technology. Microteaching and field experience are included. *Spring semester.*

**EDUC 458 Methods in Religion, Health, Science and Social Studies (K-8) 4**

Prerequisite: EDUC 345

Instruction and practice in teaching Bible, health, science and social studies to grades K-8. Students learn to use scope and sequence charts and curriculum guides. Students develop lesson plans and learning centers, use technology and learn a variety of teaching and assessment techniques. Students demonstrate microteaching competence. Up to 25 hours of field experiences are included. *Fall semester.*

**EDUC 465 Math Methods and Materials (K-8) 3**

Prerequisite: EDUC 345

K-8 math content taught in conjunction with appropriate teaching strategies. For each concept presented, a variety of interpretations and possible applications are given, followed by related activities for children that develop specific concepts and skills. Practicum and technology module are included. *Fall semester.*

**EDUC 475 Student Teaching 1-16**

Prerequisite: Student Teaching Authorization from teacher preparation committee

Real-life experiences in a wide variety of settings providing creative conventional and nontraditional hands-on teaching/learning opportunities for those planning to enter the helping professions. *May be repeated for additional credit. Secondary -Fall semester. Elementary - Fall/ spring semesters.*

**EDUC 476 Content Reading and Writing 3**

Corequisite: EDUC 345

Designed to help prepare secondary classroom instructors to utilize reading and writing to enhance the teaching of their subject areas. Included are affective learning, vocabulary, comprehension and study skills, instructional strategies for individual content areas, and use of multiple resources. Students apply literacy strategies in field settings and through microteaching. *Fall semester.*

**EDUC 477 Secondary Reading Methods 2**

Prerequisite: Practicing Teacher

Designed for the in-service teacher, this course explores using metacognition, interactive reading and writing strategies, and current research on vocabulary development, comprehension, and graphic organizers in 7-12 classrooms. *Summer.*

**EDUC 485 Issues in Education 1**

Prerequisite: EDUC 345

This course for secondary education majors includes discussion of contemporary educational trends and issues and certification procedures. *Spring semester.*

**ENGLISH**

**ENGL 100 Basic Skills in English 2**



Focuses on the skills necessary to successfully complete ENGL 111 College Writing I including sentence creation, paragraph development and essay writing. Stresses critical thinking, analytical reading and the writing processes of invention, drafting, peer review and revision. A minimum grade of C in ENGL 100 is required to enter ENGL 111. The course does not satisfy general education requirements but does count toward elective credit. *Fall semester.*

**ENGL 111 College Writing I 3**

Prerequisites: Minimum ACT English raw score of 17 or an SAT Verbal score of 430, ENGL 100 with a minimum grade of C or, for English as a Second Language students, a minimum TOEFL score of 550 or 525 plus a passing essay.

The writing of clear, concise and well-developed exposition. Objectives include peer evaluation, learning to revise and edit drafts and evaluation of models for writing. Critical thinking and editing skills are emphasized. *Fall/spring semesters.*

**ENGL 112 College Writing II 3**

Prerequisite: ENGL 111

The application of rhetorical principles to further expository and persuasive writing and sharpening of skills in basic research writing. Readings, class discussions and writing assignments foster critical thinking skills (including the recognition of logical fallacies) and acquaint students with academic language. Includes an introduction to various styles of documentation. *Fall/spring semesters.*

**ENGL 202 Language and Culture 1**

Analyzes the dynamics of culture and its influence on language development. Emphasizes the examination of various aspects of American culture that have characterized the English language and the implications that this has for English language learners.

**ENGL 235 Approaches to Literature: British and American (WR) 3**

Prerequisite: ENGL 112

The writing of analytical persuasive papers on the major literary genres: poetry, short story, novel and drama. Writers demonstrate a working knowledge of the tools of literary criticism in analyzing several works. *Fall semester.*

**ENGL 236 Approaches to Literature: World (WR) 3**

Prerequisite: ENGL 112

A chronological approach to major works of literature influencing Western culture from major genres. The course may cover either the ancient Hebrew, Greek and Roman worlds through the Renaissance, seventeenth century through today or non-U.S. Western Hemisphere. A chief aim is the appreciation and enjoyment of various cultures. *General education requirement for educational certification. Spring semester.*

**ENGL 277 Grammar and Linguistics 4**

Prerequisite: ENGL 112

Introduces the origin, history and development of the English language semantics and various grammatical systems. Structural and transformational systems are emphasized. *Spring semester, alternate years.*

**ENGL 299 Seminar in Non-Western Literature (WR) 3**

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

An overview of major non-Western writers, including African, Indian, Chinese, Japanese, et al. Encouraged for students interested in international service. *Fall semester, alternate years.*

**ENGL 302 TESL Grammar and Linguistics** 3

Examines the basic structures of the English language and the unique usage problems that non-native English language learners face. These challenges include subject-verb agreement, modals, passive voice and conditional sentences. Particular problems in pronunciation are also examined. *Summer.*

**ENGL 303 Second Language Acquisition** 3

A course for prospective teachers of English to speakers of other languages or foreign language teachers. Topics include comparison/contrast of first and second language acquisition (SLA), cognitive strategies in SLA and interlanguage communication. *Summer.*

**ENGL 304 Second Language Assessment** 2

A course to provide an overview of assessment techniques and instruments used to identify and remediate specific learning difficulties associated with normal second language development in the areas of listening, speaking, reading and writing. Includes a review of research concerning assessment as it relates to error analysis in the second language context. Students have the opportunity to implement diagnostic skills and remediation strategies in student case studies. *Summer.*

**ENGL 345 Studies in Early American Literature (WR)** 3

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

A consideration and evaluation of significant literary works in the Colonial, Revolutionary and Romantic Periods (1607-1865). Recommended for students with some experience in literature. *May be repeated for credit with permission of instructor. Spring semester, alternate years.*

**ENGL 348 Studies in British Literature (WR)** 3

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

Configuration varies each time the course is offered, with alternate concentration on the Enlightenment, Romantic and Victorian Eras. *May be repeated for credit with permission of instructor. Fall semester, alternate years.*

**ENGL 352 Women and Minority Writers (WR)** 3

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

A consideration and evaluation of major works by women and minority writers (in America and England from the eighteenth century to the present) in conjunction with an overview of feminist and minority critical stances. *Fall semester, alternate years.*

**ENGL/RELB 366 Biblical Literature (WR)** 3

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

A survey of the Bible's literary masterpieces from an archetypal perspective. Literary patterns, techniques and terminology are applied to Bible writers and their writings. *May be used to meet ENGL or RELB general education requirements but not both. Fall semester, alternate years.*

**ENGL 378 Technical Writing and Grant Proposals (WR)** 3

Prerequisite: ENGL 112

Provides intensive instruction in the essentials of technical writing including instructional and manual writing, report writing, letter writing, electronic documentation, managerial communication and grant-proposal writing. *Spring semester, alternate years.*

**ENGL 379 Creative Writing (WR) 3**

Prerequisite: ENGL 112

Focuses on the writing of short creative narratives and poetry. *Spring semester, alternate years.*

**ENGL 436 Studies in American Literature (WR) 3**

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

A consideration and evaluation of the significant literary works of American Realism and selected twentieth century authors, Post-Civil War to early twentieth century. Recommended for students with some experience in literature. *Fall semester, alternate years.*

**ENGL 445 Early British Literature (WR) 3**

Prerequisite: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

Presents major authors and traditions from the Anglo-Saxon period through the seventeenth century. Configuration varies each time course is offered, with alternate concentration on separate periods. *May be repeated for credit. Fall semester, alternate years.*

**ENGL 475 Twentieth-Century Writers (WR) 3**

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

Presents an overview of twentieth century American (or British) literature (novel, poetry or drama) and critical stances. *May be repeated for credit. Spring semester, alternate years.*

**ENGL 485 Advanced Studies Seminar (WR) 3**

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236 or permission of the instructor

Configuration varies each time the class is taught: Christian literature, biography or a period not covered in another course. *May be repeated for credit with permission of instructor. Spring semester, alternate years.*

## **ENGINEERING**

Prerequisites are listed for each course (grades must be C or higher) but in some cases permission may be granted by the instructor.

**ENGR 111 Introduction to Engineering 2**

Engineering communications with emphasis on sketching, conventional engineering drafting practices, an introduction to Computer Aided Design, principles of descriptive geometry and problem solving skills. *Fall semester.*

**ENGR 112 Introduction to Engineering 2**

Prerequisite: ENGR 111

Continuation of ENGR 111. Includes a study of engineering analysis, an introduction to the design process, elements of professional engineering and advanced CAD. *Spring semester.*

**ENGR 211 Statics 3**

Prerequisite: MATH 184; corequisite: MATH 285

Includes a study of two- and three-dimensional statics, analytical and graphic methods using a modified vector approach. *Fall semester.*

**ENGR 212 Dynamics** 3

Prerequisite: ENGR 211; corequisite: MATH 286

Continuation of ENGR 211. Includes a study of kinetics, work and energy, dynamics of rotation, translation and plane motion, impulse and momentum. *Spring semester.*

**ENGR/PHYS 228 Electric Circuit Analysis** 4

Prerequisite: MATH 184

Introduces electric circuit variables and parameters, Kirchoff's law and circuit equations, AC steady-state analysis, frequency characteristics. Three lectures and one three-hour laboratory per week. *Fall semester.*

**ENGLISH AS A SECOND LANGUAGE**

Courses numbered below 100 are considered developmental and do not count toward the 128 semester hours required for graduation. Similarly, grades in these courses do not affect a student's grade point average (GPA). Only ten hours of courses numbered 100 and above count toward the 128 hours required for graduation. All ENSL prefix courses are available only to students whose primary language is not English.

**ENSL 012 Grammar I** 1-5

A basic program in two sections: 1) emphasis is on parts of speech, simple present tense, present progressive tense, and irregular verbs; 2) emphasis is on simple past tense, past progressive tense, simple future tense, modals, and comparisons. One 50-minute lab is included. The goal is to reach a TOEFL grammar score of 40. *Fall/spring semesters.*

**ENSL 014 Reading I** 1-5

An intensive program designed for basic reading skills and vocabulary development. Emphasis is placed on reading comprehension. One 50-minute lab is included. The goal is to reach a TOEFL reading score of 40. *Fall/spring semesters.*

**ENSL 016 Writing I** 1-5

Introduces beginning writing skills, helping to develop basic sentence structures and paragraphs. Also emphasizes basic grammar and reading. One 50-minute lab is included. The goal is to reach level 2 Test of Written English (TWE). *Fall/spring semesters.*

**ENSL 018 Speaking/Listening I** 1-5

Provides the student with opportunities to practice basic listening and speaking skills and to increase vocabulary. Three class sessions and one 50-minute tutor lab per week. The goal is to reach a TOEFL listening score of 40. *Fall/spring semesters.*

**ENSL 026 Writing II** 1-5

Prerequisite: Level 2 TWE

Further develops basic writing skills, emphasizes paragraphing. One 50-minute lab is included. The goal is to reach Level 3 TWE. *Fall/spring semesters.*

**ENSL 028 Speaking/Listening II** 1-5

Prerequisite: TOEFL listening score of 40 or higher

Provides the student with opportunities to develop English listening and speaking skills through a variety of methods, such as listening practice, presentations, discussions, and small group listening/speaking practice. Three class sessions and one 50-minute tutor lab per week. The goal is to reach a TOEFL listening score of 48. *Fall/spring semesters.*

**ENSL 043 ESL Lab 1-5**

An independent course which provides extra help in specific areas. Arranged with the ESL advisors. *Fall/spring semesters.*

**ENSL 122 Intermediate Grammar 1-5**

Prerequisite: TOEFL grammar score of 40 or higher

An intermediate course which reviews irregular verbs, the main tenses, and the structural forms of statements and questions. Passive voice, modals, gerunds and infinitives are also presented. A weekly essay focuses on grammatical structures. One 50-minute lab is included. The goal is to reach the TOEFL grammar score of 48. *Fall/spring semesters.*

**ENSL 124 Intermediate Reading 1-5**

Prerequisite: TOEFL reading score of 40 or higher

Designed to enhance beginning level reading skills. Emphasizes comprehension and vocabulary development. One 50-minute lab is included. The goal is to reach a TOEFL reading score of 48. *Fall/spring semesters.*

**ENSL 132 Grammar III 1-5**

Prerequisite: TOEFL grammar score of 48 or higher

A high-intermediate to advanced course in grammar which emphasizes a number of language complexities such as clauses, conditional sentences, comparisons, parallelism, count and non-count nouns. Students practice grammatical application with a weekly essay and occasional speeches. One 50-minute lab is included. The goal is to reach a TOEFL grammar score of 55. *Fall/spring semesters.*

**ENSL 134 Reading III 1-5**

Prerequisite: TOEFL reading score of 48 or higher

Designed to further reading skills learned in Reading II. Emphasis is placed on developing a larger English vocabulary, increasing reading speed and comprehension, and developing reading strategies while reading many different kinds of reading material. One 50-minute lab is included. The goal is to reach a TOEFL reading score of 55. *Fall/spring semesters.*

**ENSL 136 Writing III 1-5**

Prerequisite: Level 3 Test of Written English (TWE)

Emphasizes the process of planning, writing, revising, and editing essays for a particular audience. This course encourages the clear written expression of ideas and the importance of correct word choice, organization, and sentence construction. Grammar, syntax, usage, and paragraph structure are also covered. A research project is required. The goal is to reach Level 4 TWE. *Fall/spring semesters.*

**ENSL 138 Speaking/Listening III 1-5**

Prerequisite: TOEFL listening score of 48 or higher

Combines basic theories of public speaking, listening and interpersonal communication with actual speaking experiences in the classroom. Modern idiomatic expressions in American culture and language are discussed. Students practice CAL (Computer Assisted Learning) by completing several computer presentations in class. Two class sessions and one 50-minute tutor lab per week. The goal is to reach a TOEFL listening score of 55. *Fall/spring semesters.*

**ENSL 187 TOEFL Preparation 1-5**

Prerequisite: TOEFL grammar score of 48 or higher

This advanced course reviews the structure of the English language and provides practice on the skills needed to pass TOEFL. Students practice grammatical application with a weekly essay. One 50-minute lab is included. The goal is to reach a TOEFL grammar score of 55. *Fall/spring semesters.*

## **FINANCE**

### **FNCE 215 Personal Finance**

**3**

Practical financial planning dealing with the day-to-day issues that confront an individual or family, such as budgeting, taxes, housing, credit, insurance, savings, investments, wills, estates, and retirement planning. *Fall semester.*

### **FNCE 325 Business Finance**

**3**

Prerequisite: ACCT 212

Emphasizes the fundamental principles of short- and long-term financial policy in business organization and operation. Also includes valuation models for stocks and bonds, analysis of financial statements, capital budgeting, working capital management, and a review of financial markets. *Fall semester.*

### **FNCE 330 Financial Institutions and Markets**

**3**

Prerequisites: ACCT 212, ECON 235, 236

A study of capital markets and financial institutions such as banks, thrifts and insurance companies. The study of capital markets focuses on a wide range of instruments for financing, investing, and controlling risk in today's financial markets. *Fall semester.*

### **FNCE 332 Investments**

**3**

Prerequisites: MATH 111 or ACT math raw score of 20 or SAT math score of 480; sophomore standing

A study of investment alternatives and the development of rational investment objectives and philosophies for the individual. Major types of investments studied in detail include: stocks; bonds; real estate; money market instruments; mutual funds; and tax-sheltered investments. *Spring semester.*

### **FNCE 370 International Finance**

**3**

Prerequisite: MATH 111

A study of the international financial environment and operation of multinational enterprises, with major focus on trade, balance of payments, foreign exchange, money and capital markets, investment decisions and comparative financial systems. *Spring semester.*

### **FNCE 475 Internship in Finance**

**1-3**

Prerequisites: Junior or senior standing and permission of division chair

Real-life experiences in a wide variety of settings providing creative and conventional hands-on learning opportunities.

## **FRENCH**

### **FREN 101 Beginning French**

**3**

An introductory course develops listening, speaking, reading and writing as well as the fundamentals of French grammar. The course gives students a foundation in contemporary French civilization, its arts and people. Students develop aural comprehension and the ability to express thought orally through readings of adapted French literature and poetry. *Fall semester, alternate years.*

**FREN 102 Beginning French 3**

Prerequisite: FREN 101

Continuation of FREN 101. *Spring semester, alternate years.***FREN 201 Intermediate French 3**

Prerequisite: FREN 102 or equivalent

Students are challenged to move into a more mature command of the French language. Regular readings of modern literary and journalistic material, presentations and discussions of cultural elements and ideas. *Fall semester, alternate years.*

**FREN 202 Intermediate French 3**

Prerequisite: FREN 201

Continuation of FREN 201. *Spring semester, alternate years.***GEOGRAPHY****GEOG 137 Introductory Geography 3**

A study of the basic concepts in contemporary geography. Includes population patterns, mapping techniques, locational analysis, spatial diffusion, landforms, climates, modeling, and urban and environmental concerns. *Spring semester, alternate years.*

**GEOG 227 World Regional Geography 3**

The study of contemporary concepts of geography with emphasis on the cultural-systematic approach. Major concern given to man-land relationships in a spatial analysis of world regions. *Spring semester, alternate years.*

**GERMAN****GRMN 101 Beginning German 3**

Introduction to basic German conversation structure, vocabulary and culture. Includes dictations, simple readings, written exercises, with the emphasis on oral communication. *Laboratory required.*

**GRMN 102 Beginning German 3**

Prerequisite: GRMN 101

Continuation of GRMN 101.

**GRMN 201 Intermediate German 3**

Prerequisite: GRMN 102 or equivalent

Intensive review of basic German grammar with an emphasis on oral communication. Includes dictations, readings and written exercises. *Laboratory required.*

**GRMN 202 Intermediate German 3**

Prerequisite: GRMN 201

Continuation of GRMN 201.

**GRAPHIC DESIGN****GRPH 150 Introduction to Graphic Arts 3**

Prerequisite: Art, Communication or Graphic Design major or permission of instructor

An introduction to the field of graphic design and to the three major types of computer applications used in print design. Students use Adobe Illustrator, Photoshop and QuarkXPress

applications to create corporate logos, business materials, photo collages and newsletters.  
*Fall/spring semesters.*

**GRPH 210 - Page Layout: Quark/InDesign** **3**

Prerequisite: GRPH 150 or permission of instructor

Reviews fundamental skills and stresses intermediate and advanced skills using computer-based page layout software. Equal time is spent studying Adobe InDesign and QuarkXPress, both on the Macintosh platform. Students learn the use of master pages, style sheets, typographic controls, and to flow and format text, to place and manipulate images, to combine images and text, to create tables, gradients and PDF's, and to correctly prepare digital files for offset printing.  
*Fall semester, alternate years*

**GRPH 225 - Digital Photography** **3**

Prerequisite: GRPH 150 or permission of instructor

A study of photography using digital tools, technology, and output. Students will learn the core concepts of photography and how to manage a digital workflow, with emphasis on practical control of image making for application such as journalism, commercial photography, and fine art photography. *Spring semester, alternate years*

**GRPH 250 - Digital Imaging** **3**

Prerequisite: GRPH 150 or permission of instructor

Focuses on image manipulation and enhancements using Adobe Photoshop, the industry standard for digital imaging. Students learn image enhancement and retouching, color correction, combining images and text, collaging, and high-quality digital output. *Fall semester, alternate years*

**GRPH 252 Computer Design** **3**

Prerequisite: GRPH 150

Building on basic computer and design skills, this course allows students to master Illustrator and Photoshop while making real-world design applications such as posters, logos, corporate identity, photo manipulation and compositing. *Fall semester.*

**GRPH 254 Publication Design** **3**

Prerequisite: GRPH 150

Further study of design principles and QuarkXPress. Includes production of print projects such as programs, brochures, magazine spreads and newsletters. *Spring semester.*

**GRPH 301 Web Design/Dreamweaver** **3**

Prerequisite: CPTR 225 or permission of instructor

Dreamweaver is a professional HTML editor for visually designing and managing Web sites and pages. Emphasis is on optimizing for speedy download and user-centered design. *Spring semester.*

**GRPH 350 - History of Graphic Design/Contemporary Design** **3**

A study of the historical development of graphic design and its influence on design trends today, including national and international styles, influences, major artists/designers, and their influence on current design trends. *Spring semester, alternate years*

**GRPH 358 Typography** **3**

Prerequisites: GRPH 150



A study of the history, terminology, practical and creative use of type in communication graphics. Comprehensive coverage of copy editing and fitting, illustration editing, print planning, and paper selection. Each student produces a final major project from plan to product. *Spring semester, alternate years.*

**GRPH 460 Prepress Production** 3

Prerequisite: GRPH 254

A technical look at how graphic materials are traditionally and electronically prepared for the printing process. Emphasizes preparation for offset lithography including ink and paper selection. Students develop a working knowledge necessary to successfully communicate with a service bureau or printer. *Fall semester, alternate years.*

**GRPH 464 Advertising Design** 3

Prerequisite: GRPH 150

Emphasizes the development of graphic design as it relates to advertising in the print media. Subjects include the creative process, design elements and principles, layout, production, typography and copy writing. Special attention is given to creativity and craftsmanship. *Spring semester, alternate years.*

**GRPH/ART 476 Internship** 1-4

Prerequisites: Junior or senior standing and permission of supervising instructor

A real-life experience in a wide variety of settings providing a hands-on learning opportunity. Each hour of credit represents 50 clock hours of contact time. *For majors only. May be repeated for additional credit.*

**HEALTH AND HUMAN PERFORMANCE ACTIVITY**

**HHPA credits may be applied to the general education requirements only once, but may be repeated for additional credit with permission of the instructor.**

**HHPA 115 Beginning Swimming** 1

Prerequisite: Non-swimmer, minimal swimming skills, familiar with water

Assists students to develop skills to the level equivalent to Red Cross Beginner and Advanced Beginners Swimming Certificates. *Fall/spring semesters.*

**HHPA 116 Leisure and Recreational Activities** 1

Provides instruction as well as participation in selected leisure and recreational activities. *Fall semester, alternate years.*

**HHPA 126 Team Activities** 1

Aids the student in learning and applying the skills and strategies common to major team sports. Basic sports covered include basketball, flagball, soccer, softball and volleyball. *Spring semester, alternate years.*

**HHPA 137 Gymnastics for Everyone** 1

Gives basic instruction in cheerleading, acrosports and ground tumbling. Students have a conditioning component and are required to perform a basic routine in an area of their choice. *Fall/spring semesters.*

- HHPA 138 Team Handball** 1  
Designed to improve cardiovascular fitness and instruction to gain knowledge and skill of the worldwide sport of handball. *Minimum of 12 students required for the class. Spring semester.*
- HHPA 139 Ultimate Frisbee** 1  
Designed to improve cardiovascular fitness and instruction to gain knowledge and skill of ultimate Frisbee. *Minimum of 12 students required for the class. Spring semester.*
- HHPA 140 Introduction to Outdoor Recreation** 1  
Designed to promote outdoor recreation and provide experience for those interested in preparing for different phases of camp life, outdoor activities and living, and teambuilding activities. *Fall/spring semesters.*
- HHPA 141 Self-directed Physical Education Activity** 1  
Designed to track an individual's exercise/activity online. Exercise technology beyond the Internet is taught and used: such as pedometers, heart rate monitors and video files. Activity could range from team and individual sports to an approved activity such as virtual reality exercise. This class does involve a research paper approved by the instructor. *Fall/spring semesters.*
- HHPA 142 Self Defense** 1  
Gain an understanding of the terminology and the physical techniques associated with self defense against kicks, strikes, grabs, ground fighting and attacks. *Fall/spring semesters.*
- HHPA 145 Beginning Badminton** 1  
Instruction and practice of the fundamental skills and techniques essential for successfully playing badminton. *Students provide their own equipment. Fall/spring semesters.*
- HHPA 147 Beginning Tennis** 1  
Instruction and practice in the fundamental skills involved in playing tennis. *Students provide their own equipment. Fall/spring semesters.*
- HHPA 149 Beginning Golf (Fee)** 1  
Instruction and practice in the skills essential to playing golf. Expenses in addition to tuition is necessary for greens fees. *Students provide their own equipment. Fall semester.*
- HHPA 151 Beginning Volleyball** 1  
Instruction and practice of basic skills for volleyball team participation. *Fall semester.*
- HHPA 153 Beginning Basketball** 1  
Instruction and practice of basic skills for basketball team participation. *Fall semester.*
- HHPA 155 Concepts of Wellness** 2  
Assists students in developing a practical theory of general and cardiovascular fitness. Reviews the principles of health instruction as cited in the Scriptures and counsels of Ellen White. Application in aerobics, aquatics, calisthenics, running and weight training accomplishes improved fitness. Individual programs are made so that students with disabilities can develop better fitness. *Fall/spring semesters.*
- HHPA 205 Special Physical Education** 1

Developmental activities, games and sports suited to the interests, capabilities and limitations of students with disabilities, who may not safely or successfully engage in regular, unrestricted participation in general physical education programs. *May be repeated for additional credit.*

**HHPA 215 Intermediate/Advanced Swimming 1**

Prerequisite: HHPA 115 or equivalent

Designed to assist students in developing skills to the level equivalent to Red Cross Intermediate and Advanced Swimmer Certificates. *Fall semester.*

**HHPA 217 Skin and Scuba Diving (Fee) 1**

Prerequisite: HHPA 215 or equivalent

Provides knowledge and skills necessary for underwater diving. A fee in addition to tuition is necessary for equipment rental. Other expenses may be incurred in connection with test dives. *Students must provide their own fins, mask and snorkel. The additional class fee can be reduced if the student has more personal scuba gear. Fall/spring semesters.*

**HHPA 235 Weight Training and Physical Conditioning 1**

Designed to give instruction for knowledge and experience in weight training relative to total fitness. *Fall/spring semesters.*

**HHPA 245 Cycling 1**

Introduction to the various types of cycling techniques. Emphasis is on muscular and cardio-respiratory endurance. Basic mechanical repairs of bicycles are also included. *Students provide their own equipment. Fall semester.*

**HHPA 250 Running for Fitness 1**

Designed to increase cardiovascular fitness and a practical knowledge of the healthy benefits of running as a lifestyle. *Fall/spring semesters.*

**HHPA 270 Racquetball (Fee) 1**

Instruction and practice in the fundamental skills involved in racquetball. *Additional fee beyond tuition is required. Students provide their own equipment. Fall/spring semesters.*

**HHPA 316 Lifeguard Training 1**

Prerequisite: HHPA 215 or equivalent

Focuses on the development and refinement of skill for individuals who have good swimming techniques, first aid and CPR background. Leads to the Red Cross, Lifeguarding, First Aid and CPR Certification upon successful completion of the class requirements. *Spring semester.*

**HHPA 317 Water Safety Instruction 1**

Prerequisite: HHPA 215 or equivalent

Designed to assist students in refining and developing skills necessary to teach aquatic courses. Leads to the Red Cross Water Safety Instructor Certificate upon successful completion of class requirements. *Fall semester.*

**HEALTH AND HUMAN PERFORMANCE THEORY**

**HHPT 129 Introduction to Fitness and Wellness Management 3**

An introduction to the fitness marketplace with emphasis in administration. Laboratory experience includes selected aspects of fitness including fitness screenings, weight management

programs and fitness assessments. Visitation to hospitals, private clubs and corporate clubs and included. This course requires ten (10) hours of field-based experience. *Fall semester, alternate years.*

**HHPT 215 Emergency Health Care** 2

Leads to certification in CPR/AED for the Professional Rescuer and Responding to Emergencies First Aid. Provides hands-on experience for the knowledge and skills necessary in an emergency to help sustain life and to minimize pain and the consequences of injury or sudden illness until professional medical help arrives. *Spring semester, alternate years.*

**HHPT 216 Athletic Injuries** 2

Focuses on skills for the treatment and care of athletic and recreational injuries. *Spring semester, alternate years.*

**HHPT 235 Principles of Sports Officiating** 1.5

Prerequisite: Permission of the instructor

Covers rules, mechanics and practical experience in officiating flag football, soccer and volleyball. Also covers interpretation and officiating techniques for intramural sports. Course meets twice a week throughout the semester with laboratory experience required. Completion of this course prepares students for National Intramural-Recreational Sports Association (NIRSA) officiating certification. *Students are required to have a complete official's uniform. Fall semester, alternate years.*

**HHPT 236 Principles of Sports Officiating** 1.5

Prerequisite: HHPT 235 or permission of the instructor

Covers rules, mechanics and practical experience in officiating basketball, floor hockey and softball. Also covers interpretation and officiating techniques for intramural sports. Course meets twice a week throughout the semester with laboratory experience required. Completion of this course prepares students for National Intramural-Recreational Sports Association (NIRSA) officiating certification. *Students are required to have a complete official's uniform. Spring semester, alternate years.*

**HHPT 256 Medical Terminology** 1

This self-study module enables students to pace their learning of medical terms. *Fall/spring semesters.*

**HHPT 316 Leisure and Recreational Activities** 2

Prerequisite: Permission of the instructor

Provides instruction as well as participation in selected leisure and recreational activities, and instruction in the methods and techniques of teaching these activities. *Fall semester, alternate years.*

**HHPT 326 Team Activities** 2

Prerequisite: Permission of the instructor

Aids the student in learning and applying the skills and strategies common to major team sports that will be used in teaching or coaching. Basic sports skills covered include basketball, flagball, floor hockey, soccer, softball and volleyball. *Spring semester, alternate years.*

**HHPT 335 Administration of Intramural Sports** 3

Prerequisites: HHPT 235, 236

Designed to provide instruction and develop skills necessary to administer a successful intramural program. Emphasis is also given to refining knowledge and skill from HHPT 235,

236. Laboratory experience required in administering, supervising and officiating intramural sports activities. *Fall semester, alternate years.*

**HHPT 337 Gymnastics for Teachers** 1

Prerequisite: HHPA 137 or permission of the instructor

Designed to further develop skills in cheerleading, acrosports and ground tumbling. Students become aware of safety considerations, create lesson plans and develop routines. Completion of this course prepares students to take the USA Gymnastics University Safety/Risk Management online course to obtain safety certification. *Spring semester, alternate years.*

**HHPT 340 Introduction to Coaching Theory** 2

Designed to develop coaching strategies and practical coaching theories. Includes information on sport psychology, sport pedagogy, and management. Completion of this course prepares students for the American Sport Education Program (ASEP) coaching certification. *Fall semester, alternate years.*

**HHPT 350 Practicum** 1-2

Prerequisite: Permission of instructor

Affords the opportunity to observe practical work in a student's chosen field, and to assist in the organization and administration of the program (on-campus). Approximately 45 hours per credit hour are spent in the completion of all aspects of the practicum experience. *Repeatable to total of two credits.*

**HHPT 356 Physiology of Exercise (WR)** 3

Prerequisites: BIOL 111, 112

Covers training, sedentary lifestyle and the study of the physiological factors related to human movement. *Fall semester, alternate years.*

**HHPT 357 Motor Learning** 3

Prerequisite: BIOL 111, 112

Covers neurological and psychological factors affecting the learning of movement skills. *Spring semester, alternate years.*

**HHPT 360 Biomechanics** 3

Prerequisites: BIOL 111, 112

Designed so the student may learn and apply the anatomical and mechanical principles relative to human movement. *Spring semester, alternate years.*

**HHPT 366 Adapted Physical Education** 2

Covers the physical educator's role in identifying and providing appropriate activities for individuals who have structural, physical, neurological or psychological disorders. *Fall semester, alternate years.*

**HHPT 370 Personal Training** 3

Prerequisites: BIOL 111, 112, HHPT 215, or permission of instructor

Designed to develop the skills necessary for being a personal trainer. Completion of this course prepares students for the National Council on Strength and Fitness (NCSF) personal training certification. *Spring semester, alternate years.*

**HHPT 437 Measurement and Evaluation in HHP** 3

Prerequisite: MATH 111 or above

Covers elementary statistics applicable to test construction, evaluation and grading. Students develop appropriate measurement and evaluation techniques essential for all professionals in the exercise and sport science and physical education fields. *Fall semester, alternate years.*

**HHPT 475 Internship** 1-4

Prerequisite: HHPT 370

Affords students the opportunity to observe practical work in a chosen field and to assist in the organization and administration of the program (off-campus). Approximately 45 hours per credit hour are spent in the completion of all aspects of the intern experience. *Repeatable to total of four credits.*

**HHPT 476 Wellness Methods, Materials and Management** 3

A course in planning, implementing and evaluating worksite and community health promotion activities, including stress management, smoking cessation, cardiovascular fitness, body composition and cholesterol testing. Oral presentation required. *Fall semester, alternate years.*

**HHPT 485 Seminar in Health and Human Performance (WR)** 1

A study of health and human performance from a cultural perspective--past and present. Research project. *Spring semester, alternate years.*

**HHPT 486 Senior Capstone** 1

All HHP majors are required to apply the principles of research design by selecting, designing and, depending upon the nature of the study, initiating research in a project directly applicable to health and human performance. Each student produces a report presenting their research process and findings. Additionally a significant portion of the grade includes explanation of the completed portfolio.

**HEALTH AND HUMAN PERFORMANCE VARSITY**

Varsity athletics do not apply toward the Human Health and Performance Activity general education requirements but count as elective credit toward the total hours for graduation.

**HHPV 125 Acrosports** 1

College gymnastics team. Registration must be concurrent with participation on the college gymnastics team. *May be repeated for credit with permission of the instructor. Graded CR/NC. Fall/spring semesters.*

**HHPV 150 Basketball** 1

Intercollegiate basketball (men and women). Registration must be concurrent with participation on the intercollegiate basketball team. *Credit available second semester only. May be repeated for credit with permission of the instructor. Graded CR/NC. Spring semester.*

**HHPV 165 Golf** .5

Intercollegiate golf (men). Registration must be concurrent with participation on the intercollegiate golf team. *Credit available second semester only. May be repeated for credit with permission of the instructor. Graded CR/NC. Spring semester.*

**HHPV 175 Volleyball .5**

Intercollegiate volleyball (women). Registration must be concurrent with participation on the intercollegiate volleyball team. *Credit available first semester only. May be repeated for credit with permission of the instructor. Graded CR/NC. Fall semester.*

**HISTORY****HIST 157 The West and the World 3**

Deals topically with the unique contributions of Europe, Asia, America and Africa to present-day world civilization. Students are also introduced to the problems facing the historian who studies the past of various peoples and cultures. *Fall/spring semesters.*

**HIST 255 Issues in Early American History 3**

Brief account of the discoveries, colonization and struggle for independence, growth of slavery, expansion and the Civil War. *Fall semester.*

**HIST 307 History of Bible Times (WR) 3**

Prerequisite: HIST 157

Introduction to the civilizations which most affected ancient Israel and the early Christian church; namely, those of Mesopotamia, Egypt, Palestine, Greece, and Rome. *Fall semester, alternate years.*

**HIST 315 Economic History of the U.S. (WR) 3**

An economic and business history of the U.S. that emphasizes events during and following the Civil War, the Depression and the growth of the U.S. as a major international economic power. *Spring semester, alternate years.*

**HIST 335 Civil War and Reconstruction, 1840-1877 (WR) 3**

Studies the causes of the Civil War, slavery, the Southern resistance and the preservation of the Union under Lincoln. Explores the post-war problems of the North and South against the background of the emerging industrial society. *Fall semester, alternate years.*

**HIST 349 Medieval Civilization (WR) 3**

Studies major institutional, intellectual, political and economic developments in Europe between the fourth century and 1400. *Fall semester, alternate years.*

**HIST 378 Modern Europe (WR) 3**

Studies the political, economic, social and cultural developments in Europe from the French Revolution to the present. *Fall semester, alternate years.*

**HIST 428 Renaissance and Reformation (WR) 3**

Survey of the early modern period. The Reformation, the Counter Reformation, religious wars, expansion of Europe and absolutism in France. *Spring semester, alternate years.*

**HIST 445 American Frontier (WR) 3**

Covers the westward push of settlement beyond the Mississippi River and out on the plains until all tillable land was occupied. *Fall semester, alternate years.*

**HIST 455 Recent American History (WR) 3**

Begins with the period following the Civil War and places special emphasis on events in the twentieth century. *Spring semester, alternate years.*

**HIST 457 History of Rome (WR) 3**

Covers the rise, growth and disintegration of the Roman Empire. Attention given to changing political forms, socioeconomic bases for the Empire, rise of Christianity and reasons for the fall of the Empire. *Spring semester, alternate years.*

**HIST 485 Seminar in History (WR) 3**

Prerequisite: Permission of the division chair

Research course for history and social science majors and minors. Includes historical method, research and preparation of a paper. *Spring semester.*

**HONORS □ UNION SCHOLARS****HONS 112 Research and Composition 3**

Prerequisite: Acceptance into Union Scholars and an ACT English score of at least 28 or its equivalent, or completion of ENGL 111 or its equivalent with a grade of at least B+

Introduction to the study of literacies, that is, how reading, writing, listening and meaning-making arise out of specific cultural, political and historical contexts and, in turn, engender particular discourses. Students explore the rhetorical aspects of writing while honing research skills. Includes the application of MLA, APA, and Chicago documentation styles in the writing of a research paper. *Spring semester.*

**HONS 125 Western Culture I (Core Course) 4**

Prerequisite: Union Scholars. A Western Culture course is required the first year in Scholars

Significant issues in Western civilization approached through reading major works, considering artistic creations, and disciplined reflection in discussion and writing. Explores cultural and reflects artistic and literary themes against the historical background of the ancient, classical medieval and Renaissance eras. Small group projects and discussions, field trips and cultural events enrich the lectures. Disciplines: Primarily history and literature. *Fall semesters, alternate years.*

**HONS 126 Western Culture II (Core Course) 4**

Prerequisite: Union Scholars. A Western Culture course is required the first year in Scholars

Continuation of HONS 125. Second semester covers the Enlightenment to the modern world. Disciplines: Primarily history and literature. *Fall semester, alternate years.*

**HONS 215 Self and Society (WR) (Core Course) 3**

Prerequisite: Acceptance into Union Scholars or permission of the instructor

Explores answers to the question, "Who am I?" from the viewpoints of the disciplines of psychology, sociology, and religion. It looks at the self and how the individual is shaped by and related to society at large in various cultures around the globe. The course contains a component of public speaking.

**HONS 245 Authority and Responsibility (WR) 3**

Prerequisite: Acceptance into Union Scholars or permission of the instructor

Explores the issues of personal responsibility and authority in political life from the viewpoint of the disciplines of political science, history, psychology and communications. It examines the respective roles of the individual and the state in historical settings around the globe. The course contains a component of public speaking.

**HONS 265 Conflict and Peacemaking 3**

Prerequisite: Acceptance into Union Scholars or permission of the instructor



Explores conflict resolution from the viewpoint of the disciplines of communications, history, political science and religion. Its focus is on the practice of non-violence and peacemaking in personal and global situations.

**HONS 287 Topics** 3

Prerequisite: Acceptance into Union Scholars or permission of the instructor

Various interdisciplinary topics have been taught including the following: The Epistle of Paul to the Romans, The US Presidency, A Literary Walk in Tuscany, The Holocaust, and Critiquing Film. These courses or other selected topics may be taught as needed.

**HONS 325 Science and Religion (WR) (Core Course)** 3

Prerequisite: Acceptance into Union Scholars or permission of the instructor

Explores the nature of scientific inquiry, the history of scientific thought around the globe, and the relationship between science and religion in various cultures. The course contains a component of public speaking.

**HONS 335 Wealth and Poverty** 3

Prerequisite: Acceptance into Union Scholars or permission of the instructor

Explores the causes and result of wealth and poverty on a global scale from the viewpoint of the disciplines of economics, sociology and religion. It then explores possible responses to the disparities of wealth and poverty.

**HONS 345 The Global Environment** 3

Prerequisite: Acceptance into Union Scholars or permission of the instructor

Explores issues related to the ecology of the globe from the viewpoint of the disciplines of biology, environmental science and religion. It explores the causes of, results of, and possible solutions to the environmental impact of human beings.

**HONS 398 Research Methods** 1

Prerequisite: Acceptance into Union Scholars

Preparation of the Honors Independent Study project. Expectations for the independent study project are addressed, including the choice of a topic, refining the proposal, the role of literature review, formal public speaking presentation software, and evaluation. The letter grade assigned reflects the presentation of the project to the Scholars Advisory Committee. *Fall semester.*

**HONS 496 Directed Study in Research** 1

Prerequisite: Acceptance into Union Scholars

A complement to research classes in other division of the college. Students choose an original research project, write a proposal and appear with the proposal before the Scholars Advisory Committee. Students then write a research paper and present it publicly. The research paper is filed in the Scholars Office and in the Ella Johnson Crandall Memorial Library.

**HONS 498 Honors Independent Study** 3

Prerequisite: Acceptance into Union Scholars

Students conduct independent research or create a work of art typically within their major field under the primary supervision of a professor in that discipline and with the additional support of two other advisors. Culminates in a public presentation with the research paper filed in the Scholars Office and in the Ella Johnson Crandall Memorial Library.

**HUMANITIES****HMNT 305 Arts and Ideas** 2

Prerequisite: HIST 157 or permission of instructor

A survey of the fine arts with an emphasis on recognizing and understanding the great styles from ancient to 19th Century. *Fall semester.*

**INTERNATIONAL RESCUE AND RELIEF****INRR 100 Emergency Medical Technician Basic** 7

Prerequisite: Completion of criminal background check and current American Heart Association BLS for the Health Care Provider CPR certification

Prepares students to deliver basic emergency care to individuals at the scene of an accident or medical emergency and to transport individuals to a medical facility in a safe and expedient manner. Emphasizes accurate observation, evaluation of emergency situations, effective communications with the medical network and high skill proficiency. At the completion of the course, students are eligible to take the examinations for state certification and national registry as Emergency Medical Technicians. *Spring semester.*

**INRR 110 Search and Rescue Technician II** 2

Prerequisite: INRR 100 or permission of instructor

Provides knowledge concerning the general responsibilities, skills and equipment needed by persons who would be participating in a rural as well as wilderness environment search and rescue mission. The Technician II level provides opportunities for skill development in practical search missions. The course provides instruction in three main areas: survival and support, search, and rescue. *Summer.*

**INRR 112 Swift Water Rescue Technician I/Advanced** 1

Prerequisite: INRR 100 or permission of instructor

SRT-I meets *NFPA 1670 and 1006* standards for swift water rescue. SRTA is an *NFPA 1670* standard and the *NFPA 1006* standard at the technician level for water rescue. The initial emphasis is on self-rescue skills. Other objectives include an in-depth look at water dynamics, handling hazards and obstacles, using basic rescue equipment, setting up technical rope systems, and controlling in-water contact rescues. Also covers pre-planning; rescue and recovery management; specific problems which arise with floods; rescue from class IV-VI whitewater; raising/lowering systems; stokes litter management; cliff picket anchors, "A" frames, tripod setups; a night mock Search and Rescue (SAR) problem, and other subjects. *Summer.*

**INRR 114 Rope Rescue Technician** 1

Prerequisite: INRR 100 or permission of instructor

Students are trained in pre-planning and size-up of rope rescue operations; knots, hitches and anchor systems; belay operations; ascending and descending; raising and lowering systems; and patient packaging and litter attending. Also covers advanced problem solving and highline systems. Safety of the rescuer, rescue team, patient and bystanders is stressed at all times. *Summer.*

**INRR 116 Basic Survival** 1

Prerequisite: INRR 100 or permission of instructor

Instructs and trains students to: prioritize the seven basic needs for survival; build a foul weather fire using a spark and wet wood; construct a natural shelter without rope, cord or nails; identify, prepare and eat indigenous wild edible plants; navigate on land using a map, compass and natural aides. *Summer.*

**INRR 200 Critical Incident Stress Management (CISM) 2**

Prepares participants to provide a variety of crises intervention services with emphasis on the critical incident stress management of debriefing and defusing techniques and how they may be applied to personnel who respond to disasters or emergency situations. Covers fundamentals and understanding of the role of CISM methods and fundamentals. Specific protocols, terms, concepts, common problems and classroom practice sessions are the major emphasis of the course. *Spring semester.*

**INRR 202 EMT II 4**

Prerequisite: INRR 100, successful completion of NREMT-B Exam

Prepares students in the advanced techniques of airways, aspirin, epinephrine, and IV administration along with Pre-Hospital Trauma Life Support (PHTLS), a program designed to reduce death and disability for patients who suffer traumatic emergencies such as accidents, drowning, and other injury related illnesses. Discussion also covers issues of biochemical, molecular, medical laboratory, and pathobiological aspects of living agents or organic products of potential use in warfare, terrorism, or criminal activities. *Fall semester*

**INRR 285 Firefighter I 6**

Beginning of prospective firefighters training, and provides the training, knowledge and skills necessary to attain the minimum basic requirements to perform safely as an entry level firefighter under direct supervision. This program is designed to meet the requirements of Firefighter I certification and follows *NFPA 1001*. *Fall semester.*

**INRR 302 HIV and Emerging Diseases 1**

Focuses on the wide-spread effects of HIV and new emerging diseases. Treatment skills and knowledge of prevention for these and other rapid rising, life- threatening illnesses are essential to avoid both endemic and pandemic health catastrophes. *Fall semester.*

**INRR 310 Emergency Care I 3**

Prerequisites: BIOL 111; prerequisites or corequisites: BIOL 205 (except for Pre-professional), INRR 100, 110, 112, 114, 116, 202 or permission of the instructor

The first part of emergency care for those in rural areas, disaster situations and the wilderness environment. Students learn how to treat themselves and patients when there are virtually no medical supplies and resources available. Contains lecture and didactic components. *Fall semester.*

**INRR 311 Emergency Care II 3**

Prerequisite: INRR 310, SPAN 101, 102, BIOL 205 or permission

The second part of emergency care for those in rural areas, disaster situations and the wilderness environment. Students learn to treat themselves and patients when there are limited medical supplies and resources available. Contains lecture and didactic components with clinical experiences in dental emergencies, wound management and fracture management. *Overseas—Spring semester.*

**INRR 315 Global Communications Technology 3**

Prerequisites: Junior or senior standing

Explores global communications technology both domestically and abroad. Study includes the operations, technology and usage of the Global Positioning System (GPS), Geographical Information System (GIS), as well as, amateur radio operations, up to the technician level. Additional topics covered are technology and set-up of solar power systems. Viewpoints on

effective methods of reaching the world with the Gospel of Christ will be discussed. Students explore the roles they can play in assisting in international service opportunities. *Fall semester.*

**INRR 320 Public Health****3**

Prerequisite: INRR 310

A hands-on course in rural South American villages. Topics include: assessing local health needs and conditions; recognition and treatment of diseases; prevention of spread of disease; developing and implementing strategies to improve health (nutrition, hygiene, water purification, waste control and safe living conditions); environmental toxicology; microbiology with field laboratory testing. *Overseas—Spring semester.*

**INRR 325 Relief Infrastructure****3**

Prerequisites: Junior or senior standing

Covers domestic and international relief infrastructure. This course goes beyond the learning and application of such basic skills as plumbing, masonry, framing and electrical wiring. By offering hands-on experience, through actual building projects, students are given the opportunity to develop the knowledge and skills necessary to provide leadership in times of disaster, when supplies are not readily available. Additional topics include the safe use of power tools and chainsaw operations, mission service both here and abroad and effective methods of reaching the world with the Gospel of Christ. Students explore the roles they can play in assisting in international service opportunities. *Fall semester.*

**INRR 330 Travel Medicine/Tropical Medicine****3**

Prerequisite: INRR 310

Covers the health risks of travel from dengue fever to jet lag. Emphasizes safe travel and how to avoid and treat diseases primarily found in developing countries. *Overseas—Spring semester.*

**INRR 340 Jungle, Coastal and Ocean Survival****3**

Prerequisite: INRR 310

*Jungle* survival covers shelter, fire, food and water needs in the jungle setting. Includes instruction in identification and avoidance of dangerous plants and venomous creatures. Also covers search and rescue techniques, and in-depth navigation.

*Coastal* survival covers the same topics as the Basic Survival course with a special emphasis on a coastal environment situation. Students learn how to find fresh water as well as how to successfully obtain a wide variety of foods. Fire-craft, shelter building, signaling and all other topics from the Basic Survival class are reviewed. While emphasis is placed on the coastal environment, discussion includes how to adapt the skills for any environment.

*Ocean* survival covers survival of a downed aircraft or capsized boat. Includes: how to use a life raft; how to survive in an aquatic environment; helicopter rescue; practical use of signaling devices; meteorology; medical emergencies. Students spend 24 hours in a survival scenario on a life raft with survival gear. *Overseas—Spring semester.*

**INRR 350 Dive Rescue****1**

Prerequisite: HHPA 217 or recognized dive certification (required to log an additional 5-6 dives prior to enrollment in this course)

Students learn the fundamentals of dive operations from scene evaluation through incident debriefing. Public safety divers and surface-support personnel will be prepared to respond effectively to the water-incident scene. The program is presented in a classroom, and at an open-water training site. *Overseas—Spring semester.*

**INRR 360 Medical and Conversational Spanish 1**

Begins to prepare the students to work among the indigenous peoples of Spanish speaking countries. The students must be able to communicate in Spanish with medical terminology in order to provide care for the patients they come in contact with during the overseas semester. *Overseas—Spring semester.*

**INRR 420 IRR Preceptorship (WR) 3**

Prerequisite: 30 hours of IRR courses; senior standing

Designed as the individualized capstone class for international rescue and relief majors. Includes study of the specific functions of refugee management and new developments in disaster management, rescue and survival, integrating the various areas of international and domestic relief leadership through a comprehensive preceptorship. Applies knowledge and skills in a clinical setting of the students' choice, bridging the gap between theory and practice at an entry level position. Preparation for the experience includes analysis of pre-hospital emergency care delivery systems, relief and refugee management, domestic and international leadership and roles the student will fill within those systems. Joint planning between the student, instructor, preceptor and agency determines the students' activities and experiences. No previous experience is accepted for credit. *Fall semester (summer preceptorship programs must be approved in advance and will include a writing project).*

**INRR 450 Hazardous Materials Awareness and Operations 2**

Prerequisite: Junior or senior standing

A hands-on course designed for hazardous materials emergency response personnel. It meets OSHA, PEOSHA and NFPA standards. Students participate in a series of practical situations including: chemistry of hazardous materials; material identification; detection devices; personal protection equipment; decontamination; zoning; high pressure cylinders; monitoring equipment; control; contaminated confinement; drum patching and over packing; and cargo tank truck plugging and patching techniques. *Fall semester.*

**INRR 485 Seminar in International Service (WR) 3**

Prerequisite: Junior or Senior Standing

A seminar class designed to explore the spiritual, political and cultural issues of international service and the expectations for entering the realm of "service work". Discussion on how to remain faithful to one's personal beliefs in a non-ecclesiastical setting will be dealt with through a variety of avenues ranging from in-class presentations from visiting international workers currently employed in the world field, to video footage of short-term service trips. Seminar projects/presentations will be required. *Fall Semester*

**INRR 491 Disaster Management and Terrorism (WR) 3**

Prerequisite: Junior or Senior standing

Explores the concepts and principles of disaster preparedness and management. Covers natural and man-made disasters and acts of terrorism including conventional, biological, chemical, nuclear and radiological mass casualty events. Students explore the roles of the local, state and federal Departments of Health & Human Services, FEMA, CDC and the Department of Homeland Security during disasters and mass casualty events. *Fall semester.*

**LEADERSHIP****LEAD 225 Creative Leadership 3**

Focuses on developing leaders from an experiential perspective, including studying salient leadership theories, hearing guest speakers, and students presenting interactive lessons.

**MATHEMATICS**

**Mathematics Placement Policy:** ACT or SAT scores are used for placing students into appropriate mathematics courses. Those with scores lower than the published cutoff for the course must receive permission from the instructor before enrolling. Granting of permission is based on performance in secondary mathematics courses and in related college courses. An additional placement examination may also be required.

**Prerequisites are listed for each course and students must present grades of C or higher in prerequisite courses.**

**Credit:** After MATH 165 or 184 have been passed with a grade of C or higher, credit will not be given for taking MATH 017, 100, 111 or 121.

**Courses numbered below 100 are considered developmental and do not count toward the 128 semester hours required for graduation. Similarly, grades in these courses do not affect a student's grade point average (GPA).**

**MATH 017 Elementary Algebra** 3

A course in basic algebra covering the standard topics of first-year algebra in high school. Emphasis is on problem solving using algebra. Students with little or no previous background in algebra require both MATH 017 and 100 prior to taking MATH 111, 121 or 221. *Fall semester.*

**MATH 100 Intermediate Algebra** 3

Prerequisites: One year of high school algebra and an ACT math score of 16 (SAT of 380) or completion of MATH 017 with a minimum grade of C

A second course in basic algebra covering polynomial and rational expressions, factoring, exponents, graphing linear and quadratic functions, and solving related equations. A continuation of MATH 017. *Does not meet general education requirements. Fall/spring semesters.*

**MATH 111 College Algebra** 3

Prerequisites: Two years of high school algebra and an ACT math score of 20 (SAT of 480) or MATH 100

Study of the properties of the real and complex number systems, linear and quadratic equations, factoring, exponents, inequalities, and polynomials. Emphasizes functions (algebraic, exponential, and logarithmic). **A TI-83 (highly recommended) or other graphics calculator with comparable features is required for this course.** *Does not apply toward a mathematics major or minor. Fall/spring semesters.*

**MATH 121 Precalculus** 5

Prerequisites: Two years of high school algebra and a year of high school geometry and an ACT math score of 20 (SAT of 480) or MATH 100

Provides instruction and experience that enable the student to: apply algebra/trigonometry to model, analyze, and predict physical phenomena; and analyze scientific and business problems verbally, graphically, numerically, and symbolically. **A TI-83 (highly recommended) or other graphics calculator with comparable features is required for this course.** *Fall semester.*

**MATH 165 Calculus for Managers** 3

Prerequisites: Two years of high school algebra and a year of high school geometry and an ACT math score of 21 (SAT of 500) or MATH 111

Provides instruction and experience that enables students to apply calculus to solve problems in business, economics, management, and the social sciences. **A TI-83 (highly recommended) or other graphics calculator with comparable features is required for this course.** *Does not apply toward a mathematics, chemistry or physics major or minor.*

**MATH 184 Calculus I**

4

Prerequisite: MATH 121

Provides instruction and experience that enable the student to apply calculus, related mathematics, and a graphical calculator to structure an understanding of the world around us and to investigate related questions. **A TI-83 (highly recommended) or other graphics calculator with comparable features is required for this course.** *Spring semester.*

**MATH 221 Elementary Statistics and Probability**

3

Prerequisites: Two years of high school algebra and an ACT math score of 20 (SAT of 480) or MATH 100

Explores basic frequency distributions, probability, sampling, estimations, testing hypotheses, correlation, regression, chi-square and analysis of variance. **A TI-83 (highly recommended) or other graphics calculator with comparable features is required for this course.** *Does not apply toward a mathematics major or minor. Fall/spring semesters.*

**MATH 285 Calculus II**

4

Prerequisites: MATH 184

Continuation of MATH 184 with emphasis on methods of integration in rectangular and polar coordinate systems, indeterminate forms, and infinite sequences and series. *Fall semester.*

**MATH 286 Calculus III**

4

Prerequisite: MATH 285

Continuation of the Calculus sequence. Includes function of several variables, partial derivatives, multiple integrals, vector differential operators, line integrals and Green's theorem. *Spring semester.*

**MATH 320 Mathematical Concepts for Elementary School Teachers**

3

Prerequisite: MATH 111; corequisite: EDUC 345

Builds upon previous mathematics courses as well as classroom observation. Standards for mathematics published by the National Council of Teachers (NCTM) form the basis for the selection of topics. These include number and operations, algebra, geometry, measurement, data analysis and probability and is taught with a focus on problem solving, reasoning, communication and connections. *Fall semester.*

**MATH 331 Statistics and Probability**

3

Prerequisite: MATH 286

A calculus based introduction to basic concepts in statistics (such as the Central Limit Theorem and hypothesis testing) and classical probability theory. Includes Bayes' rule, bivariate distributions, and moment generating functions. Application of several discrete distributions (such as Poisson, binomial and hypergeometric) and continuous distributions (such as exponential and normal). *Spring semester, alternate years.*

**MATH 340 Discrete Mathematics**

3

Prerequisite: MATH 184

Concerned with finite processes, sequences of individual steps, and sets that can be listed (e.g. whole numbers). This contrasts with calculus, which has to do with infinite processes, continuous change, and intervals of real numbers. **A TI-83 (highly recommended) or other graphics calculator with comparable features is required for this course.** *Fall semester.*

**MATH 351 Abstract Algebra** 3  
Prerequisite: MATH 286

Introduction to the basic concepts of abstract algebra presenting the elements of the theory of number systems, groups, fields, etc. *Spring semester, alternate years.*

**MATH 352 Linear Algebra** 3  
Prerequisite: MATH 184

Provides instruction and experience that enable students to: solve systems of linear equations; apply the properties of vectors spaces, inner product spaces, and linear transformations to real-world problems; and answer various questions in engineering, computer science, and statistics. **A TI-83 (highly recommended) or other graphics calculator with comparable features is required for this course.** *Spring semester.*

**MATH 385 Differential Equations** 3  
Prerequisite: MATH 286

Ordinary differential equations with emphasis on the solutions and analysis of systems of first- and higher-order differential equations drawn from fields of physics, chemistry, geometry and engineering. *Fall semester, alternate years.*

**MATH 401 Math Connections I for K-12 Teachers** 2  
Prerequisite: Currently teaching mathematics at the elementary or secondary level

Provides instruction and experience in number, operations, and elementary algebra. It is directed toward thorough comprehension of elementary mathematics and of interconnections among mathematical ideas and grade levels. Cooperative learning teams (a mix of elementary and secondary teachers) prepare, present and critically reflect on lessons to guarantee their students gain in-depth understanding of mathematics. *Summer.*

**MATH 402 Math Connections II for K-12 Teachers** 2  
Prerequisite: Currently teaching mathematics at the elementary or secondary level

Provides instruction and experience in elementary geometry, measurement, and data analysis. . It is directed toward thorough comprehension of elementary mathematics and of interconnections among mathematical ideas and grade levels. Cooperative learning teams (a mix of elementary and secondary teachers) prepare, present and critically reflect on lessons to guarantee their students gain in-depth understanding of mathematics. *Summer.*

**MATH 409 Modern College Geometry** 3  
Prerequisite: MATH 285 or experience teaching secondary geometry

Studies advanced Euclidean geometry and introduces modern geometrical concepts in non-Euclidean geometry. *Spring semester, alternate years.*

**MATH 451 Mathematical Connections for Secondary Teachers** 3  
Prerequisites: EDUC 475 or 29 of the 38 MATH hours required for the BS in Mathematics Education



Provides a capstone experience for prospective mathematics teachers enabling them to build insightful connections between the advanced mathematics of their college courses and the high school mathematics they will be teaching. *Spring semester.*

**MATH 486 Numerical Analysis** 3

Prerequisites: MATH 285 and CPTR 226

Numerical techniques to model physical phenomena. Topics cover error analysis, matrices, numerical solutions of linear and nonlinear equations, polynomial approximations, numerical differentiation and integration and interval algebra. *Fall semester, alternate years.*

**MATH 491 Real Analysis** 3

Prerequisite: MATH 286

Studies properties of real numbers and sets of real numbers, limits of sequences and functions, series, modes of convergence and their consequences (such as continuity). Introduction to elementary topological notion of the real line. Theory of the Riemann Integral. *Fall semester, alternate years.*

**MATH 492 Complex Variables** 3

Prerequisite: MATH 286

Introduces theory of functions of a complex variable as well as applications. Includes uses of the residue theory, contour integration, and conformal mapping. *Fall semester, alternate years.*

**MARKETING**

**MRKT 327 Marketing (WR)** 3

A general survey of major marketing methods, institutions and practices, and their effects on producers and consumers. *Fall semester.*

**MRKT 333 Professional Selling** 3

Examination and practice of the sales process from prospecting to successful closing of the sale and effective follow up. Also considers ethical issues. *Spring semester, alternate years.*

**MRKT 443 Consumer Behavior** 3

Prerequisite: MRKT 327 or PSYC 105

Studies people's actions as they relate to obtaining, consuming, and disposing of products and services. Includes consumer decision processes and their relevance for marketing decision-making. *Spring semester, alternate years.*

**MRKT 456 Marketing Research** 3

Prerequisites: MATH 221 or concurrent enrollment; MRKT 327

Focuses on planning investigations, gathering and interpreting data, and presenting findings in a professional manner. *Fall semester, alternate years.*

**MRKT 475 Internship in Marketing** 1-3

Prerequisite: Junior or senior standing or permission of the division chair

Real-life experiences in a wide variety of settings providing creative and conventional hands-on learning opportunities.

**MUSIC APPLICATIONS**

**MUAP 207 Brass Techniques and Materials** 1

Designed to give future teachers experience with the various techniques of, and the materials for, teaching brass instruments to beginning and intermediate students. Class members also gain a basic proficiency in playing a variety of brass instruments. *Fall semester, alternate years as needed.*

**MUAP 217 Guitar Techniques and Materials** 1

Designed to give future teachers experience with the techniques of, and the materials for, teaching guitar to beginning and intermediate students. The members of this class also gain a basic proficiency in playing the guitar. *Spring semester, alternate years as needed.*

**MUAP 227 Percussion Techniques and Materials** 1

Designed to give future teachers experience with the various techniques of, and the materials for, teaching percussion instruments to beginning and intermediate students. The members of this class also gain a basic proficiency in playing a variety of percussion instruments. *Fall semester, alternate years as needed.*

**MUAP 237 String Techniques and Materials** 1

Designed to give future teachers experience with the various techniques of, and the materials for, teaching stringed instruments to beginning and intermediate students. The members of this class also gain a basic proficiency in playing a variety of stringed instruments. *Spring semester, alternate years as needed.*

**MUAP 247 Vocal Techniques and Materials** 1

Develops a foundation of vocal principles which can be applied to teaching the young (ages 15 to 22) singing voice. Includes fundamental anatomy and physiology of the singing voice, acoustics, resonance, and articulation concepts necessary for efficient and healthy vocal production. Choral singing, solo singing, the adolescent voice, the aging voice, the speaking voice, and vocal hygiene are discussed. Students are also exposed to basic resources for vocal literature and methodology. *Fall semester, alternate years as needed.*

**MUAP 257 Woodwind Techniques and Materials** 1

Designed to give future teachers experience with the various techniques of, and the materials for teaching woodwind instruments to beginning and intermediate students. The members of this class also gain a basic proficiency in playing a variety of woodwind instruments. *Fall semester, alternate years as needed.*

**MUSIC EDUCATION**

**MUED 307 Keyboard Pedagogy** 2

Prerequisite: Permission of instructor

A survey of methods and materials for effective piano teaching starting with the child beginner and proceeding through the high school student. Particular emphasis given to age appropriate techniques, literature, and musicianship development. Includes observations and practical experience with professional piano teachers from the community. *Alternate years as needed.*

**MUED 317 Instrumental Pedagogy** 2

Prerequisite: Permission of instructor

Designed to give future teachers experience with a variety of more advanced techniques for teaching instrumentalists of all skill levels, through normal classroom study as well as supervised practicum. *Alternate years as needed.*

**MUED 327 Vocal Pedagogy** 2

Prerequisite: Permission of instructor

Develops a comprehensive understanding of the singing voice. Students learn the introductory skills necessary to teach efficient and healthy singing in both the choral and solo setting. Principles of respiration, phonation, resonance, and articulation are presented and applied in a supervised teaching practicum. A written project is required as well as the teaching practicum. *Fall semester, alternate years as needed.*

**MUED 347 Music in the Elementary School** 2

Prerequisite: Permission of instructor

Prepares future elementary teachers for teaching music at the K-8 level by teaching how to set goals and objectives for the music program and how to organize and institute a music program. Studies the various methods and techniques available to the elementary music teacher and considers the interrelationship between music and the entire curriculum. *Fall semester.*

**MUSIC HISTORY AND LITERATURE****MUHL 260 Music in the Western World** 3

Focuses on the development of music in Western civilization. Students become acquainted with important styles and genres of art music, as well as influential composers and specific pieces from Medieval to contemporary times. *Fall semester.*

**MUHL 261 Traditional and World Music** 3

Designed to increase cultural awareness through an overview of traditional music styles and performance practices from around the world. The cultural and historical context for each musical tradition is examined. *Spring semester.*

**MUHL 315 Music and Christian Worship** 2

A survey of congregational song and its use in Christian worship. Emphasis is placed on relationships between church history, theology, scripture, music and literature, criteria for planning and evaluation. *Offered as needed.*

**MUHL 351 Music History I (WR)** 2

Prerequisite: Permission of instructor

Western music from early Christian times through the medieval period and the early Renaissance. *Fall semester, alternate years.*

**MUHL 352 Music History II (WR)** 2

Prerequisite: Permission of instructor

Western music from late Renaissance through the Baroque period. *Spring semester, alternate years.*

**MUHL 353 Music History III (WR)** 2

Prerequisite: Permission of instructor

A study of the Classical and early Romantic periods. *Fall semester, alternate years.*

**MUHL 354 Music History IV (WR)** 2

Prerequisite: Permission of instructor

Music from late Romantic period to the present, including an overview of jazz. *Spring semester, alternate years.*

**MUSIC PERFORMANCE****Music Performance Studies**

Private lessons with studio classes as required. *May be repeated for additional credit.* Thirteen 30-minute lessons per semester and daily practice amounting to at least four periods per week shall yield one hour of academic credit. Credit will not be given until these requirements are met. All new students in music performance register at the 100 level. Upon successfully passing a jury examination, music majors, minors and other advanced students may be transferred to the 200 level. Upper-division students who have studied at the 200 level for four semesters may, upon a successful jury examination, move to the 400 level. The 300 level is reserved for upper-division students who are not majors.

MUPF 101, 201, 301, 401 Voice	1-3
MUPF 105, 205, 305, 405 Flute	1-3
MUPF 106, 206, 306, 406 Oboe	1-3
MUPF 107, 207, 307, 407 Clarinet	1-3
MUPF 108, 208, 308, 408 Bassoon	1-3
MUPF 109, 209, 309, 409 Saxophone	1-3
MUPF 111, 211, 311, 411 Piano	1-3
MUPF 112, 212, 312, 412 Organ	1-3
MUPF 113, 213, 313, 413 Harpsichord	1-3
MUPF 114, 214, 314, 414 Harp	1-3
MUPF 115, 215, 315, 415 Trumpet	1-3
MUPF 116, 216, 316, 416 Horn	1-3
MUPF 117, 217, 317, 417 Euphonium (Baritone Horn)	1-3
MUPF 118, 218, 318, 418 Trombone	1-3
MUPF 119, 219, 319, 419 Tuba	1-3
MUPF 121, 221, 321, 421 Percussion	1-3
MUPF 125, 225, 325, 425 Violin	1-3
MUPF 126, 226, 326, 426 Viola	1-3
MUPF 127, 227, 327, 427 Cello	1-3
MUPF 128, 228, 328, 428 String Bass	1-3
MUPF 129, 229, 329, 429 Guitar	1-3
MUPF 130, 230, 330, 430 Composition	1-3

<b>MUPF 175 Band (Symphonic Concert Band)</b>	<b>1</b>
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Prerequisite: Permission of instructor

See MUPF 375. *May be repeated for additional credit. Fall/spring semesters.*

<b>MUPF 176 Chamber Orchestra</b>	<b>1</b>
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Prerequisite: Permission of instructor

See MUPF 376. *May be repeated for additional credit. Fall/spring semesters.*

<b>MUPF 177 Chamber Choir</b>	<b>1</b>
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See MUPF 377. *May be repeated for additional credit. Fall/spring semesters.*

<b>MUPF 185 Advanced Choir (Unionaires)</b>	<b>1</b>
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Prerequisite: Permission of instructor

See MUPF 385. *May be repeated for additional credit. Fall/spring semesters.*

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<b>MUPF 190 Small Ensembles</b>	<b>1</b>
Prerequisite: Permission of instructor	
Select vocal and instrumental ensembles which may include Brass Ensemble, Guitar Ensemble, Handbell Ensemble, Keyboard Ensemble, Octet Ensemble, String Ensemble and Woodwind Ensemble. Consult class schedule for further information. See MUPF 390. <i>May be repeated for additional credit. Fall/spring semesters.</i>	
<b>MUPF 257 Introduction to Conducting</b>	<b>2</b>
Prerequisite: Permission of instructor	
<i>Spring semester.</i>	
<b>MUPF 266 English-Italian Diction</b>	<b>1</b>
Prerequisite: Permission of instructor	
<i>Fall semester, alternate years.</i>	
<b>MUPF 267 German-French Diction</b>	<b>1</b>
Prerequisite: Permission of instructor	
<i>Spring semester, alternate years.</i>	
<b>MUPF 341 Choral Conducting</b>	<b>1</b>
Prerequisite: MUPF 257; permission	
<i>Spring semester, alternate years as needed.</i>	
<b>MUPF 342 Instrumental Conducting</b>	<b>1</b>
Prerequisite: MUPF 257; permission	
<i>Alternate years as needed.</i>	
<b>MUPF 346 Service Playing</b>	<b>1</b>
Prerequisite: Permission of instructor	
The role of the organist in the church service; practical procedures. <i>Alternate years as needed.</i>	
<b>MUPF 351 Junior Recital</b>	<b>1</b>
Prerequisite: Permission of instructor	
<b>MUPF 375 Band (Symphonic Concert Band)</b>	<b>1</b>
Prerequisite: Sophomore standing and permission of instructor	
See MUPF 175. <i>May be repeated for additional credit. Fall/spring semesters.</i>	
<b>MUPF 376 Chamber Orchestra</b>	<b>1</b>
Prerequisite: Sophomore standing and permission of instructor	
See MUPF 176. <i>May be repeated for additional credit. Fall/spring semesters.</i>	
<b>MUPF 377 Chamber Choir</b>	<b>1</b>
Prerequisite: Sophomore standing and permission of instructor	
See MUPF 177. <i>May be repeated for additional credit. Fall/spring semesters.</i>	
<b>MUPF 385 Advanced Choir (Unionaires)</b>	<b>1</b>
Prerequisite: Sophomore standing and permission of instructor	
See MUPF 185. <i>May be repeated for additional credit. Fall/spring semesters.</i>	

**MUPF 390 Small Ensembles** 1

Prerequisite: Sophomore standing and permission of instructor

Select vocal and instrumental ensembles which may include Brass Ensemble, Guitar Ensemble, Handbell Ensemble, Keyboard Ensemble, Octet Ensemble, String Ensemble and Woodwind Ensemble. Consult class schedule for further information. See MUPF 190. *May be repeated for additional credit. Fall/spring semesters.*

**MUPF 451 Senior Recital** 1

Prerequisite: MUTH 254 and permission of instructor

**MUSIC THEORY****MUTH 151 Theory I** 3

Prerequisite: Permission of instructor

Emphasis of fundamentals, nonharmonic tones, figured bass and melody harmonization techniques in 4-part style, and melody writing. *Fall semester.*

**MUTH 152 Theory II** 3

Prerequisite: MUTH 151 with a minimum grade of C

Continuation of MUTH 151 with emphasis on part-writing, analysis, keyboard harmonization and music composition. Specific topics covered are seventh chords, secondary dominants and modulation techniques. *Spring semester.*

**MUTH 161 Sight-Singing and Ear Training I** 1

Corequisite: MUTH 151

This is the lab course to accompany Theory I. *Fall semester.*

**MUTH 162 Sight-Singing and Ear Training II** 1

Prerequisite: MUTH 161; Corequisite: MUTH 152

Lab course to accompany Theory II. *Spring semester.*

**MUTH 253 Theory III** 3

Prerequisites: MUTH 152, 162

Continuation of MUTH 152 with emphasis on 19th-century chromaticism. Score reading, analysis and original composition. *Fall semester.*

**MUTH 254 Theory IV** 3

Prerequisite: MUTH 253

Continuation of MUTH 253 with emphasis on 20th-century techniques and materials. Score reading, analysis and original composition. *Spring semester.*

**MUTH 263 Form and Analysis** 2

Corequisite: MUTH 253

Advanced tonal and structural analysis. *Alternate years as needed.*

**MUTH 362 Introduction to Counterpoint** 2

Prerequisite: MUTH 254 or permission; MUHL 352 recommended

Introduction to contrapuntal procedures from the 18th century. *Spring semester, alternate years as needed.*

**MUTH 365 Orchestration** 2

Prerequisite: MUTH 254

*Fall semester, alternate years as needed.***NURSING****NRSRG 208 Pharmacology** 1

Introduces pharmacologic principles. Examines various drug classifications and general characteristics of drugs within each class, including actions, indications for use, undesirable effects and education for clients.

**NRSRG 213 Fundamentals** 5

Prerequisites: Admission to nursing program, BIOL 111, 112, CHEM 101, CHEM 102, HHPT 256, PSYC 105; corequisite: NRSRG 335

Introduces the roles and responsibilities of the professional nurse in acute care and home health settings. Utilizes the nursing process, emphasizing psycho-motor skills in nursing. Includes basic principles of nursing theory, therapeutic communication, teaching-learning, stress adaptation, wholeness and high-level wellness, and critical thinking. Students use beginning skills/therapeutics to meet the comfort and safety needs of clients. Three class hours and six clinical hours per week.

**NRSRG 263 Medical-Surgical I** 5

Prerequisites: BIOL 205, NRSRG 213, 335, NUTR 227; corequisites: NRSRG 359, PSYC 215, SOCI 105

Building upon principles from relevant arts and sciences, students use the nursing process in modifying commonly-occurring stressors involving the chronic and acutely-ill client. Students address client problems related to body systems. This course encourages the development of critical thinking in making beginning nursing decisions for client care. Three class hours and six clinical hours per week.

**NRSRG 335 Physical Assessment** 3

Prerequisite: Admission to nursing program

Develops assessment skills necessary to provide competent care for clients of varying ages and ethnic backgrounds. These skills help the student focus on client wholeness and placement on a health continuum for optimum care. Clinical hours are spent with preschool children, school-age children, adults and geriatric clients. Two class hours and three clinical hours per week. Withdrawal from NRSRG 335 requires withdrawal from NRSRG 213.

**NRSRG 359 Pathophysiology** 3

Prerequisite: Admission to nursing program or permission of instructor

Examines human pathophysiology, beginning at the cellular level and progressing to integrated systems analysis. An in-depth examination of normal body function is contrasted to physiological dysfunction. Emphasizes the relationship between theory and clinical findings. Three class hours per week.

**NRSRG 363 Medical-Surgical II** 5

Prerequisites: NRSRG 263, 335, 359

Continues to build upon principles from relevant arts and sciences. Students use the nursing process in modifying commonly-occurring stressors involving the chronic and acutely-ill client. Students address client problems related to body systems. This course encourages the

development of critical thinking in making nursing decisions for client care. Three class hours and six clinical hours per week.

**NRSG 383 Junior Seminar** 1

Prerequisite: Level III status or permission of instructor

Examines the historical as well as the future trends of the nursing profession. Nursing education, image and professional behavior, nursing theorists, and the political process are discussed. One class period per week.

**NRSG 385 Childbearing Family** 5

Prerequisites: NRSG 335, 359, 363

Emphasizes the promotion of high-level wellness during the childbearing cycle. Students utilize the nursing process to meet the physical, mental, social-cultural, and spiritual needs of clients, taking into consideration the total family unit. Clinical experiences include care of childbearing families in hospital and community settings. Average of three class hours and six clinical hours per week.

**NRSG 387 Nursing Research (WR)** 3

Prerequisites: MATH 221; Level III status or permission of instructor

Focuses on basic research concepts and methodology involved in conducting studies in nursing. Students learn to critique research studies in order to apply findings to clinical nursing practice. The overall focus is a thorough understanding of the scientific method from a Christian perspective. Equivalent of three class hours per week.

**NRSG 391 Frontier Nursing** 2

Prerequisite: Level III status or permission of instructor

Introduces the nursing student to principles and practices of health care on the frontiers of developing and third world countries, and opportunities for professional practice in these areas throughout the world. Concepts of basic health education, use of natural remedies, prevention of diseases throughout the life cycle are emphasized. *Spring semester.*

**NRSG 392 Frontier Nursing—Field Experience** 2-3

Prerequisite: NRSG 391

An elective two-week field experience that allows third- or fourth-year nursing students to apply the principles that were learned in NRSG 391 Frontier Nursing. Students have the opportunity, as part of a multidisciplinary healthcare team, to perform village health assessments, provide basic public health education, and assist in providing healthcare to patients in a developing country. The field trip utilizes the Tasba Raya Adventist Clinic in Francia Sirpi, North Atlantic Autonomous Region, Nicaragua. This clinic provides health care to Miskito Indians who reside in this region. A third week may be added to this experience in the future. *Summer.*

**NRSG 423 Childrearing Family** 5

Prerequisites: NRSG 363, 385; PSYC 215

Provides an opportunity to develop awareness of the needs of children and their families at various stages of development. The nursing process is utilized in providing nursing care. Students learn nursing interventions that promote wellness and prevent illness, as well as caring for the ill child and family. The concept of wholeness is considered as it relates to the child and family. Clinical experience is obtained in hospital and community settings. Average of three class hours and six clinical hours per week.



**NRSRG 435 Mental Health** 5

Prerequisites: NRSRG 363, 387; PSYC 105, 215; SOCI 105

Studies thought, emotion and behavior, the application of mental health principles and current developments in the mental health field. Students use the nursing process in the psychiatric setting. Clinical experiences provide the students opportunity to develop therapeutic nurse-patient relationships while working with clients experiencing psychosocial stressors. Focus is on the promotion and maintenance of mental health, so that wholeness is facilitated and movement toward optimal health is achieved. Average of three class and six clinical hours per week.

**NRSRG 437 Management and Leadership in Health Care** 3

Prerequisite: Level IV status; corequisites: NRSRG 423, 435

Examines the purpose and functions of management, leadership and current organizational styles. Emphasizes understanding human behavior as the basis of management effectiveness. Using critical thinking and decision making, students apply principles of management and leadership to promote high levels of wellness for patients in relation to changing societal and health needs and facilitate the actions of others in the delivery of healthcare. Average of two class and three clinical hours per week. Completion of the clinical component in this course depends on the successful progression in NRSRG 423.

**NRSRG 439 Complex Care** 5

Prerequisites: NRSRG 435; 423 or permission of instructor

Builds upon the previous nursing courses to develop a systematic approach to caring for the client with multiple stressors affecting many systems. Students apply the nursing process to facilitate removal or modification of stressors for persons primarily in the acute care and partially in the community settings. Students address both the critically ill adult with complex problems of body systems as well as legal, ethical and psychosocial aspects of nursing the critically ill adult. Average of three class hours and six clinical hours per week.

**NRSRG 447 Community Health Nursing** 5

Prerequisite: Last semester of nursing program

Focuses on nursing knowledge and skill needed in providing for health care of the community. Student are able to provide care to a variety of individuals, families and groups in the community who are at various positions on the age and health continuum. The focus of care is promotion of health with consideration for all dimensions of wholeness. Students apply the nursing process in the clinical setting and develop awareness and experience with community resources appropriate for community clients. Average of three class hours and six clinical hours per week.

**NRSRG 483 Senior Seminar** 1

Prerequisite: Last semester of nursing program

Focuses on issues which will confront new graduates in the workplace. Discusses licensure, resumes and interviewing, ethical decision making, collective bargaining and legal concerns. Also explores career options and further professional development of nurses. One class hour per week.

**NRSRG 491 Disaster Management** 2

Prerequisite: Level III or IV status or permission of the instructor

An elective course that explores the concepts and principles of disaster preparedness and management. Covers natural and man-made disasters and acts of terrorism including conventional, biological, chemical, nuclear and radiological mass casualty events. Students explore the roles of the local, state and federal Departments of Health & Human Services, FEMA, CDC

and the Department of Homeland Security during disasters and mass casualty events. This course is open to students of any major.

**NRSG 499 Preceptorship****3**

Prerequisite: Last semester of nursing program

Applies nursing knowledge in a clinical setting of the students' choice, bridging the gap between theory and practice at an entry level position. Preparation for the experience includes analysis of health care delivery systems and roles the students will fill within the system. Joint planning between the student, instructor, preceptor and agency determines the students' activities and experiences. This individualized program is the capstone course for Union College nursing students. No previous experience is accepted for credit.

**NUTRITION****NUTR 227 Nutrition****3**

An overview of the principles of nutrition. Students examine personal eating behaviors and nutritional adequacy of their diet in comparison to current recommendations. Basic nutrient functions are emphasized within the context of normal physiological processes. Relationships between nutrition and health of individuals and groups throughout the life cycle are examined, including special nutritional needs and dietary modifications. Chemistry and anatomy and physiology strongly suggested, though not required. *Fall semester.*

**PHYSICIAN ASSISTANT STUDIES**

**Prerequisite for all PHAS courses: Admission to the Physician Assistant Program**

**PHAS 505 Medical Literature Review (WR)****2**

Focuses on basic research concepts and methodology involved in health care research. Students learn to evaluate or critique research literature for application of findings to clinical practice. Experience is gained in identifying researchable health care problems. *Summer.*

**PHAS 510 Clinical Nutrition****2**

After a review of basic human nutrition science, guides students in examining individual eating behaviors and their nutritional adequacy compared to current recommendations. Nutrient functions are presented within the context of normal physiological processes, and then related to a variety of disease states and nutritional problems, including prescriptive diet modifications. Relationships between nutrition and health throughout the life cycle are also studied. *Fall semester.*

**PHAS 511 Human Anatomy****5**

Recommended: Undergraduate anatomy

A graduate-level study of human anatomy and related clinical applications. Relationship of structures at the different regions of the body are studied in depth, including discussions of consequences of malfunction. Four lectures and one three-hour laboratory. Cadaver work required. *Fall semester.*

**PHAS 514 Medical History and Physical Examination Skills****4**

Introduces communication skills related to obtaining a comprehensive medical history. Also covers the techniques required in performing a thorough and technically correct physical examination. Forms and descriptive language used to compile reports are utilized. Though the course emphasizes normal and typical findings on examination, selected normal variants and abnormal findings are reviewed. In addition to the adult physical examination, specific aspects of

a comprehensive neurological, neonatal/pediatric, geriatric and obstetric examination are included. *Fall semester.*

**PHAS 515 Clinical Diagnostic Procedures** 3

Presents indications for the use and interpretation of fundamental diagnostic tests including blood cell counts, serum chemistries, urinalysis, HIV tests, radiology overview of common diagnostic imaging modalities—their indications, limitations, benefits and potential risks, culture and sensitivity tests, Pap smears and other common pathologic reports. Indications for more specialized procedures such as MRI, CT, ultrasound, and endoscopy are reviewed. *Fall semester.*

**PHAS 518 Psychiatry and Behavioral Medicine** 3

Involves the acquisition of counseling skills necessary in communicating with patients facing common psychologic and psychiatric presentations (e.g., anxiety, stress, obsessive-compulsive, biochemical and reactive depression, schizophrenia, dementias, and mental retardation). Topics are discussed and role-played, integrating appropriate diagnostic and therapeutic interventions. Addressed also are management of the dying patient, practical assessment of the pediatric psychosocial development, and skills needed to communicate under difficult or sensitive patient scenarios (e.g., domestic violence, obstinate/manipulative patients, physically challenged patients, multicultural sensitivity issues, polypharmacy, sexual education and dysfunction, and unwanted pregnancy concerns). *Summer.*

**PHAS 519 Differential Diagnosis and Case Development** 2

Emphasizes problem-based learning with applied exam skills required to properly diagnose various diseases. Through small group discussions, presents symptom complexes from clinical cases. Students integrate the given information with physical exam clues leading to appropriate and prioritized differential diagnoses. Application of diagnostic testing modalities is highlighted and treatment regimes discussed. *Summer.*

**PHAS 525 Physician Assistant Professional Issues** 3

Explores the history and practice issues of the physician assistant profession including the present day scope and roles of PA practice. Legal and ethical issues confronting the profession, enabling legislation at the state and federal levels, medical economics, and quality of care issues are discussed. Includes student-led discussions and debates to hone communication skills. *Fall semester.*

**PHAS 531 Clinical Medicine I** 6

With PHAS 532 provides a comprehensive review of the different organ systems of the body, their normal function, and the diseases that affect them. Emphasizes the diagnosis, differential diagnosis, and management of various disease states. Clinical concerns specific to pediatric, female medicine, and geriatrics are included. *Fall semester.*

**PHAS 532 Clinical Medicine II** 7

Continuation of PHAS 531. *Spring semester.*

**PHAS 533 Preventive Health** 1

Various strategies of preventive medicine are described including smoking prevention and cessation, drug use/abuse, childhood and adult immunizations, abstinence programs, genetic screening, management of cardiac risk factors, stress management, and cancer screening. Reviews public health programs and emphasizes the role of the individual practitioner tailoring successful preventive health goals for patients of all ages. *Spring semester.*

**PHAS 539 /RELP 439 Christian Health Care and Bioethics 3**

Studies the Christian ministry of the healing professions. Includes an inductive study of the biblical account of the healing ministry of Jesus Christ, a presentation of themes in the biblical theology of health, and a study of topics in bioethics. WR applies only to PHAS 539. *Spring semester.*

**PHAS 542 Applied Medical Ethics 1**

Studies the ethical dynamics of health care including principles of autonomy, beneficence, nonmaleficence, justice, fairness and dignity. Ethical principles are then applied to actual clinical and professional situations including inalienable rights, reproductive technologies, allocation of health care, death and dying issues, confidentiality, and professional conflict. *Spring semester.*

**PHAS 546 Clinical Skills I 4**

Provides specific skill instruction in universal/standard precautions, sterile technique, gowning/gloving, injections, IV techniques and infusions, wound assessment, suturing, specialized wound care, airway management, nasogastric tube placement, splinting, casting, joint procedures, catheterizations, biopsies, foreign body removal and specialty practice procedures. Includes exposure to actual clinical patient care and assessment of clinical competency of specified skills, diagnostic modalities, and therapeutic interventions related to professional responsibilities and practices in patient care. *Fall semester.*

**PHAS 547 Clinical Skills II 2**

Emphasizes application of clinical skills in the actual clinical arena with students performing physical examinations in local health care settings under the guidance of physicians and PAs. In the classroom, students perform appropriate IV line placement and become experienced with the pediatric, obstetric/gynecologic, geriatric and genitourinary examination, with models and facilitators. The ACLS certification course is also provided. *Spring semester.*

**PHAS 553 Cultural Competencies in Medicine 1**

Prepares the student for facilitating multi-lingual clinical interactions with Hispanic patients. The intensive curriculum uses second language learning methods utilizing necessity context (healthcare) and cultural use of the language. Students will learn listening, speaking, reading and writing skills, with a particular emphasis on oral skills. A review of health care needs related to Hispanic culture is included.

**PHAS 557 Electrocardiography 2**

Specific instruction is presented in understanding electrophysiology of the heart and deviations from the normal electrocardiography. *Fall semester.*

**PHAS 559 Clinical Pathophysiology 4**

Studies the pathophysiology of cellular, immune, nervous, endocrine, cardio-vascular, respiratory, renal and reproductive systems with an emphasis on mechanisms which move the body away from homeostasis. Particular focus is given to correlation of theoretical material with clinical case studies. *Spring semester.*

**PHAS 564 Clinical Therapeutics 4**

Explores concepts in disease management using problem-based learning principles, identifying the process of caring for patients using standardized treatment designs based on scientific, economic and human strategies that ensure appropriate utilization and high quality care across the

continuum. Topics include routine clinical disease syndromes but emphasize chronic, costly disease states with high co-morbidity as well as acute, catastrophic episodes of care. *Spring semester.*

**PHAS 584 Pharmacology** 5

Introduces a wide variety of pharmacological agents used in the practice of medicine. Categorizes drugs into various classes according to their primary actions with emphasis on prototypical drugs to treat disease and on relevant clinical information. An introduction to prescription writing is also presented. *Spring semester.*

**PHAS 585 Master's Research Seminar** 1

Builds on the foundation provided in PHAS 505 to involve students in independent research review projects that are presented in both written and oral formats. The topic for review may be chosen by the student, meeting provided guidelines that confirm clinical relevancy and patient-oriented evidence that matters (POEM). Students are assigned an individual faculty advisor for the project and oral presentations are given during quarterly meetings scheduled during the year of clinical rotations.

**PHAS 620 – 629 Clinical Rotations**

Prerequisite: Completion of didactic program of studies in the PA Program

During clinical rotations with an assigned physician preceptor, the PA student will elicit a problem-oriented medical history, perform a pertinent physical examination, obtain and assess the results of indicated diagnostic studies, formulate a management plan and assist in providing the appropriate therapy for common problems encountered in a variety of disciplines. In addition to those listed, at least 3 elective rotations (PHAS 630+) are required for graduation. Examples of potential disciplines available are: Dermatology, ENT, Trauma, Radiology, Sports Medicine, or any additional rotation from the required rotations.

<b>PHAS 620 Family Practice I Rotation</b>	<b>6</b>
<b>PHAS 621 Family Practice II Rotation</b>	<b>4</b>
<b>PHAS 622 Internal Medicine Rotation</b>	<b>4</b>
<b>PHAS 623 Surgery Rotation</b>	<b>4</b>
<b>PHAS 624 Obstetrics &amp; Gynecology Rotation</b>	<b>4</b>
<b>PHAS 625 Pediatrics Rotation</b>	<b>4</b>
<b>PHAS 626 Cardiology Rotation</b>	<b>4</b>
<b>PHAS 627 Emergency Medicine Rotation</b>	<b>4</b>
<b>PHAS 628 Orthopedics Rotation</b>	<b>2</b>
<b>PHAS 629 Psychiatry Rotation</b>	<b>2</b>
<b>PHAS 630+ Elective Rotation</b>	<b>2-10</b>

**PHILOSOPHY**

**PHIL 335 Introduction to Philosophy** 2

Prerequisite: Junior or senior standing

A systematic study of the history and methods of major philosophers and their systems of thought from the Pre-Socratics to the present in the context of the Judaeo-Christian worldview. *Spring semester.*

**PHYSICS**

Prerequisites are listed for each course (grades must be C or higher) but in some cases permission may be granted by the instructor.

**PHYS 111 Principles of Physics****4**

Prerequisites: A knowledge of high school algebra and fulfillment of MATH general education requirement

Course intended to give the nonscience major an insight into the physical world. Emphasis is placed on the scientific method as Newtonian mechanics, thermodynamics, sound, optics, electricity, magnetism, and modern physics topics are explored. Three lectures and one laboratory per week. *Credit will not be given for this course if PHYS 151 or 251 have been previously completed with a grade of C or better. Does not apply toward a physics major or minor. Spring semester.*

**PHYS 151 General Physics****4**

Prerequisite: MATH 111 or equivalent

Introduces linear and rotational mechanics including energy and momentum considerations, thermodynamics, and waves. Includes discussion of the historical development of our understanding along with references to environmental and social impacts of applied technology. Three lectures and one three-hour laboratory per week. *Credit not given for both this course and PHYS 251. Fall semester.*

**PHYS 152 General Physics****4**

Prerequisite: PHYS 151 or 251

A continuation of PHYS 151 covering electricity, magnetism, simple circuits, optics, special relativity and modern physics. Appropriate discussion of the historical development of our understanding is included along with references to environmental and social impacts of applied technology. Three lectures and one three-hour laboratory per week. *Credit not given for both this course and PHYS 252. Spring semester.*

**\*PHYS 209 Electromagnetic Theory****3**

Prerequisites: PHYS 252 and MATH 285 and computer programming skills or permission of the instructor; corequisite: MATH 286 or 385

A development of Maxwell's equations from basic principles with the objective of achieving a macroscopic description of the electric and magnetic properties of matter, including a relativistic description of electromagnetic fields and their interaction with charged particles. Vector calculus is developed and used as needed. Three lectures per week. *Fall semester, alternate years.*

**\*PHYS 210 Optics****3**

Prerequisites: PHYS 252 and MATH 285 and computer programming skills or permission of the instructor; corequisite: MATH 286 or 385

The study of the production, transmission, diffraction, interference, refraction, polarization, and absorption of electromagnetic radiation. Three lectures per week. *Spring semester, alternate years.*

**PHYS/ENGR 228 Electric Circuit Analysis****4**

Prerequisite: MATH 184

Introduces electric circuit variables and parameters, Kirchoff's law and circuit equations, AC steady-state analysis, frequency characteristics. Three lectures and one three-hour laboratory per week. *Fall semester.*

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\* Available through Nebraska Wesleyan University, Lincoln, NE.

**\*PHYS 241 Classical Mechanics** 3

Prerequisites: PHYS 251 and MATH 285 and computer programming skills or permission of the instructor; corequisite: MATH 286 or 385

A theoretical treatment of classical mechanics of particles and systems of particles, with emphasis on the conservation laws of energy, momentum and angular momentum. Particular topics in Newtonian, celestial and continuum mechanics are studied. Vector calculus is developed and used as needed. Three lectures per week. *Fall semester, alternate years.*

**\*PHYS 242 Classical Mechanics** 3

Prerequisite: PHYS 241

A continuation of PHYS 241, involving the use of LaGrangian and Hamiltonian formalisms. Matrix methods are used in the study of rigid body motion, oscillation theory and the theory of relativity. The mechanics of continuous media is also investigated. Three lectures per week. *Spring semester, alternate years.*

**PHYS 251 College Physics** 4.5

Prerequisite: MATH 184

Same as PHYS 151 except that a calculus emphasis is added. Four lectures and one three-hour laboratory per week. *Fall semester.*

**PHYS 252 College Physics** 4.5

Prerequisite: PHYS 251

Same as PHYS 152 except that a calculus emphasis is added. Four lectures and one three-hour laboratory per week. *Spring semester.*

**\*PHYS 261 Thermal Physics** 3

Prerequisites: PHYS 251 and MATH 285 and computer programming skills or permission of the instructor; corequisite: MATH 286 or 385

A theoretical treatment of macrophysics. The basic principles of information theory, statistical mechanics, thermodynamics and fluid mechanics are developed and applied to topics of current interest. Three lectures per week. *Fall semester, alternate years.*

**\*PHYS 262 Fluid Dynamics** 3

Prerequisites: PHYS 251 and MATH 285 and computer programming skills or permission of the instructor; corequisite: MATH 286 or 385

A theoretical treatment of macrophysics, emphasizing examples of large scale mass and energy transport in our physical environment as applications of techniques in geophysical fluid dynamics. Three lectures per week. *Spring semester, alternate years.*

**PHYS 296 Research Methods I** 1

Prerequisite: ACT Math Score of 20 (SAT 480) or MATH 100

Introduces the fields of descriptive and inferential statistics. Data sampling techniques, hypothesis testing and some applications of probability theory to business situations are examined. *Fall semester.*

**PHYS 350 Modern Physics (WR)** 4

Prerequisites: PHYS 252, MATH 286

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\* Available through Nebraska Wesleyan University, Lincoln, NE.

An introduction to the revolutionary changes in physics understanding that occurred in the 20<sup>th</sup> century. Topics include special relativity, elementary quantum physics, solid state physics, nuclear physics and elementary particles. Designed to prepare physics students for advanced physics courses in these fields and others. The laboratory experiments provide a first-hand view of the information that led to the modern understanding of physics. Three lectures and one three-hour laboratory per week. *Spring semester.*

**PHYS 351 Quantum Mechanics** 4

Prerequisites: CHEM 152, MATH 286, PHYS 252

Recommended: MATH 352 and 385, PHYS 350

Introductory course in quantum mechanics including wave-particle duality, time-independent Schrodinger equation, harmonic oscillators, matrix treatment, and the wave treatment of the hydrogen atom. Uses and applications of differential equations and matrices are developed along with a historical perspective of the development of our understanding of quantum mechanics. Four lectures per week. *Fall semester, alternate years.*

**PHYS 386 Research Methods II** 1

Prerequisites: PHYS 251 and PHYS 296 or MATH 221

An introduction to the methods and mechanics of the research process. Topics include the nature, methods, literature, funding, limitations and strengths of scientific research. A proposal and literature search may be required. *Spring semester.*

**PHYS 396 Research Methods III** 1

Prerequisite: PHYS 386

Emphasizes research design. A research project is proposed, a research plan developed for the project, and depending upon the nature of the study, research initiated. *Fall semester.*

**PHYS/CHEM 412 Physical Chemistry II** 4

Prerequisite: PHYS 351

Chemical thermodynamics is developed to describe energy and entropy changes in ideal and real gases and extended to a range of chemical systems. Manipulation of multiple variables is achieved by use of partial differential equations, and skill in identifying the conditions of the problem to derive the appropriate equations for a particular application are developed. Attention is given to the results of applying Gibbs Energy and other thermodynamic constructs to a variety of uses including electrochemistry and phase equilibria. Three lectures and one laboratory per week. *Spring semester, alternate years.*

**PHYS 496 Research Methods IV (WR)** 1

Prerequisite: PHYS 396

Emphasizes active research and both oral and written reporting of research. The project proposed in PHYS 396 is carried out and both written and oral presentations of the research are made. *Spring semester.*

**POLITICAL SCIENCE**

**PLSC 205 American Government** 3

Covers the making and functioning of the United States Constitution as well as the national judiciary, state, county and local government. *Spring semester.*



**PLSC 327 Comparative Governments** 3

An analysis of political philosophies and of governments in the modern world. *Spring semester, alternate years.*

**PSYCHOLOGY****PSYC 100 Careers in Psychology** .5

Exposes students to the variety of careers available in the field of psychology and gives instruction about the academic choices to be made in order to be qualified for the various careers. *Fall semester.*

**PSYC 105 Introduction to Psychology** 3

Explores psychology as a science of behavior and experience. Emphasizes the basic psychological processes and concepts of motivation, learning, memory, emotion, sensation and perception. Topics include personality and adjustment, behavior disorders and treatment of abnormal behavior. *Fall semester.*

**PSYC 215 Developmental Psychology (WR)** 3

Prerequisite: ENGL 112

Studies theories of physical, cognitive and psycho-social development through each of the life stages, prenatal through old age. Attention is given to the influences of society and culture on the normal developmental process. *Fall semester.*

**PSYC 225 Psychology of Religion** 3

An examination of the psychological processes involved in religious experiences from personal, developmental, social and emotional perspectives. Religious experiences will be considered from the perspective of Christianity as well as other persuasions. *Spring semester.*

**PSYC 300 Career and Graduate School Preparation** .5

Prerequisite: Junior standing

Helps students examine their personal career goals and make choices best aligned with those goals. Students are also provided with information needed to prepare for choosing appropriate graduate programs, making graduate applications and preparing for graduate testing. *Fall semester.*

**PSYC 311 Introduction to Counseling Theory and Techniques** 3

Prerequisite: PSYC 105

Provides a comprehensive study of various theories of counseling examined from a Seventh-day Adventist Christian perspective. Students participate in counseling sessions. *Fall semester.*

**PSYC 315 Social Psychology** 3

Prerequisite: PSYC 105

A general study of the individual in relationships to other people. Includes such topics as social thinking, social influence and social relations. *Spring semester.*

**PSYC 337 History and Systems of Psychology (WR)** 3

Prerequisite: PSYC 105

Examines the theories and historical aspects of the major psychological schools of thought. *Spring semester.*

**PSYC 338 Cognitive Psychology** 3

Prerequisite: PSYC 105

A study of the processes involved in human memory and cognition. Topics include attention and perception, information processing models, development of language and comprehension, and processes of thinking and reasoning. *Spring semester.*

**PSYC 340 Research Methods I** 3

Prerequisite: PSYC 105

An integrated approach to the study of the basic statistical procedures used in behavioral science research along with basic research methods they support. Basic principles of research design and ethics related to behavioral research are also covered. *Fall semester.*

**PSYC 341 Research Methods II (WR)** 3

Prerequisite: PSYC 340

A continuation of PSYC 341, covering more advanced statistical procedures and experimental research methods. A research proposal is required for completion of this class. *Spring semester.*

**PSYC 375 Theories of Personality** 3

Prerequisite: PSYC 105

Involves examination of the factors that influence personality development and introduces students to major psychological theories of personality. *Fall semester, alternate years.*

**PSYC 380 Biopsychology** 3

Prerequisite: PSYC 105

An introduction to the biological basis of behavior. Students will be presented with information on the basic functioning of the nervous system and the physiological basis of behaviors including such topics as sleep, sex, aggression, learning and memory, and psychopathology. *Spring semester, alternate years.*

**PSYC 415 Abnormal Psychology** 3

Prerequisite: PSYC 105

Investigates the causes, symptoms and treatment of psychological disorders. *Spring semester.*

**PSYC 425 Human Sexuality** 3

Prerequisites: PSYC 105, junior standing

Multiple aspects of sexual behavior are examined from the perspectives of varying methods of investigation and within a Christian framework. *Fall semester, alternate years.*

**PSYC 427 Clinical Assessment** 3

Prerequisites: PSYC 105, 215

Trains the student to think clinically about persons they interact with in their professional role. Students are introduced to a wide range of objective instruments as means of assessment as well as the role of the professional's subjective experience in the process of assessment.

**PSYC 450 Psychological Testing** 3

Prerequisites: PSYC 105, 340, 341

Introduction to psychometric methods and the practice involved in individual and group testing of ability, personality, interest and achievement. *Spring semester.*

**PSYC 455 Internship** 1-3

Provides students with opportunities to observe practice in real life settings and to participate in human service professional activities and research. Student complete 45 clock hours of internship for one hour credit. *Fall/spring semesters.*

**PSYC 475 Current Issues in Psychology** 2

Prerequisite: PSYC 105

Investigates the research and dialogue of issues that are current in the field of professional psychology. Students are required to do in-depth investigation on two issues and to defend a personal position on the issue.

**PSYC 476 Senior Research Project (WR)** 3

Prerequisite: PSYC 341

Students select, design, carry out, and statistically analyze an empirical study which deals with an aspect of behavior. *Fall semester.*

**RELIGION - BIBLICAL STUDIES****RELB 175 How to Study the Bible** 3

Introduces the principles of interpreting the Bible including practical skills in using concordances, Bible dictionaries, and commentaries as well as instruction in how to evaluate and choose a Bible translation. *Fall semester.*

**RELB 226 Old Testament Survey** 3

A survey of the Old Testament with attention given to the theological significance of creation, the fall, the plan of salvation and the covenant relationship between God and Israel. Includes exegetical study of selected Old Testament prophets. *Fall semester.*

**RELB 246 Sanctuary and Salvation** 3

A study of the biblical teaching of salvation in the books of Leviticus, Daniel, Hebrews, and Revelation through the events and offices of the earthly sanctuary and their relationships to the heavenly fulfillments in Christ's ministry. *Fall semester.*

**RELB 255 Jesus and the Gospels** 3

A study of the life, ministry and teachings of Jesus, with applications for daily living, based upon an inductive study of the four gospels. *Fall/spring semester.*

**RELB 325 Prophets** 3

Exegetical study of selected Old Testament prophets. Emphasizes the eternal principles of their messages as applied to present-day conditions. *Spring semester.*

**RELB 335 New Testament Epistles** 3

An inductive study of the book of Acts and the letters of the New Testament using selected passages to illustrate themes of New Testament thought. *Spring semester.*

**RELB 348 Daniel (WR)** 3

An introduction to the narrative and prophetic portions of the book of Daniel rooted in its historical context, emphasizing the spiritual and prophetic applications relevant to Christian leadership and life. *Fall semester.*

**RELB 349 Revelation 3**

An introduction to apocalyptic literature and an inductive study of the book of Revelation within the context of Christian history and the church today. *Spring semester.*

**RELB/ENGL 366 Biblical Literature (WR) 3**

Prerequisites: ENGL 112 and either ENGL 235, ENGL 236, or permission of the instructor

A survey of the Bible's literary masterpieces from an archetypal perspective. Literary patterns, techniques, and terminology are applied to Bible writers and their writings. *May be used to meet RELB or ENGL general education requirements but not both. Fall semester, alternate years.*

**RELIGIOUS HISTORY****RELH 310 History of the Seventh-day Adventist Church 3**

A study of the Advent movement of the early 19<sup>th</sup> century and the subsequent growth of the Seventh-day Adventist Church. *Spring semester.*

**RELH 410 History of the Christian Church (WR) 4**

History of the development of the Christian church from the first century to modern times. *Spring semester.*

**BIBLICAL LANGUAGES****RELL 171 New Testament Greek I 4**

The elements of Greek grammar and basic vocabulary. Translation from the New Testament combined with a systematic approach to vocabulary building and the rules of Biblical Greek syntax. *Fall semester.*

**RELL 172 New Testament Greek II 4**

Prerequisite: RELL 171

Continuation of RELL 171. *Spring semester.*

**RELL 273 New Testament Greek III 3**

Prerequisite: RELL 172 or equivalent

Extensive translation of various portions of the New Testament and introduction to the science of exegesis, with emphasis on the acquisition of those skills and tools which will make Greek a useful aid in a pastoral study program. *Fall semester.*

**RELL 274 New Testament Greek IV 3**

Prerequisite: RELL 273

Continuation of RELL 273. *Spring semester.*

**RELL 385 Biblical Hebrew I 3**

A study of the fundamentals of the Hebrew language. The emphasis is on translating portions of the Old Testament by applying vocabulary, grammar and syntax learned in the class. *Fall semester.*

**RELL 386 Biblical Hebrew II 3**

Prerequisite: RELL 385

Continuation of RELL 385. *Spring semester.*

**PROFESSIONAL TRAINING****RELP 125 Introduction to Ministry 2**

A study of the principle elements in pastoral ministry and spiritual formation through class discussion, observation and report writing. *Fall semester.*

**RELP 149 Dynamics of Christian Living 3**

A small group based class designed to introduce students to the inter-dynamics of personal relationships with others, the power of a relationship with God and the joys of a life of assurance in salvation. *Spring semester.*

**RELP 235 Introduction to Youth Leadership 3**

A study of youth ministry, examining youth culture, the theology of youth ministry, and specific skills to equip and empower students to be effective in ministry to young people. *Spring semester, alternate years.*

**RELP 321 Biblical Preaching 3**

Prerequisite: COMM 105

A study of sermon methodology designed to train biblical preachers. Preaching skills are developed through theory, class and field experience. Emphasizes topical, narrative and expository preaching. *Fall semester.*

**RELP 322 Biblical Preaching 3**

Prerequisite: RELP 321

Continuation of RELP 321. *Spring semester.*

**RELP 335 Youth Leadership in the SDA Church 3**

Building on an understanding of youth culture and a theology of youth ministry, this course focuses on the implementation and practice of youth ministry. Its design is to better prepare those interested in life long youth ministry, both professional and volunteer. *Spring semester, alternate years.*

**RELP 336 Youth Leadership Practicum 3**

Prerequisite: RELP 235, 335

Internship in Union College Campus Ministries and/or externships in a local academy, Youth Sabbath School, Pathfinder organization, summer camp, and conference office. *Graded credit/no credit. Open only to Youth Ministry minors.*

**RELP 361 Church Leadership 3**

Combines a study of the theology of church leadership and on-the-job training assisting pastors in nearby churches. Taken in conjunction with RELP 321. *Fall semester.*

**RELP 362 Church Leadership 3**

Prerequisite: RELP 361

Continuation of RELP 361. Taken in conjunction with RELP 322. *Spring semester.*

**RELP 375 Missions Internship 2**

Cross-cultural missionary service under the direction of a local supervisor and one of the religion faculty. Students prepare an internship proposal, give monthly reports while carrying out the project, and give a final report of the outcomes.

**RELP 376 Evangelism and Field School 2**

Active participation and preaching in an evangelism series. Students prepare a public evangelism proposal for a local church and carry out this project under the supervision of one of the religion faculty. Interim reports indicate the progress of the project and a final paper details the outcomes.

**RELP 439/PHAS 539 Christian Health Care and Bioethics 3**

Studies the Christian ministry of the healing professions. Includes an inductive study of the biblical account of the healing ministry of Jesus Christ, a presentation of themes in the biblical theology of health, and a study of topics in bioethics. *Spring semester.*

**RELP 465 Personal Witnessing 3**

Designed to help students gain the knowledge and skill needed to share their faith through personal influence, conversation and Bible studies. Examines the beliefs of other churches and compares them with Adventist beliefs. Laboratory required. *Fall semester.*

**RELP 466 Public Evangelism 3**

Prerequisite: RELP 321

Studies public evangelism practices and develops skills through the preaching, planning, conducting and follow-up of an evangelism series. Laboratory required. *Spring semester.*

**THEOLOGICAL STUDIES****RELT 110 Introduction to Christian Faith and Adventism 3**

Prerequisite: Permission of the instructor or the religion chair

The teaching of the Seventh-day Adventist church in the context of other belief systems, designed specifically for those not familiar with or newly introduced to the Seventh-day Adventist church. *Fall semester.*

**RELT 141 Christian Beliefs 3**

Surveys fundamental biblical doctrines from the Christian church and the Seventh-day Adventist perspective. *Fall/spring semesters.*

**RELT 205 Developing the Christian Mind 3**

Examines worldview perspectives and biblical teachings. Incorporating information from biblical, philosophical, world religions and sociological sources, this class seeks to help the student define, discern and develop more fully "the mind of Christ." 1 Cor. 2:16 *Fall semester.*

**RELT 305 Christian Ethics 3**

An introduction to the systems and methods used in making ethical decisions viewed from the perspective of the Christian faith. Discusses questions of current interest in the area of personal and social ethics. *Fall/spring semesters.*

**RELT 337 Christian Theology I 3**

Prerequisite for non-theology majors: RELT 141

A systematic study of the major theological tenets of Christianity within the Seventh-day Adventist perspective, informed by their biblical foundations, their historical formulations, and their contemporary applications. *Fall semester.*

**RELT 338 Christian Theology II** 3

Prerequisite: RELT 337

Continuation of RELT 337. *Spring semester.***RELT 347 World Religions** 3

A study of the major religions of the world including primal religions, Hinduism, Buddhism, the religions of China and Japan, Judaism, Islam and Christianity. The relationship of Christianity to these religions is discussed, including the Christian mission to the world. *Fall semester.*

**RELT 455 Prophetic Guidance in the Advent Movement (WR)** 3

Study of the gift of prophecy as a method of divine communication. Special attention given to the origin and development of the Seventh-day Adventist Church within 19th-century culture with emphasis on the life and writings of Ellen G. White. *Spring semester.*

**SCIENCE**

**Prerequisites are listed for each course but in some cases permission may be granted by the instructor.**

**SCNC 301 Science and Society** 1

Prerequisites: Completion of science and mathematics general education; junior standing

Explores selected societal and ethical issues raised by the investigation and application of science. Students are expected to seek possible solutions to the problems that are raised by these issues.

**SCNC/BIOL 377 Origins (WR)** 3

Prerequisites: Completion of one laboratory science course; junior standing

A consideration of issues in science and religion as they relate to origins. Consideration is given to interpretation of inspiration and scripture relating to evidence from nature and the scientific method. Data from the biological and physical sciences are evaluated as they relate to earth history and the origin of life. Evidence for change, mechanisms of change, speciation, the fossil record and issues of time is considered. *Class may be taken to meet the general education requirements for either the Life Sciences or Physical Sciences. Does not apply toward a biology major or minor. Spring semester.*

**SOCIOLOGY****SOCI 105 Introduction to Sociology** 3

Introduces the fundamental principles and concepts of sociology. Studies forms and processes of societal organization and social institutions. Teaches sociological theory from a functionalist, conflict and symbolic interactionist perspective. Traditional theorists are discussed. Sociological topics include culture, socialization, stratification, class structure, healthcare, education, minority groups, and family. *Fall/spring semesters.*

**SOCI 210 Group Dynamics** 3

Prerequisite: SOCI 105

An introduction to the stage theory of group development, small group dynamics, interpersonal skills, goal setting, conflict management, leadership styles, group member role and functions. Students identify information relevant to selected populations and specify ways to work with them. Students lead and participate in weekly small group encounters. *Spring semester.*

**SOCI 315 Marriage and Family** 3

Assists students in their understanding and negotiating of relationships by examining friendships, dating, courtship, marriage and family life. Uses a strengths-based approach to relationship development with emphasis on positive communication and problem solving. Discusses the issues of divorce, single parenting, sexuality, death and dying, finances and pre-marital counseling. *Fall semester.*

**SOCI 321 Issues of Diversity (WR)** 3

Prerequisite: SOCI 105

Builds on sociological theory and concepts. Applies functionalist, conflict and symbolic interaction theory to majority-minority relations. Develops understanding of racism, prejudice, stereotypes, discrimination, institutional discrimination, assimilation and pluralism. Minority groups are the primary focus of the course. *Fall semester.*

**SOCIAL WORK****SOWK 115 Introduction to Social Work** 4

Prerequisite: SOCI 105 or permission of instructor

Survey of the field of professional social work. Covers the history of social work and its professional roles and functions. Explores professional areas of practice such as mental health, disabilities, youth, elderly, families, healthcare, schools, and criminal justice. Laboratory required. *Spring semester.*

**SOWK 227 Human Behavior in the Social Environment I** 3

Prerequisite: SOWK 115 or permission of instructor

Reviews and analyzes theory and knowledge from the behavioral and social environment sequence of courses to discover specific implications for social work practice. Areas of focus include social system, community, groups, family and the individual. Covers the age span from birth to young adulthood. *Fall semester.*

**SOWK 228 Human Behavior in the Social Environment II** 3

Prerequisite: SOWK 227

Reviews and analyzes theory and knowledge from the behavioral and social environment sequence of courses to discover specific implications for social work practice. Areas of focus include social system, community, groups, family and the individual. Covers the age span from middle-adulthood to old age. *Spring semester.*

**SOWK 316 Social Welfare Policy and Practice** 3

Studies the history of social welfare and the nature and purpose of social policy. Additionally teaches methods to analyze policy and methods for policy change. Examines and monitors current state and federal bills relevant to U.S. social welfare. *Spring semester.*

**SOWK 320 Child Welfare** 3

Prerequisite: SOWK 228

An overview of child welfare services from a historical, theoretical, and practice perspective. Services are discussed from family, diversity, and provider/consumer perspectives. *Fall semester, alternate years.*

**SOWK 322 Case Management in Social Work Practice** 3

Prerequisite: SOWK 228



Examines the process of linking clients to necessary resources and the evolving role of the case manager in a variety of settings. The managed care environment, integrated case management procedures and case management models of psycho-social enhancement are discussed. Covers practical skills of intake, assessment goal setting, intervention and evaluation. Explores current use of computer software and record keeping. Presents social work practice roles of broker, advocate, mediator and educator.

**SOWK 336 Social Work Practice I** 3

Prerequisite: SOWK 228

Assists students in developing generalist social work skills in individual and group levels of practice. Students practice relationship-building, problem solving, assessment, and intervention skills as they relate to individuals, families and groups. *Fall semester.*

**SOWK 337 Social Work Practice II** 3

Prerequisite: SOWK 316

An introductory course to the administration and planning of social service organizations with major emphasis upon community, organizational and legislative analysis; management skills; program planning and evaluation. Includes simulations, in-class projects, volunteer experience and personal introspection. *Spring semester.*

**SOWK 345 Social Work in Healthcare** 3

Prerequisite: SOWK 228

Provides basic orientation to the new generalist practitioner preparing to work as a medical social worker in a hospital, nursing home or outpatient setting. Surveys the field of medical social services, providing information regarding the administrators in both health care in general and social services in particular and a discussion of the various groupings of illnesses, their impact on individual, family, employment, etc. *Fall semester, alternate years.*

**SOWK 388 International Social Services** 3

Prerequisite: SOWK 228 or permission of instructor

Introduces social human need and response to that need in developing countries. The course mainly concentrates on Asia, Latin America and Africa. Assessment of current needs and national and international responses are addressed.

**SOWK 389 Leadership of an NPO/NGO** 3

Prerequisite: SOWK 228 or permission of instructor

Covers fundamental concepts and structural elements of a Not-For-Profit/Non-Governmental Agency to aid students in developing the administrative leadership skills necessary for community organization and planning.

**SOWK 390 Research Seminar** 1

Prerequisite: PSYC 341

Student groups apply the principles of research design by selecting, designing, and carrying out a research project directly applicable to the social work field. Each group produces a report presenting their research process and findings. *Fall semester.*

**SOWK 415 Crisis and Resilience** 3

Prerequisite: SOWK 228 or permission of instructor

Developing generalist practice skills in crisis management. Fundamentals of crisis including violence, rape, suicide, natural disasters and terrorism with an emphasis on ability not only to

survive, but thrive after crisis. Prepares the student to develop creative coping skills, and promote crisis resolution within themselves as well as with individuals, groups and communities.

**SOWK 426 Field of Corrections** 3

Prerequisite: SOWK 228 or permission of instructor

Surveys the field of corrections, providing a historical focus, the current picture, problems and possible outcomes. Covers the basic laws regarding corrections practices, the client and methods of handling the client. *Spring semester, alternate years.*

**SOWK 438 Gerontology** 3

Prerequisite: SOWK 228 or permission of instructor

Introduces services available for elderly care which students examine in the context of social and economic justice, societal values, and their effectiveness in achieving their objectives. Also explores the interrelationship between the aging person, his or her family, and society. *Spring semester, alternate years.*

**SOWK 475 Field Practicum** 1-12

Prerequisite: SOWK 228

Professional experience in a social service agency, under the mentorship of an MSW or BSW professional. A total of 480 hours are required. Placements are completed over a four-semester plan in the junior and senior years. Attendance at weekly seminars is required. *Fall/spring semesters.*

**SPANISH**

**SPAN 101 Beginning Spanish** 3

Introduction to basic Spanish conversation, structure, vocabulary and culture. Includes dictations, simple readings, written exercises, with the emphasis on oral communication. *Laboratory required. Fall semester.*

**SPAN 102 Beginning Spanish** 3

Prerequisite: SPAN 101

Continuation of SPAN 101. *Spring semester.*

**SPAN 201 Intermediate Spanish** 3

Prerequisite: SPAN 102 or equivalent

Intensive review of Spanish grammar with an emphasis on oral communication. Includes dictations, readings and written exercises. *Fall semester.*

**SPAN 202 Intermediate Spanish** 3

Prerequisite: SPAN 201

Continuation of SPAN 201. *Spring semester.*

**TEACHING LEARNING CENTER**

**TLCM 100 Bridge: Building Connections** 1

Focusing on college life, students discuss topics regarding academic skills, self-advocacy, campus and community resources.

**UNION COLLEGE STUDENT MISSION SERVICE**

**UCSM 205 Introduction to Overseas Service** 2

An orientation course for prospective student missionaries and others interested in cross-cultural mission service. *Does not apply toward religion general education requirement. Spring semester.*

**There is no tuition charge for 400-level UCSM courses, but the students are considered half-time and eligible for most loan deferments.**

**UCSM 490 Student Mission Service I** 6

Prerequisite: Permission of Student Mission Director

Credit for service as a student missionary serving in an official General Conference recognized call or as arranged with the Union College Student Mission Director. Credits do not count toward graduation. *Graded CR/NC. May be repeated. Fall semester.*

**UCSM 491 Student Mission Service II** 3

Prerequisite: UCSM 490; Permission of Student Mission Director

Continuation of the student mission service. Credits do not count toward graduation. *Graded CR/NC. May be repeated. Spring semester.*

**UCSM 495 Student Mission Service III** 3

Prerequisite: UCSM 490; Corequisite: UCSM 491

Continuation of the student mission service. Credits count toward graduation as *elective credit only*. *Graded CR/NC. May be repeated. Spring semester.*

**UNION COLLEGE TASK FORCE SERVICE**

**There is no tuition charge for UCTF courses, but the students are considered half-time and eligible for most loan deferments.**

**UCTF 490 Task Force Service I** 6

Prerequisite: Permission of Student Mission Director

Credit for service as a task force worker serving in an official North American Division recognized call or as arranged with the Union College Student Mission Director. Credits do not count toward graduation. *Graded CR/NC. May be repeated. Fall semester.*

**UCTF 491 Task Force Service II** 3

Prerequisite: UCTF 490; Permission of Student Mission Director

Continuation of the task force service. Credits do not count toward graduation. *Graded CR/NC. May be repeated. Spring semester.*

**UCTF 495 Task Force Service III** 3

Prerequisite: UCTF 490; Corequisite: UCTF 491

Continuation of the task force service. Credits count toward graduation as *elective credit only*. *Graded CR/NC. May be repeated. Spring semester.*

## COLLEGE ORGANIZATION

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### BOARD OF DIRECTORS—2007-2008

Dennis Carlson, Chair	NE	Ron Halvorsen	NE
Charles Drake, Vice Chair	NE	Rob Koch	KS
David C. Smith, Secretary	NE	Jack Krogstad	IA
Steve Bascom	IA	Rick Krueger	NE
Neil Biloff	SD	Jerome Lang	NE
Mardian Blair	FL	Tom Lemon	MN
James Boyle	CO	James McArthur	TN
Jim Brauer	CO	Jay Miller, III	KY
Alex Bryant	KS	Larry Pitcher	NE
Ron Carlson	KS	Barbara Prowant	WA
Ronald K. Carlson	ND	Rich Reiner	FL
Dean Coridan	IA	Susan Reiswig-Haines	OH
Geraldine Dickinson*	ID	Ron Russell	NE
Mike Dunlap	NE	Jessica Saxton	MO
Derald Goetz	NE	Kent Seltman	MN
Mildred Greer	MO	Kent Thompson	NE
Elaine Hagele	NE	Samuel Turner, Sr	KS

By Invitation: Director, North American Division Higher Education Cabinet

\*Honorary Board Member

### ACADEMIC COMMITTEE

Jack Krogstad, Chair	Jay Miller
VP for Academic Admin, Ex Officio Secr	Larry Pitcher
Don Abbey	Ron Russell
Mildred Greer	Kent Seltman
Tom Lemon	

### CAMPUS LIFE COMMITTEE

Steve Bascom, Chair	Charles Drake
VP for Student Serv, Ex Officio Secr	Ron Halvorsen
VP for Spiritual Life, Ex Officio	Rob Koch
Deborah Bogdon	Susan Reiswig-Haines
Ron Carlson	

### EXECUTIVE COMMITTEE

MAUC President, Ex Officio Chair	Charles Drake
UC President, Ex Officio Secr	Jerome Lang
Jim Boyle	

### FINANCE AND DEVELOPMENT COMMITTEE

MAUC Treasurer, Ex Officio Chair	Jeff Joiner
VP for Financial Admin, Ex Officio Secr	Jerome Lang
UC President, Ex Officio	Barbara Prowant
KS-NE Conf Treasurer, Ex Officio	Rich Reiner
VP for Advancement, Ex Officio	Kent Thompson
Mardian Blair	

**MASTER PLANNING AND FACILITIES**

Kent Thompson, Chair	Rick Krueger
VP for Finance, Ex Officio Secr	Jerome Lang
Plant Services Director, Ex Officio	Dan Lynn
Neil Biloff	James McArthur
James Boyle	Rich Reiner
Ronald K. Carlson	Sam Turner
Derald Goetz	

**RECRUITMENT, RETENTION, AND MARKETING**

, Chair	Mike Dunlap
VP for Enrollment, Ex Officio Secr	Huda McClelland
Jim Brauer	Ron Russell
G Alexander Bryant	Jessica Saxton
Elina Camarena	Kent Seltman
Dean Coridan	Tom Shepherd

**TRUSTEESHIP COMMITTEE**

MAUC President, Ex Officio Chair	Charles Drake
UC President, Ex Officio Secr	Jay Miller
Mardian Blair	Sam Turner

**MIDWEST FOUNDATION FOR HIGHER EDUCATION BOARD**

Jerome Lang, Chair	LuAnn Davis
Rick Krueger, Vice Chair	Charles Henkelmann
Gary Bollinger, Secretary/Treasurer	Jessica Saxton
Dennis Carlson	David Smith, Ex Officio
Ronald K. Carlson	

**UNION COLLEGE PRESIDENTS**

W. W. Prescott	1891-1893	A. H. Rulkoetter	1938-1942
J. W. Loughhead	1893-1896	E. E. Cossentine	1942-1946
E. B. Miller	1896-1897	R. W. Woods	1946-1950
N. W. Kauble	1897-1898	H. C. Hartman	1950-1957
W. T. Bland	1898-1901	D. J. Bieber	1957-1964
L. A. Hoopes	1901-1904	R. W. Fowler	1964-1970
C. C. Lewis	1904-1910	R. H. Brown	1970-1973
Frederick Griggs	1910-1914	M. O. Manley	1973-1980
H. A. Morrison	1914-1922	Dean L. Hubbard	1980-1984
O. M. John	1922-1924	Benjamin R. Wygal	1985-1985
W. W. Prescott	1924-1925	John Wagner	1986-1991
Leo Thiel	1925-1928	John Kerbs	1991-1998
P. L. Thompson	1928-1931	David C. Smith	1998- Pres
M. L. Andreasen	1931-1938		

## COLLEGE ADMINISTRATION

Dates in parentheses indicate the date of current appointment.

### OFFICERS OF THE COLLEGE □ 2007-2008

**David C. Smith** (1998-) President; Professor of English Literature  
B.A. 1972, M.A. 1978, Andrews University; Ph.D. 1989, University of Tennessee

**Malcolm Russell** (2003-) Vice President for Academic Administration; Professor of History and Economics  
B.A. 1970, Columbia Union College; M.A. 1972, Ph.D. 1977, The Johns Hopkins University

**Gary Bollinger** (1989-) Vice President for Financial Administration  
B.S. 1971, Union College; M.A. 1975, Seattle University

### MAJOR ADMINISTRATIVE OFFICERS □ 2007-2008

**Linda Becker** (2001-) Vice-President for Student Services  
B.A. 1972, Pacific Union College; M.A.T. 1974, Andrews University; Ph.D. 2000, University of Nebraska-Lincoln

**Richard Carlson** (1981-) Vice President for Spiritual Life; Associate Professor of Psychology  
B.A. 1973, Union College; M.A. 1977, Andrews University; Ph.D. 1996, University of Nebraska-Lincoln

**LuAnn Davis** (1992-) Vice President for Advancement  
B.S. 1982, Union College; M.B.A. 1996, University of Nebraska-Lincoln

**Rob Weaver** (1990-) Vice-President for Enrollment Services  
B.A. 1972, Union College; M.B.A. 1987, University of Arkansas

## FACULTY

### EMERITI □ 2007-2008

Arlie Fandrich, Professor Emeritus of Computer Science  
Wayne Fleming, Ed.D., Professor Emeritus of Health and Human Performance  
Lowell Hagele, Professor Emeritus of Mathematics  
Minon Hamm, Ph.D., Professor Emerita of English  
H. Ward Hill, Ph.D., Professor Emeritus of Religion and Sociology  
Earl Leonhardt, Ph.D., Professor Emeritus of Mathematics  
Marilyn McArthur, Professor Emerita of Nursing  
Robert Murray, Ph.D., Professor Emeritus of Music  
Beatrice Neall, Ph.D., Professor Emerita of Religion  
Ralph Neall, Ph.D., Professor Emeritus of Religion  
Walter E. Page, Ph.D., Professor Emeritus of Biology  
Opal Miller Payne, M.Mus., Professor Emerita of Music  
Sieg Roeske, Professor Emeritus of Religion  
Ruth C. Rolls, M.A., Associate Professor Emerita of Secretarial Science  
Neil Rowland, Ph.D., Professor Emeritus of Biology  
Virginia Simmons, Professor Emerita of Education and Psychology

**FACULTY □ 2007-2008**

Date(s) in parentheses indicate years of employment at Union College.

**Don H. Abbey** (1998-) Professor of Biology

B.S. 1969, M.A. 1971, Walla Walla College; Ph.D. 1993, University of Alberta

**Edward M. Allen** (2005-) Associate Professor of Religion

B.A. 1975, Loma Linda University; M.Div. 1979, Andrews University; D.Min. 1991, Fuller Theological Seminary

**Joseph R. Allison** (2002-) Professor of Education

B.S. 1979, Union College; M.A. 1985, Ed.S. 1991, Ed.D. 1999, Andrews University

**Chris Blake** (1993-) Associate Professor of English

B.A. 1977, California State Polytechnic University-San Luis Obispo; M.A. 1980, Pacific Union College

**Kathy Bollinger** (2002-) Associate Professor of Education

B.S. 1971, Union College; M.Ed. 1981, University of Nebraska-Lincoln

**Veneracion Cabana** (2003-) Professor of Biology

B.S. 1964, Philippine Union College; M.S. 1972, Ph.D. 1980, University of Illinois

**Sylvester Case** (1997-) Associate Professor of Religion

B.A. 1982, M.Div. 1985, Andrews University; M.A. 1987, Denver Baptist Seminary

**Tanya R. Cochran** (2005-) Assistant Professor of English

B.A. 1995, Southern College of Seventh-day Adventists; M.A. 2000, University of Tennessee

**Gary Dickerson** (2007-) Associate Professor of Computer Science

B.S. 1984, Union College; M.B.A. 1989, University of Nebraska-Lincoln; M.S. Andrews University

**Michael R. Duehrssen** (2005-) Associate Professor of International Rescue and Relief

B.A. 1984, Union College; M.D. 1989, Loma Linda University

**Thomas Dunion** (2007-) Professor of Mathematics

B.S. 1973, Rensselaer Polytechnic Institute; M.S. 1983, University of Connecticut; D.A.M. 1995, Idaho State University

**Robert Fetrick** (1996-) Associate Professor of Religion

B.A. 1972, Pacific Union College; 1978 M.Div., Andrews University

**William D. Fitts** (1985-) Professor of English

B.A. 1974, Southwestern Union College; M.A.T. 1976, Andrews University; Ph.D. 1985, Texas A & M University

**Barry Forbes** (1988-) Associate Professor of Business

B.S. 1987, Southwestern Adventist College; M.B.A. 1988, Texas A & M University

**Bruce Forbes** (2000-) Associate Professor of Art and Graphic Design

B.S. 1986, Union College; M.F.A. 1996, Savannah College of Art and Design

**Lisa Forbes** (2002-) Associate Professor of Accounting and Finance

B.S. 1992, Union College; M.B.A. 1995, University of Nebraska-Lincoln

**Eugena Foster** (2004-) Assistant Professor of Nursing

B.S.N. 1999, Union College; M.S.N. 2004, University of Nebraska Medical Center

**Charles Freidline** (1983-) Professor of Chemistry

B.A. 1960, M.S. 1963, Westmont College; Ph.D. 1966, University of Minnesota

**Malcolm Gaskin** (2002-) Associate Professor of Accounting

B.S. 1992, M.A. 1995, University of Montana

**George Gibson** (1981-) Professor of History and Economics

B.A. 1969, Union College; M.A. 1974, Western State College; Ph.D. 1987, University of Nebraska-Lincoln

**Debra Heinrich** (2003-) Assistant Professor of Nursing

B.S. 1999, Union College; M.S.N. 2004, University of Phoenix

**Joann Herrington** (1995-1999, 2003-) Associate Professor of Education

B.S. 1974, Union College; M.A. 1995, LaSierra University

**Trudy Ann Holmes-Caines** (1994-) Professor of Psychology

B.A. 1986, West Indies College; M.A. 1991, Ph.D. 1995, Andrews University

**Michael Huckabee** (1997-) Associate Professor of Physician Assistant Studies

B.A. 1980, Northwest Nazarene College; B.S. 1983, M.P.A.S. 1997, University of Nebraska Medical Center; Ph.D. 2008, University of Nebraska-Lincoln

**Jeff Joiner** (2001-) Associate Professor of Nursing

B.S.N. 1986, Southwestern Adventist University; M.S.N., 1996, University of Kentucky

**Laura Karges** (1998-) Associate Professor of Nursing

B.S.N. 1985, Southwest Missouri State University; M.S. 1992, Andrews University

**Cliff Korf** (2000-2003, 2005-) Associate Professor of Physician Assistant Studies

B.H.S. 1980 Wichita State University; M.P.A.S. 2001, University of Nebraska Medical Center

**Valeree Krueger** (1979-) Associate Professor of Nursing

B.S. 1977, Union College; M.S.N. 1983, Vanderbilt University

**John B. Kurlinski** (2005-) Associate Professor of Religion

B.A., 1979, University of Wisconsin-Eau Claire; M.Div. 1984, D.Min. 1998, Andrews University



**Dwain Leonhardt** (1996-) Professor of Physician Assistant Studies  
B.A. 1972, Union College; M.D. 1975, Loma Linda University

**Daniel Lynn** (1986-) Professor of Music  
B.M.E. 1972, University of Nebraska-Lincoln; M.M. 1975, University of Hartford; D.M.A.  
1987, University of Colorado

**Nicholas Madhiri** (2007-) Assistant Professor of Chemistry  
B.S. 1999, University of Zimbabwe; Ph.D. 2006, West Virginia University

**James D. McClelland** (1974-) Professor of Art  
B.A. 1964, Andrews University; M.A. 1977, Western Michigan University

**Laurel McClelland** (1998-) Assistant Professor of English as a Second Language  
B.S. 1996, Union College; M.A. 1997, Andrews University

**Ruth Mendenhall** (1986-) Associate Professor of Nursing  
B.S. 1980, Union College; M.S.N. 1986, University of Texas at Arlington

**Michael Mennard** (2003-) Assistant Professor of Communication  
B.A., B.S. 1991, Pacific Union College; M.A. 2002, Sonoma State University

**Lorri Merchant** (2006-) Assistant Professor of Social Work  
B.S.W. 1994, Southern Adventist University; M.S.W. 1996, University of Kansas

**Michelle Velázquez Mesnard** (2002-) Associate Professor of Communication  
B.S. 1989, Pacific Union College; M.S. 2001, Golden Gate University

**Salvador Moguel** (2006-) Associate Professor of Biology  
B.S. 1983, Autonomous University of Guadalajara; M.S. 1995, State University of New York;  
Ph.D. 2004, New Mexico State University

**Y. J. Moses** (1992-) Professor of Education  
B.A. 1970, Spicer Memorial College; M.A. 1976, Andrews University; Ph.D. 1981, Michigan  
State University

**Nicole Orian** (2007-) Instructor of Nursing  
B.S.N. 2004, Union College

**Seth Perkins** (2007-) Assistant Professor of Health and Human Performance  
B.A., B.S. 1997, Southern Adventist University; M.S. 2006, Azusa Pacific University

**Nancy Petta** (1981-) Professor of Health and Human Performance  
B.S. 1980, University of Wisconsin; M.A.T. 1980, Andrews University; Ed.D. 1999, University  
of Nebraska-Lincoln

**Larry Ray** (1983-) Professor of Mathematics and Computer Science  
B.A. 1964, M.A. 1966, Pacific Union College; Ph.D. 1977, University of Southern California

**Frank T. Restesan** (2007-) Associate Professor of Music

B.A. 1995, George Dima State Conservatory; M.M. 2004, University of Arizona; D.M.A. 2007, University of Arizona

**Keith Riese** (1981-) Professor of Engineering

B.S. 1970, Walla Walla College; M.S.E.E. 1972, Oregon State University

**Mark Robison** (1996-) Associate Professor of English

B.A. 1977, Walla Walla College; M.A. 1993, St. John's College

**Bruce Schlieder** (1994-) Associate Professor of Social Work

B.S. 1975, State University College, Brockport; M.S.W. 1989, State University of New York, Albany

**Roger Schmidt** (2007-) Lecturer in Computer Science

B.S. 2006, Andrews University

**Charlotte Schober** (1984-) Associate Professor of Nursing

B.S. 1972, Walla Walla College; M.S.N. 1988, University of Nebraska Medical Center

**Karl-Heinz Schroeder** (1977-) Professor of History

B.A. 1969, Southern College; M.A. 1971, University of California at Santa Barbara

**Tom Shepherd** (1994-) Professor of Religion

B.A. 1973, Pacific Union College; M.P.H., Dr. P.H. 1976, Loma Linda University; M.A. 1986, Ph.D. 1991, Andrews University

**Victoria Smith** (2006-) Associate Professor of Nursing

B.S.N. 1976, Andrews University; M.S. 1988, Purdue University

**Rebecca Stafford** (2004-) Instructor in Physician Assistant Studies

B.S. 2000, Union College

**Kent Stahly** (1988-) Associate Professor of Finance

B.S. 1967, M.A. 1969, University of Nebraska-Lincoln

**Kimberly A. Steiner** (2005-) Assistant Professor of Business

B.A., B.S. 2001, Union College; M.A. 2004, University of Redlands

**Douglas I. Tallman** (2005-), Associate Professor of International Rescue and Relief;

B.A. 1977, Southern Missionary College; M.S.Ed. 2000, Southern Adventist University

**Benjamin Thornton** (2003-) Associate Professor of Biology

B.S. 1994, Southwestern Adventist University; M.S. 2000, Andrews University

**Debra Unterseher** (1990-) Associate Professor of Computer Information Systems

B.S. 1987, Union College; M.A. 1993, University of Nebraska-Lincoln

**Peggy Wahlen** (1996-) Associate Professor of English, and English as a Second Language  
B.A. 1970, Union College; M.A. 1979, Loma Linda University; M.L.S. 1981, San Jose State University

**Richard Webb** (2003-) Professor of Physics  
B.S. 1988, Loma Linda University; M.S. 1990, Ph.D. 1995, Washington State University

**Ryan Wells** (1979-) Professor of Music  
B.S. 1974, Union College; M.M. 1977, University of Nebraska-Lincoln; D.M.A. 1982, University of Arizona

**Carrie Wolfe** (1999-) Professor of Chemistry  
B.A. 1990, Union College; Ph.D. 1995, University of Nebraska-Lincoln

#### **LIBRARIANS HOLDING FACULTY RANK**

**Karla Britain** (1989-) Technical Services Librarian; Associate Professor  
B.S. 1967, Union College; M.L.S. 1971, University of Maryland

**DeForest Nesmith** (1968-) Associate Librarian; Associate Professor  
B.A. 1963, Union College; M.A. (L.S.) 1967, University of Denver

**Sabrina Riley** (2003-) Library Director; Associate Professor  
B.A. 1996, Andrews University; M.I.L.S. 1998, University of Michigan

#### **TEACHERS AT LABORATORY SCHOOL**

**Jacquelyn Simpson** (1989-95, 2000-) Instructor, George Stone Elementary School  
B.S. 1988, Union College; M.A. 1993, La Sierra University

**Susan Zimmermann** (1977-) Associate Professor of Education; George Stone Elementary School  
B.S. 1977, Union College; M.A. 1982, Loma Linda University

#### **ADJUNCT FACULTY—2007-2008**

**Marcia A. Kilsby**, M.S., M.T. (ASCP) S.B.B., C.L.S. (NCA), Ph.D  
Program Director, Clinical Laboratory Sciences  
Andrews University, Berrien Springs, Michigan

#### **LECTURERS—2006-2008**

These individual carry continuing teaching responsibilities.

Tomas Bartulec, M.A., Communications  
Steven Bassett, M.S., Science Education, Physician Assistant Studies  
Osa Berg, M.A., French  
Thomas Berg, Ph.D., History  
Deborah Bogdon, M.S., Sociology  
Amy Bollinger, B.S.N., Clinical Nursing  
Lee Bowes, B.A., Communication  
Kirk Brown, D.Min., Psychology

Shayne Daughenbaugh, M.Div., Religion  
LuAnn Davis, M.B.A., Communication  
Lynn Davis, M.F.A., Art  
Eric Fung, Ph.D., Physician Assistant Studies  
Melanie Gabbert, M.A., Psychology  
Sarah Gilbert, M.M., Music Education  
Phyllis Gorton, B.S., Health and Human Performance  
Angie Hardt, M.A., Mathematics  
Stan Hardt, M.A., Religion  
Janell Hurst, M.Ed., Music Ensemble  
Van Hurst, M.Div., Religion  
Debra Johnson, M.A., Art  
Priscilla Jones, M.B.A., Communication  
Maurice Kelley, D.M.A., Music  
John Kinworthy, Ph.D., Geography  
Donna Kopf, B.S., Emergency Medical Technician  
Konstantin Lisovskiy, B.A., Graphic Arts  
Robert Moore, B.F.A., Graphic Arts  
Jill Morstad, Ph.D., English  
Michelle Nash, M.A., English Education  
Linda Robison, M.A., Music Education  
Wayne Schaber, M.A., Education  
David Shaw, Ph.D., Physician Assistant Studies  
Virginia Simmons, Ph.D., Education  
G. Mark Smith, J.D., Business Law  
Jacque Smith, M.A., Communication  
Greg Steiner, M.A.M., Health and Human Performance  
Judy Sweney, M.A., Art History  
Man-kin Tsui, M.M., Music Ensemble  
Sarah Tupa, M.A., English  
Teresa Wadkins, Ph.D., International Rescue and Relief  
Harry Walles, M.Div., International Rescue and Relief  
Edward R. Walter II, B.S., International Rescue and Relief  
Dan Wysong, M.Div., Religion

**Individual Music Instruction**

Christopher Barrick, M.M.  
Deborah Bouffard, M.M.  
Peter Bouffard, M.M.  
Donna Carnes, M.M.  
Aleta Collier, B.M.E.  
Lisette Deemer, M.M.  
Marina Fabrikant, M.M.  
Jason Fass, M.M.  
Diana Frazier, M.M.  
Andy Hall, B.S.  
Kristin Heslop, M.M.  
Gerald Holbrook, D.M.A.  
Maurice Eugene Kelley, M.M.

Kevin Kroon, B.S.  
Darcy Jo Percy, M.M.

### **ADMINISTRATIVE STAFF—2007-2008**

Date(s) in parentheses indicate years of employment at Union College.

### **ACADEMIC SUPPORT**

**Osa-Karin Berg** (1995-) Director of Records, Research, and Assessment; Assistant Academic Dean; Associate Professor of French  
B.A. 1966, Atlantic Union College; M.A. 1987, Harvard University

**Deborah Bogdon** (1996-) Director of Career Center; Assistant Professor  
B.A. 1981, B.Ed. 1985, P.G.D. 1986, University of Regina; M.Sc. 1993, Loma Linda University

**Deborah Forshee-Sweeney** (2001-) Director of Teaching Learning Center; Instructor  
B.S.W. 1994, Union College

**Anita Kidwiler** (1963-1984, 1988-) Associate Director of Records  
B.S. 1961, Union College; M.Ed. 1969, University of Missouri

**Sabrina Riley** (2003-) Library Director  
B.A. 1996, Andrews University; M.I.L.S. 1998, University of Michigan

### **CAMPUS SERVICES**

**Tom Becker** (1969-) Director of Information Systems  
B.S. 1969, Union College

**Cheryl Crawford** (1982-) Manager of Union Manor Facility

**Wilma Darcy** (1982-1994, 1998-) Manager of College Housing

**Terri Lair** (2004-) Manager of Campus Store  
B.A. 1985, Union College

**Don Murray** (2002-) Director of Plant Service  
B.S. 1981, Union College

**Patricia Parmele** (1985-) Director of Food Service  
A.A. 1985, Union College

**Ric Spaulding** (1988-) Director of Lifestyle Center; Athletic Director; Assistant Professor of Health and Human Performance  
B.S. 1983, Andrews University; M.Ed. 1988, University of Missouri

### **STUDENT SERVICES**

**Kirk Brown** (2002-) Counselor  
B.A.T. 1981, Union College; M.Div. 1985, Andrews University;  
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B.S. 2000, Union College

**Ron Dodds** (1990-) Associate Dean of Men  
B.S. 1990, Union College

**Carol Gibson** (1993-) Student Health Nurse  
B.S.N. 1978, Union College

**Leann Merth** (1992-) Dean of Women  
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B.A. 1972, Union College; M.Ed. 1987, College of Idaho

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B.A. 1964, Andrews University; M.A. 1993, University of Nebraska-Lincoln

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B.A. 1971, Columbia Union College; M.A., 1983, Andrews University

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#### **FINANCIAL ADMINISTRATION**

**Tommy Cash** (1987-) Chief Accountant  
B.S. 1967, Union College

**Harvey Meier** (1977-) Controller  
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**Jonathan Shields** (2005-) Director for Human Resources  
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