



bulletin 2018–2020

experience the all-important details

UNION
COLLEGE



Bulletin 2018-~~2019~~2020

Contact us

Volume 80

www.ucollege.edu
records@ucollege.edu

P 402.486.2529
F 402.486.2584

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3800 S. 48th St., Lincoln, NE 68506 • ucollege.edu

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Contact Information

General Information	402.486.2600
Academic Administration	402.486.2501
Admissions and Enrollment Services	402.486.2504 402.486.2566 (Fax) enroll@ucollege.edu
Campus Ministries	402.486.2508
Career Planning and Testing	402.486.2540
Cashier	402.486.2992
Information Systems (Computer and telephone services)	402.486.2511 402.486.2895 (Fax)
Library	402.486.2514
Records Office	402.486.2529
Student Employment	402.486.2502
Student Financial Services	402.486.2505 402.486.2592 (Fax) sfs@ucollege.edu
Student Housing	402.486.2507
College-owned Apartments	402.486.2502
Men's Residence Halls	402.486.2533
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Student Life	402.486.2507
Teaching Learning Center	402.486.2506

Academic Year Calendar 2018-2019

2018

May 7	Summer Classes Begin
Aug. 10	Last Day to Complete Summer Graduation Requirements
Aug. 15-17	New Student Orientation - uConnect
Aug. 17	Registration for Fall Semester
Aug. 20	Fall Semester Classes Begin
Aug. 28	Last Day to Drop (no record)/Add Classes
Sept. 3	Labor Day Holiday (no classes)
Oct. 12	Fall Break
Nov. 4 Nov. 8	Last Day to Withdraw from a Class/Receive a "W"
Nov. 7	Pre-registration for Spring Semester Begins (JR/SR)
Nov. 8	Pre-registration for Spring Semester Begins
Nov. 19-23	Thanksgiving Vacation
Dec. 10-12	Fall Semester Examinations
Dec. 13 Dec. 12	Last Day to Complete December Graduation Requirements

2019

Jan. 6	Registration for Spring Semester
Jan. 7	Spring Semester Classes Begin
Jan. 16	Last Day to Drop (no record)/Add Classes
Jan. 21	Martin Luther King Jr. Day Holiday (no classes)
Feb. 7-8	Winter Break
Mar. 4-8	Spring Vacation
Mar. 21 Mar. 28	Last Day to Withdraw from a Class/Receive a "W"
Mar. 25	Pre-registration for Fall Semester Begins (JR/SR)
Mar. 26	Pre-registration for Fall Semester Begins
Apr. 29-May 1	Spring Semester Examinations
May 3-5	Commencement Weekend

**See Addendum to Withdrawal deadlines and Last Day to Complete December Graduation Requirements at end of bulletin (Pg 286)*

This is Union College

Our mission

Union College is a Seventh-day Adventist community of higher education, inspired by Jesus Christ and dedicated to empowering students to learn, serve and lead.

Our vision

Union College mentors every student to become a highly sought graduate who serves joyfully in God's calling.

- **Joyfully Living in God's Calling**
We mentor every student and employee to develop a personal spiritual journey and live God's calling.
- **Student Mentorship**
We make every student's success our top priority through mentors who believe in and champion them.
- **Highly Sought Graduates**
We prepare every student to be a highly sought graduate through development of soft skills such as leadership, communication, teamwork, problem solving, creativity and grit.
- **Empowered Employees**
We develop and support every employee as our most important asset.

Our core values

LEARNING	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.
DISCIPLESHIP	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.
SERVICE	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.
MENTORING	Mentoring provides support for development of the whole person. We inspire each other to achieve, believe, and make wise choices.
DIVERSITY	Diversity enriches campus life. We create cordiality of discourse, encourage respect for differences, promote inclusiveness, and welcome diversity among employees, students and leaders.
COMMUNITY	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.
STEWARDSHIP	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.

Description

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 to help students find and fulfill their God-given calling in both personal and professional life, making a positive impact on their family, community and the world.

Accreditation

Union College is Accredited by:

The Higher Learning Commission
230 South LaSalle Street, Suite 7-500
Chicago, IL 60604
800.621.7440
<http://hlcommission.org>

Union College is Recognized by:

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

Relevant Programs are Accredited or Licensed by:

- 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
- Nebraska Department of Health and Human Services

Union College Is a Member of:

- American Association of Colleges for Teacher Education
- American Association of Colleges of Nursing
- American Association of Collegiate Registrars and Admissions Officers
- Adventist Library Information Cooperative
- Association of Independent Colleges and Universities of Nebraska
- Council of Independent Colleges
- National Association of Student Financial Aid Administrators
- National Collegiate Honors Council
- 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 Administrators
- Nebraska Council on Teacher Education
- Nebraska Independent College Foundation
- Network for Vocation in Undergraduate Education
- Physician Assistant Education Association
- United States Gymnastics Federation
- Upper Midwest Honors Council

Union College Is Approved by:

- Nebraska Department of Education
- State of Nebraska Board of Nursing

Admission to the College

Union College welcomes applicants who desire to study in a Christian environment, who demonstrate intellectual curiosity, and who seek strength of character. The college is committed to equal education for men and women of all races and does not discriminate in its educational and admissions policies on the basis of disability, age, gender, race, color, or national origin. Admission is granted to applicants who meet admission requirements and whose principles and interests reflect the ideals and standards of the college.

Religious affiliation is not a requirement for admission. All students are expected to abide by the policies and standards of the college.

Admission of First-Year Students

The admission process is designed to indicate the applicant's success in high school and the ability to perform well in academic coursework.

The recommended high school curriculum includes the coursework listed below. Depending on career goals, additional study in math, science, foreign language, and other fields will improve the preparation for college.

- 4 years of English
- 2 years of algebra
- 1 year of geometry
- 2 years of laboratory sciences
- 2 years of social sciences
- 1 unit of computer applications

In completing these courses, high school applicants should meet or surpass the following minimum standards:

- A high school grade point average (GPA) of 2.50 on a 4-point scale, and
- An ACT composite score of 18 or a combined old SAT score of 1290 or new SAT score of 950.
- Applicants applying on the basis of high school equivalency using the General Education Development Test (GED) must achieve an average score of 500 with no score below 450.

International Students

- Applications are welcomed from graduates of recognized secondary schools in other countries or who earn government credentials (e.g., the Hong Kong HKDSE). When lacking ACT scores, applicants may be evaluated by other standards for admission, although ACT or SAT English, reading and math test results may still be required for placement in specific courses.
- Students whose native language is not English and who do not meet the minimum ACT English score of 17 (or equivalent) must demonstrate current English proficiency by scores on a standardized test taken within the past two years. The college accepts the following examinations and, for regular admission, requires minimum scores of TOEFL: Internet-based (iBT), 79; International paper-based, 550; IELTS 6.5.
- Applicants not meeting the regular admission scores will be considered for provisional admission if they possess an iBT score between 60 and 79, or an IELTS between 5.5 and 6.0. Provisional admission involves courses preparatory to freshman composition while taking selected college courses. The regular admission requirements must be met within two years.

Application Process

Two documents are essential for the admission process:

- A completed application, which may be found online at www.ucollege.edu/apply.
- A high school transcript. The college requires an official transcript with date of graduation prior to enrollment. Home school students should submit a home school transcript and an explanation of the home school curriculum with completion date. Official transcripts are required from any schools attended.

International Student Admission Process

If an applicant's original documents are not in English, a certified translation must be provided. Except for applicants from certain affiliated colleges and universities, all transcripts from foreign universities must be sent to www.wes.org.

For a Form I-20 to be issued, the applicant must provide an Affidavit of Support (available at www.ucollege.edu/international), bank statements as proof of sufficient income, a deposit of \$5,000, and a copy of the applicant's passport photo page.

For further information contact the Enrollment Office or go to www.ucollege.edu/international.

Provisional Admission

Applicants who do not meet the published standards may receive provisional acceptance, which requires enrollment in programs through the Teaching Learning Center.

- **Freshman Enrichment** is a one semester program that provides an academic coach to help with the transition to college. Students on Freshman Enrichment must complete the following requirements:
 - Sign a participation agreement.
 - Participate in Personal Academic College Coaching (PACC) the first semester.
 - Limit course loads to a maximum of 15 hours.
- **Integrated College Experience (ICE)** is a two semester program based on high school GPA and ACT scores designed to help with the transition to college and developing an academic plan. Students accepted for the ICE program will:
 - Sign the ICE participation agreement.
 - Participate in one year of Personal Academic College Coaching (PACC) and the ICE Learning Community.
 - Take 12-15 credit hours per semester.
 - Enroll in TLMC 111 and CORE 109.
 - Pursue a two-year degree with a general studies major. After successful completion of 24 credit hours at a 2.0 GPA, students may declare a bachelor's level major.

Transfer Student Admission

Students wishing to transfer from another regionally-accredited college or university must provide the following as part of the admission process:

- A completed application (available online at www.ucollege.edu/apply).
- Final official transcripts from all schools attended.
- Transfer students whose native language is not English may demonstrate their language proficiency through the standards listed for admission or by the successful completion of a full year of English composition.
- Applicants who have completed the equivalent of 24 semester hours including one semester of English composition at a regionally accredited institution with a cumulative minimum GPA of 2.00 are accepted based on college performance. However, ACT or SAT test scores are used for placement in specific courses.

Non-Degree/Guest Students

Guest students from other institutions and individuals not seeking a degree from Union College may request to take up to six hours of courses per semester without meeting the regular admission requirements. Regular Union students have priority over guest students in gaining entrance to classes with limited enrollment.

Guaranteed Education Program

The Guaranteed Education program permits Union College graduates who earned at least 64 hours in residence to receive free tuition when initiating a single additional undergraduate major between two years and six years after graduation. Some restrictions apply:

- Free tuition is limited to courses in the major and required cognates.
- The professional phases of Health Sciences, Nursing, occupational therapy assistant and International Rescue and Relief programs are not covered under this program.
- Because personalized and general studies degrees are not college-designed programs, their graduates are not covered under this program.
- Students paying regular tuition will receive priority for registration in limited-enrollment classes and laboratory sections.
- Students must maintain satisfactory academic progress each semester (2.0 minimum semester GPA) in order to continue in the Guaranteed Education program.

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 even 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. The following apply:

- Applicants must submit an official transcript verifying completion of the previous degree.
- The Baccalaureate Bonus program's half-tuition rate applies only to fall and spring semesters.
- Discounts are applied to tuition only and do not apply to laboratory or other fees, clinical coursework, off-campus courses, individual lessons, or the professional phases of Health Sciences, Nursing, Occupational Therapy Assistant or the International Rescue and Relief program.
- International students who hold a degree equivalent to the American bachelor's (or higher level degree) and meet the English language requirement may qualify for the discount.
- Students paying full tuition will receive priority for registration in limited-enrollment classes and laboratory sections.
- Baccalaureate Bonus students must maintain satisfactory academic progress each semester (2.0 minimum semester GPA) in order to continue in the Baccalaureate Bonus program.

Financial Considerations

Applicants to the Baccalaureate Bonus program must have paid in full any previous account balances held with Union College.

- The student remains responsible for summer school tuition, other expenses, and fees, which, unlike regular tuition, are not reduced. The student also assumes full financial responsibility for classes taken at other colleges or universities.
- Students in the program are not eligible to receive any other Union College scholarships or financial awards.
- On-campus employment is not usually available to students in this program. However, based on campus employment needs, the Student Finance Committee may approve a student's application for employment.
- Other restrictions may apply. Contact Academic Records and Student Financial Services.

Financial Information

Student Financial Services

Student Financial Services assists students in determining how to pay for college. Students are required to complete their financial plans online in the My Financial Aid section of the student portal before classes begin each semester. To maintain maximum financial aid, the Free Application for Federal Student Aid (FAFSA) and financial aid questionnaire must be completed by May 15. To better serve students, parents, sponsors, and others who plan to travel long distances to the campus for business purposes, appointments are recommended. Contact us at sfs@ucollege.edu or 402-486-2505.

Tuition and Fees

Students at Union College are entitled to information on applying for, receiving and continuing with financial aid as well as educational costs, refunds, and transportation costs for students living off-campus.

A schedule of Scholarships, Tuition and Fees may be found online at www.ucollege.edu/costs.

Typically student charges include tuition, student housing, dining, books and supplies for classes. Other charges might include health insurance, special academic attention and testing, and music lessons. Additional service charges are listed in the Miscellaneous Charges section.

Payment Arrangements

Student charges and financial aid at Union College are calculated on a yearly basis. Payment for any previous balance due is expected at the beginning of each term. Families may elect to make payments using a 10-month payment plan. The payment amount will be calculated based on the yearly balance due (estimated charges minus estimated aid) divided into ten equal payment amounts due payable on the first day of each month (August through May). A late payment fee of \$25 will be applied each month the required payment is not made.

All prior year balances must be paid in full in order to receive federal financial aid the following year.

International students needing an I-20 are required to pay a \$5,000 deposit. Of this deposit, \$4,000 is applied towards the first semester of attendance, and \$1,000 is withheld and is applied to the student's account at graduation. An initial payment of \$2,500 is required upon arrival. The remaining account balance will be divided into nine monthly payments due the first of each month (September-May).

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/Drop Classes." After that date, required fees are non-refundable and the following refund policy applies to tuition.

Refund	Calendar Days	(See Addendum to Refund Calendar Days at end of bulletin (Pg 286))
100%	Up to and including Last Day to Add/Drop Classes	
80%	days 10 to 19 days	10 to 20
60%	days 20 to 36 days	21 to 39
40%	days 37 to 53 days	40 to 58
20%	days 54 to 70 days	59 to 77
None	Exceeding 70 days	Exceeding 77 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 that determines the amount of federal aid the student earned while enrolled. The Federal calculation is slightly different from that used for institutional aid.

Keeping Current

In order to be eligible to register for classes for the upcoming term, the account balance must be paid up to date.

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.

Transcripts and Diplomas

The student account needs to be current in order to expedite the release of transcripts and diplomas. Payment should be made to cover any outstanding account balance when a transcript or diploma request is submitted. It is Union College policy to withhold transcripts and diplomas if a student has an unpaid account balance. Under provisions of federal loan programs, Union College withholds all academic records when Federal Student Loan payments become past due. This policy applies to all student account charges and all other educational related expenses.

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.

Credit Balances

When a credit balance is generated on a student account (payments and credits exceed total charges due), a refund will be processed and the excess returned to the student if that is the option selected. Students select their preferred method of refund during the registration process.

Collection Policy

Regardless of reason for leaving, students are responsible for any outstanding balance left on their account. Satisfactory payment arrangements must be made within ninety (90) days after student is no longer enrolled. The college reserves the right to use third-party agencies for collections on non-current accounts more than one hundred and eighty (180) days past due.

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
- Occupational Therapy Assistant
- 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, non-returnable special supplies and special laboratory services not ordinarily required.

College Level Examination Program (CLEP)

\$ 85.00	Testing fee (per 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)*

\$ 45.00	ACT residual testing
15.00	Online course proctor fee
25.00	Diploma replacement
105.00	Residence hall room deposit
50.00	Examination rescheduling
100.00	Late registration (after second day of classes)
25.00	Nursing application fee
150.00	CORE (Education majors) ¹
120.00-146.00	Praxis II ¹
25.00	Proficiency examinations (per course by division)
15.00	Recording fee (per credit)
5.00	eTranscript fee ²

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 apply.

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. If approved, a student may have credits taken at another institution for the given term count towards their overall enrollment for the purposes of being considered full-time for financial aid. Students must be enrolled at least half-time at Union College in order to be eligible for financial aid under a Multi-Campus Enrollment contract.

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) will be charged the full 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 individually customized degrees, cooperative, Guaranteed Education and Baccalaureate Bonus programs.

¹ Charges subject to change.

² Account must be paid in full.

Family Educational Rights and Privacy Act (FERPA)

Financial records are included as part of students' educational records and therefore are subject to FERPA regulations. Union College's FERPA policy is found at www.ucollege.edu/academic-services/records-office/ferpa.

Resources Available

Financial assistance is available from the college and federal/state/private agencies. Most financial aid eligibility is based on results of the Free Application for Federal Student Aid (FAFSA). Students are encouraged to complete the FAFSA early to receive the maximum financial awards. The earliest date to file is October 1 for the following school year. Except in extreme cases, students should file the FAFSA using actual (not estimated) tax return information. Beginning in the 2017-2018 school year, all applicants are required to complete the FAFSA with their prior-year tax information. For the 2018-2019 school year students and families will use 2016 tax and financial information.

The FAFSA may be completed prior to acceptance to the college, but the student must be officially accepted through the college's Admissions Office before receiving an offer for financial assistance. 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, ethnic origin, age, or disability.

Scholarships

Students are eligible to receive scholarships from multiple sources, including external and internal scholarships.

External Scholarships

There are many external scholarship opportunities available. Students are encouraged to research and apply for online and external scholarship opportunities. It is not recommended to pay for searching and/or applying for scholarships.

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.

Union College Merit Awards, Scholarships and Financial Assistance

Students enrolling at Union are eligible to earn significant awards based on academic merit, admission criteria or need. The scholarship and grant award chart can be viewed online for eligibility criteria at www.ucollege.edu/scholarships.

At Union, merit awards and grants are funded through institutional resources as well as numerous endowed and annual scholarships made possible by generous contributions from alumni, businesses and friends of the college. Students who meet the criteria and earn an award guarantee from Union College are required to acknowledge donors for their generosity by thanking them. This acknowledgement is a requirement for annual renewal. Scholarship recipients will be contacted by the Advancement Office to fulfill the donor acknowledgement process.

Total institutional aid (excluding loans) cannot exceed the institutional budget. Institutional budget is defined as full-time tuition, general fee, double room occupancy and minimum meal plan.

Eligibility for Union College scholarships and financial assistance is based upon full-time enrollment (12 hours or more per semester). For detailed information on awarding policies please visit www.ucollege.edu/sfs/forms.

- **Summer Camp Scholarships** are for students employed in a Seventh-day Adventist conference summer camp program. Summer earnings have to be applied to the student's account to be eligible for a camp match scholarship. Union College matches applied camp earnings at 100% up to \$1,500.
- **Literature Evangelism Scholarships.** Union College matches 100% of earnings up to \$2,000.
- **Task Force Scholarships** are for Union College students who participate in qualified Task Force assignments. Scholarships of \$2,000 are awarded when student returns to Union College.
- **Student Missionary Scholarships** of \$2,000 are awarded to participants in qualified student missionary assignments. Scholarships are awarded when student returns to Union College.

Eligibility for Accepting Financial Assistance

Financial aid offers are typically based on full-time (12 hours or more) enrollment. If a student enrolls for less than 12 hours each semester or drops below full-time, their award will be reduced or cancelled. Students who plan to register for less than 12 hours in a semester should contact Student Financial Services in advance to discuss the effect their enrollment will have on their financial aid eligibility.

Federal Financial Aid

Title IV Federal Student Financial Aid programs include Federal Pell Grants, Federal Work-Study Employment, Federal Supplemental Educational Opportunity Grants, Federal Direct 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, registering 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 online at www.fafsa.gov. Help is available on that site or by calling 1-800-4-FED-AID (1-800-433-3243).

Federal Grants

Grants are awarded to students based on the results of the FAFSA application.

- **Federal Pell Grant.** A Federal Pell Grant is a federal grant awarded to undergraduate students who are United States citizens or permanent residents and have not earned a bachelor's or professional degree. Award amounts vary based on the results of 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.
- **State of Nebraska Grant.** The Nebraska Opportunity Grant (NOG) is a state managed fund. Awards are made to qualified Nebraska residents who meet the eligibility requirements set by the state and college.
- **Government loans.** The federal loan program provides low-interest, long-term loan opportunities to eligible degree-seeking students who are United States Citizens or permanent residents enrolled at least half-time at Union College. Eligibility for federal loan funds requires annual completion of the FAFSA. See Federal Financial Aid for information or help filing the FAFSA.
- **Federal Direct Loan.** This loan program provides eligible students access to low interest rate loans. Federal Direct Loan repayment begins approximately six months after the student is no longer enrolled at least half time in a degree seeking program. Repayment options may be found at studentloans.gov.

Subsidized loan means the federal government pays the interest while the student is enrolled at least half time and during deferment periods. Unsubsidized loans begin accruing interest immediately upon disbursement.

- **Federal Parent PLUS Loan for Undergraduate Students.** Parent PLUS loans enable parents with satisfactory credit history to borrow funds to pay education expenses of their dependent undergraduate student enrolled at least half time. The maximum eligibility for a Parent 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, unless other arrangements are made. These payments may be deferred while the student is enrolled at least half time. For more information visit studentloans.gov.
- **Federal Graduate PLUS Loan for Graduate Students.** Graduate PLUS loans enable graduate students with a satisfactory credit history to borrow funds to pay educational expenses not covered by other funds. The maximum eligibility for a Graduate PLUS loan is the cost of attendance less other financial aid received. Interest begins to accrue immediately upon disbursement. Repayment is deferred as long as the student is enrolled at least half time.

Employment Opportunities

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

Finding Campus Employment

The student employment office assists students in finding on-campus work opportunities by posting employment openings online. Full-time students seeking their initial bachelor's degrees are given preference for employment. Campus employment is limited to 20 hours per week during the school year.

Federal Work-Study Employment

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

Worker's Comp Insurance

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

International Students

The U.S. Citizenship and Immigration Service only allows students on an I-20 to be employed in campus positions. International students are eligible to work 20 hours a week when enrolled in full-time classes and 40 hours a week during the summer. International students may apply for Occupational Practical Training (OPT) when coursework is completed.

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

Summer employment opportunities are available to students.

Policies That Affect Financial Aid Eligibility

Satisfactory Academic Progress to Keep Financial Aid

The United States Department of Education requires students to progress through their academic program in a timely manner in order to maintain eligibility for Title IV funds. Eligibility for Union College Institutional Funds is also based on the same standards as Federal Aid eligibility as defined below.

All students receiving Title IV financial assistance are reviewed for Qualitative, Quantitative and Maximum Timeframe standards of Satisfactory Academic Progress (SAP) on a semester basis. All students must maintain SAP toward their degree.

Undergraduate Student Guidelines

Qualitative Standard:

- Undergraduate students who do not achieve at least a 2.0 cumulative grade point average (GPA) are no longer eligible for Federal and Institutional Financial Aid.

Quantitative Standard:

- Students who fail to complete at least 67 percent of units attempted will not be eligible to receive Title IV and Institutional financial awards. Federal regulations require that a student complete (earn) a minimum of 67 percent of the credits they attempt in order to remain eligible to receive student financial aid.
- Attempted credits include:
 - All credits for courses in which a student is enrolled as of the last day to add/drop.
 - All credits for courses in which the student enrolled, but later withdrew or failed.
 - Transfer credits from another school that are accepted by Union College.
 - Credits earned through examination.
- Earned credits include:
 - All credits completed with grades of 'D-' or higher.
 - Transfer credits from another school that are accepted by Union College.
 - Credits earned through examination.

All Union College students must successfully complete (earn) 67 percent of the total cumulative credits attempted as a condition for continued financial aid eligibility.

Maximum Timeframe:

- Students may receive financial assistance up to 150 percent of the units necessary to complete their program. Therefore, undergraduate students may not receive aid for terms subsequent to the student reaching (or exceeding) 186 attempted hours.
- When transferring to Union College, attempted units from all other institutions where the student attended will be included when determining the total units attempted.
- When a student changed their major the units from their previous program that qualify for their new program will be calculated in the total.
- Union College allows one change of major when calculating the 150 percent.
- Units from the previous degree will be added to the total when calculating the 150 percent.

Graduate Student Guidelines

A graduate student must maintain an overall cumulative grade point average of at least 3.00 and must satisfactorily complete all credit hours with a grade of C or above to continue in the program. Graduate students may only receive Title IV assistance up to 150 percent of the required time to complete their graduate degree.

Financial Aid Warning

Students who fail to meet all SAP regulations receive a Financial Aid warning for one semester. During the warning semester, students are eligible to receive financial aid as awarded. Performance during this semester determines whether financial aid is given in future terms. Federal, state and institutional aid is terminated after the warning semester if the student fails to meet the overall SAP requirements.

Financial Aid Termination

A student who does not meet satisfactory academic progress standards will not be eligible for federal, state, or institutional aid until after SAP requirements are met or an appeal is approved by the Student Financial Services committee. 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.

Financial Aid Termination Appeal

Students have the right to appeal this decision. Appeals must be based on relevant, significant and documentable extenuating circumstances such as serious injury, illness, death of a close relative or other special circumstances. The appeal form is online and must be submitted to the SFS director at least two weeks prior to the semester. If an appeal is approved, the student will be placed on Financial Aid probation for one semester and evaluated at the end of the semester. A student on Financial Aid probation is eligible for Title IV aid and institutional aid for the approved semester. Performance during this semester determines whether financial aid is given in future terms. Federal, state and institutional aid is terminated after the probation semester if the student fails to meet the overall SAP requirements.

Master's Program. Students in master's program are granted 33 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 62 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 circumstances for not making satisfactory progress;
- indicating how satisfactory progress will be achieved; and
- all supporting documentation for reasons for not making satisfactory progress.

Drug Law Violation

According to the United States Department of Education, if a student is convicted of a drug offense after receiving Federal aid money, he or she must notify the Student Financial Services office immediately and that student will become ineligible for further federal aid and also be required to pay back any and all aid received after the conviction.

Should a conviction result, a student can take advantage of rehabilitation programs that can make him or her eligible for federal financial aid again.

Students Convicted of Possession or Sale of Drugs

(The following information is excerpted from the Federal Student Aid Handbook, Volume 1 – Student Eligibility)

A federal or state drug conviction can disqualify a student for FSA funds. Convictions only count if they were for an offense that occurred during a period of enrollment for which the student was receiving Title IV aid—they do not count if the offense was not during such a period. Also, a conviction that was reversed, set aside, or

removed from the student's record does not count, nor does one received when s/he was a juvenile, unless s/he was tried as an adult.

If the student was convicted of both possessing and selling illegal drugs, and the periods of ineligibility are different, the student will be ineligible for the longer period. A student regains eligibility the day after the period of ineligibility ends or when s/he successfully completes a qualified drug rehabilitation program. Further drug convictions will make him or her ineligible again. It is the student's responsibility to certify to that s/he has successfully completed the rehabilitation program.

Federal Verification Process

Some students who file the Free Application for Federal Student Aid (FAFSA) are selected for a process called 'Verification'. The verification selection process is dictated by the Department of Education. The Financial Aid Office has the right to select student records for the process under certain circumstances.

Verification is a quality-assurance measure used by the United States Department of Education (DOE). The college is required to confirm accuracy of the data reported on the FAFSA. Verification is completed by collecting the documents the student used to complete the FAFSA and comparing them with the information the student provided to the DOE.

Students selected for verification are notified by the DOE on the Student Aid Report (SAR). A request letter for the needed documents will be sent from the Student Financial Services office. Required documents are updated as needed and can be viewed on the Financial Aid section of the Union College Student Portal under the "To Do" tab.

Professional Judgment

Students who feel that the results of the Free Application for Federal Student Aid (FAFSA) do not accurately reflect the family financial circumstances correctly may file an appeal. The appeal must be based on a documentable, justified situation. Some examples include death in the family, loss of income, exceptional medical expenses, etc. In order to be considered for special circumstance appeal, students must first complete the verification process (see Federal Verification Process) as well as provide documentation to substantiate their claim.

Student Life and Services

Student Life

Union College is known as a friendly undergraduate environment that provides opportunities for learning, leadership, socializing and personal Christian growth. Saturday night activities are planned by various groups such as Student Life, Associated Student Body (ASB), Athletics, and our Campus Clubs to enhance campus involvement. The Student Center is a hub of campus life. The proximity of rivers, lakes and parks offers opportunities for group and individual activities. Clubs and organizations provide a variety of social and intellectual enrichment activities.

The college organizes intramural sports, varsity sports, and individual sports opportunities. Tennis courts, a 25-meter swimming pool, gymnasium and four-acre playing field are available on campus. The Gymnares, the college's student gymnastics team, tour academies and regularly attend AcroFest.

Union provides for student socialization and learning in the Student Center, Woods Auditorium, Cooper's Corner, Campus Store, Career Center, Teaching Learning Center, the Rees Hall Club Room, 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 the second floor of the Everett Dick Administration Building.

Student Life Agreement

The college aims for students to 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 principles outlined in the Student Handbook.

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 worship led by students or faculty, residence hall worship, 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.

Overview 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. For the full Code of Conduct, please refer to the Student Handbook.

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 can be found in the Student Handbook.

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 dean of students or residence hall dean. Students 21 years old with senior status at the beginning of a semester may arrange to live in a residence hall at a reduced rate through the Dorm Incentive Program.

There are four residence halls: Rees Hall and Rees Hall Annex 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/student-services.

Room Reservations

Room reservations can be made online at www.ucollege.edu/forms or by writing or calling the dean of women (402.486.2535) or dean of men (402.486.2533).

College-Owned Housing

The college owns a number of campus apartments and houses suitable for student families and students who qualify to live outside the residential halls. 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 at housingmanager@ucollege.edu or www.ucollege.edu/campushousing.

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.

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 nurse or physician. Referrals may be made to physicians and other healthcare professionals. Additional fees may apply.

To register, each student must complete a health form and provide an official record of immunizations. 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. For specific information, please visit the website. Special health regulations apply to international students. For more information contact the director of admissions.

Pharmaceutical or Chemical Trial

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, regardless of a student's age, if a student 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.

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. Upon registration students must provide documentation verifying insurance coverage that is comparable to the school's insurance coverage, or they may elect to purchase a health insurance plan available through the college. Though health insurance is not required for students taking 11 hours or less, it is highly recommended. International students are required, by law, to purchase the optional major medical insurance. Medicaid from a state other than Nebraska does not suffice. Contact Student Life if you have questions regarding health insurance.

Motor Vehicles

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

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 who are enrolled in at least six hours of credit and who meet insurance requirements are eligible to participate in the intramural sports program. Students competing on intercollegiate varsity 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 soccer, men's and women's basketball, women's volleyball, gymnastics, and men's golf. All varsity 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 and must be registered for a minimum of 12 credit hours to be fully eligible to participate on an intercollegiate team. First semester freshmen academic eligibility is based on the high school GPA. A one semester probationary period may be granted to team members whose GPA falls between 2.00 and 2.50 for the past semester by appeal to the Athletic Committee. Those placed on probation may be allowed to practice, and play in games or travel with the team at the coaches' and Athletic Director's discretion. 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.

Policy Regarding Student Complaints

In seeking to do what is right, Union College values student complaints as evidence of potential difficulties to be addressed. Most complaints are addressed informally, orally or electronically, with the division chair, residence hall dean, work supervisor, or other responsible campus employee. However, if a student seeks further resolution of the problem, and discussion with the appropriate vice president likewise fails to satisfy the student, a formal complaint should be filed with the appropriate vice president.

Formal complaints are defined as non-trivial complaints submitted in writing, dated, signed by the student, and submitted to the vice president with the responsibility to handle the complaint. Formal complaints are kept on file, and each vice president maintains a record of each complaint filed and its resolution.

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 may file a formal grievance. The processes for a formal grievance can be found on the Academic Administration section of the Union College website.

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.

Academic Resources

Ella Johnson Crandall Memorial Library

www.ucollege.edu/library

Melissa Hortemiller, Public Services Librarian

The Ella Johnson Crandall Memorial Library empowers students, faculty, staff, and community members for learning, teaching, research and spiritual growth through the provision of information resources, services, and the preservation of institutional and spiritual heritage.

Within the library's 38,000-square-foot facility, librarians offer reference assistance, research instruction, collection development, and special programming. Through the Reference Assistance Program, patrons can schedule a reference appointment with a librarian, or receive help on a walk-in basis, by phone, email, or Instant Messaging from the library's home page. Through the Personal Librarian Program, librarians provide effective research instruction, collection development (selection of resources), and online subject research guides (LibGuides) for each major on campus. The library's resources are highlighted through physical book displays and through special programming.

The library's collection of more than 160,000 physical items includes a variety of formats such as books, eBooks, periodicals, DVDs and audio books. Online collections include full-text access to more than 28,000 periodical titles, 170,000 electronic books, and 15,000 academic streaming videos. Both physical and electronic collections are searchable through the library's online catalog. The Lora McMahon King Heritage Room houses a large collection of Adventist books, periodicals and microforms, in addition to Union College archival materials. A selection of these materials is also available online through the Union College Heritage Collections database. The library subscribes to approximately 40 article databases accessible via the Web from services such as EBSCOhost and OCLC. Students may log in to these databases from any campus computer or from off campus via EzProxy.

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 70,000 member libraries of OCLC. Additionally, patrons visiting the library can choose from a variety of study spaces including small group study rooms, individual study rooms, open tables, study carrels, and lounge seating. Two small group study rooms include televisions and DVD players. Students may also check out HDMI cords to connect laptops to the televisions.

Information Systems

www.ucollege.edu/information-systems

Richard Henriques, Director

Information Systems (IS) maintains computer hardware and software owned by Union College. IS also provides a campus wide network, both wired and wireless, that gives access to learning management systems, student information systems, enterprise management software, and the Internet. Students that comply with Union College's computer policy are granted access via credentials that are issued during their registration process.

Microcomputer Laboratory

www.ucollege.edu/campus-services/computer-labs

Gary Dickerson, Director

The Division of Business and Computer Science maintains the largest general-use computer lab on campus. The micro lab is available for more than 80 hours per week during the school year. The micro lab gives students

access to the internet, a place to print out their papers for classes, as well as word processing, spreadsheets and presentation software.

Graphic Arts Computer Laboratory

www.ucollege.edu/campus-services/computer-labs

Bruce Forbes, Director

The graphic arts computer lab, an open lab located in Engel Hall, is maintained to support photo editing and printing, print production, graphic design, and web design. Macintosh computers run drawing, page layout, image editing, and web design software. Color and black and white printers, scanners, 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, and the Teaching Learning Center.

Career Center

www.ucollege.edu/career-center

Valerie Lee, Career Center Advising Coordinator

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

Career Planning

- Career advising & counseling: individual appointments with a career counselor
- Career inventories: skills, interests, abilities, strengths and personality assessments
- Career shadowing and internship information
- Student Employment information

Job Search Assistance

- On-campus employment: www.ucollege.edu/student-jobs
- Off-campus employment and internships: JobZone (<https://ncrc-csm.symplicity.com/students>)
- Job search skills: assistance with cover letter and résumé writing, interviewing, salary negotiation and business etiquette
- Career and Graduate School Fair: employers are hosted on campus each fall - information provided on internships, part-time jobs, full-time employment, and university graduate programs

Testing

- ACT & SAT: tests given on non-Sabbath test dates (Union College test center number and clergyman's letter available at the Career Center may be required for these Sunday tests)
- CLEP tests: online CLEP test available upon request (see Academic Information section for academic credit information)
- Online distance education or correspondence tests proctored as requested
- Graduate entrance exams: LSAT administered at Union College on non-Saturday test dates

Teaching Learning Center

www.ucollege.edu/tlc

Deborah Forshee-Sweeney, Director

Accessibility Accommodations 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, the Americans with Disabilities Act of 1990, and ADA Amendments Act of 2008. These prohibit discrimination on the basis of disabilities.

The Teaching Learning Center coordinates accommodations for students with disabilities. Accommodations are made on an individual basis and determined in consultation with the student. Students requesting accommodations may contact the TLC for accessibility guidelines or download them from the college website.

Personal Academic College Coaching (PACC)

The Teaching Learning Center provides academic and life coaching for Union College students through the Personal Academic College Coaching (PACC) program. Coaches assist students in developing academic skills and creating steps to achieve goals. There is no additional fee for academic coaching.

Academic Success Programs

See Admission to the College section for more information on the Freshman Enrichment and Integrated College Experience (ICE) programs. There is no additional fee for these programs.

Studio for Writing and Speaking

www.ucollege.edu/humanities/thestudio

Tanya R. Cochran, Director

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. Therefore, the Studio's 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. Peer consultants are available to brainstorm before the writer puts something on notebook paper or computer screen or a speaker utters one word as well as to offer feedback on first, in-between, and final drafts of writing projects and oral presentations. As a later concern, consultants support instruction in grammar and mechanics. While they are not trained as editors or proofreaders, consultants help student writers and speakers identify and revise their own errors. Ideally, consultants 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 the Studio Web page.

Adventist Colleges Abroad

www.ucollege.edu/aca

Mark Robison, Coordinator

Tamara Seiler, Assistant

The Adventist Colleges 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.

A Bachelor of Arts degree in Foreign Language Studies with emphases in French, German, Italian, or Spanish may be earned (as a second major) through this program. Minors are available in French, German, Italian, or Spanish. Language study is also available at other various locations during the summer. (See Summer Study Abroad below.)

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.

Because geopolitical situations can change rapidly, an ACA campus may be closed. Check with the Humanities Division for the latest updates.

Academic Year Study Abroad

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

Argentina	Universidad Adventista del Plata
Austria	Seminar Schloss Bogenhofen
Brazil	Brazil Adventist University
England	Newbold College of Higher Education
France	Campus Adventiste du Salève
Germany	Friedensau Adventist University
Italy	Istituto Avventista Villa Aurora
Lebanon	Middle East University
Spain	Escuela Superior de Español de Sagunto

(See Foreign Language Studies section for degree information.)

Application Policies

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; and
- if pursuing a degree in Spanish, complete two high school years or one college year in prerequisite language study with a minimum GPA of 3.00, or pass the appropriate College Level Examination Program (CLEP) language exam.

Summer Study Abroad

ACA also offers summer terms at the following international study centers listed above in Argentina, Austria, Brazil, France, Italy, and Spain, and periodically in the following:

Hong Kong (Chinese)	Hong Kong Adventist College
Israel (Hebrew)	Jerusalem Study Center
Lebanon (Arabic)	Middle East University
Ukraine (Russian)	Ukrainian Adventist Center of Higher Education

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; and
- 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 and be at least 15 years of age;
- complete and submit the applicable form to enroll at Union College as a non-degree seeking student. This enrollment form will require verification by the high school registrar that the student's GPA is above the 3.0 minimum required;
- submit tuition payment in full to Union College Student Financial Services.

Academic Information

This section of the Bulletin provides basic information for progress through college, from registration to final exams and transcripts.

Academic Advising

Beyond completing the courses required for a major, earning a degree includes satisfying a variety of requirements and deadlines. To assist in meeting these requirements, each student is appointed a faculty advisor. Besides guiding course selection and general academic planning, advisors assist a student's orientation to campus life, discuss broader personal concerns, and encourage career planning.

However, ultimate responsibility for planning the academic program and fulfilling graduation requirements lies with the student.

Academic Course Load

Union College operates on a 15-week semester system, which defines courses in semester hours. Traditionally, each hour consists of one 50-minute class period and two hours of additional study per week. A laboratory period of two and one-half to three hours equals one semester hour.

An average load of 15-16 hours per semester over four years (120 weeks total) achieves the 124 semester 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. Students in the freshmen enrichment, Integrated College Experience, academic probation and academic alert programs are limited to 15 hours. The recommended freshman maximum is 16 hours.

Class Standing

Student classification is based on the semester hours applied to a Union College degree. The minimum number of hours for each class is:

- Freshman—admitted/0 semester hours
- Sophomore—24 semester hours
- Junior—56 semester hours
- Senior—92 semester hours
- Graduate—enrolled in a master's program
- Other—special students, guest students and others not seeking a degree and enrolled for up to six hours

Course Numbers

Course numbers indicate the designated level of the course from the 100-level for first-year students through the upper division levels of 300 (junior) and 400 (senior). The 500 and 600 levels are designated for master's courses. Courses numbered below 100 are considered developmental and do not apply toward graduation. Similarly, grades in these courses do not affect a student's grade point average (GPA).

Prerequisites For All Upper Division Courses

Registration for any 300 or 400-level course requires sophomore class standing.

Online Courses

Union College offers a number of online course options, with most of these courses being available during the summer term. Union offers online courses taught by Union teachers as well as through our membership with the Online Consortium of Independent Colleges and Universities (OCICU). OCICU is a virtual academic consortium in which member institutions collaborate in sharing online, credit-bearing courses and programs. All consortium members are regionally accredited, independent, and not-for-profit institutions. OCICU is managed by Higher Learning Partners of Regis University in Denver, Colorado.

Online and hybrid courses may be identified as such if the following prefixes are added to course titles:

- **ONS (Online-Synchronous):** Online course requiring instructors and students to be online at the same time for portions of the course.
- **ONA (Online-Asynchronous):** Online course with no requirements for students to meet with the instructor/other learners at specific times online.
- **HYS (Hybrid-Synchronous):** A hybrid course including some level of in-person class or lab participation as well as a required time for instructors and students to be online at the same time for portions of the course.
- **HYA (Hybrid-Asynchronous):** A hybrid class including some level of in-person class or lab participation, but no requirement for instructors and students to be online at the same time for the online portion of the course.

Auditing Courses

Students seeking to attend a course may request to audit courses using the applicable request form. No grade is assigned nor credit given, and the tuition rate is greatly reduced. Changes from credit to audit, or the reverse, must take place during the add-drop registration period each semester or during the first two days of summer sessions. Nursing courses, most laboratory courses, and some others may not be audited.

New Student Orientation

New Student Orientation provides an important introduction to the college experience, extending from academic preparations to social activities, spiritual programs, and services available to students. Orientation is scheduled each fall before registration and as announced for spring semester.

First-year students are required to register for and attend the one-semester-hour introductory course CORE 109-120 linked to their chosen major. An abbreviated orientation program is available for transfer students.

Registration

Registration is the process of arranging to take courses for a semester as well as the associated steps to pay for them and become a Union College student. To accomplish this, students register for courses through Self-Service, the college's online portal, and complete the assigned steps in the Registration Checklist. Students are registered only after the student completes all steps.

Students who consult with their advisors and reserve courses during the pre-registration periods benefit from priority access to courses and reduce unnecessary stress. Financial clearance should also be completed before the end of the registration period. At the end of the add/drop period, reservations for courses are canceled for students who have not completed registration.

Changes In Registration

Add/drop

Students who are considering changing courses should consult with their advisors and attend the new courses as soon as possible if space is available. Courses already in progress may be added or dropped only during the first

six days of classes (two days in summer session). Thereafter, permanent academic records are established and a W (withdrawal) grade will be assigned. Students benefit from confirming their class schedule on Self-Service to ensure the registered courses are those actually intended.

Withdrawal

Courses dropped between the add/drop deadline and the published withdrawal deadline receive the designation W (withdrawal) instead of a letter grade. After that date, letter grades are assigned based on the work completed.

Students considering withdrawal from a course should contact Student Financial Services to determine if financial aid could be jeopardized. Withdrawal procedures must be fully completed before a withdrawal becomes official.

Unofficial Withdrawal Policy

Students are defined as unofficially withdrawn for Title IV federal aid purposes when they do not have any grades for the semester other than FA, a failing grade due to non-attendance. When instructors assign the FA grade, the last known date of attendance or academic activity must also be reported. At the end of each semester, any students who have all FA grades are assumed to be “unofficially withdrawn”. Students who unofficially withdraw from Union College (quit attending all classes but do not follow official withdrawal procedures) may have to return all of the financial aid received for the semester. The FA grade designation is treated as F (failing) for all other policy purposes.

Administrative Withdrawal

The college administration may grant an administrative withdrawal (W) from a course or courses for a student suffering an emergency or unexpected circumstance. Administrative withdrawals are not granted to avoid failing grades or for circumstances normally addressed by a regular withdrawal. A student receiving an administrative withdrawal in all courses must demonstrate evidence of recovery from the circumstances before returning to Union College.

Transfer Credits

All credit from another regionally accredited college or university will be transferred when the following conditions are met:

- an official transcript is received directly from the other institution;
- credits transferred have a grade of C- (1.67) or above;
- vocational and technical courses if approved by the appropriate academic division, by petition, or by Academic Administration;
- transfer credits from two-year institutions are limited. At least 56 hours must be taken from a four-year institution before graduation.

Life experiences are not transferable, and credit is not granted for non-college sponsored instruction.

Remedial, developmental, or basic skill courses will transfer to Union when they are considered equivalent to a course offered by Union College. Courses numbered below the 100 level, such as MATH 017, will be transferred for zero credits with a grade of CR.

The transfer of credits does not guarantee that credits meet specific requirements, but when they are equivalent to Union College coursework, they satisfy corresponding requirements for general education, a major or a minor.

If a student wishes to remove a transferred class from their Union College record, they may submit a petition to the Records office.

Administrative approval may be required if the course is not strictly comparable, and the student is expected to provide evidence such as the course description or syllabus.

In most situations, all eligible credits are transferred on a course-by-course basis with the corresponding Union College prefix and number, letter grades and credit hours (in terms of semester hours) for each transfer course. However in some cases (e.g. international, paramedic, and second-degree-seeking students), the total number of transfer credits may be transferred with a grade of CR. If specific transfer courses are needed to fulfill the declared degree at Union College, those courses will be considered for transfer on a course-by-course basis.

Course Transfers from Institutions without Regional Accreditation

Courses from institutions without regional accreditation do not generally transfer. However, a student may request that such credits be transferred by filing an academic petition with the Records office. Provision of a syllabus is required for the evaluation; other materials may be requested during the evaluation process. The division chair must validate the equivalence.

Credit By Examination

Several types of examinations are available for a student to demonstrate knowledge sufficient for academic credit, which may not exceed credit granted for similar classes offered by the college.

Credit is not given if a student ever enrolled in the course, even if it was not completed, 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 is granted to students who pass certain College Board AP Examinations with a score of 3 or higher. Language and Composition substitutes for Writing for General Audiences, while Literature and Composition substitutes for literature. However, no AP course may substitute for Writing for Scholarly Audiences. For more information about credits granted for certain AP tests, please visit www.ucollege.edu/transfer/transfer-credit-equivalency and search for "THE COLLEGE BOARD AP/CLEP."

College Level Examination Program (CLEP)

Union College grants credit for CLEP subject examinations as recommended by the Commission on Educational Credit of the American Council on Education. Applications for CLEP exams are available in the Records office, while requests to schedule CLEP tests are made with the Career Center. A recording fee is charged for credits earned on CLEP exams (see fees). For more information about credits granted for certain CLEP tests, please visit www.ucollege.edu/transfer/transfer-credit-equivalency and search for "THE COLLEGE BOARD AP/CLEP."

Credit by CLEP carries the following stipulations:

- not available after a student has completed 56 hours of college credit.
- not available for Writing for General Audiences or Writing for Scholarly Audiences.
- not granted for the general tests in Humanities, College Mathematics, Natural Sciences, or Social Sciences and History.
- will not necessarily satisfy requirements for a major or minor. The student seeking to use CLEP credit for a major or minor should obtain program approval before taking the test.

Challenge Examinations

Proficiency examinations may be arranged for some courses. Students who want to take an exam should contact the chair of the division. A fee will be charged for the exam's preparation and credit registration. A course already taken cannot be replaced by a proficiency examination.

Alternative Programs

General Studies

The Bachelor of Science degree in general studies allows students to develop academic knowledge and skills in several areas of study. The student must meet graduation requirements for bachelor's degrees, substituting a general studies curriculum for a major. Because it lacks a major, the college does not extend the Guaranteed Education option to students who graduate under this program.

Courses applying to the general studies curriculum are taken in addition to those meeting the general education requirements. A minimum of 24 semester hours must be earned in one academic division and 12 semester hours each from two other divisions. All qualifying courses must be completed with a grade of C or higher with a minimum of 15 hours numbered at the 300 or 400 levels.

The Associate of Science degree in general studies requires a minimum of 12 semester hours earned in one academic division and 6 semester hours each from two other academic divisions. All qualifying courses must be completed with a grade of C or higher. Electives and the general education requirements for an associate's degree are also required.

Personalized Degree

The personalized degree option is intended for a student who, in consultation with an advisor, wishes to design and fulfill a unique program of study at the bachelor's level that achieves individual educational goals. Students and their advisors are encouraged to consider modifying current degrees with petitions in place of creating a personalized degree that is very similar to a degree already offered. Such 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, and the Guaranteed Education option is not available to students graduating under this program.

The student should present a proposed curriculum during the first semester of the junior year. This proposal must be approved by Academic Council.

Requirements for a personalized degree are broadly the same as for a regular bachelor's degree. Variations in the general education requirements are permissible but must also be approved by Academic Council. Personalized degree students may utilize courses offered on other campuses for which the student is financially responsible. The residency requirement is that 64 of the final 80 hours of this degree or at least 100 hours total must be taken at Union College.

Post-Baccalaureate Professional Program

Exceptional students occasionally gain acceptance into professional graduate programs such as medicine, dentistry or law before completing a bachelor's degree. The appropriate bachelor's degree will be conferred upon those who

- apply for a Union College degree within two years after successfully completing the first year of a post-baccalaureate professional program;
- complete the general education requirements as outlined in the relevant bulletin;
- complete a minimum of 96 semester hours of undergraduate courses, including 20 or more upper division hours;
- complete 30 of the last 36 undergraduate hours in residence; and
- arrange verification from the professional school that the applicant has successfully completed the first year of the professional program and is eligible to continue.

Study Elsewhere

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

To ensure that the proposed coursework elsewhere will satisfy the course of study at Union College, students should verify the course by visiting Union's Credit Equivalency Tool online at www.ucollege.edu/transfer/transfer-credit-equivalency. If the desired course is not listed, the student should obtain permission from the Records office by submitting a Transfer Credit Inquiry prior to registering for the course at the other institution. Failure to do so may result in a student earning credit that will not apply toward graduation.

Grade Reports

Grades and unofficial transcripts are available at the midterm and conclusion of each semester on the Self-Service website. Only the final grade is recorded on the official transcript; the midterm grade serves as an indication of progress and is not factored into a student's GPA calculation.

Students are responsible for reviewing their Self-Service accounts regularly to ensure the accuracy of the academic information on file in the Records office.

Grade Definitions

- 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 met course objectives in a satisfactory manner. A grade of C- or below may not apply for a course in a major, minor or professional education.
- D The student has not demonstrated a satisfactory learning 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-	0.67
F	0.00
FA	0.00 <i>Failure due to discontinued class attendance</i>

Other Designations

(These grade designations do not count towards GPA)

AU	Audit
CR	Passing (C or higher) in a credit/no credit course
NC	Failing in a credit/no credit course
W	Withdrawal after 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

Grade Point Average (GPA)

The cumulative grade point average is computed by totaling the grade points of all courses and dividing by the total semester hours of courses for which grades are received. 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, the higher grade is used. Both the original and repeat grades become part of the student's permanent record, but only the highest grade and credits earned are computed in the cumulative grade point average and in the total credits earned.

Incomplete

Students may petition to receive the designation of incomplete (I) in case of illness or unavoidable circumstances unrelated to the course requirements. By federal regulation, an incomplete is only available if a major portion of the course has been completed satisfactorily.

A request for an incomplete must be approved by the instructor and division chair. It must be submitted before the final examination week. The deadline for course completion is 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 original grade as indicated on the request. Forms are available in the Records office.

In Progress

The designation "In Progress" (IP) is permitted for approved courses whose requirements likely extend beyond the given semester, typically due to length of research, clinical experiences, or internships. The deadline for completion may vary but not exceed one year.

If the course 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 Academic Council.

Changes of Assigned Grades

After a final grade has been recorded, an instructor may request a change in the grade if an error occurred 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 first contact the teacher and follow the appeal procedures outlined in the Student Life and Services section. Grade changes are accepted up to one year after the posting of the original grade.

Dean's List

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

Recognition	GPA Range
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 Sanctions

Academic Probation

Undergraduate students whose cumulative GPA falls below 2.00 are placed on academic probation and will remain on probation until the cumulative GPA again reaches 2.00. Academic probation is a serious matter, and students on probation will be suspended if a semester's grades fall below a GPA of 2.00.

To strengthen their scholastic performance, students on academic probation must participate in the Academic Success Program. This program assists students in creating a personalized contract that recognizes past failings and identifies resources for improving academic performance. Students on the Academic Success program are required to:

- limit their class load to a maximum of 15 hours;
- renegotiate financial agreements in case of loss of financial aid; and
- fulfill the personalized contract for improving academic performance.

A student whose cumulative GPA falls below 2.00 or who fails to successfully complete two-thirds of the attempted credits will lose eligibility for federal financial aid, as detailed in the Satisfactory Academic Progress paragraphs of the Financial Aid section.

Academic Suspension

A student already on academic probation will be suspended from the college if the following semester GPA falls below 2.00. Any appeals should be directed to the vice president for Academic Administration. A student may also be suspended after a single semester with a current GPA of less than 1.00, even when the cumulative GPA exceeds the 2.00 minimum for graduation.

Students who have been suspended for academic reasons may request readmittance to regular academic programs upon completion of a full academic load for a semester or quarter of college-level study with a B- (2.67) average or above taken at another regionally accredited institution.

Academic Alert

A student whose cumulative GPA remains at or above 2.00, but whose semester GPA falls below a C- level (1.67), is placed on Academic Alert. This involves limiting the subsequent semester to 15 hours and setting goals for improved performance.

Academic Dismissal

A student readmitted to college after suspension who fails to maintain a satisfactory GPA is subject to dismissal, which is final.

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.

Attendance

The Union College faculty considers regular class attendance vital to learning, and students are expected to attend each class period. Each syllabus provides the policy for the course, which may include an automatic failing grade for absence (for whatever reason) from 20% of the regularly scheduled class periods. Individual instructors are responsible for determining the degree to which missed classroom activities and assignments can be made up.

Final Examination Schedule and Exceptions

The semester examination schedule found on the Union College website indicates the dates and times of final examinations. Requests for exceptions to the schedule must be made to the Vice President of Academic Administration by December 1 (fall semester) or April 15 (spring semester). A rescheduling fee is charged (see Financial Information section).

Prep Days for Finals

Designated “dead days” at the end of each semester provide an opportunity for students to review material and prepare for finals. Though new material may be presented during classes these days, no tests or major assignments are to be due without prior approval from Academic Administration.

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 the student mission or task force programs provided prior arrangements are made with Campus Ministries. 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).

Veteran Education Benefits

Union College courses meet the standards of 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 U.S. Department of Veterans Affairs (VA). A Certificate of Eligibility (COE) is required to certify students for veteran education benefits.

Enrollment in 12 or more credit hours is considered full-time training. It is the student’s responsibility to report any changes in enrollment to the director of Records. The college is also required to promptly report any changes in enrollment data affecting payment by the VA, such as students who are placed on academic suspension.

For those who qualify, Yellow Ribbon benefits are available at Union College.

For questions regarding veteran status and registration, please contact the Records office.

Integrity of Scholarship

Union College adheres to high academic and ethical standards. Inspired by the values of both the Christian and the scholar, its faculty, staff, and students commit to exhibit integrity and truth in all academic endeavors. Thus, scholarly endeavors carry the broad expectation that they have been accomplished with honesty, whether by professors in research and developing coursework or by students preparing assignments and taking examinations.

Among other examples, dishonest conduct by students includes cheating on examinations and the submission of assignments that violate expected standards of integrity. Unauthorized multiple submissions, excessive revision by someone else, unauthorized collaboration, forged signatures, plagiarism, misrepresented sources, misused copyrighted material, and the fabrication or unauthorized use of data all constitute violations of academic integrity. In addition to honesty in creating their own work, students should refrain from suspicious behavior themselves and deny others the opportunity to use their works in an unethical manner. Similarly, Union expects professors to exhibit trustworthiness in their work, both in and out of the classroom, and to commit to working in redemptive ways with students regarding academic honesty.

Academic integrity violations range from incidental to significant to egregious. Descriptions of each level of violation, the processes and the corresponding consequences are explained in greater detail in the Academic Integrity Policy on the Academic Administration section of the Union College website.

The consequences of violating integrity can range from remediation to receipt of a failing grade for an assignment to dismissal from the course and even expulsion from the college.

A student who feels unjustly charged with misconduct after the appropriate process should appeal to the vice president for Academic Administration, and if still not satisfied then to the president. Reports of academic integrity violations and their consequences are maintained by the office of Academic Administration, and serious violations may be noted in a student's permanent academic record as explained in the Academic Integrity Policy on the website.

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act of 1974 provides for specific rights to students regarding the privacy of student educational records, including the right that records will only be shared with those employees who have a legitimate educational need.

The act explicitly permits colleges to disclose directory information without student consent. However, an individual student has 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;
- student id
- home address;
- hometown;
- local address;
- email 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. A written request that identifies the record(s) a student wishes to inspect should be submitted to the director of Records or other appropriate official. Students have the right to seek amendment of his/her own education records that the student believes to be inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA. Students have the right to file a complaint with the U.S. Department of Education.

Assessment

Student learning is the central academic focus of the Union College mission. Assessment of that learning is vital to strategic planning and to maintaining an environment where students achieve the goals of their disciplines 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:

- **Course Assessment:** Professors assess their courses based on established program goals and objectives formalized as student learning outcomes.
- **Program Assessment:** Each division conducts an annual review of program learning outcomes and their assessment. The review process assists each division in determining and implementing evidence-based changes.
- **Program Review:** Each academic program is reviewed and compared with external programs to ensure relevancy and currency. Each program is reviewed once every ten years with a five year mid-cycle review.

Student Right to Know Act Graduation Rate

In accordance with the Student Right to Know Act, Union College annually releases its graduation rate. As of March 2016, the four-year average student-right-to-know completion or graduation rate was 46%.

Transcripts

Requests for transcripts must be made through Parchment. A link is located on the Union College web page. Transcripts are released only when the student's account has been paid in full. Transcripts may also 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.

Changes to Current Bulletin

Subject to advice by Faculty Senate, Academic Council 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 Website, www.ucollege.edu.

Graduation Requirements for Bachelor's and Associate Degrees

The responsibility of meeting requirements for graduation rests primarily upon the student. Students should acquaint themselves with the various requirements in the bulletin and plan their college courses accordingly.

Bulletin for Graduation

Students maintaining continuous residence may meet the requirements in any bulletin published during that time of residence. Students discontinuing residence longer than two consecutive semesters generally should meet the requirements in a bulletin valid after they return. Exceptions (submitted as petitions) may be granted by the registrar on a case-by-case basis weighing what is in the best interest of both the student and the institution.

Bachelor's Degree Requirements

Bachelor's degrees are conferred upon students who have

- successfully completed at least 124 semester hours, with at least 36 hours at the 300-level or above;
- fulfilled the specific requirements of a major described in this bulletin (General studies and personalized programs may present more individualized requirements);
- earned a minimum of C (2.00) for all courses forming part of the major;
- achieved a minimum cumulative grade point average of 2.00 or higher as required by the individual major;
- completed the general education program 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 three semesters before intended completion date; and
- provided all official transcripts and completed courses designated I or IP.

Associate Degree Requirements

Associate degrees are conferred upon students who have

- successfully completed at least 62 semester hours;
- fulfilled the specific requirements described in this bulletin;
- earned a minimum of C (2.00) for all courses in the discipline of the degree forming part of the major;
- achieved a minimum cumulative grade point average of 2.00;
- completed the general education program appropriate to the degree;
- met the residency requirement;
- participated in the assessment program as requested;
- applied for graduation three semesters before the intended completion date;
- provided all official transcripts and completed courses designated I or IP.

Commencement

Commencement exercises are held annually in May, although diplomas are also issued in August and December. Students who complete a program at the end of the spring semester are expected to participate in the graduation exercises. Graduates from the previous December are invited to participate.

The deadline for undergraduates to apply to be included in the May Commencement Program is April 1. The Commencement Program is not an official document and is printed prior to spring final grades and other

requirements being received. The Commencement Program lists actual December graduates and prospective May/August graduates.

Academic Administration grants exemption from participation in the annual exercises upon request.

Prospective August Graduates Participation

Students planning to complete requirements during the following summer may apply prior to April 1 to participate in the May graduation ceremonies as prospective summer graduates if the remaining requirements are limited to a practicum or ten semester hours of coursework. Students must present documented evidence that they can complete the remaining requirements before the August graduation date. 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 by the August graduation date. If the degree is not completed on time, the deposit will be forfeited.

Academic Recognition at Graduation

Students graduating from Union College are awarded bachelor's degrees with the following designations appropriate to the minimum cumulative grade point average attained for classes completed prior to the start of the final semester:

	<u>GPA</u>
Summa Cum Laude	3.90
Magna Cum Laude	3.75
Cum Laude	3.50

Residency Requirements³

For a baccalaureate degree, 30 of the final 36 hours, or at least 100 semester hours, must be taken in residence. A minimum of 12 upper division 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.

A minimum of 56 semester hours must be completed at a four-year college or university.

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

Second Degrees

Graduates of regionally accredited institutions may earn baccalaureate degrees from Union College by fulfilling all requirements for the major, including its specific general education requirements, 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 meet the Union College general education requirements.

If the second-degree requirements do not contain a religion course, students must take RELB 115, RELT 110 or RELT 141.

Multiple Majors

Students may complete multiple majors for a given degree. When different degrees are involved, both degrees will be awarded.

³ Residency requirements for some degrees may be more prescriptive.

Academic Minors

Completion of an academic minor is required only if specified by a major or program. Minors may be selected from the minors outlined in this bulletin. A minimum grade of C (2.00) is required for all minor courses, and at least three semester hours of the required courses numbered at the 300 level or above must be taken in residence.

Completion of a minor is not completion of a degree; therefore, a minor is not recognized separately from completion of a bachelor's degree. Academic minors are not listed on the diploma or in the commencement program.

General Education

Like most American colleges and universities, Union College expects its general education and campus life programs to strengthen students' abilities to think, reason, and communicate effectively, to understand essential elements of the natural world and human society, and to engage the fine arts. These academic elements are reflected in the educational goals listed below.

Unlike most colleges and universities, Union possesses a strong commitment to ensuring that students develop values and skills essential for living, both in this world and as preparation for the life eternal promised by Scripture. Our students develop their knowledge, understanding, and abilities within a culture that exemplifies and communicates the great importance of integrity, participation in community, and the application of common sense in solving life's challenges. Our educational mission extends to assisting students to discern their individual callings, to live healthfully, to prepare for leadership, and to interact with others as thoughtful citizens.

With these objectives in mind, the general education program adopted in 2016 incorporates contemporary topics, thought-provoking courses that demonstrate the role of religion in addressing world problems, higher-level communication skills, and reduced total hours. It offers students greater choices and broader opportunities for learning.

Union College Educational Goals

Union College graduates possess the competencies to:

1. Engage the Bible as Scripture, recognizing the significance of choosing Jesus Christ as Savior, of becoming His disciple, and valuing the mission of the Seventh-day Adventist church.
2. Engage different viewpoints and read texts in thoughtful and deliberative ways, making critical judgments and defending them reasonably using appropriate quantitative and qualitative sources of information and methods.
3. Listen actively and communicate ideas effectively through speaking and writing.
4. Examine the human, natural and aesthetic worlds, and articulate one's place in them.
5. Recognize and affirm the importance of diversity in the natural world and human society.
6. Engage in the ways of knowing, including research methods, and participate in discourse across the arts, sciences, and humanities.
7. From the perspective of a Christian worldview, reflect theologically and philosophically on significant questions about the value and meaning of life and living.
8. Live healthfully and serve as a wise, humane, responsible and ethical citizen of our diverse nation and world.
9. Discern one's calling, develop traits of persistence and reliance and prepare for personal leadership.
10. Understand the professional standards of one's chosen discipline, and demonstrate its expected knowledge, skills and values.

Union College students develop their knowledge, understanding, and abilities within a community whose culture exemplifies and communicates the great importance it places on integrity, participation in community, and the application of common sense in solving life's challenges.

General Education Objectives

1. Students will demonstrate critical thinking through examination of ideas and evidence before formulating an opinion or conclusion.
2. Students will be encouraged to experience practices which promote physiological, psychological, and social well-being.

3. Students will demonstrate an understanding and appreciation of cultures, faiths, and values different from their own.
4. Students will demonstrate the ability to reason and develop evidence-based decisions using numerical information.
5. Students will apply ethical principles to completing academic work.
6. Students will communicate effectively orally and in writing to various audiences.
7. Students will be encouraged to experience Biblical principles within daily life through a personal relationship with Jesus Christ.

General Education Requirements (4-Year)

Union College students seeking Baccalaureate degrees complete the following general education requirements to meet the total 124 credit hours (36 upper division credits). Major or minor courses may also be used as general education requirements. It is recommended that general education courses consist of a minimum of 41 credits (of the 124 total credits). Transfer courses may be accepted for each general education category in consultation with faculty and at the discretion of the registrar. Students transferring the majority or all of their general education classes should note the residency policies, including 100 total credits at Union (or 30 out of the last 36) and at least 56 credits taken at a 4-yr college.

The general education requirements are distributed as follows:

1. *Following Christ*

A. RELB 115 Encountering Jesus as Savior (3) or RELT 110 Introduction to Christian Faith and Adventism (3) or RELT 141 Christian Beliefs (3)	1 course
B. RELB (Biblical Studies) Other than category A	1 course
C. REL (Religion elective) Other than category A	1 course

2. *Thinking Deeply as a Christian*

RELG (General Studies) or RELT 350 Developing the Christian Mind (3) or PLSC 345 Global Environment and International Policy (3) or RELH 310 History of the Seventh-day Adventist Church (WR) (3) (<i>Education majors only</i>) or RELH 410 History of the Christian Church (WR) (4) or any 300-400 level RELB or RELT course (3)	1 course
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Students transferring from institutions other than Seventh-day Adventist colleges as

- **Sophomores** take 1 course from category 1A, 1 course from category 1B, and 1 course from either category 1C or category 2.
- **Juniors** take 1 course from category 1A and 1 course from either category 1B or RELT 305 or RELT 347.
- **Seniors** take 1 course from category 1A.

3. Thinking Analytically

- | | |
|---|----------|
| A. A college-level science course (e.g. ASTR, BIOL, CHEM, PHYS) with a lab
or BIOL 104 Insects and You (3)
or BIOL 106 Human Biology (3)
or an approved science course with an emphasis on the scientific method | 1 course |
| B. MATH 111 College Algebra (3) or above
or CPTR 226 Computer Science I (4) | 1 course |

4. Communicating Effectively

- | | |
|--|----------|
| A. COMM 105 Public Speaking (2)
or COMM 205 Introduction to Interpersonal Communication (2) | 1 course |
| B. ENGL 110 Writing for General Audiences (3) | 1 course |
| C. ENGL 212 Writing for Scholarly Audiences (3) | 1 course |

5. Engaging Globally

- | | |
|---|----------|
| A. ANTH, ECON, GEOG, HIST, PLSC, PSYC, or SOCI | 1 course |
| B. GLBL (Engaging Globally electives)
or an additional course chosen from category 5A (<i>must be from a different discipline</i>)
or HMNT 376 Critiquing Film in a Global Context (3)
or INRR 300 Social Dimensions of Disaster (3)
or LEAD 425 Experiences in Leadership (3)
or NURS 474 Community Health (WR) (3.5) (<i>Nursing majors only</i>)
or SOCI 405 Social, Economic and Environmental Justice (WR) (3) | 1 course |

6. Living with Purpose and Wonder

- | | |
|--|----------------|
| A. LITR (not including children's or young adult literature) or PHIL (3) | 1 course |
| B. ART, CODR, HMNT 205, HMNT 305, MUHL, MUTH, or PHOT (1 course)
or MUPF (<i>not including lessons</i>) (2 courses) | 1-2
courses |
| C. HHPA 155 Concepts of Wellness (2)
or NURS 305 Physical Assessment (3) (<i>Nursing majors only</i>)
or INRR 321 Global Health (3) (<i>IRR majors only</i>) | 1 course |
| D. HHPA (physical activity elective) (1) | 1 course |

7. College Success

- | | |
|---|----------|
| CORE 109-120—FOCUS (1)
(<i>Required only for freshmen and transfer students with less than 24 hours</i>) | 1 course |
|---|----------|

8. Foreign Language *(Required for BA degree only)*

Beginning foreign language or ASL in a year-long sequence (____ 101, ____ 102) 2 courses
CLEP credit accepted with a minimum score of 50.

Transfer of Courses for General Education

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

Union College participates in the Nebraska Transfer Initiative. Students transferring from a participating institution should contact the Records office for more information on how their credits meet general education requirements at Union.

General Education Requirements (2-Year)

It is recommended that general education courses consist of a minimum of 22 credits (of the 62 total credits) required for an Associate degree.

1. Following Christ

- | | |
|--|----------|
| A. RELB 115 Encountering Jesus as Savior (3)
or RELT 110 Introduction to Christian Faith and Adventism (3)
or RELT 141 Christian Beliefs (3) | 1 course |
| B. RELB (Biblical Studies) other than category A
or RELT 305 Christian Ethics (3) | 1 course |

2. Thinking Analytically

- | | |
|---------------------------------------|----------|
| MATH 111 College Algebra (3) or above | 1 course |
|---------------------------------------|----------|

3. Communicating Effectively

- | | |
|---|----------|
| A. ENGL 110 Writing for General Audiences (3) | 1 course |
| B. ENGL 212 Writing for Scholarly Audiences (3)
or COMM 105 Public Speaking (2)
or COMM 205 Introduction to Interpersonal Communication (2) | 1 course |

4. Engaging Globally

- | | |
|---|----------|
| ANTH, ECON, GEOG, GLBL, HIST, PLSC, PSYC, or SOCI | 1 course |
|---|----------|

5. Living with Purpose and Wonder

Choose from at least two categories below:

A. LITR (not including children's or young adult literature) or PHIL	1 course
B. ART, CODR, HMNT 205, HMNT 305, MUHL, MUTH, or PHOT (1 course) or MUPF (<i>not including lessons</i>) (2 courses)	1-2 courses
C. HHPA	1 course
6. College Success	
CORE 109-120 (1) (<i>Required only for freshmen and transfer students with less than 24 hours</i>)	1 course

Honors - Union Scholars

The Union Scholars Honors Program is designed to cultivate students' full intellectual faculties and research capabilities. Its interdisciplinary curriculum addresses complex global issues and the development of individual research projects to prepare students for the rigorous demands of postgraduate education and future work environments. Students learn to appreciate diverse thought perspectives, accumulate deeper knowledge, develop analytical thinking, and strengthen their problem-solving skills.

Contact Information

Corrairie McNeill, Ph.D. and Malcolm Russell, Ph.D., Co-Directors
Amarachi Banks, Administrative Director
Dick Building, Room 304
honors@ucollege.edu
www.ucollege.edu/honors
402.486.2560

Mission: What We Offer

The Union Scholars Honors Program empowers students to

- Think critically and deeply;
- Develop broad intellectual and cultural interests;
- Interact with other cultures and become globally engaged;
- Develop civic and spiritual virtues, including appreciation of diversity; and
- Create works of original scholarship delivered with precision and clarity.

Vision: How we impact Honors students beyond specific knowledge

Union Scholars will be characterized by their

- Appreciation of the fine arts, humanities, the role of ideas, and the value of science;
- Self-understanding, including the ability to think deeply about their spiritual calling;
- Personal ethical standards based on spiritual values;
- Demonstration of high academic standards and achievement; and
- Engagement as leaders in campus life.

Values: What the Honors Program does for Union College

As it offers academic and other intellectual opportunities for qualified students, the Honors Program contributes to Union College through

- Innovative teaching, including evaluating trends from wider academia;
- Strengthening the campus intellectual life;
- Flexibility in adapting program elements to address student needs;
- Providing social and cultural opportunities reflecting Honors mission;
- Fostering student leadership.

The Honors Curriculum

1. Following Christ

Thinking deeply about our spiritual calling, and adopting personal ethical standards based on spiritual values

- | | | |
|----|---|----------|
| A. | RELB 115 Encountering Jesus as Savior (3)
or RELT 110 Introduction to Christian Faith and Adventism (3)
or RELT 141 Christian Beliefs (3) | 1 course |
|----|---|----------|

- | | | |
|----|---|----------|
| B. | HONS 260 Romans in Context (3) (<i>Recommended</i>)
or RELB course 200-level or above; | 1 course |
|----|---|----------|

2. Thinking Deeply as a Christian

Applying ethical and Christian perspectives to contemporary life and problems.

- | | | |
|----|--|----------|
| A. | HONS 345 The Global Environment (3) (<i>May only count for one category, either 2.A. or 5.A.</i>)
or designated HONS/REL 287/487 Topics
or RELH 310 History of the Seventh-day Adventist Church (WR) (3)
or RELT 305 Christian Ethics (3)
or RELT 347 World Religions (3)
or RELT 350 Developing the Christian Mind (3) | 1 course |
|----|--|----------|

- | | | |
|----|---|----------|
| B. | HONS 370 Living as a Christian Professional (1) | 1 course |
|----|---|----------|

3. Thinking Analytically

- | | | |
|----|--|----------|
| A. | A college-level science course (e.g. ASTR, BIOL, CHEM, PHYS) with a lab
or BIOL 104 Insects and You (3)
or BIOL 106 Human Biology (3)
or an approved science course with an emphasis on the scientific method | 1 course |
|----|--|----------|

- | | | |
|----|---|----------|
| B. | MATH 111 College Algebra (3) or above
or CPTR 226 Computer Science I (4) | 1 course |
|----|---|----------|

4. Communicating Effectively

- | | | |
|----|---|----------|
| A. | COMM 105 Public Speaking (2)
or COMM 205 Introduction to Interpersonal Communication (2) | 1 course |
|----|---|----------|

- | | | |
|----|--|----------|
| B. | ENGL 110 Writing for General Audiences (3) | 1 course |
|----|--|----------|

- | | | |
|----|--|----------|
| C. | ENGL 212 Writing for Scholarly Audiences (3) | 1 course |
|----|--|----------|

5. Engaging Globally

Developing civic and spiritual virtues, including appreciation of diversity, and interacting with other cultures

- A. Select two courses from the following: 2 courses

HONS 271 Civic Virtue, Politics & Christian Values (3)
HONS 345 The Global Environment (3) (*May only count for one category, either 2.A. or 5.A.*)
Designated HONS 287/487 Topics course
Relevant cognate course designated by discipline

- B. Honors International Study Tour 1 course
HONS 395 Honors International Study Tour (3)
or other approved international experience by petition

6. Living with Purpose and Wonder

Developing broad intellectual and cultural interests, including appreciation of the fine arts, humanities, the role of ideas, and recognizing the value of science

- A. HONS 225 Reading Philosophers (3) 1 course
or HONS 275 Theism, Modernity, and Post-Modernism (3)
or HONS 287 Topics in Literature (3)

- B. HONS 135 Fine Arts for Honors (3) 1 course

- C. HHPA 155 Concepts of Wellness (2) 1 course
or INRR 321 Global Health (3) (*IRR majors only*)
or NURS 305 Physical Assessment (3) (*Nursing majors only*)

- D. HHPA (physical activity elective) (1) 1 course

7. College Success

- CORE 109-120—FOCUS (1) 1 course
(*Required only for freshmen and transfer students with less than 24 credit hours*)

8. Foreign Language (Required for BA degree only)

Beginning foreign language or ASL in a year-long sequence (____ 101, ____ 102)
CLEP credit accepted with a minimum score of 50.

9. Discovering and Evaluating Knowledge: Honors Research & Thesis

- A. HONS 289 Initial Disciplinary Research (1) 1 course
or HONS 389 Disciplinary Research (1)

B. HONS 398 Research Methods (2) 1 course or BIOL/CHEM 386 Research Methods: Scientific Inquiry (1) <u>AND</u> BIOL 396 Research Methods: Writing Scientific Proposals (WR) (1) or NURS 243 Evidence-Based Practice (WR) (3) (<i>Nursing majors only</i>) or PSYC 340 Research Methods I (3) or PSYC 341 Research Methods II (WR) (3)
C. HONS 498 Honors Thesis (1) 1 course or BIOL 496 Research Methods: Independent Biological Research (WR) (1) or CHEM 496 Research Methods IV (WR) (1) or HIST 497 Historiography (WR) (3) or PLSC 460 Global Political Economy and International Labor (3) or PSYC 476 Senior Research Project (WR) (3) or SOWK 390 Research Seminar (2)
D. HONS 499 Capstone (1) 1 course

Guest Registration For Honors Courses

Students who are qualified to enroll in the Honors Program, but whose chosen curriculum makes it difficult or impossible to do so, may request permission from the Honors director to enroll in specific Honors courses, space permitting. This opportunity is founded on the Honors Program's mission to provide academic and other intellectual opportunities for Union's qualified students.

Transition For Students Under Previous Bulletins

Students under previous bulletins may apply any three-hour Honors course towards the seminar requirement, and replace the specific Western Culture requirement with HONS 225 or any other 200-level HONS course. Registration for HONS 289 Initial Disciplinary Research or HONS 389 Disciplinary Research (1 hour) replaces HONS 295 Study Tour Orientation.

The Honors Thesis Or Creative Project

The Honors thesis or creative project is the culmination of a student's Honors program. The creation of this original work of scholarship strengthens a student's analytical abilities, research techniques, and writing skills. By working closely with several faculty members and by exploring a research project or creative idea in some depth, students will gain an advanced experience in their discipline. The honors thesis may provide excellent preparation for graduate work and a solid career credential as well. Students in certain disciplines produce an equivalent thesis while completing their major, and they present the thesis to an interdisciplinary Honors audience. By incorporating higher elements of research and writing in the Initial Disciplinary Research and Honors Research courses, students gradually develop skills essential to the thesis.

The Honors Personal Achievement Project

Through the Personal Achievement requirement, Honors encourages Scholars to focus on a significant personal project. The project is selected by the student, typically by the second semester of the sophomore year, and completed no later than the beginning of the senior year. The range of appropriate topics is deliberately wide, as these examples illustrate:

- Identifying a community need, and developing a service to address it;
- Extending knowledge and abilities by studies outside the normal curriculum—e.g., an uncommonly-studied foreign language, or a humanities major who studies calculus;
- Participating and documenting a year of service, within the country or internationally;

- Providing leadership in identifying and achieving an opportunity for improvement on campus;
- Creating and leading a personally-designed spiritual program that addresses needs of one's church;
- Obtaining a reasoned set of skill certifications and/or badges deemed valuable for one's prospective career;
- Achieving a significant personal goal in physical fitness, musical accomplishment, a hobby, or other area.

Academic credit for the project is optional, but available under HONS 391 Personal Achievement Project. Each graduate's approved final personal achievement project report is required as part of HONS 499 Capstone and archived in the Honors office.

Honors Audit

Scholars in good standing with 24 or more credits may apply to audit a single course per semester, with tuition (but not class fees and other expenses) covered by the Honors Scholarship Program. To register, Scholars submit the Honors Audit form available from the Honors website. Honors Audits carry the same deadlines and restrictions as regular audits; see the relevant section of this Bulletin.

Admission Requirements

- Completion of Honors program application.
- A minimum high school cumulative GPA of 3.50 for entering freshmen.
- A minimum composite ACT score of 24 or equivalent.
- A minimum college cumulative GPA of 3.50 for transfer students and current Union College students.

Maintaining Membership

To continue in the Honors program, a student must fulfill the following:

- Enroll in the appropriate sequence of Honors courses;
- Receive a combined B+ average (3.33) or higher in all Honors courses; and
- Maintain a minimum cumulative GPA of 3.33.

A student who receives a notification of discontinuance in the program may reapply to the Honors program after certain membership conditions have been met.

Transfer Policy

With approval by the director, students may satisfy specific requirements with transfer or Union courses appropriate to the goals of the Honors Program.

Master of Physician Assistant Studies

Vision:

Prepare excellent PAs who transform lives through quality healthcare and Christian service.

Mission:

To equip PA students, through rigorous training and caring mentorship in a **quality program within a** Christian atmosphere, to work in a team environment, demonstrate academic excellence, practice clinical acumen, show a high degree of professionalism, and exhibit servanthood. *(See Addendum at end of bulletin (Pg 286))*

Goals:

1. Work in a Team Environment
2. Demonstrate Academic Excellence
3. Practice Clinical Acumen
4. Show A High Degree of Professionalism
5. Exhibit Servanthood
6. **Quality** *(See Addendum at end of bulletin (Pg 286))*

Program Expectations:

1. Graduates will proficiently perform medical care as part of an interdisciplinary team.
2. Graduates will demonstrate a broad knowledge base for successful delivery of primary care medicine.
3. Graduates will apply an investigatory and analytical thinking approach to clinical situations.
4. Graduates will demonstrate an attitude of professionalism and positive values.
5. Graduates will render medical care and service with compassion.

Learning Outcomes:

1. Demonstrate interpersonal communication skills that result in effective information exchange with patients, physicians, professional associates, and other individuals within the healthcare system to promote optimal patient-centered care.
2. Utilize information technology to critically analyze medical literature to make evidence-based medical decisions that maximize diagnostic and therapeutic effectiveness.
3. Apply medical knowledge to evaluate and treat patients across the lifespan by obtaining a history and performing a physical examination, selecting and interpreting diagnostic studies, formulating a differential and final diagnosis, and developing a treatment and management plan for primary care conditions.
4. Perform common clinical skills and procedures seen in a primary care setting.
5. Provide counseling, patient and family education, interventions, and appropriate referral for promotion, restoration, and maintenance of optimal levels of health for patients.
6. Exhibit ethical behavior and professional conduct expected of the PA in a medical practice setting while acknowledging professional and personal limitations.
7. Demonstrate the delivery of healthcare to disadvantaged and underserved populations.
8. Commit to professional and public service by carrying out compassionate and wholistic medical practice in light of a Christian faith and biblical perspective.

Contact Information

Megan Heidtbrink, Program Director
Jan Lemon, Admissions Coordinator
Don Love Building - South, Room 201-A
402.486.2527 phone
402.486.2559 fax
jan.lemon@ucollege.edu
www.ucollege.edu/pa

Faculty

Michelle Buller, Christina Burden, Megan Heidtbrink, Tim Kuntz, Dwain Leonhardt, Austin Young

Adjunct Faculty

Larry Crouch, Ben Holdsworth, Cliff Korf, Anne Mullin, Katie Packard, Bronson Riley, David Shaw, Ashley Waldrep

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. Supervised clinical practice experiences (“rotations”) throughout the final year provide students with diverse and intensive patient care experience. The quality of the theoretical and clinical experiences prepares students to become proficient and competent health care providers.

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 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 a regionally accredited college or university or who expect to do so within the next year.

Admission into the graduate curriculum of the PA program is limited and competitive. While a minimum grade point average of 3.00 or higher (on a 4.00 scale) is required for all undergraduate and graduate courses, nearly all successful applicants have earned grade point averages of 3.50 or higher (on a 4.00 scale) in both the cumulative and science GPAs.

Application Procedure

Application to the PA Program should be made through the Central Application Service for Physician Assistants (CASPA) at www.caspaonline.org.

All applications are reviewed without regard to age, sex, ethnicity, creed, race, color, or national origin. However, as an institution owned and operated by the Seventh-day Adventist Church, Union College gives first consideration to students who uphold biblical principles of morality and lifestyle as interpreted by the Seventh-day Adventist Church and to students who have completed their pre-PA coursework at Union College. It is a firm policy of the college to admit a number of qualified students into each class who have not completed coursework at Union College but who demonstrate a strong commitment to the mission of the college and its PA program.

Admission Requirements

While undergraduate academic performance is important, the PA Program seeks students who have wide potential for achievement both in and outside of the classroom. Each applicant will be evaluated on the following criteria:

- Successful completion of the prerequisite coursework listed under Required Prerequisites;
- Cumulative GPA and science GPA (biology, chemistry and physics courses) of 3.00 or higher (on a 4.00 scale) for all post-secondary coursework;
- Meeting educational standards of the United States Department of Education for foreign courses;
- 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);
- Three letters of recommendation;
- At least 480 hours (approximately three months) of work experience related to direct patient care,⁴ to include exposure to the PA role;
- Submission of complete application materials;
- A written Personal Statement;
- A signed Lifestyle Agreement;
- A personal interview with PA Program admissions team;
- Completion of a required physical exam upon acceptance into the program; and
- Criminal background check clearance upon acceptance into the program.

Possession of a baccalaureate degree prior to entering the MPAS program is required for all applicants to the PA Program, with the exception of Union College students who are applying through the health sciences major. The focus of the degree may vary, but studies must include the prerequisite courses of the PA Program.

Qualified Union College students may apply for admission to the PA Program through the BS in health sciences major. This 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.

Criminal background checks are performed after the applicant is conditionally admitted and has paid the required deposit. Felony convictions or multiple misdemeanor convictions may result in denial of acceptance to the program and/or eligibility of licensure. Drug screening checks will also be required for clinical rotation placement and/or licensure.

All PA students enrolled at Union College must possess personal health insurance. Personal liability insurance is also encouraged. (See Student Life and Services, "Health Insurance.")

⁴ Hours earned as a student-in-training or in roles without direct patient care (e.g., records management, cleaning, cooking, transportation, or clerical duties) will not be accepted.

Application Deadlines

Completed application forms must be verified by CASPA⁵ by October 1 of the year prior to the desired enrollment. Applicants who are accepted to the program will receive formal notification approximately three weeks after all candidates have been interviewed. Applicants designated as alternates or who are not accepted also receive notification by this time.

International Students

International students must complete at least three upper division science courses from a four-year college or university (rather than a community college) in the United States, achieving a letter grade of “A” in each course. Examples of these courses are Advanced Human Anatomy, Advanced Human Physiology, Endocrinology, Immunology, Cell Biology, Developmental Biology, Genetics, Molecular Biology, and Advanced Biochemistry. (These courses are traditionally numbered in the 300s or 400s.) Specific questions regarding appropriate courses should be addressed to the PA admissions coordinator.

The Union College PA Program requires 480 hours of direct patient care experience, obtained through work or volunteering, rather than as a student-in-training. International applicants must have earned these hours performing direct patient care in a medical system in the U.S. The patient care experience should include time shadowing a PA.

Students who hold undergraduate degrees from countries other than the United States must present proof of equivalency from a reputable translation company, such as WES. Once a student has been academically accepted into the PA Program, all immigration procedures must be handled through the Union College admissions office. An applicant whose native language is not English and who does not present a degree from an accredited college or university in the United States that includes a full year of composition or the equivalent in English studies 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 as follows:

- Internet-based TOEFL (IBT): Score of 100 with a minimum score of 20 on each section; or
- A total score of 600 on the paper TOEFL, with a score of 55 on Listening Comprehension; or
- A total score of 250 on the computer-based TOEFL;
- 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. Photocopies of TOEFL scores are not accepted.

International applicants who have questions or would like additional information should view the PA Program website. For specific questions about the admission of international students, contact the Union College admissions office at (402) 486-2504.

Academic Information

Only courses numbered 500 and above carry graduate credit toward 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 used for undergraduate courses apply to the graduate courses.

⁵ Applicants should allow at least six weeks for CASPA to verify a successfully submitted application.

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 PA 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.

Suspension and Dismissal Policy

A cumulative GPA of 3.00 (on a 4.00 scale) is required for MPAS courses. Students receiving a “C-” or below on any single examination or preceptor evaluation may receive an academic warning. Students who either earn a cumulative GPA of less than 3.00 or demonstrate poor clinical performance will be placed on academic probation. Non-academic and Academic sanctions are at the discretion of the PA Program Faculty. The complete policy can be found in the PA Student Handbook.

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 (on a 4.00 scale) at the conclusion of the Fall semester prior to the start of clinical rotations; or
- Is found guilty of unprofessional or illegal behavior according to the guidelines in the PA Student Handbook

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 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. The PA Student Handbook outlines the procedure for actions resulting from academic dishonesty.

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 or above 3.00 (on a 4.00 scale);
- All assigned coursework and clinical rotations must be completed;
- No PHAS course may be repeated more than once, and no more than one course may be repeated;
- Additional graduation requirements established by the program and published in the PA Student Handbook must be met;
- Assessment activities approved by the program must be successfully completed; and
- An application for a graduate degree must be filed with the Records office by January of the year preceding the anticipated graduation.

Delayed Graduation

Students who need to complete program requirements during the summer following the anticipated May graduation may apply to participate in the May graduation ceremonies as a prospective summer graduate if the remaining requirements are limited to 8 credit hours. Students must present evidence that the remaining requirements can reasonably be completed prior to the August graduation date. A deposit of \$200 will be charged to the student’s account, and can be refunded or applied to any unpaid Union College charges if all graduation requirements are completed by the August graduation date. If the degree is not completed on time, the deposit will be forfeited.

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 accommodations 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 individuals with disabilities. In addition to assisting students with disabilities, the TLC offers academic coaching 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.

Program-specific Fee

For the most recent information regarding fees and financial assistance, applicants should contact Union College Student Financial Services. In addition to regular college fees, a special fee is assessed each term for all students admitted to the graduate curriculum of the PA program. These fees are published annually on the college's website: www.ucollege.edu/pa.

Master of Physician Assistant Studies

Required courses (116 hours)

PHAS 505	Medical Literature Review (WR)	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	PA Professional Issues	2
PHAS 531	Clinical Medicine I	6
PHAS 532	Clinical Medicine II	6
PHAS 533	Preventive Health	1
PHAS 534	Clinical Medicine III	3
PHAS 539	Christian Health Care and Bioethics (WR)	3
PHAS 546	Clinical Skills I	4
PHAS 547	Clinical Skills II	2
PHAS 553	Diversity in Medicine	1
PHAS 557	Electrocardiography	1
PHAS 558	Medical Physiology	3
PHAS 559	Clinical Pathophysiology	4
PHAS 562	Medical Genetics	1
PHAS 564	Clinical Therapeutics	4

PHAS 584	Pharmacology	5
PHAS 585	Master's Research Seminar	1
PHAS 594	Master's Capstone Project I	3
PHAS 595	Master's Capstone Project II	1
PHAS 620	Family Practice I Rotation	4
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	4
PHAS 629	Psychiatry Rotation	4
PHAS 630	Elective Rotation	4

Required Prerequisites (47 hours)

BIOL 151, 152	General Biology I and II	4, 4
BIOL 205	Microbiology	4
BIOL 411	Advanced Human Anatomy	4
BIOL 416	Advanced Human Physiology (WR)	4
CHEM 151, 152	General Chemistry I and II ⁶	4, 4
CHEM 211, 212	Organic Chemistry I and II ⁶	4, 4
CHEM 445	Biochemistry I	4
HHPT 256	Medical Terminology	1
MATH 221	Elementary Statistics and Probability	3
PSYC 215	Developmental Psychology ⁷	3

Additional Requirements

- American Heart Association HeartCode BLS CPR certification⁸
- All science classes and required labs must be taken in person, rather than online.
- Generally, science courses should be completed in the seven years preceding application to the PA Program.
- Due to the rigorous nature of the graduate program, Union College prefers courses from four-year colleges or universities, rather than from community colleges. Applicants are encouraged to add upper division biology courses such as Advanced Microbiology, Cell Biology, Developmental Biology, Endocrinology, Genetics, Immunology, Physiology, Advanced Anatomy, and Molecular Biology to demonstrate academic strength. An upper division Biochemistry II is also recommended.
- Union College PA program does not accept courses with grades less than "C".

⁶Individual colleges will determine their own chemistry sequences of preparation for Biochemistry.

⁷Abnormal Psychology is recommended.

⁸CPR certification must be obtained by June 1 of the same calendar year the student begins the PA Program and must be kept current while a PA student.

Academic Divisions

DIVISION OF BUSINESS AND COMPUTER SCIENCE

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;
- benefit from 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; and
- pursue 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 by tracking graduates' job placement and scores on nationally recognized tests.

Contact Information

Barry Forbes, Chair
Dick Building, Room 301 and Room 407
402.486.2521
barry.forbes@ucollege.edu
www.ucollege.edu/bcs

Faculty

Gary Dickerson, Barry Forbes, Lisa Forbes, Seth McNeill, Aaron Purkeypile, Jon Turk, Debra Unterseher

Adjunct Faculty

Cid Coto, Darrel Huenergardt, Aaron Rogge, Matthew Roque, Janet Scott

Degrees and Programs

Bachelor of Science

Business Administration with emphases in:

- Accounting
- Finance

- Management
- Marketing
- Science
- Small Business Management

Computing with emphases in:

- Computer Information Systems
- Computer Science
- Web Development

Associate of Science

Accounting

Business Administration

Computing

Minors

Accounting

Business Administration

Business Analytics

Computer Information Systems

Marketing

Small Business Management

DIVISION OF EMERGENCY MANAGEMENT AND EXERCISE SCIENCE

Mission

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

Contact Information

Emergency Management and Exercise Science, Chair
International Rescue and Relief, Director

Rick Young
Don Love Building- South
402.486.2980
402.486.2983 fax
rick.young@ucollege.edu
www.ucollege.edu/irr

Exercise Science & Health and Human Performance, Director

Nancy Petta
Larson Lifestyle Center, lower level
402.486.2889
nancy.petta@ucollege.edu
www.ucollege.edu/hhp

Occupational Therapy Assistant, Director

Cami Hollins
Don Love Building-South
402-486-2640
camy.hollins@ucollege.edu
www.ucollege.edu/ota

Faculty

Cami Hollins, Kyle Kuehmichel, Nancy Petta, Shawntae Razo, Andrew Saunders, Kalie Saunders, Rick Young

Adjunct Faculty

Phyllis Gorton, Ryan Perry

Degrees and Programs

Bachelor of Science

Exercise Science

Health and Human Performance with emphases in:

- Business/Sports Management
- Fitness and Wellness

International Rescue and Relief, with a minor
International Rescue and Relief with emphases in:

- Firefighter
 - Global Community Development
 - Health Care Leadership
 - Paramedic
 - Pre-Dental, Pre-Medical
 - Pre-Physical Therapy
 - Pre-PA
 - Public Safety
- Physical Education—Secondary Subject Endorsement

Associate of Science

Emergency Medical Services
Occupational Therapy Assistant
Rescue and Relief/Allied Health

Minors

Business/Sports Management
Coaching
Disaster Management
Fitness and Wellness
Global Community Development
Personal Training
Physical Education
Survival and Rescue

DIVISION OF FINE ARTS

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; and
- serve God and humanity through the gifts of art and music.

Contact Information

Bruce Forbes, Chair
Nancy Meier, Office Manager
Engel Hall
402.486.2553
nancy.meier@ucollege.edu
www.ucollege.edu/fine-arts

Faculty

Bruce Forbes, Brett Hadley, Ricky Little, Kurt Miyashiro, Alan Orrison, Mark Robison

Adjunct Faculty

Patrick Brown, Marina Fabrikant, Don Farrall, Steve Nazario, Lisa Nielsen, Julia Noyes, Matt Olson

Degrees and Programs

Bachelor of Arts

Music

Bachelor of Music

Music Education K-12 Field Endorsement with emphases in:

- Instrumental
- Keyboard
- Vocal

Music Performance with emphases in:

- Instrumental
- Keyboard
- Vocal

Bachelor of Science

Graphic Design with emphases in:

- Business
- Communication

Vocal Music Education, Subject Endorsement K-12

Associate of Science

Art

Graphic Design

Music Pedagogy

Photo and Video Imaging

Minors

Art

Graphic Design

Music

Photo and Video Imaging

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.

Goals

The goals of the Division of Human Development are to prepare graduates for

- entry-level career positions, and
- graduate study.

Contact Information

Trudy Holmes-Caines, Chair

Lisa Turk, Office Manager

Dick Building, Room 403

402.486.2522

402-486-2574 fax

lisa.turk@ucollege.edu

www.ucollege.edu/humandev

www.ucollege.edu/education

www.ucollege.edu/psychology

www.ucollege.edu/socialwork

Faculty

Susan Byers, Pam Cotton, Elizabeth Davis, Jody Detwiler, Melanie Gabbert, Trudy Holmes-Caines

Adjunct Faculty

Steven Bassett, Jodi Gabel, Sarah Gilbert, Jenienne Kriegelstein, Jim McClelland, Nancy Petta, Linda Robison, Mary Schlieder, Jackie Simpson, Natalie Swift, Mitzi Sylvester

Degrees and Programs

Bachelor of Science

Elementary Education

Psychology

Secondary Education Endorsements (see major division section)

Bachelor of Social Work

Social Work

Minor

Psychology

Social Work

DIVISION OF HUMANITIES

Goals

- Create community
- Create dialogue
- Be deliberate about assessment

Contact Information

Mark Robison, Chair
Tamara Seiler, Office Manager
Dick Building, Room 409
402.486.2523
mark.robison@ucollege.edu
www.ucollege.edu/humanities

Faculty

Christopher Banks, Tanya R. Cochran, William D. Fitts, Brett Hadley, Lori Peckham, Patricia Maxwell Robertson, Mark Robison, Benjamin Tyner, Peggy Wahlen

Adjunct Faculty

LuAnn Davis, George Gibson, Jason Gildow, Mike Mennard, Jill Morstad

Degrees and Programs

Bachelor of Arts

Communication with emphases in:

- Emerging Media
- Nonprofit Communication and Management
- Public Relations

English with emphases in:

- Literature
- Writing and Speaking

Foreign Language Studies with emphases in:

- French
- German
- Italian
- Spanish

History

International Relations

Social Science

Bachelor of Science

English Language Arts Education, Secondary Field Endorsement

History Education, Secondary Subject Endorsement

Secondary English Education, Subject Endorsement

Social Science Education, Secondary Field Endorsement

Minors

Communication

Drama

Emerging Media

English

French

German

History

International Relations

Italian

Pre-Law

Public Relations

Social Science

Spanish

DIVISION OF NURSING

Union College offers a four-year curriculum in nursing, leading to a Bachelor of Science in Nursing. The baccalaureate degree in nursing program at Union College is accredited by the Commission on Collegiate Nursing Education (<http://www.ccnaccreditation.org>). The program is also approved by the Nebraska State Board of Nursing. Graduates are eligible to write the National Council Licensing Examination RN (NCLEX-RN®) for professional licensure.

Mission

The mission of the Union College Nursing program is to prepare students from diverse backgrounds to be competent, caring generalists in the profession of nursing. The program reflects a commitment to Christian values, professional standards, holistic care, and service as modeled by Jesus Christ.

Contact Information

Nicole Orian, DNP, RN
Chair, Division of Nursing
Larson Lifestyle Center, Second Floor
402.486.2524
www.ucollege.edu/nursing

John Luckiesh
Admissions Coordinator
402.486.2674
nursing@ucollege.edu

Faculty

Kelly Boyd, Krystal Davis, Debbie Eno, Larinda Fandrich, Kristine Follett, Amy Golter, Tracy Hagele, Laura Karges, Ruth Mendenhall, Elysia Ockenga, Nicole Orian, Rebecca Randa, Ellen Rose

Adjunct Faculty

Whitney Bernecker, Kayla Hallock, Lisa Kendle, Rebecca Lamoree, Diane McMurray, Jayne Nelson, Molly Sass, Charlotte Schober, Amber Schuler, Stephanie Semerad, Rebekah Trevino, Terra Vejraska, Jill Weyers

Degree

Bachelor of Science in Nursing
Nursing

The changes on this page were made as of 02/04/19. See Addendum starting on Page 286.

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 goals of the Division of Religion are to enable students to

- express an active faith in a life of Christian discipleship;
- demonstrate knowledge of the teachings of the Bible common to the Christian faith, and of distinctive Seventh-day Adventist beliefs; and
- display Christian character by the ability to apply ethical principles in life situations.

Contact Information

Edward Allen, Chair
Sandy Tallman, Office Manager
Dick Building, Room 412
402.486.2526
ed.allen@ucollege.edu
www.ucollege.edu/religion-division

Faculty

Edward Allen, Robert Petrick, Ben Holdsworth, Thomas Toews

Adjunct Faculty

Harold Alomia, Richard Carlson, Michael Halfhill, Stan Hardt, Michael Henton, Michael Paradise, Lena Toews

Degrees and Programs

Bachelor of Arts

Theology

Bachelor of Science

Religion, with a minor

Religion with emphases in:

- Pastoral Care
- Religious Education, Secondary Subject Endorsement

Minors

Biblical Languages

Missions

Religion

Youth Ministry

DIVISION OF SCIENCE AND MATHEMATICS

The Division of Science and Mathematics aims to attract and produce 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.

Contact Information

Carrie Wolfe, Chair

Krueger Center

402.486.2515 or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Christina Burden, Richard Clark, Lesa Kean, Corrairie McNeill, Seth McNeill, Salvador Moguel, Kenneth Osborn, Richard Webb, Carrie Wolfe

Adjunct Faculty

Karen Reiner, Robert Ruyle

Degrees and Programs

Bachelor of Arts

Biology

Chemistry

Mathematics

Physics

Bachelor of Science

Biology

Biology Education, Secondary Subject Endorsement

Biomedical Science with emphases in:

- Biotechnology
- Pre-Dentistry/Pre-Medicine/Pre-Pharmacy
- Pre-Genetic Counseling
- Pre-Physical Therapy

- Pre-Physician Assistant
- Chemistry with emphases in:
- Biochemistry
 - Physical Chemistry
- Chemistry Education, Secondary Subject Endorsement
Mathematics
Mathematics Education, Secondary Field Endorsement
Medical Laboratory Science
Physics
Physics Education, Secondary Subject Endorsement
Science Education, Secondary Field Endorsement

Associate of Science

Biomedical Science
Engineering

Minors

Biology
Biomedical Science
Chemistry
Engineering
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, Southern Adventist University, Southwestern Adventist University, and Walla Walla University. These arrangements are described along with the applicable major.

Pre-Professional Studies

Pre-professional programs are available in

- Dentistry
- Medicine
- Pharmacy

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 along with a minimum of 50 hours of dental practice observation/shadowing 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 December 1 for entry into the next first-year dental class. Applicants are urged to take the DAT and complete their AADSAS application during the summer one year before their anticipated enrollment in dental school. Both AADSAS and DAT application forms and deadline information are available from the pre-dental advisor.

Minimum Requirements for Admission to LLU (courses vary for other dental schools)

BIOL 151, 152	General Biology I and II	4, 4
BIOL/CHEM 445	Biochemistry I	4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
ENGL 110, 212	Writing for General and Scholarly Audiences	3, 3
PHYS 151, 152	General Physics I and II	4, 4
or PHYS 251 and 252	College Physics I and II (4.5, 4.5)	
50 hours of observation		

CLEP and credit/no credit performances are not acceptable for the required courses. Prerequisites must be taken in the U.S or Canada. Science coursework completed at a four year school is preferred.

LLU strongly recommends at least three additional courses including BIOL 411 Advanced Human Anatomy and BIOL 416 Advanced Human Physiology. Other recommended electives include Biochemistry II, genetics, histology, small business management, and pottery.

Medicine—Loma Linda University Application

Applicants are expected to obtain a baccalaureate degree from an accredited institution of higher education (United States or Canada) prior to matriculation. The degree can be in any field of study. No major field is given preference. A curriculum that includes the study of humanities, social sciences, and natural sciences is recommended to provide a solid preparation for the future role of physician. The Medical College Admissions Test (MCAT), taken within the last two years is 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.

Minimum Requirements for Admission (in terms of Union College courses)

BIOL 151, 152	General Biology I and II	4, 4
BIOL/CHEM 445	Biochemistry I	4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
ENGL 110, 212	Writing for General and Scholarly Audiences	3, 3
PHYS 151, 152	General Physics I and II	4, 4
or PHYS 251 and 252	College Physics I and II (4.5, 4.5)	

CLEP, pass/fail performances, and online classes are not acceptable for the required science courses.

Loma Linda University recommends courses in basic statistics, psychology, and sociology. Most successful medical school candidates will have studied additional courses taken from histology, biochemistry, anatomy, physiology, genetics, cell biology, and molecular biology.

Pharmacy—Loma Linda University Application

Preference is given to applicants who will have completed the baccalaureate degree (preferably) in chemistry, biology, physics, or a related scientific field. The Pharmacy College Admission Test (PCAT) or Graduate Record Examination (GRE) is not required and is not considered in the application process. Candidates should have

demonstrated ability in the sciences. It is highly recommended that applicants obtain volunteer or paid pharmacy work experience.

Application to the Loma Linda University School of Pharmacy begins with application to the Pharmacy College Application Service (PharmCAS). Applications are accepted from June 3 to November 1 for entry into the next first-year pharmacy class. Prerequisites must be completed by the end of Spring Term prior to entering pharmacy school.

Minimum Requirements for Admission (in terms of Union College courses)

BIOL 111 or BIOL 411	Human Anatomy and Physiology I Advanced Human Anatomy (4)	4
BIOL 151, 152	General Biology I and II	4, 4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
CHEM/BIOL 445	Biochemistry I ⁹	4
COMM 105 or COMM 355	Public Speaking Advanced Speech and Oral Interpretation (3)	2
PHYS 151	General Physics I	4

CLEP credit is not accepted. Recommended additional courses: BIOL 112 Human Anatomy and Physiology II (or BIOL 416 Advanced Human Physiology), BIOL 450 Histology, BIOL 403 Molecular Biology, BIOL 404 Cell Biology, and BIOL 455 Immunology.

⁹A biochemistry class with no lab is acceptable. Union offers a summer biochemistry class with no lab.

Art

Mission

The mission of the art program is to prepare students to appreciate, produce, and share artwork within a Christian framework.

Goals

- Students graduating from the art program 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; and
 - value the role of the arts in society and to recognize the impact of the arts on themselves and others.

Contact Information

Bruce Forbes, Chair, Division of Fine Arts
Nancy Meier, Office Manager
Engel Hall
402.486.2553 phone
bruce.forbes@ucollege.edu
www.ucollege.edu/fine-arts

Faculty

Bruce Forbes, Brett Hadley, Alan Orrison, Mark Robison

Adjunct Faculty

Don Farrall, Julia Noyes, Amy Smith

Academic Programs

Art, AS
Photo and Video Imaging, AS
Art Minor
Photo and Video Imaging Minor

ART, AS

Required courses (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/PHOT	Electives	9-10

PHOTO AND VIDEO IMAGING, AS

Required courses (33 hours)

Core

CODR 380	Script Writing	3
COEM 410	Digital Storytelling: The Creative Process	3
COEM 411	Digital Storytelling: The Technical Process	3
GRPH 150	Introduction to Graphic Arts	3
GRPH 250	Digital Imaging	3
GRPH 252	Computer Design	3
PHOT 151	Introduction to Photography	3
PHOT 225	Intermediate Photography	3
PHOT 285	Advanced Photography	3
PHOT 325	Commercial Photography	3

Cognates

Select three hours from:		3
BUAD 219	Small Business Management (3)	
MRKT 327	Marketing (WR) (3)	

ART Minor

Required courses (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/PHOT	Electives (3 hours must be 300 or 400 level)	9-10

PHOTO AND VIDEO IMAGING Minor

Required courses (21 hours)

Core

CODR 380	Script Writing	3
COEM 410	Digital Storytelling: The Creative Process	3
GRPH 150	Introduction to Graphic Arts	3
GRPH 250	Digital Imaging	3
PHOT 151	Introduction to Photography	3
PHOT 225	Intermediate Photography	3

Select one course from: 3

COEM 411	Digital Storytelling: The Technical Process (3)
GRPH 252	Computer Design (3)
PHOT 325	Commercial Photography (3)

Biology

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.

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; and
- pursue graduate studies.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515 or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Christina Burden, Corrairie McNeill, Salvador Moguel

Academic Programs

Biology, BA

Biology, BS

Biology Education, BS — Secondary Subject Endorsement

Biology Minor

Biology Core & Cognates

Required courses (36-37 hours)

Core

BIOL 151, 152	General Biology I and II	4, 4
BIOL 310	Seminar in Biology (WR)	1
BIOL 321	Genetics (WR)	4
BIOL 365	Plant Biology	4
BIOL 356	Animal Biology	4
BIOL 375	Ecology (WR)	4
BIOL 386	Research Methods: Scientific Inquiry	1
BIOL 404	Cell Biology	4

BIOL 477	Issues in Origins and Speciation	3
Cognates		
MATH 221 or MATH 331	Elementary Statistics and Probability Statistics & Probability (4)	3

BIOLOGY, BA

Required courses (53-73 hours)

Biology Core & Cognates		36-37
BIOL	Biology electives (300 or 400-level)	6-8
Cognate		
CHEM 104 or CHEM 151, 152, 211 and 212 (16)	Introduction to General, Organic and Biochemistry	4
PHYS 111 or PHYS 151 and 152 (8)	Introduction to Physics	4
MATH 111, 119, or 200-level or above		3-4
A minor in any field is highly recommended for this Biology BA degree.		

BIOLOGY, BS

Required courses (72-76 hours)

Biology Core & Cognates		36-37
BIOL 396	Research Methods: Writing Scientific Proposals (WR)	1
BIOL 496	Research Methods: Independent Biological Research (WR)	1
BIOL	Biology electives (300 or 400-level)	6-8
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
PHYS 151, 152 or PHYS 251, 252	General Physics I and II College Physics I and II (4.5, 4.5)	4, 4
MATH 184	Calculus I	4

The affiliation with Walla Walla University involves the summer program at the marine laboratory. Courses offered at Walla Walla University are primarily oriented toward the biology major, but included are courses which would strengthen any major. Additional information is available in the Biology course descriptions.

All students, including Guaranteed Education and Baccalaureate Bonus recipients, will be charged tuition at the fall semester rate.

BIOLOGY EDUCATION, BS

Secondary Subject Endorsement

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 a point of view objectively, 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; and
- an ability to use scientific instruments, to dissect biological specimens and to treat live animals humanely.

Required courses (110-114 hours)

Core

BIOL 151, 152	General Biology I and II	4, 4
BIOL 205	Microbiology	4
BIOL 321	Genetics (WR)	4
BIOL 375	Ecology (WR)	4
BIOL 404	Cell Biology	4
BIOL 416	Advanced Human Physiology (WR)	4
or BIOL 111, 112	Human Anatomy and Physiology I and II (4, 4)	
BIOL 477	Issues in Origins and Speciation	3

Cognates

ASTR 111	Astronomy	4
CHEM 151, 152	General Chemistry I and II	4, 4
MATH 111	College Algebra	3
or MATH 119	Trigonometry (3)	
PHYS 151	General Physics I	4

Professional Education

EDUC 418	Methods: Science Education	3
Additional Professional Education		57

It is strongly recommended that every student finish requirements for at least two subject endorsements.
(See *Education-Secondary Education Endorsements*)

BIOLOGY Minor

Required courses (19-20 hours)

BIOL 151, 152	General Biology I and II	4, 4
Select two courses from:		8
BIOL 321	Genetics (WR) (4)	
BIOL 375	Ecology (WR) (4)	
BIOL 404	Cell Biology (4)	
BIOL 416	Advanced Human Physiology (4)	
Select one additional BIOL elective:		3-4
BIOL	Biology electives (300 or 400-level)	

Biomedical Science

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.

Goals

Students graduating with a bachelor's degree in Biomedical Science will be prepared to

- pursue professional or graduate studies;
- demonstrate knowledge of past contributions and awareness of current progress in the biomedical sciences;
- apply knowledge acquired from varied aspects of biomedical sciences to critical thinking in research and everyday life;
- independently synthesize and communicate relevant data in the biomedical sciences;
- demonstrate familiarity with basic techniques of investigation in varied fields of biomedical research; and
- apply knowledge acquired from varied aspects of biomedical sciences to ethical decision making in stewardship and everyday life.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Christina Burden, Richard Clark, Corrairie McNeill, Salvador Moguel, Kenneth Osborn, Richard Webb, Carrie Wolfe

Academic Programs

Biomedical Science, BS, with emphases in:

- Biotechnology
- Pre-Dentistry/Pre-Medicine/Pre-Pharmacy
- Pre-Genetic Counseling
- Pre-Physical Therapy
- Pre-Physician Assistant

Biomedical Science, AS

Biomedical Science Minor

Essential Qualities of a Pre-professional Student

In selecting students to clinical programs, admissions committees at other institutions look for evidence of intellectual vigor and aptitude in science as demonstrated by maintaining a high GPA and achieving high standardized test scores (MCAT, CAT, GRE). The student will also demonstrate integrity, self-discipline, manual dexterity, and good health. A sensitive concern for the sick and a capacity for unusual devotion and personal effort are also essential.

Students interested in entering a professional school should acquaint themselves with the particular requirements of that school and should pattern their pre-professional courses to be taken at Union College in harmony with such requirements. Advisors in the Division of Science and Mathematics will help plan a program of study.

BIOMEDICAL SCIENCE, BS

Required courses (72-78 hours)

A sequence of the most essential courses to prepare the student for health-related professional/graduate programs. Many of these courses are entrance requirements for professional programs. Recommended entrance requirements for this major: High School GPA 3.5, ACT 27 or SAT 1810 (old SAT 2400 scale) or SAT 1290 (new SAT 1600 scale). Students may not double major in biomedical science and either biology or chemistry with a biochemistry emphasis. Choose one of the following emphases: Biotechnology, Pre-Dentistry/Pre-Medicine/Pre-Pharmacy, Pre-Genetic Counseling, Pre-Physical Therapy, or Pre-Physician Assistant.

Core

BIOL 151, 152	General Biology I and II	4, 4
BIOL 386	Research Methods: Scientific Inquiry	1
BIOL 416	Advanced Human Physiology (WR)	4
BIOM 201	Professional Shadowing	1
CHEM 151, 152	General Chemistry I and II	4, 4
HHPT 256	Medical Terminology	1

Emphasis in Biotechnology

Required courses (50 hours)

BIOL 321	Genetics (WR)	4
BIOL 396	Research Methods: Writing Scientific Proposals (WR)	1
BIOL/CHEM 440	Biochemistry	4
or BIOL/CHEM 445	Biochemistry I (4)	
BIOL 496	Research Methods: Independent Biological Research (WR)	1
CHEM 211, 212	Organic Chemistry I and II	4, 4
PHYS 151	General Physics I	4
Select ten hours from:		10
BIOL 205	Microbiology (4)	
BIOL 310	Seminar in Biology (WR) (1)	
BIOL 403	Molecular Biology (3)	
BIOL 404	Cell Biology (4)	
BIOL 411	Advanced Human Anatomy (4)	
BIOL 450	Histology (3)	
BIOL 451	Histology Lab (1)	
BIOL 455	Immunology (3)	
CHEM 311	Analytical Chemistry (4)	
CHEM 312	Instrumental Analysis (WR) (4)	
CHEM 446	Biochemistry II (3)	

Supporting Course work

BIOT	Biotechnology courses transferred from Southeast Community College	18
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Emphasis in Pre-Dentistry/Pre-Medicine/Pre-Pharmacy

Required courses (54-55 hours)

BIOL/CHEM 440	Biochemistry	4
or BIOL/CHEM 445	Biochemistry I (4)	
CHEM 211, 212	Organic Chemistry I and II	4, 4
MATH 221	Elementary Statistics and Probability	3
or MATH 184	Calculus I (4)	
PHYS 151, 152	General Physics I and II	4, 4
PSYC 105	Introduction to Psychology	3
Select ten hours from:		10
BIOL 205	Microbiology (4)	
BIOL 321	Genetics (WR) (4)	
BIOL 403	Molecular Biology (3)	
BIOL 404	Cell Biology (4)	
BIOL 411	Advanced Human Anatomy (4)	
BIOL 450	Histology (3)	
BIOL 451	Histology Lab (1)	
BIOL 455	Immunology (3)	
CHEM 446	Biochemistry II (3)	
Minor or individualized supporting course work ¹⁰		18

Emphasis in Pre-Genetic Counseling

Required courses (53-54 hours)

MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
BIOL 321	Genetics (WR)	4
BIOL 403	Molecular Biology	3
BIOL/CHEM 440	Biochemistry	4
or BIOL/CHEM 445	Biochemistry I (4)	
CHEM 211, 212	Organic Chemistry I and II	4, 4
PSYC 105	Introduction to Psychology	3
Select ten hours from:		10
BIOL 404	Cell Biology (4)	
BIOL 411	Advanced Human Anatomy (4)	
BIOL 450	Histology (3)	
BIOL 451	Histology Lab (1)	
BIOL 455	Immunology (3)	
CHEM 446	Biochemistry II (3)	
Minor (Psychology recommended) or individualized supporting course work ¹⁰		18

Emphasis in Pre-Physical Therapy

Required courses (49-50 hours)

BIOL 411	Advanced Human Anatomy	4
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
PHYS 151, 152	General Physics I and II	4, 4
PSYC	Two psychology courses	6

¹⁰ See *Supporting Course Work at the end of this section.*

Select ten hours from:		10
BIOL 205	Microbiology (4)	
BIOL 321	Genetics (WR) (4)	
BIOL 403	Molecular Biology (3)	
BIOL 404	Cell Biology (4)	
BIOL/CHEM 440	Biochemistry (4)	
or BIOL/CHEM 445	Biochemistry I (4)	
BIOL 450	Histology (3)	
BIOL 451	Histology Lab (1)	
BIOL 455	Immunology (3)	
HHPT 356	Physiology of Exercise (3)	
HHPT 360	Biomechanics/Kinesiology (3)	
Minor or individualized supporting course work ¹¹		18

Emphasis in Pre-Physician Assistant

Required courses (50-51 hours)

BIOL 205	Microbiology	4
BIOL 411	Advanced Human Anatomy	4
BIOL/CHEM 440	Biochemistry	4
or BIOL/CHEM 445	Biochemistry I (4)	
CHEM 211, 212	Organic Chemistry I and II	4, 4
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
PSYC	A psychology course	3
Select six hours from:		6
BIOL 321	Genetics (WR) (4)	
BIOL 403	Molecular Biology (3)	
BIOL 404	Cell Biology (4)	
BIOL 450	Histology (3)	
BIOL 451	Histology Lab (1)	
BIOL 455	Immunology (3)	
CHEM 446	Biochemistry II (3)	
NURS 315	Pathophysiology & Pharmacology I (4)	
Minor or individualized supporting course work ¹¹		18

Supporting Course Work (18 hours)

Select a minor or an individualized set of course work that either complements the professional program of choice or broadens the student's skill set in a meaningful way. If a minor is used to fulfill this requirement, a maximum of 9 hours can overlap between the major requirements and the minor. Potential options include Business, Communication, International Rescue and Relief, Leadership, Music, and Psychology. A minimum of 18 hours are required. The individualized sequence of courses must be approved by the student's faculty advisor and the division chair of Science and Mathematics.

¹¹ See *Supporting Course work at the end of this section*.

BIOMEDICAL SCIENCE, AS

Union College offers many of the courses necessary to prepare students for admission to professional schools. Programs are available in

- Cardiac Electrophysiology
- Communication Sciences & Disorders
- Cytotechnology
- Dental Hygiene
- Diagnostic Medical Sonography
- Emergency Medical Care
- Health Care Administration
- Health Information Management
- Medical Radiography
- Nuclear Medicine
- Nutrition and Dietetics, Dietetic Technology
- Occupational Therapy
- Orthotics & Prosthetics
- Physical Therapy Assistant
- Radiation Therapy and Medical Radiography
- Respiratory Care
- Respiratory Therapy

BIOMEDICAL SCIENCE, AS

Required courses (20 hours)

HHPT 256	Medical Terminology	1
Select eight hours from		8
BIOL 111, 112	Human Anatomy and Physiology I and II (4, 4)	
BIOL 151, 152	General Biology I and II (4, 4)	
BIOL 205	Microbiology (4)	
Select four hours from		4
CHEM 104	Introduction to General, Organic and Biochemistry (4)	
CHEM 151	General Chemistry I (4)	
PHYS 111	Introduction to Physics (4)	
PHYS 151	General Physics I (4)	
Select four additional hours from		4
BIOL 111, 112	Human Anatomy and Physiology I and II (4, 4)	
BIOL 151, 152	General Biology I and II (4, 4)	
BIOL 205	Microbiology (4)	
CHEM 104	Introduction to General, Organic and Biochemistry (4)	
CHEM 151, 152	General Chemistry I and II (4, 4)	
PHYS 111	Introduction to Physics (4)	
PHYS 151, 152	General Physics I and II (4, 4)	
Select one course from PSYC or SOCI		3

Consult advisor for general education and elective courses. Students should consult with their advisor to verify that their program of study includes the requirements for the program they wish to enter upon completion of Union's Associate of Science in biomedical science.

BIOMEDICAL SCIENCE Minor

Required courses (18 hours)

BIOL 151, 152	General Biology I and II	4, 4
Select ten hours from:		10
BIOL 205	Microbiology (4)	
BIOL 321	Genetics (WR) (4)	
BIOL 403	Molecular Biology (3)	
BIOL 404	Cell Biology (4)	
BIOL 411	Advanced Human Anatomy (4)	
BIOL 416	Advanced Human Physiology (WR) (4)	

BIOL/CHEM 440	Biochemistry (4)
or BIOL/CHEM 445	Biochemistry I (4)
BIOL 450	Histology (3)
BIOL 451	Histology Lab (1)
BIOL 455	Immunology (3)
CHEM 446	Biochemistry II (3)

Business Administration

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 from the business administration program 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;
- benefit from 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;
- pursue advanced study;
- analyze comprehensive business problems; and
- apply classroom ideas to current events in business.

The division's 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 by tracking graduates' job placement and scores on nationally recognized tests.

Contact Information

Barry Forbes, Chair, Division of Business and Computer Science
Dick Building, Room 301 and Room 407
402.486.2521
barry.forbes@ucollege.edu
www.ucollege.edu/bcs

Faculty

Barry Forbes, Lisa Forbes, Aaron Purkeypile, Jon Turk

Adjunct Faculty

Darrel Huenergardt, Matthew Roque, Janet Scott

Academic Programs

Business Administration, BS, with emphases in:

- Accounting
- Finance
- Management
- Marketing
- Science

- Small Business Management
- Accounting, AS
- Business Administration, AS
- Accounting Minor
- Business Administration Minor
- Business Analytics Minor
- Marketing Minor
- Small Business Management Minor

Business Core & Cognates
Required courses (39 hours)

Core		
ACCT 211, 212	Principles of Accounting	3, 3
BSAN 230	Information Display for Decision Making	3
BUAD 376	Human Resource Management	3
BUAD 425	Business Communications (WR)	3
BUAD 428	Business Policies	3
BUAD 445	Business Law	3
ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3
FNCE 325	Business Finance	3
MRKT 327	Marketing (WR)	3
Cognates		
CPTR 220	Microcomputer Applications	3
RELT 305	Christian Ethics	3

Admission to some graduate programs may require additional courses.

BUSINESS ADMINISTRATION, BS—Accounting Emphasis

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.

Required courses (69-70 hours)

Business Core & Cognates		39
Accounting Core		
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	2
ACCT 449	Advanced Accounting	3
ACCT 455	Auditing	4
BUAD 405	Business Ethics	1
Accounting Cognates		
MATH 221 or MATH 331	Elementary Statistics and Probability Statistics and Probability (4)	3
Internship in Business		

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, BS–Finance Emphasis

Required courses (66-67 hours)

Business Core & Cognates		39
Finance Core		
ACCT 313, 314	Intermediate Accounting	4, 4
BUAD 405	Business Ethics	1
FNCE 330	Financial Institutions and Markets	3
FNCE 332	Investments	3
FNCE 370	International Finance	3
Select additional courses from		
ACCT, BSAN, BUAD, FNCE, or MRKT		6
Finance Cognates		
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
Internship in Business		

BUSINESS ADMINISTRATION, BS–Management Emphasis

Required courses (65-66 hours)

Business Core & Cognates		39
Management Core		
BUAD 310	Quality Management	3
BUAD 316	Operations and Resource Management	3
BUAD 350	Project Management	2
BUAD 405	Business Ethics	1
BUAD 430	Conflict Management	3
BUAD 455	Advanced Human Resource Management	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, BSAN, BUAD, FNCE or MRKT course(s)	(3-6)	

Management Cognates		
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
Internship in Business		

BUSINESS ADMINISTRATION, BS–Marketing Emphasis

Required courses (64-65 hours)

Business Core & Cognates		39
Marketing Core		
BUAD 405	Business Ethics	1
MRKT 333	Professional Selling	3
MRKT 443	Consumer Behavior	3
MRKT 456	Marketing Research	3
Marketing Cognates		
COEM 440	Social Media Public Relations and Marketing	3
COPR 241	Public Relations Principles	3
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
Internship in Business		
Select additional courses from		6
COMM 365	Institutional Development (3)	
COPR 316	Advertising Practices (3) <i>Recommended</i>	
COPR 332	Rhetoric (WR) (3)	
COPR 445	Public Relations Campaigns (WR) (3)	
GRPH 150	Introduction to Graphic Arts (3) <i>Recommended</i>	

Recommended general education course: PSYC 105 Introduction to Psychology

BUSINESS ADMINISTRATION, BS–Science Emphasis

The degree in business and science prepares the student for professional schools in the medical field and 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 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. General education classes and electives should be carefully chosen to reach the 36 hours at the 300-level or above.

Required courses (81-83 hours)

Business Core & Cognates		39
FNCE 332	Investments	3
Cognate		
Select course from		3-4
MATH 119	Trigonometry (3)	
MATH 184	Calculus I (4)	
MATH 221	Elementary Statistics and Probability (3)	
MATH 331	Statistics and Probability (4)	
Science Courses		
BIOL 151, 152	General Biology I and II	4, 4
or BIOL 111, 112	Human Anatomy & Physiology I and II (4, 4)	
CHEM 151, 152	General Chemistry I and II	4, 4

PHYS 151, 152	General Physics I and II	4, 4
or PHYS 251, 252	College Physics I and II (4.5, 4.5)	
or upper division science courses (8)		
Select three science courses numbered 200 or above (one must be 300 or 400 level)		12
BIOL, CHEM, PHYS		

BUSINESS ADMINISTRATION, BS—Small Business Management Emphasis

Required courses (63-64 hours)

Business Core & Cognates		39
Small Business Core		
ACCT 315	Federal Income Tax-Individual	3
ACCT 335	Accounting Information Systems	3
BUAD 219	Small Business Management	3
BUAD 310	Quality Management	3
or BUAD 430	Conflict Management (3)	
BUAD 405	Business Ethics	1
BUAD 455	Advanced Human Resource Management	2
FNCE 215	Personal Finance	3
FNCE 332	Investments	3
or BUAD 316	Operations and Resource Management (3)	
Small Business Cognates		
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
Internship in Business		

ACCOUNTING, AS

Required courses (32-33 hours)

Core		
ACCT 211, 212	Principles of Accounting	3, 3
ACCT 313	Intermediate Accounting	4
ACCT 314	Intermediate Accounting	4
or ACCT 455	Auditing (4)	
ACCT 315	Federal Income Tax—Individual	3
ACCT 335	Accounting Information Systems	3
FNCE 325	Business Finance	3
Select two additional courses from		6
ACCT, BSAN, BUAD, ECON, FNCE or MRKT		
Cognate		
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	

BUSINESS ADMINISTRATION, AS

This program 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.

Required courses (27-28 hours)

Core		
ACCT 211, 212	Principles of Accounting	3, 3
BUAD 138	Dynamics of Business	3
or 300-400 level course from ACCT, BSAN, BUAD, ECON, FNCE, MRKT (3)		
BUAD 425	Business Communications (WR)	3
ECON 235	Principles of Microeconomics	3
or ECON 236	Principles of Macroeconomics (3)	
Select additional courses from		9
ACCT	Any ACCT course above 212 (3-4)	
BSAN 230	Information Display for Decision Making (3)	
BUAD 376	Human Resource Management (3)	
BUAD 445	Business Law (3)	
CPTR 220	Microcomputer Applications (3)	
FNCE	Any 300-400 level FNCE course (3)	
MATH	Any MATH course above 111 (3)	
Cognate		
MATH 221	Elementary Statistics and Probability	3
or MATH 184	Calculus I (4)	
or MATH 331	Statistics and Probability (4)	

ACCOUNTING Minor

Required courses (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

Required courses (18 hours)

ACCT 211	Principles of Accounting	3
ECON 235	Principles of Microeconomics	3
or ECON 236	Principles of Macroeconomics (3)	
Select at least 12 hours from		12
ACCT 212	Principles of Accounting (3)	
BSAN 230	Information Display for Decision Making (3)	
BUAD 138	Dynamics of Business (3)	
BUAD 219	Small Business Management (3)	
300-400 level ACCT, BSAN, BUAD, FNCE or MRKT courses		
Recommended courses include:		
BUAD 376	Human Resource Management (3)	
BUAD 430	Conflict Management (3)	
BUAD 445	Business Law (3)	
FNCE 332	Investments (3)	
MRKT 327	Marketing (WR) (3)	

BUSINESS ANALYTICS Minor

Required courses (18-19 hours)

BSAN 230	Information Display for Decision Making	3
BSAN courses	300-400 level	12
MATH 221 or MATH 331	Elementary Statistics and Probability Statistics and Probability (4)	3

MARKETING Minor

Required courses (18 hours)

COEM 440	Social Media Public Relations and Marketing	3
COPR 241	Public Relations Principles	3
MRKT 327	Marketing (WR)	3
MRKT 333	Professional Selling	3
MRKT 443	Consumer Behavior	3
MRKT 456	Marketing Research	3
Internship in Business		

SMALL BUSINESS MANAGEMENT Minor

Required courses (18 hours)

ACCT 211	Principles of Accounting	3
ACCT 335	Accounting Information Systems	3
BUAD 219	Small Business Management	3
ECON 235	Principles of Microeconomics	3
Internship in Business		
Select two courses from		6
ACCT 212	Principles of Accounting (3)	
BUAD 138	Dynamics of Business (3)	
BUAD 445	Business Law (3)	
FNCE 332	Investments (3)	
MRKT 327	Marketing (WR) (3)	

Chemistry

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.

Goals

Students graduating from the chemistry program will be prepared 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;
- 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; and
- be prepared to pursue graduate studies.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515 or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Richard Clark, Kenneth Osborn, Carrie Wolfe

Academic Programs

Chemistry, BA

Chemistry, BS, with emphases in:

- Biochemistry
- Physical Chemistry

Chemistry Education, BS—Secondary Subject Endorsement

Chemistry Minor

Chemistry Core & Cognates

Required courses (47-50 hours)

Core

CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
CHEM 296	Research Methods I	1
or MATH 221	Elementary Statistics and Probability (3)	
or MATH 331	Statistics and Probability (4)	
CHEM 311	Analytical Chemistry	4

CHEM 312	Instrumental Analysis (WR)	4
CHEM 386	Research Methods: Scientific Inquiry	1
CHEM 451	Physical Chemistry: Thermodynamics	4

Cognates

MATH 184, 285	Calculus I, II	4, 4
PHYS 251, 252	College Physics I and II	4.5, 4.5

CHEMISTRY, BA

Required courses (62-65 hours)

Chemistry Core & Cognates		47-50
CHEM 452	Physical Chemistry: Quantum Mechanics and Kinetics	4
CHEM	Chemistry Electives (300 or 400-level)	4

Cognates

Divisional or approved electives (at least 3 hours must be non-chemistry)		7
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CHEMISTRY, BS—Biochemistry Emphasis

Required courses (75-81 hours)

Chemistry Core & Cognates		47-50
CHEM 445, 446	Biochemistry I and II	4, 3
CHEM	Chemistry elective (300 or 400-level)	2-4

Cognates

BIOL 151, 152	General Biology I and II	4, 4
BIOL 321	Genetics (WR)	4
BIOL 404	Cell Biology	4
Select at least three hours from the following courses:		3-4
BIOL 411	Advanced Human Anatomy (4)	
BIOL 416	Advanced Human Physiology (WR) (4)	
BIOL 450	Histology (3)	
BIOL 451	Histology Lab (1)	
BIOL 455	Immunology (3)	

CHEMISTRY, BS—Physical Chemistry Emphasis

Required courses (67-71 hours)

Chemistry Core & Cognates		47-50
CHEM 396	Research Methods III	1
CHEM 452	Physical Chemistry: Quantum Mechanics and Kinetics	4
CHEM 496	Research Methods IV (WR)	1
CHEM	Chemistry Electives (300 or 400-level)	2

Cognates

MATH 286	Calculus III	4
or MATH 352	Linear Algebra (3)	
or MATH 486	Numerical Analysis (3)	
Divisional or approved electives		9

CHEMISTRY EDUCATION, BS

Secondary Subject Endorsement

The teaching major in chemistry is designed to prepare the candidates for secondary teaching through a program which will

- allow students 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.

Required courses (107-110.5 hours)

CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
CHEM 296	Research Methods I	1
or MATH 221	Elementary Statistics and Probability (3)	
or MATH 331	Statistics and Probability (4)	
CHEM 311	Analytical Chemistry	4
CHEM 312	Instrumental Analysis (WR)	4
CHEM 386	Research Methods: Scientific Inquiry	1
CHEM 445	Biochemistry I	4
Cognates		
ASTR 111	Astronomy	4
BIOL 151	General Biology I	4
MATH 184	Calculus I	4
PHYS 151	General Physics I	4
or PHYS 251	College Physics I (4.5)	
SCNC 301	Science and Society	1
Professional Education		
EDUC 418	Methods: Science Education	3
Additional Professional Education		57

It is strongly recommended that every student finish requirements for at least two subject endorsements.

(See *Education-Secondary Education Endorsements*)

CHEMISTRY Minor

Required courses (20 hours)

CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
CHEM 311	Analytical Chemistry	4
or CHEM 451	Physical Chemistry: Thermodynamics (4)	

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

- disseminate written, spoken, digital, 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 emerging media, public relations, or institutional development; and
- explore a variety of perspectives in the lifelong process of becoming a Christian scholar and practitioner in the field of communication.

Contact Information

Mark Robison, Chair, Division of Humanities

Tamara Seiler, Office Manager

Dick Building, Room 409

402.486.2523

mark.robison@ucollege.edu

www.ucollege.edu/humanities

Faculty

Tanya R. Cochran, Brett Hadley, Lori Peckham, Patricia Maxwell Robertson, Mark Robison

Adjunct Faculty

LuAnn Davis, Jill Morstad

Academic Programs

Communication, BA, with emphases in:

- Emerging Media
- Nonprofit Communication and Management
- Public Relations

Communication Minor

Drama Minor

Emerging Media Minor

Public Relations Minor

Communication Core & Cognates**Required courses (26 hours)****Core**

COMM 125	Media and Meaning	3
COMM 290	Sophomore Seminar	1
COMM 465	Interpersonal Communication	3
COMM 490	Senior Seminar	1

Cognates

COJR 221	Reporting (WR)	3
COJR 245	Editing	3
COJR 457	Magazine Writing (WR)	3
COPR 332	Rhetoric (WR)	3
GRPH 150	Introduction to Graphic Arts	3
PHOT 151	Introduction to Photography	3

200 clock hours of internship in a related field are required of all communication majors.

COMMUNICATION, BA—Emerging Media Emphasis**Required courses (59 hours)**

Communication Core & Cognates	26
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Emerging Media Core

COEM 260	Writing in the Digital World	3
COEM 324	Web Research and Analytics	3
COEM 362	Interacting with an Online Audience	3
COEM 410	Digital Storytelling: The Creative Process	3
COEM 411	Digital Storytelling: The Technical Process	3
COEM 440	Social Media Public Relations and Marketing	3

Emerging Media Cognates

CODR 380	Script Writing	3
COPR 241	Public Relations Principles	3
or MRKT 327	Marketing (WR) (3)	
CPTR 245	Web Development Basics	3
MATH 221	Elementary Statistics and Probability	3
MRKT 456	Marketing Research	3

Major or minor required from another discipline or an emphasis in Nonprofit Communication and Management or Public Relations.

Emerging Media majors are expected to purchase and maintain their own websites from their sophomore year through graduation. Each student can expect to pay from \$40-120 per year to maintain a website.

COMMUNICATION, BA—Nonprofit Communication and Management Emphasis**Required courses (52-53 hours)**

Communication Core & Cognates	26
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ACCT 211	Principles of Accounting	3
BUAD 425	Business Communications (WR)	3
COEM 362	Interacting with an Online Audience	3
COMM 365	Institutional Development	3
COPR 241	Public Relations Principles	3

ENGL 378	Technical Writing and Grant Proposals (WR)	3
Select three courses from the following:		8-9
ACCT 212	Principles of Accounting (3)	
ACCT 443	Governmental and Not-for-Profit Accounting (2)	
CODR 380	Script Writing (3)	
COEM 260	Writing in the Digital World (3)	
COEM 410	Digital Storytelling: The Creative Process (3)	
COMM 425	Intercultural Communication (3)	
GRPH 254	Publication Design (3)	
MRKT 327	Marketing (WR) (3)	

COMMUNICATION, BA—Public Relations Emphasis

Required courses (56 hours)

Communication Core & Cognates		26
COEM 440	Social Media Public Relations and Marketing	3
COMM 365	Institutional Development	3
COPR 241	Public Relations Principles	3
COPR 377	Crisis Public Relations	3
COPR 445	Public Relations Campaigns (WR)	3
MATH 221	Elementary Statistics and Probability	3
MRKT 456	Marketing Research	3
Select three courses from the following:		9
CODR 380	Script Writing (3)	
COEM 410	Digital Storytelling: The Creative Process (3)	
COMM 355	Advanced Speech and Oral Interpretation (3)	
COMM 425	Intercultural Communication (3)	
COPR 316	Advertising Practices (3)	
ENGL 378	Technical Writing and Grant Proposals (WR) (3)	
GRPH 254	Publication Design (3)	
MRKT 327	Marketing (WR) (3)	

COMMUNICATION Minor

Required courses (19 hours)

COMM 125	Media and Meaning	3
COMM 290	Sophomore Seminar	1
COMM 465	Interpersonal Communication	3
GRPH 150	Introduction to Graphic Arts	3
Select three courses from the following: (3 hours must be 300 or 400 level)		9
CODR 380	Script Writing (3)	
COEM 260	Writing in the Digital World (3)	
COEM 324	Web Research and Analytics (3)	
COEM 362	Interacting with an Online Audience (3)	
COEM 410	Digital Storytelling: The Creative Process (3)	
COJR 221	Reporting (WR) (3)	
COJR 245	Editing (3)	
COJR 457	Magazine Writing (WR) (3)	
COMM 355	Advanced Speech and Oral Interpretation (3)	
COMM 425	Intercultural Communication (3)	
COPR 241	Public Relations Principles (3)	
COPR 316	Advertising Practices (3)	

COPR 332	Rhetoric (WR) (3)
COPR 445	Public Relations Campaigns (WR) (3)
GRPH 254	Publication Design (3)
PHOT 151	Introduction to Photography (3)

DRAMA Minor

Required courses (20 hours)

Courses labeled CODR are offered at Union College; courses labeled Theatre are available through Nebraska Wesleyan University, the University of Nebraska-Lincoln, or Southeast Community College.

Theatre	Introduction to Theatre	3
Theatre	Approved Acting Course	3
Theatre	Approved Acting or Tech Course	3
CODR 229	Play Production: Technical Design	3
CODR 329	Play Production: Performance	3
CODR 380	Script Writing	3
CODR 480	Advanced Studies Seminar	2

EMERGING MEDIA Minor

Required courses (22 hours)

COEM 260	Writing in the Digital World	3
COEM 324	Web Research and Analytics	3
COEM 362	Interacting with an Online Audience	3
COEM 410	Digital Storytelling: The Creative Process	3
COEM 440	Social Media Public Relations and Marketing	3
COMM 290	Sophomore Seminar	1
COPR 241	Public Relations Principles	3
or MRKT 327	Marketing (WR) (3)	
CPTR 245	Web Development Basics	3

PUBLIC RELATIONS Minor

Required courses (22 hours)

COEM 440	Social Media Public Relations and Marketing	3
COMM 125	Media and Meaning	3
COMM 290	Sophomore Seminar	1
COMM 465	Interpersonal Communication	3
COPR 241	Public Relations Principles	3
COPR 445	Public Relations Campaigns (WR)	3
GRPH 150	Introduction to Graphic Arts	3
MRKT 456	Marketing Research	3

Computing

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 a degree in 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;
- benefit from 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;
- pursue advanced study;
- apply traditional and newer problem-solving techniques to an ever-changing field of computing; and
- understand how various areas of computing relate to each other.

The division's 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 and graduate school acceptance.

Contact Information

Barry Forbes, Chair, Division of Business and Computer Science
Dick Building, Room 301 and Room 407
402.486.2521
barry.forbes@ucollege.edu
www.ucollege.edu/bcs

Faculty

Gary Dickerson, Seth McNeill, Debra Unterseher

Adjunct Faculty

Cid Coto, Aaron Rogge

Academic Programs

Computing, BS, with emphases in:

- Computer Information Systems
- Computer Science
- Web Development

Computing, AS

Computer Information Systems Minor

Computing Core & Cognates**Required courses (22 hours)****Core**

CPTR 126	Fundamentals of Computer Science	3
CPTR 226	Computer Science I	4
CPTR 240	Systems Administration	3
CPTR 245	Web Development Basics	3
CPTR 322	SQL	3
CPTR 327	Systems Analysis and Design	3

Cognates

RELT 305	Christian Ethics	3
Internship in Computing		

COMPUTING, BS—Computer Information Systems Emphasis**Required courses (65-66 hours)**

Computing Core & Cognates	22
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Computer Information Systems Core

Select 9 hours from the following:	9
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CPTR 227 Computer Science II (4)

CPTR 300-400 level courses (5-9)

Computer Information Systems Cognates

ACCT 211, 212	Principles of Accounting	3, 3
BSAN 230	Information Display for Decision Making	3
BUAD 405	Business Ethics	1
BUAD 425	Business Communications (WR)	3
Select 18 hours from 3-400 level ACCT, BSAN, BUAD, CPTR, FNCE, MRKT		18
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	

COMPUTING, BS—Computer Science Emphasis**Required courses (65-66 hours)**

Computing Core & Cognates	22
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Computer Science Core

CPTR 227	Computer Science II	4
Select 15 hours from 300-400 level CPTR courses		15

Computer Science Cognates

MATH 119	Trigonometry	3
MATH 184	Calculus I	4
MATH240	Discrete Mathematics	3
MATH 285	Calculus II	4
MATH 286	Calculus III	4
MATH	300-400-level mathematics electives	6-7
MATH 331	Statistics and Probability (4) <i>Recommended</i>	
MATH 352	Linear Algebra (3) <i>Recommended</i>	
Highly recommended elective:		
BSAN 230	Information Display for Decision Making (3)	

COMPUTING, BS—Web Development Emphasis

Required courses (65-66 hours)

Computing Core & Cognates		22
Web Development Core		
CPTR 335	Web Technologies	3
Select six hours from 300-400 level CPTR		6
Web Development Cognates		
ART 115	Design I	2
ART 225	Color Theory	2
BUAD 425	Business Communications (WR)	3
COEM 324	Web Research and Analytics	3
GRPH 150	Introduction to Graphic Arts	3
GRPH 250	Digital Imaging	3
GRPH 252	Computer Design	3
GRPH 301	Web Design	3
GRPH 358	Typography	3
GRPH 401	Interactive Web Design	3
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
PHOT 151	Introduction to Photography	3
or PHOT 225	Intermediate Photography (3)	

COMPUTING, AS

Required courses (34-35 hours)

Core		
CPTR 126	Fundamentals of Computer Science	3
CPTR 220	Microcomputer Applications	3
CPTR 226	Computer Science I	4
CPTR 240	Systems Administration	3
CPTR 245	Web Development Basics	3
CPTR 322	SQL	3
CPTR 335	Web Technologies	3
Select nine hours from 300-400 level CPTR courses		9
Cognate		
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	

COMPUTER INFORMATION SYSTEMS Minor

Required courses (22 hours)

CPTR 126	Fundamentals of Computer Science	3
CPTR 220	Microcomputer Applications	3
CPTR 226	Computer Science I	4
CPTR 240	Systems Administration	3
CPTR 245	Web Development Basics	3
CPTR 322	SQL	3
CPTR 335	Web Technologies	3

Education

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; and
- pursue advanced study.

Contact Information

Trudy Holmes-Caines, Chair, Division of Human Development

Lisa Turk, Office Manager

Dick Building, Room 403

402.486.2522

lisa.turk@ucollege.edu

www.ucollege.edu/humandev or www.ucollege.edu/education

Faculty

Susan Byers, Pam Cotton

Adjunct Faculty

Steven Bassett, Sarah Gilbert, Jenienne Kriegelstein, Jim McClelland, Nancy Petta, Linda Robison, Mary Schlieder, Jackie Simpson, Mitzi Sylvester

Academic Programs

Elementary Education, BS

Secondary Education, BS or BMusic (See field and subject endorsements below)

ELEMENTARY EDUCATION, BS

Required courses (108 hours)

Core (minimum grade of C required)

EDUC 125	Introduction to Teaching	3
EDUC 218	Philosophy of Christian Education (WR)	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 350*	Seminar in Classroom Management	1

EDUC 357	Literature for Children and Adolescents	2
EDUC 425	Educational Organization and Administration (K-8)	3
EDUC 446	Reading Assessment (K-8)	2
EDUC 450	Methods in Reading and Language Arts (K-8)	5
EDUC 458	Methods in Religion, Health, Science, Social Studies (K-8)	4
EDUC 465	Math Methods and Materials (K-8)	3
EDUC 475	Student Teaching	16
EDUC 490	Student Teacher Seminar—Elementary	1
HMDV 265	Research Writing	1
Cognates (minimum grade of C required)		
ART 215	School Art	2
CPTR 265	Educational Technology	3
HHPA 155	Concepts of Wellness	2
MATH 111	College Algebra	3
MATH 320	Mathematical Concepts for Elementary School Teachers	3
MUED 347	Music in the Elementary School	2
PSYC 215	Developmental Psychology	3
RELB	RELB (Biblical Studies) elective	3
RELH 310	History of the Seventh-day Adventist Church (WR)	3
RELT 141	Christian Beliefs	3
RELT 455	Prophetic Guidance in the Advent Movements	3
Specific program requirement (passing grade required)		
BIOL	Biology elective	3
GEOG 137	Introductory Geography	3
or GEOG 227	World Regional Geography (3)	
HIST 157	The West in the World	3
HIST 255	The U.S.: From Discovery to Civil War	3
HIST 380	The U.S.: Crisis, Consolidation, and Expansion	3
or HIST 386	Economic History of the United States (3)	
LITR 231	Ancient Western Literature	3
or LITR 232	Modern Western Literature (3)	
or LITR 240	Travel Literature (3)	
or any LITR at the 300-400 level		
PLSC 208	American Politics	3
SCNC 111	Physical Science	4

**The additional requirement of EDUC 350 is for students under the 2019-20 bulletin.*

SECONDARY EDUCATION

Required Professional Education courses (61 hours)

Core (minimum grade of C required)

EDUC 125	Introduction to Teaching	3
EDUC 218	Philosophy of Christian Education (WR)	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 350*	Seminar in Classroom Management	1
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
HMDV 265	Research Writing	1

Cognates (minimum grade of C required)

CPTR 265	Educational Technology	3
HHPA 155	Concepts of Wellness	2
PSYC 215	Developmental Psychology	3
RELB	RELB (Biblical Studies) elective	3
RELH 310	History of the Seventh-day Adventist Church (WR)	3
RELT 141	Christian Beliefs	3
RELT 455	Prophetic Guidance in the Advent Movements	3

**The additional requirement of EDUC 350 is for students under the 2019-20 bulletin.*

Required Courses for Major

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

English Language Arts Education 7-12
Mathematics Education 7-12
Music Education K-12
Science Education 7-12
Social Science Education 7-12

Subject Endorsements

Biology Education 7-12
Chemistry Education 7-12
History Education 7-12
Physical Education K-6; 7-12
Physics Education 7-12
Religious Education K-12
Secondary English Education 7-12
Vocal Music Education K-12

Religion Minor

If pursuing a Religion minor, EDUC 415 Methods: Social Science and Religious Education (K-12) is required to obtain a Seventh-day Adventist Religion teaching endorsement.

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; and
- program completion, certification and competencies

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 2.75 cumulative GPA standard of scholarship;
- shown evidence of physical fitness, emotional maturity and moral character;
- passed the Core exam with minimum scores set by the State of Nebraska before completion of EDUC 218
- successfully completed student teaching assignment;

- completed a portfolio with rating of 2 or above on each outcome;
- taken and passed the Praxis II—Elementary Education: Curriculum, Instruction, and Assessment; PRAXIS II—Secondary Education Content Test taken and passed prior to student teaching;
- a background free of criminal convictions as shown by a professional background check (\$40.00 per check); and
- certification (\$105.00 for non-resident / \$55.00 for resident)¹²

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 website 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 2.75 minimum GPA standard of scholarship;
- passed the Core with minimum scores set by the State of Nebraska;
- taken and passed the PRAXIS II—Elementary Education: Curriculum, Instruction, and Assessment; PRAXIS II— Secondary Education Content Test taken and passed prior to student teaching (Core/PRAXIS II Testing costs may vary from \$120.00 — \$170.00 per test);
- successfully completed student teaching assignment;
- completed a portfolio with rating of 2.0 or above on each outcome;
- background free of criminal convictions as shown by a background check (\$40.00 per check); and
- certification (\$105.00 for non-resident / \$55.00 for resident)

Seventh-day Adventist Denominational Certificate: Application for Seventh-day Adventist 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 have

- met all state certification requirements;
- taken RELT 141 Christian Beliefs, an RELB elective, RELT 455 Prophetic Guidance in the Advent Movements and RELH 310 History of the Seventh-day Adventist Church (WR) (with a grade of C or higher in each);
- membership in good standing at a Seventh-day Adventist church; and
- affirmed a willingness to subscribe to and teach within the framework and philosophy of the church.

Upon graduating, the teacher candidate can request 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.

The Teacher Education Program at Union College is accredited by the National Council for Accreditation of Teacher Education (NCATE), www.ncate.org. This accreditation covers the undergraduate elementary and secondary teacher preparation programs at Union College only. It does not include individual education courses that the institution offers to P-12 educators for professional development, re-licensure, or other purposes.

¹² Fees subject to change

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 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 (Elementary, Secondary 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 may also 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.

Changes in this section made as of 02/04/19 (See Addendum on Page 286)

Engineering

Mission

The engineering program at Union College prepares students to finish advanced studies leading to a baccalaureate degree in engineering.

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; and
- successfully complete course work in preparation for the final two years of a baccalaureate degree in engineering.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515 or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Seth McNeill

Academic Programs

Engineering, AS

Engineering Minor

ENGINEERING, AS

Required courses (40.5-42 hours)

Core

ENGR 111, 112	Introduction to Engineering I and II	2, 2
ENGR 211	Statics	3
ENGR 212	Dynamics	3
ENGR 228	Electric Circuit Analysis	4

Cognates

CHEM 151	General Chemistry I	4
CPTR	An approved computing course	3
MATH 184	Calculus I	4
PHYS 251	College Physics I	4.5

Select three courses from the list below or approved elective 11-12.5

CHEM 152	General Chemistry II (4)
MATH 285	Calculus II (4)
MATH 286	Calculus III (4)
MATH 352	Linear Algebra (3)
PHYS 252	College Physics II (4.5)

Consult engineering advisor for general education and elective course selections.

ENGINEERING Minor

Required courses (21 hours)

CPTR	An approved computing course	3
ENGR 111, 112	Introduction to Engineering I and II	2, 2
ENGR 211	Statics	3
ENGR 228	Electric Circuit Analysis	4
MATH 184	Calculus I	4
MATH 352	Linear Algebra	3

English

Mission

The program in English fosters students' endeavors to be creative and critical readers, writers, speakers, 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; and
- write effectively in a range of genres because students understand the relationship of audience, author, and subject.

Contact Information

Mark Robison, Chair, Division of Humanities
Tamara Seiler, Office Manager
Dick Building, Room 409
402.486.2523
mark.robison@ucollege.edu
www.ucollege.edu/humanities

Faculty

Tanya R. Cochran, William D. Fitts, Lori Peckham, Mark Robison, Peggy Wahlen

Adjunct Faculty

Jason Gildow, Mike Mennard, Jill Morstad

Academic Programs

English, BA, with emphases in:

- Literature
- Writing and Speaking

English Language Arts Education, BS—Secondary Field Endorsement

Secondary English Education, BS—Subject Endorsement

English Minor

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.

English Core and Cognates
Required courses (27 hours)

Core		
ENGL 271	History of the English Language	3
ENGL 272	Grammatical Systems	3
ENGL 378	Technical Writing and Grant Proposals (WR)	3

ENGL 379	Creative Writing (WR)	3
Cognates		
COMM 355	Advanced Speech and Oral Interpretation	3
COPR 332	Rhetoric (WR)	3
ENGL 212	Writing for Scholarly Audiences	3
LITR 231	Ancient Western Literature	3
or LITR 232	Modern Western Literature (3)	
RELB 366	Biblical Literature (WR)	3

ENGLISH, BA–Literature Emphasis

Designed for those who desire a second major or plan for graduate study in English.

Required courses (42 hours)

English Core & Cognates		27
Select five courses from the following:		15
LITR 299	Seminar in Non-Western Literature (3)	
LITR 345	Studies in Early American Literature (WR) (3)	
LITR 348	Studies in British Literature (WR) (3)	
LITR 352	Women and Minority Writers (WR) (3)	
LITR 436	Studies in American Literature (WR) (3)	
LITR 440	Travel Literature (WR) (3)	
LITR 445	Early British Literature (WR) (3)	

ENGLISH, BA–Writing and Speaking Emphasis

Designed for students interested in law, medicine, editing, or freelance writing.

Required courses (44 hours)

English Core & Cognates		27
COJR 245	Editing	3
COJR 457	Magazine Writing (WR)	3
COMM 125	Media and Meaning	3
Select two courses from the following:		6
CODR 380	Script Writing (3)	
COEM 260	Writing in the Digital World (3)	
LITR 299	Seminar in Non-Western Literature (3)	
LITR 348	Studies in British Literature (WR) (3)	
LITR 352	Women and Minority Writers (WR) (3)	
LITR 436	Studies in American Literature (WR) (3)	
LITR 445	Early British Literature (WR) (3)	
Required specific general education courses (<i>minimum grade of C required</i>)		
COMM 105	Public Speaking	2

ENGLISH LANGUAGE ARTS EDUCATION, BS

Secondary Field Endorsement

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 English 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; and
- experience in the integration of faith and learning, particularly in the teaching of imaginative literature.

Required courses (118 hours)

CODR 229	Play Production: Technical Design	3
COJR 221	Reporting (WR)	3
COJR 245	Editing	3
COJR 457	Magazine Writing (WR)	3
COMM 125	Media and Meaning	3
COMM 355	Advanced Speech and Oral Interpretation	3
COMM 465	Interpersonal Communication	3
COPR 332	Rhetoric (WR)	3
EDUC 357	Literature for Children and Adolescents	2
ENGL 271	History of the English Language	3
ENGL 272	Grammatical Systems	3
ENGL 378	Technical Writing and Grant Proposals (WR)	3
ENGL 379	Creative Writing (WR)	3
LITR 299	Seminar in Non-Western Literature	3
LITR 352	Women and Minority Writers (WR)	3
LITR	British literature 300 level or above	3
LITR	American literature 300 level or above	3

Required specific general education course (*minimum grade of C required*)

COMM 105	Public Speaking	2
ENGL 212	Writing for Scholarly Audiences	3
LITR 231	Ancient Western Literature	3
or LITR 232	Modern Western Literature (3)	
RELB 366	Biblical Literature (WR)	3

Professional education

EDUC 412	Methods: Language Arts Education	3
Additional Professional Education		54

(See Education-Secondary Education Endorsements)

Auxiliary Requirement

Language arts majors are required to direct, produce, and/or coordinate curricular and extracurricular school speech and theatre activities.

SECONDARY ENGLISH EDUCATION, BS**Subject Endorsement**

Students who plan to teach only writing and literature at the secondary level may pursue this subject endorsement major.

The subject endorsement 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; and
- experience in the integration of faith and learning, particularly in the teaching of imaginative literature.

Required courses (95 hours)

COJR 457	Magazine Writing (WR)	3
COPR 332	Rhetoric (WR)	3
EDUC 357	Literature for Children and Adolescents	2
ENGL 271	History of the English Language	3
ENGL 272	Grammatical Systems	3
ENGL 378	Technical Writing and Grant Proposals (WR)	3
ENGL 379	Creative Writing (WR)	3
LITR 231	Ancient Western Literature	3
LITR 232	Modern Western Literature	3
LITR	One British Literature (300 level or above)	3
LITR	One American Literature (300 level or above)	3

Required specific general education course (*minimum grade of C required*)

ENGL 212	Writing for Scholarly Audiences	3
RELB 366	Biblical Literature (WR)	3

Professional education

EDUC 412	Methods: Language Arts Education	3
Additional Professional Education		54

Recommended

LANG	Beginning College Modern Language (6)
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It is strongly recommended that every student finish requirements for at least two subject endorsements.
(See *Education-Secondary Education Endorsements*)

ENGLISH Minor

Required courses (18 hours)

ENGL 271	History of the English Language	3
or ENGL 272	Grammatical Systems (3)	
Select two courses from the following:		6
CODR 380	Script Writing (3)	
COEM 260	Writing in the Digital World (3)	
COJR 245	Editing (3)	
COJR 457	Magazine Writing (WR) (3)	
COPR 332	Rhetoric (WR) (3)	
ENGL 378	Technical Writing and Grant Proposals (WR) (3)	
ENGL 379	Creative Writing (WR) (3)	
Select one course from the following:		3
COMM 355	Advanced Speech and Oral Interpretation (3)	
COMM 425	Intercultural Communication (3)	
COMM 465	Interpersonal Communication (3)	
Select two courses from the following:		6
LITR 231	Ancient Western Literature (3)	
LITR 232	Modern Western Literature (3)	
LITR 240	Travel Literature (3)	
LITR 299	Seminar in Non-Western Literature (3)	
LITR 345	Studies in Early American Literature (WR) (3)	
LITR 348	Studies in British Literature (WR) (3)	
LITR 352	Women and Minority Writers (WR) (3)	
LITR 366	Biblical Literature (WR) (3)	
LITR 436	Studies in American Literature (WR) (3)	
LITR 445	Early British Literature (WR) (3)	

Foreign Language Studies

A major in Foreign Language Studies with emphases in French, German, Italian, or Spanish can be acquired through Union College’s participation in Adventist Colleges Abroad. 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. Union College scholarships do not apply for study abroad at ACA campuses.

Contact Information

Mark Robison, Chair, Division of Humanities
 Tamara Seiler, Office Manager
 Dick Building, Room 409
 402.486.2523
mark.robison@ucollege.edu
www.ucollege.edu/humanities

Goals

- Upon graduating students should:
- Exhibit competence in speaking a second language.
 - Be able to cope with the unfamiliar, both linguistically and culturally.
 - Understand the value of diversity.

Academic Programs

Foreign Language Studies, BA, with emphases in:

- French
- German
- Italian
- Spanish

French Minor
 German Minor
 Italian Minor
 Spanish Minor

Foreign Language Studies, BA

Available as a second major only.

Required courses (32 semester hours - 48 quarter hours)

LANG¹³ prefix beyond 102, 12 semester hours (18 quarter hours) of which must be at or above the 300-level, including

LANG ¹³	History, civilization, or literature	4 SH	(6 QH)
LANG	Language or grammar	14 SH	(21 QH)
	(3 SH/5 QH at 300 level or above)		
LANG	Modern language electives	12 SH	(18 QH)
LANG 485 ¹⁴	Research in a Foreign Culture and Language		2 SH

¹³ LANG is replaced by the language studied.
¹⁴ LANG 485 is completed at Union College within one school year of a student’s successful completion of a year’s study abroad at an ACA campus.

FOREIGN LANGUAGES Minor

Minors in French, German, Italian, or Spanish can be acquired through participation in the Adventist Colleges Abroad program by living and studying on an ACA campus.

Required courses (20 semester hours - 30 quarter hours)

LANG¹⁵ prefix beyond 102, 6 SH (9 QH) of which must be at or above the 300-level, including

LANG ¹⁵	History, civilization, or literature (3 SH; 4.5 QH)
LANG	Language or grammar (10 SH; 15 QH)
LANG	Modern language electives (7 SH; 10.5 QH)

SH=semester hours

QH=quarter hours

¹⁵ LANG is replaced by the language studied.

Graphic Design

Mission

The mission of the graphic design program is to prepare students to excel in visual communication within a Christian perspective and to become competent and creative graphic designers.

Goals

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;
- demonstrate professionalism and a thorough knowledge of the field; and
- apply knowledge of fundamental business and marketing practices.

Contact Information

Bruce Forbes, Chair, Division of Fine Arts

Nancy Meier, Office Manager

Engel Hall

402.486.2553

bruce.forbes@ucollege.edu

www.ucollege.edu/fine-arts

Faculty

Bruce Forbes, Alan Orrison

Adjunct Faculty

Steve Nazario, Julia Noyes, Matt Olson, Amy Smith

Academic Programs

Graphic Design, BS, with emphases in:

- Business
- Communication

Graphic Design, AS

Graphic Design Minor

Auxiliary Requirements for Baccalaureate Degrees in the Visual Arts

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

Graphic Design Core & Cognates
Required courses (64 hours)**Core**

GRPH 150	Introduction to Graphic Arts	3
GRPH 175, 275, 375, 475	Graphic Design Seminar (0.5 each)	2
GRPH 210	Page Layout	3
GRPH 250	Digital Imaging	3
GRPH 252	Computer Design	3
GRPH 254	Publication Design	3
GRPH 301	Web Design	3
GRPH 330	Digital Illustration	3
GRPH 350	History of Graphic Design	3
GRPH 358	Typography	3
GRPH 401	Interactive Web Design	3
GRPH 460	Prepress Production	3

Internship in Graphic Design**Cognates**

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	Art History I (WR)	3
ART 322	Art History II (WR)	3
ART 485	Senior Exhibit	1
COPR 316	Advertising Practices	3
CPTR 220	Microcomputer Applications	3
CPTR 245	Web Development Basics	3
PHOT 225	Intermediate Photography	3

GRAPHIC DESIGN, BS—Business Emphasis**Required courses (76 hours)**

Graphic Design Core & Cognates 64

Cognates

Select 12 hours from 12

BUAD 138	Dynamics of Business (3)
BUAD 219	Small Business Management (3) <i>Recommended</i>
BUAD 376	Human Resource Management (3) <i>Recommended</i>
BUAD 425	Business Communications (WR) (3)
BUAD 430	Conflict Management (3)
COMM 465	Interpersonal Communication (3) <i>Recommended</i>
MRKT 327	Marketing (WR) (3) <i>Recommended</i>
MRKT 333	Professional Selling (3)
MRKT 443	Consumer Behavior (3)

GRAPHIC DESIGN, BS—Communication Emphasis

Required courses (76 hours)

Graphic Design Core & Cognates 64

Cognates

Select 12 hours from 12

COEM 410	Digital Storytelling: The Creative Process (3)
COJR 221	Reporting (WR) (3)
COJR 245	Editing (3) <i>Recommended</i>
COJR 457	Magazine Writing (WR) (3)
COMM 125	Media and Meaning (3) <i>Recommended</i>
COMM 465	Interpersonal Communication (3) <i>Recommended</i>
COPR 241	Public Relations Principles (3)

GRAPHIC DESIGN, AS

Required courses (31-32 hours)

Core

GRPH 150	Introduction to Graphic Arts	3
GRPH 175, 275	Graphic Design Seminar (0.5 each)	1
GRPH 252	Computer Design	3
GRPH 254	Publication Design	3
GRPH 358	Typography	3
GRPH 460	Prepress Production	3

Cognates

ART 105	Drawing I	2
ART 115	Design I	2
ART 225	Color Theory	2
ART/GRPH/PHOT	Electives	6-7
COPR 316	Advertising Practices	3

GRAPHIC DESIGN Minor

Required courses (21 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	Elective	3

Health and Human Performance

Mission

Our mission is to develop leaders through balanced lifestyles and Christian fellowship.

Outcomes

1. Graduates will develop a foundation of human movement, physiology, and fitness and wellness concepts.
2. Graduates will understand the need for lifelong physical activity and how it benefits them by being provided with opportunities to experience:
 - a. a balanced Christian lifestyle through lifetime physical activities;
 - b. intramural and intercollegiate sports; and
 - c. a progressive exercise program.
3. Graduates will be able to practice leadership, teamwork, and Christian service within athletic environments by
 - a. understanding the structure, rules, and participant roles for various sports;
 - b. participating in internships, practicum and student teaching opportunities within various organizations; and
 - c. creating, conducting, and successfully completing athletic and/or behavior modification programs.
4. Graduates will acquire the knowledge and application of professionalism, ethical behavior and personal responsibility to maintain ethical standards specific to their role within their chosen profession.

Contact Information

Rick Young, Chair, Division of Emergency Management and Exercise Science

Nancy Petta, Director

402.486.2889 or nancy.petta@ucollege.edu

Larson Lifestyle Center, lower level

402.486.2525

www.ucollege.edu/hhp

Faculty

Nancy Petta, Shawntae Razo

Adjunct Faculty

Phyllis Gorton, Ryan Perry

Academic Programs

Exercise Science, BS

Health and Human Performance, BS, with emphases in:

- Business/Sports Management
- Fitness and Wellness

Physical Education, BS—K-6, 7-12 Secondary Subject Endorsement

Business/Sports Management Minor

Coaching Minor

Fitness and Wellness Minor

Personal Training Minor

Physical Education Minor

Health and Human Performance Core & Cognates**Required courses (33 hours)****Core**

HHPA 220	Healthy Eating and Fitness	1
HHPA 235	Weight Training and Physical Conditioning	1
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	3
HHPT 345	Sports Nutrition	2
HHPT 350	Practicum	1
HHPT 356	Physiology of Exercise	3
HHPT 360	Biomechanics/Kinesiology	3
HHPT 366	Adapted Physical Education	2
HHPT 370	Personal Training	3
HHPT 437	Measurement and Evaluation in HHP (WR)	2
HHPT 485	Seminar in Health and Human Performance	1
HHPT 486	Senior Capstone (WR)	1
Internship in Health and Human Performance		

Cognates

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
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EXERCISE SCIENCE, BS

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.

Required courses (70 hours)

Health and Human Performance Core & Cognates	33
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Exercise Science Core

HHPT 256	Medical Terminology	1
Additional Internship in Exercise Science		

Exercise Science Cognates

BIOL 151	General Biology I	4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211	Organic Chemistry I	4
HHPT 357	Motor Learning (WR)	3
MATH 221	Elementary Statistics and Probability	3
PHYS 151, 152	General Physics I and II	4, 4
PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3

HEALTH AND HUMAN PERFORMANCE, BS—Business/Sports Management Emphasis

Designed to prepare students to work in fitness-racquet clubs, lifestyle centers, retail sporting goods stores, YMCA/YWCA's or other recreational businesses. Students can tailor-make the selections of internship to meet their own specific goals. Participation in an annual fitness test is required.

Required courses (60.5 hours)

Health and Human Performance Core & Cognates	33
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Business courses		
ACCT 211, 212	Principles of Accounting	3, 3
BUAD 219	Small Business Management	3
or BUAD 138	Dynamics of Business (3)	
or BUAD 310	Quality Management (3)	
BUAD 376	Human Resource Management	3
BUAD 425	Business Communications (WR)	3
or BUAD 430	Conflict Management (3)	
MRKT 327	Marketing (WR)	3
or MRKT 333	Professional Selling (3)	
Select two Health and Human Performance activity courses from		2
HHPA 126	Team Activities (1)	
HHPA 137	Gymnastics for Everyone (1)	
HHPA 145	Beginning Badminton (1)	
HHPA 151	Beginning Volleyball (1)	
Additional Health and Human Performance courses		
HHPA 147	Beginning Tennis	1
or HHPA 146	Beginning Pickleball (1)	
HHPA 149	Beginning Golf	1
HHPA 210	Swimming	1
or HHPA 216	Lifeguard Training (1)	
or HHPA 219	Water Safety Instruction (1)	
HHPT 235	Principles of Sports Officiating I	1.5
or HHPT 236	Principles of Sports Officiating II (1.5)	
or HHPT 335	Administration of Intramural Sports (1.5)	
HHPT 340	Introduction to Coaching Theory	2
HHPT 351	Practicum	1

HEALTH AND HUMAN PERFORMANCE, BS–Fitness and Wellness Emphasis

The emphasis 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. Students can tailor-make the selection of internship to meet their own specific goals. Participation in an annual fitness test is required.

Required courses (57.5 hours)

Health and Human Performance Core & Cognates		33
Business courses		
BUAD 219	Small Business Management	3
or BUAD 138	Dynamics of Business (3)	
or BUAD 310	Quality Management (3)	
GRPH 150	Introduction to Graphic Arts	3
GRPH 252	Computer Design	3
or GRPH 210	Page Layout (3)	
or GRPH 254	Publication Design (3)	
or CPTR 245	Web Development Basics (3)	
MRKT 333	Professional Selling	3
or MRKT 327	Marketing (WR) (3)	
or BUAD 425	Business Communications (WR) (3)	
or BUAD 430	Conflict Management (3)	

Additional Health and Human Performance courses

HHPA 210	Swimming	1
or HHPA 216	Lifeguard Training (1)	
or HHPA 219	Water Safety Instruction(1)	
HHPT 235	Principles of Sports Officiating I	1.5
or HHPT 236	Principles of Sports Officiating II (1.5)	
or HHPT 335	Administration of Intramural Sports (1.5)	
HHPT 329	Introduction to Fitness and Wellness Management	3
HHPT 351	Practicum	1
HHPT 476	Wellness Methods, Materials and Management	3
Other course		
PSYC 311	Introduction to Counseling Theory and Techniques	3
or PSYC 315	Social Psychology (3)	

PHYSICAL EDUCATION, BS

K-6, 7-12 Subject Endorsement

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; and
- 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.

Required courses (112.5 hours)

Health and Human Performance Courses

HHPA 147	Beginning Tennis	1
or HHPA 146	Beginning Pickleball (1)	
HHPA 149	Beginning Golf	1
HHPA 137	Gymnastics for Everyone	1
or HHPA 145	Beginning Badminton (1)	
HHPA 210	Swimming	1
or HHPA 216	Lifeguard Training (1)	
or HHPA 219	Water Safety Instruction (1)	
HHPA 235	Weight Training and Physical Conditioning	1
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	3
HHPT 235, 236	Principles of Sports Officiating I and II	1.5, 1.5
HHPT 316	Leisure and Recreational Activities	2
HHPT 326	Team Activities	2
HHPT 335	Administration of Intramural Sports	1.5
HHPT 337	Gymnastics for Teachers	1

HHPT 340	Introduction to Coaching Theory	2
HHPT 345	Sports Nutrition	2
HHPT 350	Practicum	1
HHPT 356	Physiology of Exercise	3
HHPT 357	Motor Learning (WR)	3
HHPT 360	Biomechanics/Kinesiology	3
HHPT 366	Adapted Physical Education	2
HHPT 370	Personal Training	3
HHPT 437	Measurement and Evaluation in HHP (WR)	2
HHPT 485	Seminar in Health and Human Performance	1
HHPT 486	Senior Capstone (WR)	1

Other required courses

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
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Professional Education

EDUC 245	Physical Education in the Elementary School	2
EDUC 416	Methods: Physical Education	3

Additional Professional Education		57
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It is strongly recommended that every student finish requirements for at least two subject endorsements.
(See Education-Secondary Education Endorsements)

BUSINESS/SPORTS MANAGEMENT Minor

Participation in annual fitness test is required.

Required courses (24.5 hours)

Health and Human Performance Courses

HHPA 220	Healthy Eating and Fitness	1
HHPT 215	Emergency Health Care	2
HHPT 335	Administration of Intramural Sports	1.5
HHPT 370	Personal Training	3

Other required courses

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
BUAD 219	Small Business Management	3
or BUAD 138	Dynamics of Business (3)	
or BUAD 310	Quality Management (3)	
GRPH 150	Introduction to Graphic Arts	3
MRKT 333	Professional Selling	3
or MRKT 327	Marketing (WR) (3)	
or BUAD 425	Business Communications (WR) (3)	
or BUAD 430	Conflict Management (3)	

COACHING Minor

Participation in annual fitness test is required.

Required courses (24.5 hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
HHPA 220	Healthy Eating and Fitness	1
HHPA 235	Weight Training and Physical Conditioning	1
HHPT 215	Emergency Health Care	2

HHPT 216	Athletic Injuries	3
HHPT 235, 236	Principles of Sports Officiating I and II	1.5, 1.5
HHPT 335	Administration of Intramural Sports	1.5
HHPT 340	Introduction to Coaching Theory	2
HHPT 370	Personal Training	3

FITNESS AND WELLNESS Minor

Participation in annual fitness test is required.

Required courses (23 hours)

Health and Human Performance Courses

HHPA 220	Healthy Eating and Fitness	1
HHPT 215	Emergency Health Care	2
HHPT 329	Introduction to Fitness and Wellness Management	3
HHPT 370	Personal Training	3
HHPT 476	Wellness Methods, Materials and Management	3

Other required courses

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
GRPH 150	Introduction to Graphic Arts	3
or MRKT 333	Professional Selling (3)	
or MRKT 327	Marketing (WR) (3)	

PERSONAL TRAINING Minor

Participation in annual fitness test is required.

Required courses (23 hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
HHPA 220	Healthy Eating and Fitness	1
HHPA 235	Weight Training and Physical Conditioning	1
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	3
HHPT 345	Sports Nutrition	2
HHPT 356	Physiology of Exercise	3
HHPT 370	Personal Training	3

PHYSICAL EDUCATION Minor

Participation in annual fitness test is required.

Required courses (22.5 hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
HHPT 215	Emergency Health Care	2
HHPT 216	Athletic Injuries	3
HHPT 235, 236	Principles of Sports Officiating I and II	1.5, 1.5
HHPT 326	Team Activities	2
HHPT 335	Administration of Intramural Sports	1.5
HHPT 340	Introduction to Coaching Theory	2
HHPT 350	Practicum	1

Health Sciences

The major in health sciences combines courses at the undergraduate and graduate levels to enable exceptional, qualified Union College students to enter the Master of Physician Assistant Studies (MPAS) program after three years of undergraduate study. These students receive a Bachelor of Science in health sciences after successfully completing the first year of the PA Program and a Master of Physician Assistant Studies upon successful completion of the full MPAS curriculum.

Contact Information

Jan Lemon, Admissions Coordinator, PA Program
Don Love Building—South, Room 201-A
402.486.2527
paprog@ucollege.edu
www.ucollege.edu/pa

Faculty

Michelle Buller, Christina Burden, Megan Heidtbrink, Tim Kuntz, Dwain Leonhardt, Austin Young

Adjunct Faculty

Larry Crouch, Ben Holdsworth, Anne Mullin, Katie Packard, Bronson Riley, David Shaw, Ashley Waldrep

Academic Program

Health Sciences, BS

Admission, Progression, and Graduation Requirements

The PA Program intends that an applicant for the Bachelor of Science in health sciences (BSHS) degree is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by Union College.

Students may enter the BSHS major either as a traditional or as a transfer student. The application is designed to recognize appropriate prior work to ensure content mastery and likelihood of success in the BSHS degree.

Students are invited to apply to the BSHS degree once the minimum criteria have been met. Applications are processed and reviewed upon receipt. Applicants will be notified of status by the PA Program.

Upon acceptance to the BSHS degree program, each student will be assigned an academic advisor from the PA Program to provide guidance in the academic program.

Minimum criteria for application to the BSHS major:

- Successful completion ("B" or higher) of the following courses or their equivalents: General Chemistry I, General Chemistry II, Writing for General Audiences, and Writing for Scholarly Audiences;
- A cumulative GPA of 3.50 or above (on a 4.00 scale) for all college-level coursework; and
- A GPA of 3.50 or above (on a 4.00 scale) for all science courses.

While not required for application, exposure to the PA role (e.g., professional shadowing) is highly recommended.

Progression in the BSHS major:

Students who do not meet the following criteria will be counseled to complete a four-year degree prior to applying to the PA Program.

- Maintain GPAs (cumulative and science) of 3.50 or above (on a 4.00 scale);
- Receive a “B” or higher in all science courses;
- Complete the following courses by the conclusion of the fall semester of the junior year: General Chemistry I, General Chemistry II, Organic Chemistry I, General Biology I, General Biology II, and Advanced Human Physiology;
- Complete 101 semester hours before entering the graduate course sequence, including 30 of the last 36 semester hours in residence at Union College;
- Complete 240 hours of direct patient care by the time of application (with plans in place to complete an additional 240 hours before matriculation into the MPAS program);
- Meet all admission requirements for the MPAS program, including all general education, major, and prerequisite requirements—except completion of a college degree—before beginning the graduate curriculum; and
- Be accepted into the MPAS program (students who have been denied may reapply only after completion of a baccalaureate degree with another major).

HEALTH SCIENCES, BS

Required Courses—80-81 hours

BIOL 151, 152	General Biology I and II	4, 4
BIOL 205	Microbiology	4
BIOL 411	Advanced Human Anatomy	4
BIOL 416	Advanced Human Physiology (WR)	4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
CHEM 445	Biochemistry I	4
HHPT 256	Medical Terminology	1
MATH 221	Elementary Statistics and Probability	3
or MATH 331	Statistics and Probability (4)	
PSYC 215	Developmental Psychology	3

Required Graduate Curriculum

PHAS 510	Clinical Nutrition	2
PHAS 511	Human Anatomy	5
PHAS 514	Medical History and Physical Examination Skills	4
PHAS 518	Psychiatry and Behavioral Medicine	3
PHAS 525	PA Professional Issues	2
PHAS 533	Preventive Health	1
PHAS 539	Christian Health Care and Bioethics (WR) ¹⁶	3
PHAS 558	Medical Physiology	3
PHAS 559	Clinical Pathophysiology	4
PHAS 562	Medical Genetics	1
PHAS 584	Pharmacology	5

¹⁶ Meets undergraduate general education requirement for one religion elective

Additional Requirement
American Heart Association HeartCode BLS CPR certification¹⁷

Recommended PSYC 415	Abnormal Psychology	3
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¹⁷ CPR certification must be obtained by June 1 of the same calendar year the student begins the PA Program and must be kept current while a PA student.

History

Goals

Students graduating from the history program will

- possess a knowledge of global history appropriate for admission to graduate school;
- be prepared for law or professional schools;
- have conducted independent historical study and research; and
- be familiar with schools of historical thought and the contributions of significant historians.

Contact Information

Mark Robison, Chair, Division of Humanities
Tamara Seiler, Office Manager
Dick Building, Room 409
402.486.2523
mark.robison@ucollege.edu
www.ucollege.edu/humanities

Faculty

Christopher Banks, Benjamin Tyner

Adjunct Faculty

George Gibson

Academic Programs

History, BA
History Education, BS—Secondary Subject Endorsement
History Minor

HISTORY, BA

Required courses (45 hours)

Core		
HIST 157	The West in the World	3
HIST 220	World Antiquity	3
HIST 497	Historiography (WR)	3
Cognates		
GEOG 137	Introductory Geography	3
or GEOG 227	World Regional Geography (3)	
PLSC 208	American Politics	3
Select two courses from the following:		6
HIST 255	The U.S.: From Discovery to Civil War (3)	
HIST 380	The U.S.: Crisis, Consolidation, and Expansion (3)	
HIST 386	Economic History of the United States (3)	
HIST 450	American History: The 20th Century (3)	
HIST 465	The U.S. War on Terror (3)	

Select an additional eight courses from the following:

24

HIST 255	The U.S.: From Discovery to Civil War (3)
HIST 258	Africa's Global Emergence (3)
HIST 260	Latin America and the Caribbean (3)
HIST 349	Medieval Europe (WR) (3)
HIST 378	Early Modern Europe (WR) (3)
HIST 380	The U.S.: Crisis, Consolidation, and Expansion (3)
HIST 383	The North Atlantic: War and Peace 1900s (3)
HIST 386	Economic History of the United States (3)
HIST 401	Europe: 1789-1914 (WR) (3)
HIST 450	American History: The 20th Century (3)
HIST 465	The U.S. War on Terror (3)
PLSC 105	Introduction to International Relations (3)
PLSC 346	Russia in Global Politics (3)
PLSC 392	The Modern Middle East (3)
PLSC 396	Politics of East and South Asia (3)

HISTORY EDUCATION, BS

Secondary Subject Endorsement

The teaching major in history is designed to prepare candidates for secondary teaching by providing

- a general knowledge of American and world 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; and
- 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.

Required courses (99 hours)

Core

HIST 157	The West in the World	3
HIST 255	The U.S.: From Discovery to Civil War	3
HIST 497	Historiography (WR)	3

Cognates

GEOG 137	Introductory Geography	3
GEOG 227	World Regional Geography	3
PLSC 208	American Politics	3

Select seven courses from the following:

21

HIST 220	World Antiquity (3)
HIST 258	Africa's Global Emergence (3)
HIST 260	Latin America and the Caribbean (3)
HIST 349	Medieval Europe (WR) (3)
HIST 378	Early Modern Europe (WR) (3)
HIST 380	The U.S.: Crisis, Consolidation, and Expansion (3)
HIST 383	The North Atlantic: War and Peace 1900s (3)

HIST 386	Economic History of the United States (3)
HIST 450	American History: The 20th Century (3)

Professional Education		
EDUC 415	Methods: Social Science and Religious Education (K-12)	3
Additional Professional Education		57
Recommended: Beginning College Modern Language (6)		

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

HISTORY Minor

Required courses (18 hours)

HIST 157	The West in the World	3
HIST 220	World Antiquity	3
PLSC 208	American Politics	3
HIST	History electives (300 level and above)	9

International Relations

Goals

The Bachelor of Arts in International Relations is designed to prepare the student for careers in a variety of areas, including careers in U.S. or international politics and government service, international aspects of law, business and communications, church positions, and graduate studies in related fields. Upon graduation all international relations majors may sit for the U.S. Department of State Foreign Service exam in the following summer.

Contact Information

Mark Robison, Chair, Division of Humanities
 Tamara Seiler, Office Manager
 Dick Building, Room 409
 402.486.2523
mark.robison@ucollege.edu
www.ucollege.edu/humanities

Faculty

Christopher Banks, Benjamin Tyner

Academic Programs

International Relations, BA
 International Relations Minor

INTERNATIONAL RELATIONS, BA

Required courses (48 Hours)

Core

PLSC 105	Introduction to International Relations	3
PLSC 208	American Politics	3
PLSC 258	Africa's Global Emergence	3
PLSC 383	The North Atlantic: War and Peace 1900s	3
PLSC 392	The Modern Middle East	3
PLSC 460	Global Political Economy and International Labor	3

Internship - 150 hours in a political science related field

Select one course from 3

PLSC 260	Latin America and the Caribbean (3)
PLSC 345	Global Environment and International Policy (3)
PLSC 346	Russia in Global Politics (3)
PLSC 396	Politics of East and South Asia (3)
PLSC 430	Global Instability and Migrations (3)
PLSC 465	The U.S. War on Terror (3)

Cognates

ACCT 211, 212	Principles of Accounting	3, 3
ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3
FNCE 330	Financial Institutions and Markets	3

FNCE 370	International Finance	3
GEOG 137 or GEOG 227	Introductory Geography World Regional Geography (3)	3
HIST 157	The West in the World	3
PSYC 340	Research Methods I	3

INTERNATIONAL RELATIONS Minor

Required courses (18 Hours)

GEOG 137	Introductory Geography	3
PLSC 105	Introduction to International Relations	3
PLSC 392	The Modern Middle East	3
PLSC 460	Global Political Economy and International Labor	3
Select two courses from the following		6

PLSC 208	American Politics (3)
PLSC 258	Africa's Global Emergence (3)
PLSC 260	Latin America and the Caribbean (3)
PLSC 345	Global Environment and International Policy (3)
PLSC 346	Russia in Global Politics (3)
PLSC 383	The North Atlantic: War and Peace 1900s (3)
PLSC 396	Politics of East and South Asia (3)
PLSC 430	Global Instability and Migrations (3)
PLSC 465	The U.S. War on Terror (3)

International Rescue and Relief

The International Rescue and Relief program is designed for students seeking careers in community service and the skills to serve in times of disaster and humanitarian need. There are four foundational elements of the program: 1) we believe that Jesus applied himself to physical needs before engaging in spiritual ministry, and that both must be concurrent in outreach; 2) a summer session in Colorado dedicated to survival and rescue training; 3) a semester abroad studying and providing humanitarian relief; 4) and clinical emergency training throughout the entire program. The curriculum also provides graduates with the knowledge, skills, and ability for professional certification in emergency response and management. The IRR program prepares students for a variety of career opportunities depending on their degree focus; such as in mission service, nursing, public health, public services, non-profit agencies, business, and social services. The pre-professional emphasis prepares students for graduate studies to become a doctor, dentist, PA, or physical therapist. The Public Safety emphasis prepares a graduate to work as a paramedic, in emergency medical services, emergency manager, firefighter, forest or park ranger, search and rescue, and law enforcement. The Global Community Development emphasis prepares students for careers in the mission field, humanitarian relief and development. Union College offers this program in its long-standing tradition of Christian service.

Mission

The International Rescue and Relief program prepares students for numerous career opportunities while providing students with the skill sets that will enable them to effectively respond to humanity's needs during disaster and tragedy. Through traditional coursework, experiential environments, and training in remote and wilderness settings, students will be prepared to lead in challenging circumstances, rescue others, provide humanitarian relief and successfully compete for professional placement and graduate study.

Outcomes

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

- Demonstrate leadership skills by serving effectively, compassionately and enthusiastically in providing current humanitarian relief and development in both national or international environments;
- Competently deploy during emergencies and disasters as trained humanistic responders and certificated search and rescue technicians;
- Identify and determine the necessary emergency medical treatments for individuals experiencing a crisis in urban, rural, or austere locations;
- Obtain an entry-level career placement in their chosen field or pursue advanced study.

Contact Information

Rick Young, Director
Don Love Building- South
402.486.2980
rick.young@ucollege.edu
www.ucollege.edu/irr

Faculty

Kyle Kuehmichel, Andrew Saunders, Kalie Saunders, Rick Young

Academic Programs

International Rescue and Relief, BS, with a minor

International Rescue and Relief, BS, with emphases in:

- Firefighter
- Global Community Development
- Health Care Leadership
- Paramedic
- Pre-Dental, Pre-Medical
- Pre-Physical Therapy
- Pre-PA
- Public Safety

Emergency Medical Services, AS

Rescue and Relief/Allied Health, AS

Disaster Management Minor

Global Community Development Minor

Survival and Rescue Minor

Preparatory Coursework for Admission to the Program

Recommended high school preparation for admission includes year-long courses in biology and chemistry, two years of algebra, computer applications and two years of foreign language. Students should maintain a physical fitness program to meet the challenging experiential courses in IRR.

Admission and Progression Requirements

Admission into the International Rescue and Relief Program requires Union College enrollment and a meeting with an IRR advisor to determine the best academic program to help meet career goals.

Criteria for Admission to the IRR Program

- Acceptance into Union College
- The physical, mental, and emotional capacity to function as a professional emergency responder
- Passport for international travel

Progression in most of the IRR programs requires the student to:

- maintain physical, mental, and emotional capacity to function as a professional emergency responder;
- maintain ability to hike, swim, run, adapt and function well in a broad range of climates and austere settings;
- comply with health policy requirements, including completion of the Hepatitis B series, an annual TB test, and annual influenza vaccine;
- complete the prerequisite CPR certification: American Heart Association Heart Code Basic Life Support by spring semester;
- maintain a successful criminal background check through the IRR program;
- obtain and maintain certifications for CPR, NREMT, and NEEMT;
- obtain all designated advanced EMT certifications; and
- successfully complete summer survival and rescue certifications before junior year.

Program-Specific Fees

Additional fees are charged for the summer training courses, and the overseas semester. A program fee is also assessed each semester for all students admitted to the program, with the exception of the overseas semester. Information regarding current fees can be found by contacting the IRR program office.

Certificate Courses

Certificate courses are identified in course descriptions.

International Rescue and Relief Core & Cognate

Required courses (28 hours)

Core

INRR 105	Principles of Emergency Management	3
INRR 205	Disaster Management	3
INRR 300	Social Dimensions of Disaster	3
INRR 316	Jungle, Coastal and Ocean Survival	1
INRR 321	Global Health	3
INRR 330	Travel and Tropical Medicine	3
INRR 430	Expeditionary Leadership	3
INRR 482	Development and Project Implementation (WR)	3
INRR 483	Cultural Perspectives in Development (WR)	3

Cognate

RELT 347	World Religions	3
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INTERNATIONAL RESCUE AND RELIEF, BS

Required courses (71 hours)

International Rescue and Relief Core & Cognate	28	
INRR 100	Emergency Medical Technician	7
INRR 110	Search and Rescue	2
INRR 112	Swift Water Rescue and Flood Management	1
INRR 114	Technical Rope Rescue	1
INRR 116	Basic Survival	1
INRR 202	Advanced Emergency Medical Technician	4
INRR 310	Clinical & Emergency Care I	3
INRR 311	Clinical & Emergency Care II	3

Select a minor from below that enhances career choice goals
or work with advisor to create an approved set of coursework¹⁸ 21

Accounting—19	International Relations—18
Biology—19	Marketing—18
Business Administration—18	Mathematics—21
Business/Sports Management—24.5	Physical Education—22.5
Chemistry—20	Physics—21
Communication—19	Pre-Law—18
Computer Information Systems—22	Psychology—18
Emerging Media—22	Public Relations—22
English—18	Religion—18
Fitness and Wellness—23	Small Business Management—18
Graphic Design—21	Social Science—18
History—18	Youth Ministry—18

¹⁸ Minor and electives must total a minimum of 21 hours and be approved by the advisor.

INTERNATIONAL RESCUE AND RELIEF, BS—Firefighter Emphasis

Students complete the first three years at Union College. Students complete this emphasis by submitting an official college transcript showing completion of an accredited Fire Protection Technology program. Students who complete the firefighter portion of the program after the junior year at Union College may meet the residency requirement for graduation during the junior year. Thirty credit hours are accepted for the Fire Protection program and will satisfy the Union College upper division requirement. Firefighter program must be completed within two years of completing the IRR Core requirements

Required courses (80 hours)

International Rescue and Relief Core & Cognate	28
INRR 100 Emergency Medical Technician	7
INRR 110 Search and Rescue	2
INRR 112 Swift Water Rescue and Flood Management	1
INRR 114 Technical Rope Rescue	1
INRR 116 Basic Survival	1
INRR 202 Advanced Emergency Medical Technician	4
INRR 310 Clinical & Emergency Care I	3
INRR 311 Clinical & Emergency Care II	3
Completion of an Accredited Firefighter Program	30

INTERNATIONAL RESCUE AND RELIEF, BS—Global Community Development Emphasis

This emphasis does not require the medical and rescue requirements found in other IRR programs.

Required courses (79 hours)

International Rescue and Relief Core & Cognate	28
INRR 312 Development, Logistics and Analytics	3
Cognates	
ACCT 211 Principles of Accounting	3
ECON 235 Principles of Microeconomics	3
HHPT 215 Emergency Health Care	2
PLSC 105 Introduction to International Relations	3
Select 15 additional credit hours from:	
BSAN, BUAD, CPTR, INRR 405-425, SOCI, or SOWK	15
Select a minor from below that enhances career choice goals or work with advisor to create an approved set of coursework ¹⁹	
Accounting—19	International Relations—18
Biology—19	Marketing—18
Business Administration—18	Mathematics—21
Business/Sports Management—24.5	Physical Education—22.5
Chemistry—20	Physics—21
Communication—19	Pre-Law—18
Computer Information Systems—22	Psychology—18
Emerging Media—22	Public Relations—22
English—18	Religion—18
Fitness and Wellness—23	Small Business Management—18
Graphic Design—21	Social Science—18
History—18	Youth Ministry—18

¹⁹ Minor and electives must total a minimum of 21 hours and be approved by the advisor.

INTERNATIONAL RESCUE AND RELIEF, BS–Health Care Leadership Emphasis

Students may finish their Bachelor of Science degree in International Rescue and Relief during their first year of clinical Nursing studies, after acceptance into the Nursing program.

Students must maintain a cumulative GPA of 2.75 or above to apply to the nursing program during their third year before going overseas with IRR. Students would enter the nursing program in their fourth year on campus and complete the IRR and Nursing programs in 5 ½ years.

Required courses (83 hours)

International Rescue and Relief Core & Cognate	28
INRR 100 Emergency Medical Technician	7
INRR 110 Search and Rescue	2
INRR 112 Swift Water Rescue and Flood Management	1
INRR 114 Technical Rope Rescue	1
INRR 116 Basic Survival	1
INRR 202 Advanced Emergency Medical Technician	4
INRR 310 Clinical & Emergency Care I	3
INRR 311 Clinical & Emergency Care II	3
Nursing Prerequisites	22
BIOL 111, 112 Human Anatomy and Physiology I and II (4, 4)	
BIOL 205 Microbiology (4)	
CHEM 104 Introduction to General, Organic and Biochemistry (4)	
MATH 221 Elementary Statistics and Probability (3)	
PSYC 215 Developmental Psychology (3)	
Nursing Course Work (or approved classes by advisor)	11

INTERNATIONAL RESCUE AND RELIEF, BS–Paramedic Emphasis

Students complete the first three years at Union College. Students complete this emphasis by submitting an official college transcript from a CAAHEP accredited institution for Paramedic training. 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. Thirty credit hours are accepted for the Paramedic program and the upper division courses in IRR, plus the Paramedic coursework will satisfy the Union College upper division requirement. Students who complete their paramedic coursework at an approved medical center instead of a regionally accredited college or university will be granted 30 transfer credits with a grade of CR if they can provide an official letter of completion from the program director of the CAAHEP accredited institution, along with a copy of their National Registry Paramedic Certificate. Paramedic program must be completed within two years of completing the IRR Core requirements. Students who will complete their paramedic training and national certification during the following summer may apply to participate in the graduation ceremonies in May as prospective summer graduates.

Required courses (89 hours)

International Rescue and Relief Core & Cognate	28
INRR 100 Emergency Medical Technician	7
INRR 110 Search and Rescue	2
INRR 112 Swift Water Rescue and Flood Management	1
INRR 114 Technical Rope Rescue	1
INRR 116 Basic Survival	1
INRR 202 Advanced Emergency Medical Technician	4
INRR 310 Clinical & Emergency Care I	3
INRR 311 Clinical & Emergency Care II	3

Cognate		
BIOL 111, 112	Human Anatomy and Physiology I and II ²⁰	4, 4
HHPT 256	Medical Terminology	1
Completion of an Accredited Paramedic Program		30

INTERNATIONAL RESCUE AND RELIEF, BS—Pre-Dental, Pre-Medical Emphasis

Required courses (100-101 hours)

International Rescue and Relief Core & Cognate			28
INRR 100	Emergency Medical Technician		7
INRR 110	Search and Rescue		2
INRR 112	Swift Water Rescue and Flood Management		1
INRR 114	Technical Rope Rescue		1
INRR 116	Basic Survival		1
INRR 202	Advanced Emergency Medical Technician		4
INRR 310	Clinical & Emergency Care I		3
INRR 311	Clinical & Emergency Care II		3
Cognates			
BIOL 151, 152	General Biology I and II ²⁰		4, 4
BIOL 411	Advanced Human Anatomy		4
BIOL 416	Advanced Human Physiology (WR)		4
BIOL 445	Biochemistry I		4
or BIOL 440	Biochemistry (4)		
CHEM 151, 152	General Chemistry I and II ²⁰		4, 4
CHEM 211, 212	Organic Chemistry I and II		4, 4
MATH	MATH 111 or above		3-4
PHYS 151, 152	General Physics I and II		4, 4
PSYC	A Psychology course ²⁰		3

INTERNATIONAL RESCUE AND RELIEF, BS—Pre-Physical Therapy Emphasis

Required courses (99 hours)

International Rescue and Relief Core & Cognate			28
INRR 100	Emergency Medical Technician		7
INRR 110	Search and Rescue		2
INRR 112	Swift Water Rescue and Flood Management		1
INRR 114	Technical Rope Rescue		1
INRR 116	Basic Survival		1
INRR 202	Advanced Emergency Medical Technician		4
INRR 310	Clinical & Emergency Care I		3
INRR 311	Clinical & Emergency Care II		3
Cognates			
BIOL 151, 152	General Biology I and II ²⁰		4, 4
BIOL 205	Microbiology		4
BIOL 411	Advanced Human Anatomy		4
BIOL 416	Advanced Human Physiology (WR)		4
CHEM 151, 152	General Chemistry I and II ²⁰		4, 4
HHPT 256	Medical Terminology		1
MATH 221	Elementary Statistics and Probability ²⁰		3
PHYS 151, 152	General Physics I and II		4, 4

²⁰ Meets general education requirements

PSYC 105	Introduction to Psychology ²¹	3
PSYC 215	Developmental Psychology	3
PSYC 415	Abnormal Psychology	3

INTERNATIONAL RESCUE AND RELIEF, BS—Pre-PA Emphasis

Required courses (97 hours)

International Rescue and Relief Core & Cognate		28
INRR 100	Emergency Medical Technician	7
INRR 110	Search and Rescue	2
INRR 112	Swift Water Rescue and Flood Management	1
INRR 114	Technical Rope Rescue	1
INRR 116	Basic Survival	1
INRR 202	Advanced Emergency Medical Technician	4
INRR 310	Clinical & Emergency Care I	3
INRR 311	Clinical & Emergency Care II	3

Cognates

BIOL 151, 152	General Biology I and II ²¹	4, 4
BIOL 205	Microbiology	4
BIOL 411	Advanced Human Anatomy	4
BIOL 416	Advanced Human Physiology (WR)	4
BIOL 445	Biochemistry I	4
or BIOL 440 Biochemistry (4)		
CHEM 151, 152	General Chemistry I and II ²¹	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
HHPT 256	Medical Terminology	1
MATH 221	Elementary Statistics and Probability ²¹	3
PSYC 215	Developmental Psychology	3

Highly recommended elective courses for pre-professional emphasis:

BIOL 321	Genetics (WR) (4)
BIOL 404	Cell Biology (4)
BIOL 455	Immunology (3)

INTERNATIONAL RESCUE AND RELIEF, BS—Public Safety Emphasis

Required courses (78 hours)

International Rescue and Relief Core & Cognate		28
INRR 100	Emergency Medical Technician	7
INRR 110	Search and Rescue	2
INRR 112	Swift Water Rescue and Flood Management	1
INRR 114	Technical Rope Rescue	1
INRR 116	Basic Survival	1
INRR 202	Advanced Emergency Medical Technician	4
INRR 310	Clinical & Emergency Care I	3
INRR 311	Clinical & Emergency Care II	3

Cognates

PSYC 105	Introduction to Psychology	3
PSYC 415	Abnormal Psychology	3

²¹ Meets general education requirements

Select a minor or work with advisor to create an approved set of coursework that enhances career choice goals²²

22

Accounting—19	Computer Information Systems—22
Biology—19	Pre-Law—18
Business Administration—18	Psychology—18
Chemistry—20	Social Science—18
Communication—19	

EMERGENCY MEDICAL SERVICES, AS

Required courses (31 hours)

Core		
INRR 100	Emergency Medical Technician	7
INRR 105	Principles of Emergency Management	3
INRR 110	Search and Rescue	2
INRR 112	Swift Water Rescue and Flood Management	1
INRR 114	Technical Rope Rescue	1
INRR 116	Basic Survival	1
INRR 202	Advanced Emergency Medical Technician	4
INRR 205	Disaster Management	3
Cognates		
FNCE 215	Personal Finance	3
PSYC 215	Developmental Psychology	3
SOCI 105	Introduction to Sociology	3

RESCUE AND RELIEF/ALLIED HEALTH, AS

An Associate of Science Degree in Rescue and Relief/Allied Health is a 2-3 year + 2 year partnership between Union College and Loma Linda University that provides students with rescue certifications and the prerequisites needed to complete a Bachelor of Science Degree from Loma Linda University in the following fields: Cardiac Electrophysiology; Clinical Laboratory Science; Communication Sciences and Disorders; Cytotechnology; Health Informatics and Information Management; Nutrition and Dietetics; Orthotics and Prosthetics; and Respiratory Care.

Required Courses (39-63 hours)

Core		
INRR 100	Emergency Medical Technician	7
INRR 110	Search and Rescue	2
INRR 112	Swift Water Rescue and Flood Management	1
INRR 114	Technical Rope Rescue	1
INRR 116	Basic Survival	1
INRR 105	Principles of Emergency Management	3
INRR 205	Disaster Management	3
Cognates		
PSYC 105	Introduction to Psychology	3
SOCI 105	Introduction to Sociology	3

Choose one track below

15-39

²² Minor and electives must total a minimum of 22 hours and be approved by the advisor.

Cardiac Electrophysiology Track (23 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
CHEM 151, 152	General Chemistry I and II	4, 4
MATH 111	College Algebra	3
PHYS 151	General Physics I	4

Clinical Laboratory Science Track (31 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
MATH 111	College Algebra	3
PHYS 151	General Physics I	4

Communication Sciences and Disorders Track (21-22 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
CHEM 104	Introduction to General, Organic, and Biochemistry	4
MATH 111	College Algebra	3
MATH 221	Elementary Statistics and Probability	3
Any Science course		3-4

Cytotechnology Track (39 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
BIOL 151, 152	General Biology I and II	4, 4
BIOL 205	Microbiology	4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
MATH 111	College Algebra	3

Health Informatics and Information Management Track (15 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
HHPT 256	Medical Terminology	1
MATH 111	College Algebra	3
Additional ANTH, ECON, GEOG, PLSC, or SOCI elective		3

Nutrition and Dietetics Track (23 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
BIOL 205	Microbiology	4
CHEM 151, 152	General Chemistry I and II	4, 4
MATH 111	College Algebra	3

Orthotics and Prosthetics Track (24 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
CHEM 151, 152	General Chemistry I and II	4, 4
MATH 331	Statistics and Probability	4
PHYS 151	General Physics I	4

Respiratory Care Track (27 Hours)

BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
BIOL 205	Microbiology	4
CHEM 151, 152	General Chemistry I and II	4, 4
MATH 111	College Algebra	3
PHYS 151	General Physics I	4

DISASTER MANAGEMENT Minor

Required courses (20-21 hours)

INRR 105	Principles of Emergency Management	3
INRR 205 or NURS 433	Disaster Management Disaster Nursing (2)	3
INRR 300	Social Dimensions of Disaster	3
Select twelve hours from:		12
COMM 365	Institutional Development (3)	
COMM 425	Intercultural Communication (3)	
COPR 377	Crisis Public Relations (3)	
INRR 482	Development and Project Implementation (WR) (3)	
INRR 483	Cultural Perspectives in Development (WR) (3)	
NURS 391	Global Health Nursing (2)	
SOCI 415	Crisis and Resilience (3)	

GLOBAL COMMUNITY DEVELOPMENT Minor

Required courses (21 hours)

ACCT 211	Principles of Accounting	3
BUAD 219	Small Business Management	3
INRR 300	Social Dimensions of Disaster	3
INRR 482	Development and Project Implementation (WR)	3
INRR 483	Cultural Perspectives in Development (WR)	3
PLSC 105	Introduction to International Relations	3
Select one course from:		3
BUAD 316	Operations and Resource Management (3)	
ECON 235	Principles of Microeconomics (3)	
SOCI 321	Diversity in Society (WR) (3)	
SOCI 337	Interventions with Groups (3)	

SURVIVAL AND RESCUE Minor

Required courses (22 hours)

INRR 100	Emergency Medical Technician	7
INRR 105	Principles of Emergency Management	3
INRR 110	Search and Rescue	2
INRR 112	Swift Water Rescue and Flood Management	1
INRR 114	Technical Rope Rescue	1
INRR 116	Basic Survival	1
INRR 202	Advanced Emergency Medical Technician	4
INRR 300	Social Dimensions of Disaster	3

Leadership Minor

A leader needs a wide variety of knowledge, skills, and dispositions to be effective. These attributes may be innate, or they may be learned and absorbed through observation. A wide variety of classroom and practical experiences will assist students who pursue the leadership minor to assimilate and develop Leadership qualities.

This minor is designed to be completed within four years plus one summer. Several of the required courses fulfill general education requirements for general education or requirements within a student's major discipline.

Mission

By providing scholarship, experiences, support and encouragement, the Leadership Minor empowers students to grow and position themselves as leaders with a commitment to service.

Goals

Students graduating with the Leadership Minor will

- understand leadership theory;
- practice moral and ethical leadership;
- be effective in interpersonal communication and conflict resolution;
- evaluate information using critical thinking skills;
- appreciate the power of forgiveness and acceptance; and
- value the leadership qualities of Jesus

Contact Information

Linda Becker, Ph.D., Director

linda.becker@ucollege.edu

Amarachi Banks, M.A., Administrative Assistant

amarachi.banks@ucollege.edu

Dick Building, Room 304

402.486.2560

Faculty

Linda Becker, Ben Holdsworth, Benjamin Tyner

Adjunct Faculty

Kelly Moguel, Dan Wheeler

LEADERSHIP Minor

Required courses (19 hours)

HMNT 332	Historical Issues in Leadership	2
or LEAD 350	Leadership Perspectives in History (2)	
LEAD 225	Creative Leadership	3
LEAD 245	Leadership Cohort	1
LEAD 345	Leadership Cohort	1
LEAD 425	Experiences in Leadership	3
RELT 305	Christian Ethics	3
Approved Internship		

Students will select two courses from

6

BUAD 310	Quality Management (3)
BUAD 430	Conflict Management (3)
COMM 365	Institutional Development (3)
COMM 425	Intercultural Communication (3)
COMM 465	Interpersonal Communication (3)
EDUC 475	Student Teaching (16)
INRR 430	Expeditionary Leadership (3)
NURS 453	Management & Leadership (3)
NURS 499	Preceptorship (4)
RELP 362	Church Leadership II (4)
SOCI 321	Diversity in Society (WR) (3)
SOWK 475	Field Practicum (12)

Mathematics

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.

Mathematics Program Outcomes

Students graduating from the mathematics program will be prepared to

- read mathematical literature and communicate mathematically and statistically;
- think logically and analytically based on methods of mathematical proof;
- make sense of problems and persevere in solving them, using mathematical procedures, concepts, and heuristics;
- develop and articulate connections both within and between branches of mathematical knowledge;
- pursue further learning in mathematically related fields and circumstances;
- value and enjoy mathematics through a growing understanding of its historical context and relationship to other disciplines.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515

or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Lesa Kean

Adjunct Faculty

Robert Ruyle

Academic Programs

Mathematics, BA

Mathematics, BS

Mathematics Education, BS—Secondary Field Endorsement

Mathematics Minor

Mathematics Core & Cognates (39 hours)

Core

MATH 119	Trigonometry ²³	3
MATH 184	Calculus I	4
MATH 240	Discrete Mathematics	3
MATH 285, 286	Calculus II, III	4, 4

²³If a student places out of Trigonometry due to appropriate SAT/ACT and departmental placement scores, the 3 credit hours for Trigonometry are waived.

MATH 351	Abstract Algebra	3
MATH 352	Linear Algebra	3
MATH 360	History of Mathematics (WR)	3
MATH 385	Differential Equations	3
MATH 498, 499	Mathematics Seminar	1, 1
Cognates		
CPTR 220	Microcomputer Applications	3
CPTR 226	Computer Science I	4

MATHEMATICS, BA

Required courses (48 hours)

Mathematics Core & Cognates		39
MATH	Mathematics electives (numbered 300 or above)	9

MATHEMATICS, BS

Required courses (54 hours)

Mathematics Core & Cognates		39
MATH 491	Real Analysis	3
MATH 492	Complex Variables	3
MATH	Mathematics electives (numbered 300 or above)	9
Recommended Electives for Actuarial Science:		
MATH 331	Statistics and Probability	4
MATH 335	Exam P Prep	3

Also recommended that students pursuing Actuarial Science should complete an associate degree in Business Administration.

MATHEMATICS EDUCATION, BS

Secondary Field Endorsement

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:
 - o interpret data, and
 - o 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; and
- acquisition of a degree of facility with selected mathematical techniques.

Required courses (101 hours)

Core

MATH 119	Trigonometry	3
MATH 184	Calculus I	4
MATH 240	Discrete Mathematics	3
MATH 285, 286	Calculus II, III	4, 4
MATH 331	Statistics and Probability	4
MATH 351	Abstract Algebra	3
MATH 352	Linear Algebra	3
MATH 409	Modern College Geometry	3
MATH 451	Mathematical Connections for Secondary Teachers	4
MATH 498, 499	Mathematics Seminar	1, 1

Cognate

CPTR 226	Computer Science I	4
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Professional Education

EDUC 413	Methods: Mathematics Education	3
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Additional Professional Education 57

(See Education-Secondary Education Endorsements)

MATHEMATICS Minor

Required courses (21-22 hours)

MATH 119	Trigonometry ²⁴	3
MATH 184	Calculus I	4
MATH 285	Calculus II	4
MATH 286	Calculus III	4
MATH 331	Statistics and Probability	4
or MATH 240	Discrete Mathematics (3)	
MATH	Mathematics electives (numbered 300 or above)	3

²⁴ If a student places out of Trigonometry due to appropriate SAT/ACT and departmental placement scores, the 3 credit hours for Trigonometry are waived.

Medical Laboratory Science

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.

Goals

Students graduating with a bachelor's degree in medical laboratory science should be able to

- Independently synthesize and communicate relevant data in the field of medical laboratory science
- Demonstrate familiarity with basic techniques used in varied fields of medical laboratory sciences; and
- apply knowledge acquired from varied aspects of biological sciences to critical thinking in everyday work as a medical laboratory science professional.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515 or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Richard Clark, Corrairie McNeill, Salvador Moguel, Carrie Wolfe

Adjunct Faculty

Karen Reiner

Academic Program

Medical Laboratory Science, BS

Medical Laboratory Science

The Bachelor of Science degree with a major in medical laboratory science 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 medical laboratory science.

Currently, affiliation is maintained with Andrews University, Berrien Springs, MI 49104, mls@andrews.edu, www.andrews.edu/shp/mls.

Academic Requirements

- A minimum of 74 semester hours of liberal arts credits must be earned with a minimum cumulative GPA of 2.50. These 74 hours must include all the bachelor's degree general education requirements as outlined for the major and a minimum of 10 hours of courses numbered at or above the 300 level.
- 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 Medical 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 medical laboratory science.
 - o A GPA of 3.00 or higher will 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 enroll with both Andrews and Union College for clinical year (no credit until completion). Initial enrollment in the program with Union College will require the student to submit (prior to the end of the last semester in residency at Union) a completed/signed Medical Laboratory request form to enter the Medical Laboratory program. Once approved for the program, the student will be required to complete the following each semester at Andrews in order to remain in the program:
 - o Work with the Union College Registrar in completing the Union College Registration Checklist, including registering for placeholder class UCMT 495 each semester of the program;
 - o Email registrar@ucollege.edu his/her Andrews' class schedule (including number of credits) prior to the first day of classes each semester; and
 - o Request that official transcript from Andrews be sent to Union at the end of each semester (transcript costs will be refunded to student).
 - o Students must make application for the degree three semesters before planned 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).
 - o Student must send pictures or make arrangements with the yearbook editor during fall semester of final year in the program.

MEDICAL LABORATORY SCIENCE, BS

Required courses (83-85 hours)

BIOL 151, 152	General Biology I and II	4, 4
BIOL	Biology electives	6-8
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211, 212	Organic Chemistry I and II	4, 4
MATH	College level math (<i>MATH 221 recommended</i>)	3
Clinical courses at Andrews University		50

Additional courses recommended (select from)

BIOL 205	Microbiology (4)
BIOL 321	Genetics (WR) (4)
BIOL 416	Advanced Human Physiology (WR) (4)
BIOL 450	Histology (3)
BIOL 451	Histology Lab (1)
BIOL 455	Immunology (3)
CHEM 311	Analytical Chemistry (4)
CHEM 312	Instrumental Analysis (WR) (4)
PHYS 151, 152	General Physics I and II (4, 4)

Music

Mission

The mission of the music program is to educate, challenge, and inspire the Union College student for Christian service through excellence in music.

Goals

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; and
- demonstrate proficiencies in the use of current music technologies.

Contact Information

Bruce Forbes, Chair, Division of Fine Arts

Nancy Meier, Office Manager

Engel Hall

402.486.2553

bruce.forbes@ucollege.edu

www.ucollege.edu/fine-arts

Faculty

Ricky Little, Kurt Miyashiro

Adjunct Faculty

Patrick Brown, Marina Fabrikant, Lisa Nielsen

Academic Programs

Music, BA

Music Education, BMusic—K-12 Field Endorsement, with emphases in:

- Instrumental
- Keyboard
- Vocal

Music Performance, BMusic, with emphases in:

- Instrumental
- Keyboard
- Vocal

Vocal Music Education, BS—Subject Endorsement K-12

Music Pedagogy, AS

Music Minor

Auxiliary Requirements for All Baccalaureate Degrees in Music

(except K-8 subject endorsements)

- 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.
- Students are expected to take private lessons in a primary performance area each semester.

Music Core (31 hours)

MUHL 351	Music History I (WR)	2
MUHL 352	Music History II (WR)	2
MUHL 353	Music History III (WR)	2
MUHL 354	Music History IV (WR)	2
MUPF 257	Introduction to Conducting	1
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 163	Sight-Singing and Ear Training III	1
MUTH 164	Sight-Singing and Ear Training IV	1
MUTH 253	Theory III	3
MUTH 254	Theory IV	3
MUTH 263	Form and Analysis	2
MUTH 462	Introduction to Counterpoint	2
MUTH 465	Orchestration	2

MUSIC, BA

Required courses (43 hours)

Music Core		31
MUPF	Concentration in voice or one instrument (4 hours must be 300-400 level)	8
MUPF	Performance electives	3
MUPF 451	Senior Recital	1
Participate in a large ensemble each semester; select additional experiences in chamber ensembles.		

MUSIC PERFORMANCE, BMUSIC

Required courses—63 hours

Music Core		31
MUED 307	Keyboard Pedagogy	2
or MUED 317	Instrumental Pedagogy (2)	
or MUED 327	Vocal Pedagogy (2)	
MUPF 341	Choral Conducting	1
MUPF 342	Instrumental Conducting	1
Primary Performance Area		19
MUPF 351	Junior Recital (1)	
MUPF 451	Senior Recital (1)	

Select one emphasis:

Instrumental or Keyboard Emphasis

MUPF Concentration in one instrument (17)
(6 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)

Secondary Performance Area

Select four hours from 4

MUAP Techniques and Materials (1-4)
(and/or MUPF Performance Studies (1-4))

MUPF Music electives 5

Participate in a large ensemble each semester; select additional experiences in chamber ensembles.

MUSIC Minor**Required courses (21 hours)**

MUHL	Select music history in consultation with advisor	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
MUPF	Performance Studies	8

6 hours in a concentration—2 hours must be 300-400 level (6)

Performance electives (2)

Partial recital

MUPF	Electives: ensembles (<i>Recommended</i>)	3
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(One hour must be 300-400 level)

Music Education

Students 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; and
- develop an understanding of music within its historical framework, including knowledge of the major periods of music.

MUSIC EDUCATION, BMUSIC**K-12 Field Endorsement****Required courses (116-117 hours)**

Music Core		31
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

Primary Performance Area		
MUPF 451	Senior Recital	1

Select one emphasis: 12-13

Instrumental or Keyboard Emphasis

MUPF	Concentration in one instrument (12)	
(6 hours must be 300-400 level)		

Vocal Emphasis

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

Secondary Performance Area

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

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. They may choose to gain additional experiences in chamber ensembles.

Professional Education

EDUC 414	Methods: Music Education	3
Additional Professional Education		57
<i>(See Education-Secondary Education Endorsements)</i>		

VOCAL MUSIC EDUCATION, BS

K-12 Subject Endorsement

Required courses (109 hours)

Music Core		31
MUAP 247	Vocal Techniques and Materials	1
MUED 327	Vocal Pedagogy	2
MUED 347	Music in the Elementary School	2
MUPF 341	Choral Conducting	1
MUPF 451	Senior Recital	1

Primary Performance Area

MUPF 201/401	Voice	8
(4 hours must be 300-400 level)		
MUPF 266	English-Italian Diction	1
MUPF 267	German-French Diction	1
Select 1 additional course from MUAP 207-257		1

Participate in a large ensemble each semester; select additional experiences in chamber ensembles.

Professional Education

EDUC 414	Methods: Music Education	3
Additional Professional Education		57

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

MUSIC PEDAGOGY, AS

Required courses (37 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 163	Sight-Singing and Ear Training III	1
MUTH 164	Sight-Singing and Ear Training IV	1
MUTH 253	Theory III	3
MUTH 254	Theory IV	3
MUTH 263	Form and Analysis	2
Primary Performance Area		
MUPF	Concentration in instrument, keyboard or voice (2 hours must be 300-400 level)	5
MUPF	Electives: ensembles (<i>Recommended</i>)	4
Participate in an ensemble each semester.		
Other required courses		
BUAD 138	Dynamics of Business	3
MUED 275	Music Practicum	2
PSYC 215	Developmental Psychology	3

Nursing

Union College offers a four-year curriculum in nursing, leading to a Bachelor of Science in Nursing. The baccalaureate degree in nursing program at Union College is accredited by the Commission on Collegiate Nursing Education (<http://www.ccnaccreditation.org>). The program is also approved by the Nebraska State Board of Nursing. Graduates are eligible to write the National Council Licensing Examination-RN (NCLEX-RN®) for professional licensure.

Mission

The mission of the Union College Nursing program is to prepare students from diverse backgrounds to be competent, caring generalists in the profession of nursing. The program reflects a commitment to Christian values, professional standards, holistic care, and service as modeled by Jesus Christ.

Goals

Students graduating with a bachelor's degree in nursing will be prepared to

- use Christian values as a foundation of professional practice standards to demonstrate accountable, patient-centered care, and servant leadership;
- demonstrate leadership in collaboration with the interprofessional team to design and manage patient-centered care;
- utilize current technological resources to manage information, mitigate error, foster effective communication, and support decision making in provision of safe, quality patient-centered care;
- integrate best, current evidence with clinical judgment and patient preferences to provide safe, quality care across the lifespan in a variety of health care systems;
- participate in quality improvement activities promoting individual performance and system effectiveness to achieve optimal patient outcomes;
- demonstrate knowledge, skills, and attitudes in preparation for lifelong learning required in a changing practice environment; and
- synthesize knowledge from liberal education and nursing courses to provide patient-centered care.

Contact Information

Nicole Orian, DNP, RN
Chair, Division of Nursing
Larson Lifestyle Center, Second Floor
402.486.2524

Krystal Davis, MSN, RN
BSN Program Director, Division of Nursing
402.486.2524

John Luckiesh, BS
Admissions Coordinator, Division of Nursing
402.486.2674

nursing@ucollege.edu
www.ucollege.edu/nursing

Faculty

Kelly Boyd, Krystal Davis, Debbie Eno, Larinda Fandrich, Kristine Follett, Amy Golter, Tracy Hagele, Laura Karges, Ruth Mendenhall, Elysia Ockenga, Nicole Orian, Rebecca Randa, Ellen Rose

Adjunct Faculty

Whitney Bernecker, Kayla Hallock, Lisa Kendle, Rebecca Lamoree, Diane McMurray, Jayne Nelson, Molly Sass, Charlotte Schober, Amber Schuler, Stephanie Semerad, Rebekah Trevino, Terra Vejraska, Jill Weyers

Admission, Progression and Graduation Requirements

The nursing profession provides competent and caring healthcare services to patients in diverse communities. Professional, ethical, legal, and safety concerns for nursing practice necessitate a holistic admission procedure.

The Division of Nursing Admissions and Academic Evaluation Committee (AAEC) intends that an applicant to the Nursing program is well prepared to successfully complete the nursing program curriculum. The AAEC accomplishes this by examining evidence of scholastic preparation and potential as well as evidence of professional and personal values. Applicants are considered for admission at the recommendation of the AAEC.

A student may enter the nursing program as a traditional student, transfer nursing student, or BSN Completion student as a licensed practical nurse or registered nurse. Upon selecting nursing as a major, students will be assigned an academic advisor from the nursing program to provide guidance with the academic plan. Based on point of entry, pathways have been designed to support student learning and nursing program progression while recognizing appropriate prior course work to ensure content mastery and achievement of program outcomes.

Progression in the baccalaureate nursing program must be completed following the sequence of nursing courses in the degree completion guide. Students accepted into the nursing program will have a maximum of five years to complete the requirements for the bachelor's degree in nursing. Graduates must have 65 credit hours of nursing courses. Transfer students may need to take additional nursing courses to reach the 65 credit hour requirement. Nursing courses transferred from another school are considered part of the 65 credit hour requirement.

The Division of Nursing begins reviewing complete applications on February 1 for fall admission and September 1 for spring admission. The Test of Essential Academic Skills (TEAS) scores are due by March 1 for fall admission and October 1 for spring admission. Acceptance into the Nursing Program is provisional, contingent upon satisfactory completion of all admission requirements. Applicants will be notified of their status by the Division of Nursing.

Once admitted to the nursing program, students who interrupt their studies must confirm eligibility in writing to resume nursing courses by March 1 for continuation in the fall semester or October 1 for the spring semester.

Eligibility to apply

- A cumulative GPA of 2.75 or above on a 4.00 scale for all collegiate coursework at time of application.
- In progress or completion of required prerequisite courses with a grade of C or above.

Required Prerequisites	Semester Hours
Anatomy and Physiology (with lab)	8
or equivalent anatomy and/or physiology with labs (8)	
Intro to General, Organic and Biochemistry (with lab)	4
or equivalent general chemistry with lab (4)	
Microbiology (with lab)	4
Developmental Psychology	3
Elementary Statistics and Probability	3
Writing for Scholarly Audiences (research writing)	3

International students whose native language is not English and who do not meet the minimum ACT English score of 17 (or equivalent) must demonstrate current English proficiency by scores on a standardized test taken within the past two years. The college accepts the following examinations and, for regular admission, requires minimum scores of TOEFL: Internet-based (iBT), 79; International paper-based, 550; IELTS 6.5.

Application Process

Completion of the NursingCAS application²⁵ by February 1 for fall admission and September 1 for spring admission including:

- One recommendation form (a current or recent teacher at the collegiate level and employer/supervisor)
- Personal statement
- All high school and college transcripts
- Test of Essential Academic Skills (TEAS)²⁵ completed with an adjusted individual total score of 68 or above within two attempts by March 1 for fall admission and October 1 for spring admission
- A personal interview with members of the AAEC
- BSN Completion students and transfer nursing students must also complete a Nursing Program Director Recommendation form.

The AAEC recognizes practical and educational benefits of healthcare work experience. It is recommended that an applicant be a certified nursing assistant (CNA) and have some level of clinical work experience prior to applying to the nursing program although it is not required. Related clinical work experience that includes direct patient care and certification will benefit the applicant in the admission process.

Following acceptance to the nursing program students will need to complete:

- Payment of the confirmation fee
Following receipt of an acceptance letter from the Union College Division of Nursing, students must notify the program of their intent to begin the nursing program within 2 weeks of the date of the acceptance letter by paying a confirmation fee or the seat in the program will be forfeited.
- Physical Examination
Applicants are required to have a physical exam completed by a physician, nurse practitioner, or a physician assistant.
- Health Policy requirements
Nursing students are to comply with the minimum immunization guidelines established by the Union College Division of Nursing in collaboration with local healthcare facilities.
- All nursing students are required to carry personal health insurance which may be purchased through Student Services.
- Current American Heart Association HeartCode BLS Provider CPR certification (only)
- General Union College admission requirements
- Satisfactory drug screen and background checks

Progression in the Nursing Program

Nursing courses are arranged in a progressive curriculum from concrete and simple to abstract and complex. Learning begins with conceptualization, then moves to application and, finally to the abstract and complex. To facilitate student learning, the nursing program has organized a progressive curriculum. Individual student academic plans may vary depending on entry point and courses accepted in transfer. A student's academic plan is developed with the assistance of a nursing academic advisor. A student may petition the sequence based on the Division of Nursing petition policy in the Nursing Student Handbook.

²⁵ Indicates an additional fee for student

Criteria for progression in the Nursing Program

- A grade of C (2.00) or above in all nursing, prerequisite and cognate courses
- A cumulative GPA and nursing course GPA of 2.50 or higher
- All nursing courses must be passed with a grade of “C” (76%) or higher in course theory (includes unit, final exams, and required ATI assessments). If the class has a clinical component, that portion must be passed, as well as the theory portion, with a grade of 76% and an overall course grade of 76% or higher. The course theory will account for at least 75% of the total grade with the comprehensive final contributing at least 20%.
- If a student fails the clinical portion of the course at any time during the semester, the course will be considered an attempt. The course is also considered an attempt when the student continues in the course after the add/drop date published in the Union College Academic Calendar. According to Union College policy, if the student fails clinical prior to the withdrawal date, the student may choose to withdraw from the course and receive a “W” on the transcript; this will be considered a course attempt and failure. If the student fails clinical prior to the add/drop date, the student may choose to drop the course and the course will not be documented on the transcript; this will be considered a course attempt. If the student fails clinical after the Union College withdrawal date, the student will receive an “F” on the transcript.
- When a nursing course is failed, it may be retaken the following semester if clinical/class space is available.
- If a student stops out or withdraws from all nursing courses after the Add/Drop date in the college calendar, the semester will count as one course attempt.
- A student accepted on academic probation (see statement on probation in the Nursing Student Handbook) must demonstrate academic improvement (GPA) after the first semester to be removed from probation.
- Academic probation is allowed for a total of only two semesters; non-academic probation is allowed for a total of only two semesters.
- Students must successfully complete the High Stakes Simulation in NURS 321 Medical-Surgical I within two attempts to continue in the course. Failure to successfully complete the simulation in two attempts will result in clinical failure of the course.
- Students must achieve a 100% on the drug administration exam within three attempts prior to the drop/add date specified in the Union College calendar to continue in the clinical course(s) at the corresponding level of the nursing program. Students who do not successfully complete the drug administration exam prior to the drop/add date will be required to drop the clinical nursing course(s) for that semester and will be referred to the Division of Nursing Admissions and Academic Evaluation Committee (AAEC). Students may reenter the clinical nursing courses the following semester pending successful completion of all components of the Division of Nursing Back to School Fair. Students will not be allowed in clinical facilities (with exception of the Union College Skills Lab and Simulation Center) prior to successful completion of the drug administration exam.
- No one nursing course may be attempted more than twice to achieve a grade of “C” (2.0). A course is considered an attempt when the student continues in the course after the last day to drop/add a course as published in the Union College academic calendar. Students may petition the AAEC if extenuating circumstances exist.
- Health policy requirements (immunizations, annual TST, etc.) must be met and appropriate documentation to verify must be on file. See Immunizations section in the Nursing Student Handbook.
- Students are allowed a maximum of two course failures or unsuccessful attempts and then must exit the Division of Nursing.
- Once a student is admitted to the Union College Division of Nursing, all nursing courses must be completed at Union College.

Criteria for graduation and eligibility for state board licensure examination

The candidate for graduation from the Division of Nursing at Union College shall comply with the following:

- Meet all general college policies for graduation.
- Achieve cumulative GPA of 2.50 or higher in all college level courses and an overall nursing GPA of 2.50 with no grade lower than a C (2.00) in nursing courses;
- Meet progression requirements as specified in the Nursing Student Handbook;
- Be in good standing with the Division of Nursing; and
- Complete 65 credit hours of nursing courses.

The nursing program will notify the Nebraska State Board of Nursing when the graduate has met all graduation requirements. Graduation date and diploma conferral will occur according to Union College policy.

Program Specific Fees

Course fees for nursing clinical courses, course syllabi, and additional learning materials are charged through the Division of Nursing as program specific fees. Information regarding current fees is available by contacting the Division of Nursing Chair.

Guaranteed Nursing Admission

High school students with excellent academic records who are enrolling in college for the first time (advanced placement courses in high school are allowed) qualify for guaranteed admission to the nursing program if the following criteria are met:

- Cumulative high school GPA of 3.5 or above on a 4.00 scale
- Minimum score of 24 on ACT or SAT 1190 (new SAT 1600 scale)

Students can apply by indicating interest on the Union College application or contacting the Division of Nursing directly.

Requirements in college to maintain Guaranteed Nursing Admission:

- Cumulative GPA 3.3 or above on a 4.00 scale
- No pass/fail science courses
- No courses below a "C"
- Achieve an adjusted individual total score of 68 or above within two attempts on the ATI TEAS by March 1 for fall admission and October 1 for spring admission
- Complete the nursing program application process entirely, including the NursingCAS application and interview
- Must be a full time student (at least 12 credit hours per semester) and follow the advised curriculum

Failure to meet or maintain these requirements may result in the loss of guaranteed admission. Students may still apply for regular admission to the Nursing program.

Bachelor of Science in Nursing (BSN) Completion Program

Licensed practical nurses (LPNs), diploma, and associate degree registered nurses (RNs) must hold requisite U.S. nursing licensure to apply. Progression in the baccalaureate nursing program must be completed on a full-time basis and completion must be within the five year allotted timeframe. Sequencing is varied for the BSN Completion Program and assumes that the student has completed prerequisites. Each applicant is evaluated for placement in the program and spots are based on space available. Applicants with any disciplinary action on their LPN or RN license are not eligible for admission to the nursing program.

LPNs and RNs who are admitted to the BSN Completion Program must transfer their previous nursing education courses to Union College and document successful completion of the NCLEX-LPN® or NCLEX-RN®.

Licensed Practical Nurse (LPN)—Bachelor of Science in Nursing (BSN) Curriculum

Licensed practical nurses who have graduated from an accredited nursing program are eligible for credit for Fundamentals and Gerontology from their previous nursing education. Regardless of previous education or experience, Physical Assessment and Nursing Program Integration must be completed at Union College.

Registered Nurse (ADN or diploma)—Bachelor of Science in Nursing (BSN) Curriculum

Associate degree or diploma RNs who have graduated from an accredited nursing program are eligible to transfer credit for Fundamentals, Gerontology, Pathophysiology & Pharmacology I & II, Medical-Surgical I, II, and III, Maternal Child Health, Mental Health, and Transition to Professional Practice from their previous nursing education. Additional nursing courses may be petitioned for transfer.

Non-United States educated RNs not licensed in the United States must pass standardized assessments for Fundamentals, Medical-Surgical, Maternal Child Health, Mental Health, and successfully validate clinical performance in nursing courses to receive credit for previous nursing education.

NURSING, BSN

Required courses (68 hours)

Core

NURS 204 or NURS 347	Introduction to Professional Nursing Nursing Program Integration (3) <i>(for BSN completion students only)</i>	3
NURS 208	Fundamentals	6
NURS 243	Evidence-Based Practice (WR)	3
NURS 305	Physical Assessment	3
NURS 315	Pathophysiology & Pharmacology I	4
NURS 316	Pathophysiology & Pharmacology II	3
NURS 321	Medical-Surgical I	6
NURS 322	Medical-Surgical II	6
NURS 334	Gerontology	2
NURS 383	Mental Health	3
NURS 415	Maternal Child Health	6.5
NURS 423	Medical-Surgical III	5
NURS 433	Disaster Nursing	2
NURS 453	Management & Leadership	3
NURS 474	Community Health (WR)	3.5
NURS 495	Transition to Professional Practice	2
NURS 499	Preceptorship	4

Cognate

RELT 305	Christian Ethics	3
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Recommended

NURS 391	Global Health Nursing (2)	
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In addition to the above requirements, the student will select other courses to fulfill the general education curriculum (see general education section). A minimum of 124 semester hours is necessary for a bachelor's degree at Union College (see graduation requirements section).

Changes to this section were made as of 02/20/19. See Addendum starting on Page 286.

Occupational Therapy Assistant (OTA)

Union College has begun the accreditation process for our Occupational Therapy Assistant (OTA) program. Candidacy approval was received in December 2018 and full accreditation approval is anticipated in August 2020 by the Accreditation Council for Occupational Therapy Education (ACOTE). Students who are interested in our OTA program can begin applying in December 2018 through the Occupational Therapy Assistant Centralized Application Service (OTACAS), <https://otacas.liaisoncas.com/applicant-ux/#/login>. Classes for the OTA Associate degree will begin in August 2019.

Upon completion of the accreditation process, our program will have gained accreditation through the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. ACOTE's telephone number c/o AOTA is (301) 652-AOTA. ACOTE's Web address is www.acoteonline.org.

Graduates of the program will be eligible to sit for the national certification examination for the occupational therapy assistant, administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the graduate will be a certified occupational therapy assistant (COTA). In addition, all states require licensure to practice; however, state licenses are usually based on the results of the NBCOT certification examination. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

Mission

The Occupational Therapy Assistant Program at Union College is dedicated to excellence in academic and personal success of our students that fosters transformation within the lives of future clients' health and wellbeing throughout the lifespan by way of our core academic statement and learning threads.

Engaging learners by building ethical, critically thinking, evidence-based therapists who are highly-sought graduates who advocate for their clients and the profession and are committed to lifelong learning.

Outcomes

Union College OTA students will:

- demonstrate sensitivity to the ethical practice of the profession by demonstrating professional integrity as it relates to our ethical practice program thread.
- demonstrate the importance of engaged learning by participation in formative assessment and experiential learning activities throughout the program.
- demonstrate lifelong learning by continuing to seek new learning experiences and training that strengthens the generalist's knowledge base, maximizes their learning and experience both in practice and service.
- demonstrate the development of professionalism in leadership, communication, teamwork, problem-solving, creativity, and grit by achieving a 90% job placement rate within one year of graduation.

Contact Information

Jenny Gann, OTD, OTR/L
 Director, Occupational Therapy Assistant Program
 Don Love Building-South
 3800 South 48th Street
 Lincoln, NE 68506-4386
 Office: 402.486.2640
 Fax: 402.486.2983

jenny.gann@ucollege.edu
julie.capello@ucollege.edu

Faculty

Fara Adams, Julie Capello, Jenny Gann (Director)

Academic Programs

Occupational Therapy Assistant, AS

Admission Requirements for Occupational Therapy Assistant

Please see admission requirements outlined in the Admission to the College: Admission of First-Year Students section of the bulletin. Additionally, admission rubric details are outlined on the college website.

Required Classes for Admission

BIOL 111	Human Anatomy & Physiology I	4
BIOL 112	Human Anatomy & Physiology II	4
HHPT 256	Medical Terminology	1
PSYC 215	Developmental Psychology	3

Occupational Therapy Assistant, AS

Required courses (43 hours)

Core

OTAC 100	Introduction to Occupational Therapy	2
OTAC 200	Neuroanatomy & Human Movement	4
OTAC 215	Human Occupations: Analysis, Documentation and Evidence Based Practice	2
OTAC 220	Clinical Conditions	2
OTAC 225	Therapeutic Adaptations	3
OTAC 230	Pediatric Theory & Occupations	4
OTAC 240	Level IA Practicum	1
OTAC 250	Adult Theory & Physical Rehabilitation	4
OTAC 260	Psychosocial Theory & Occupations	3
OTAC 270	Clinical Ethics, Reasoning and Management	2
OTAC 275	NBCOT Preparation	1
OTAC 280	Level 2A Fieldwork-Rehabilitation	6
OTAC 290	Level 2B Fieldwork	6

Cognate

PSYC 246	Abnormal Psychology	3
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Occupational Therapy Assistant students who have completed all graduation requirements except the required fieldwork and the NBCOT preparation course may apply to participate in the graduation ceremonies in May as a prospective upcoming December graduate.

Changes in this section made as of 02/19/19 (See Addendum on Page 286)

Physics

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.

Goals

Students graduating from the physics program will be prepared to

- think logically and analytically;
- exhibit competence in understanding the application of physics principles;
- solve a variety of problems using standard techniques;
- value physics through an understanding of its historical context and its relationship to other sciences and connect knowledge about physics to other disciplines beyond the sciences;
- identify career options appropriate to their degree program that fit their strengths, both within and outside the physics field;
- value the power of physics and its application to societal needs and an understanding of God; and
- show competence as a scientist by conducting a personal research project including identification of an idea, experimental design, data collection and analysis, and both written and oral presentations.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515 or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Richard Webb

Academic Programs

Physics, BA

Physics, BS

Physics Education, BS—Secondary Subject Endorsement

Physics Minor

Physics Core & Cognates (56-62 hours)

Union College offers its physics program in cooperation with Nebraska Wesleyan University (NWU) in Lincoln, Nebraska. Students seeking a bachelor's degree in physics must take at least two courses on the NWU campus or through the Adventist Education Alliance (AEA).

Core

PHYS 228	Electric Circuit Analysis	4
PHYS 251, 252	College Physics I and II	4.5, 4.5
PHYS 296	Research Methods I	1
or CHEM 296	Research Methods I (1)	
or MATH 221	Elementary Statistics and Probability (3)	
or MATH 331	Statistics and Probability (4)	

PHYS 350	Modern Physics (WR)	4
PHYS 351	Quantum Mechanics	4
PHYS 386	Research Methods: Scientific Inquiry	1
or BIOL 386	Research Methods: Scientific Inquiry (1)	
or CHEM 386	Research Methods: Scientific Inquiry (1)	
PHYS 3000	Mechanics (at NWU)	4
or PHYS 413	Analytical Mechanics (at AEA) (3)	
PHYS 3100	Electromagnetism and Optics (at NWU)	4
or PHYS 414	Electrodynamics I (at AEA) (3)	
and PHYS 415	Electrodynamics II (at AEA) (3)	
Cognates		
CHEM 151, 152	General Chemistry I and II	4, 4
CPTR	An approved computer language course	3
MATH 184, 285, 286	Calculus I, II, III	4, 4, 4
MATH 385	Differential Equations	3

PHYSICS, BA

Required courses (59-65 hours)

Physics Core & Cognates		56-62
PHYS	Approved PHYS Elective (at NWU or AEA)	3

PHYSICS, BS

Required courses (65-71 hours)

Physics Core & Cognates		56-62
PHYS 396	Research Methods III	1
PHYS 496	Research Methods IV (WR)	1
PHYS 4100	Thermal and Statistical Physics (at NWU)	4
or PHYS 451	Physical Chemistry: Thermodynamics (4)	
PHYS	Approved PHYS Elective (at NWU or AEA)	3

PHYSICS EDUCATION, BS

Secondary Subject Endorsement

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; and
- an ability to construct at least one unit of study, including selection of audiovisual material, laboratory type activities and 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.

Required courses (121-124 hours)

ASTR 111	Astronomy	4
BIOL 151	General Biology I	4
CHEM 151, 152	General Chemistry I and II	4, 4
CPTR	An approved computer language course	3
MATH 184, 285, 286	Calculus I, II, III	4, 4, 4
MATH 385	Differential Equations	3

PHYS 228	Electric Circuit Analysis	4
PHYS 251, 252	College Physics I and II	4.5, 4.5
PHYS 296	Research Methods I	1
or CHEM 296	Research Methods I (1)	
or MATH 221	Elementary Statistics and Probability (3)	
or MATH 331	Statistics and Probability (4)	
PHYS 350	Modern Physics (WR)	4
PHYS 386	Research Methods: Scientific Inquiry	1
or BIOL 386	Research Methods: Scientific Inquiry (1)	
or CHEM 386	Research Methods: Scientific Inquiry (1)	
PHYS 451	Physical Chemistry: Thermodynamics	4
PHYS	Physics elective with lab	4
Professional Education		
EDUC 418	Methods: Science Education	3
Additional Professional Education		57

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

PHYSICS Minor

Required courses (21 hours)

PHYS 228	Electric Circuit Analysis	4
PHYS 251, 252	College Physics I and II	4.5, 4.5
PHYS 350	Modern Physics (WR)	4
or PHYS 351 Quantum Mechanics (4)		
PHYS	Approved PHYS Elective (at NWU or AEA)	4

Psychology

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

On completion of the psychology program at Union College, graduates will be able to

Knowledge

- exhibit knowledge of 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

- carry out the research process;
- critically assess data and general information;
- be competitive applicants for graduate programs and/or professional placement

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;
- demonstrate an understanding of ethical behavior; and
- demonstrate increased self-understanding and insight into the behavior of others.

Contact Information

Trudy Holmes-Caines, Division Chair, or Melanie Gabbert
Division of Human Development
Dick Building, Room 403
402.486.2522
humandev@ucollege.edu
www.ucollege.edu/psychology

Faculty

Melanie Gabbert, Trudy Holmes-Caines

Adjunct Faculty

Natalie Swift

Academic Programs

Psychology, BS
Psychology Minor

PSYCHOLOGY, BS

Required courses (55 hours)

Core

HMDV 265	Research Writing	1
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 (WR)	3
PSYC 340	Research Methods I	3
PSYC 341	Research Methods II (WR)	3
PSYC 475	Current Issues in Psychology	2
PSYC 476	Senior Research Project (WR)	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)

Cognates

SOCI 105	Introduction to Sociology	3
SOCI 321	Diversity in Society (WR)	3

Select at least nine additional hours from PSYC or SOCI electives 9

Recommended

PSYC 455	Practicum in Psychology (1-3)
SOCI 315	Marriage and Family (3)
SOCI 337	Interventions with Groups (3)
SOCI 415	Crisis and Resilience (3)

Participate in department senior assessment.

PSYCHOLOGY Minor

Required courses (18 hours)

PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
PSYC 337	History and Systems of Psychology (WR)	3

Select 9 hours of approved PSYC electives (3 hours must be 300-400 level) 9

Religion

Mission

The religion program will prepare students for graduate studies leading to Christian Service in a professional setting.

Goals

Students graduating from the religion program will be prepared to

- express an active faith in a life of Christian discipleship;
- exhibit scholarship in the knowledge and interpretation of the Bible
- demonstrate substantial knowledge of the history, mission and theological beliefs of the Seventh-day Adventist church;
- display Christian character by the ability to apply ethical principles in life situations; and
- apply skills of interpersonal relationships in specified areas of ministry.

Contact Information

Edward Allen, Chair, Division of Religion

Sandy Tallman, Office Manager

Dick Building, Room 412

402.486.2526

ed.allen@ucollege.edu

www.ucollege.edu/religion-division

Faculty

Edward Allen, Robert Petrick, Ben Holdsworth, Thomas Toews

Adjunct Faculty

Harold Alomia, Richard Carlson, Michael Halfhill, Stan Hardt, Michael Henton, Michael Paradise, Lena Toews

Academic Programs

Religion, BS, with a minor

Religion, BS, with an emphasis in:

- Pastoral Care

Religious Education, BS—Subject Endorsement

Biblical Languages Minor

Missions Minor

Religion Minor

Youth Ministry Minor

Religion Core & Cognates (42 Hours)

Core

RELB 226	Old Testament Survey	3
or RELB 325	Prophets (3)	
RELB 246	Sanctuary and Salvation	3
RELB 250	Revelation	3

RELB 255	Jesus and the Gospels	3
RELB 335	New Testament Epistles	3
or RELB 260	Interpretation of Romans (3)	
RELB 348	Daniel (WR)	3
RELH 310	History of the Seventh-day Adventist Church (WR)	3
RELP 465	Personal Witnessing	3
RELT 141	Christian Beliefs	3
RELT 305	Christian Ethics	3
RELT 347	World Religions	3
RELT 455	Prophetic Guidance in the Advent Movements	3
Cognates		
HIST 220	World Antiquity	3
LEAD 225	Creative Leadership	3
or RELP 361	Church Leadership I (3)	

Requires a minor that enhances career choice goals.

RELIGION, BS

Required courses (60 hours)

Religion Core & Cognates	42
Minor	18

RELIGION, BS—Pastoral Care Emphasis

This pre-professional program 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.

Required courses (66 hours)

Religion Core & Cognates		42
COMM 465	Interpersonal Communication	3
PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
PSYC 225	Psychology of Religion	3
PSYC 311	Introduction to Counseling Theory and Techniques	3
PSYC 415	Abnormal Psychology	3
SOCI 105	Introduction to Sociology	3
SOCI 315	Marriage and Family	3

RELIGIOUS EDUCATION, BS

Secondary Subject Endorsement

Students graduating from the religious education program will be prepared for state and church certification for teaching biblical studies classes on the secondary level. In addition to the general goal 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 teaching, preaching, and personal evangelism; and
- be prepared to pursue graduate studies.

Required courses (88 hours)

RELB 226	Old Testament Survey	3
or RELB 325	Prophets (3)	
RELB 246	Sanctuary and Salvation	3
RELB 250	Revelation	3
RELB 255	Jesus and the Gospels	3
RELB 335	New Testament Epistles	3
RELB 348	Daniel (WR)	3
RELH 310	History of the Seventh-day Adventist Church (WR)	3
RELH 410	History of the Christian Church (WR)	4
RELP 235	Introduction to Youth Leadership	3
or RELP 335	Youth Leadership in the Seventh-day Adventist Church (3)	
RELP 321	Biblical Preaching I	3
RELT 141	Christian Beliefs	3
RELT 455	Prophetic Guidance in the Advent Movements	3
Cognates		
SCNC 377	Origins	3
Professional Education		
EDUC 415	Methods: Social Science and Religious Education (K-12)	3
Additional Professional Education		45

It is strongly recommended that every student finish requirements for at least two subject endorsements.
(See *Education-Secondary Education Endorsements*)

BIBLICAL LANGUAGES Minor**Required courses (20 hours)**

RELL 171, 172	Beginning New Testament Greek I and II	4, 4
RELL 273, 274	Intermediate New Testament Greek III and IV	3, 3
RELL 385, 386	Biblical Hebrew I and II	3, 3

MISSIONS Minor**Required courses (20 hours)**

COMM 425	Intercultural Communication	3
RELB 255	Jesus and the Gospels	3
RELP 361	Church Leadership I	3
or LEAD 225	Creative Leadership (3)	
RELP 465	Personal Witnessing	3
RELT 141	Christian Beliefs	3
or RELB 135	Heroic Characters of the Bible I (3)	
RELT 347	World Religions	3
UCSM 490, 491	Student Mission Service I and II (9 hours non-credit)	0
UCSM 495	Student Mission Service III (3 elective hours only)	0
UCSM 205	Introduction to Overseas Service	2

RELIGION Minor**Required courses (18 hours)**

RELB 348	Daniel (WR)	3
or RELB 250	Revelation (3)	
RELT 141	Christian Beliefs	3
or RELT 350	Developing the Christian Mind (3)	
RELT 455	Prophetic Guidance in the Advent Movements	3
Select one New Testament course from		3
RELB 255	Jesus and the Gospels (3)	
RELB 260	Interpretation of Romans (3)	
RELB 335	New Testament Epistles (3)	
Select one Old Testament course from		3
RELB 226	Old Testament Survey (3)	
RELB 246	Sanctuary and Salvation (3)	
RELB 325	Prophets (3)	
Select one additional course from RELB, RELH, RELP, RELT		3

YOUTH MINISTRY Minor

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.

Required courses (18 hours)

PSYC 105	Introduction to Psychology	3
PSYC 215	Developmental Psychology	3
PSYC 311	Introduction to Counseling Theory and Techniques	3
RELP 235	Introduction to Youth Leadership	3
RELP 335	Youth Leadership in the Seventh-day Adventist Church	3
RELP 336	Youth Leadership Practicum ²⁹	3

²⁹ Students who take the Youth Ministry minor must establish a portfolio with Campus Ministries in their first year at Union College.

Science Education

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.

Contact Information

Carrie Wolfe, Chair, Division of Science and Mathematics

Krueger Center

402.486.2515 or 402.486.2548

carrie.wolfe@ucollege.edu

www.ucollege.edu/science-and-mathematics

Faculty

Richard Clark, Corrairie McNeill, Salvador Moguel, Kenneth Osborn, Richard Webb, Carrie Wolfe

Academic Program

Science Education, BS—Secondary Field Endorsement

SCIENCE EDUCATION, BS

Secondary Field Endorsement

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; and
- understand the history and nature of science.

Required courses (111-113 hours)

ASTR 111	Astronomy	4
BIOL 111, 112	Human Anatomy and Physiology I and II	4, 4
BIOL 151, 152	General Biology I and II	4, 4
CHEM 151, 152	General Chemistry I and II	4, 4
CHEM 211	Organic Chemistry I	4
MATH 119	Trigonometry	3
or MATH 184 Calculus I (4)		
PHYS 151, 152	General Physics I and II	4, 4
or PHYS 251, 252 College Physics I and II (4.5, 4.5)		
SCNC	Earth or space science elective with a lab	4
Additional lab science course		4

Professional Education	
EDUC 418	Methods: Science Education 3
Additional Professional Education	57

It is strongly recommended that every student finish requirements for at least two subject endorsements.
(See *Education-Secondary Education Endorsements*)

Social Science

Goals

Students graduating with a degree in social science will have

- a knowledge of U.S. history and politics;
- preparation for graduate and 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
- an awareness from a Christian perspective regarding the problems of political societies and their environment.

Assessment will be accomplished through

- the history capstone course (HIST 497) in which students will research and write a historiographical paper;
- focus groups of humanities majors, including social science majors; and
- questionnaires given to alumni who earned majors from the humanities division, including social science majors.

Contact Information

Mark Robison, Chair, Division of Humanities

Tamara Seiler, Office Manager

Dick Building, Room 409

402.486.2523

mark.robison@ucollege.edu

www.ucollege.edu/humanities/

Faculty

Christopher Banks, Benjamin Tyner

Academic Programs

Social Science, BA

Social Science Education, BS—Secondary Field Endorsement

Pre-Law Minor

Social Science Minor

SOCIAL SCIENCE, BA

Required courses (39 hours)

ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3
HIST 157	The West in the World	3
HIST 255	The U.S.: From Discovery to Civil War	3
HIST 383	The North Atlantic: War and Peace 1900s	3
HIST 386	Economic History of the United States	3
HIST 497	Historiography (WR)	3
PHIL 335	Introduction to Philosophy	3
PLSC 105	Introduction to International Relations	3

PLSC 208	American Politics	3
PSYC 340	Research Methods I	3
PSYC 341	Research Methods II (WR)	3
SOCI 105	Introduction to Sociology	3

SOCIAL SCIENCE EDUCATION, BS

Secondary Field Endorsement

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 an ability to write fluently;
- an awareness of the Christian perspective toward the problems of society and its environment; and
- 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: economics, geography, history, political science, psychology, and sociology.

The hours shall be distributed as follows:

- A minimum of 21 hours in history; and
- A minimum of 6 hours in five remaining areas (ECON, GEOG, PLSC, PSYC, SOCI)

Required courses (117 hours)

Economics (6 hours)

ECON 235	Principles of Microeconomics	3
ECON 236	Principles of Macroeconomics	3

Geography (6 hours)

GEOG 137	Introductory Geography	3
GEOG 227	World Regional Geography	3

History (21 hours)

HIST 157	The West in the World	3
HIST 255	The U.S.: From Discovery to Civil War	3
HIST 497	Historiography (WR)	3
HIST	World-European history electives	6
HIST	American history electives	6

Political Science (6 hours)

PLSC 208	American Politics	3
PLSC	Political Science Elective	3

Psychology (6 hours)

PSYC 215	Developmental Psychology	3
PSYC	Psychology Elective	3

Sociology (6 hours)		
SOCI 105	Introduction to Sociology	3
Sociology elective (select one below)		3
SOCI 300	Social Dimensions of Disaster (3)	
SOCI 315	Marriage and Family (3)	
SOCI 321	Diversity in Society (WR) (3)	
Approved Electives (9 hours)		
Select with the advisor's approval sufficient HIST, PLSC, PSYC, or SOCI electives		9
Professional Education		
EDUC 415	Methods: Social Science and Religious Education (K-12)	3
Additional Professional Education		54
<i>(See Education-Secondary Education Endorsements)</i>		

PRE-LAW Minor

The pre-law minor allows 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, 12 of which must be 300-400 level distributed as follows:

Required courses (18-34 hours) (12 hours must be 300-400 level)

Writing and Communication		3-9
COPR 332	Rhetoric (WR)	3
Select 0-6 hours from		
COMM 355	Advanced Speech and Oral Interpretation (3)	
COMM 465	Interpersonal Communication (3)	
ENGL 378	Technical Writing and Grant Proposals (WR) (3)	
History and Political Science		3-9
HIST 386	Economic History of the United States	3
or PLSC 208	American Politics (3)	
or PLSC 460	Global Political Economy and International Labor (3)	
Select 0-6 hours from HIST and PLSC not chosen above		
Sociology and Philosophy		0-6
PHIL 335	Introduction to Philosophy (3)	
SOCI 321	Diversity in Society (WR) (3)	
Business, Economics and Marketing		3-10
BUAD 445	Business Law	3
Select 0-6 hours from		
BUAD 425	Business Communications (WR) (3)	
BUAD 430	Conflict Management (3)	
ECON 236	Principles of Macroeconomics (3)	
MRKT 333	Professional Selling (3)	

SOCIAL SCIENCE Minor

Required course (18 hours)

HIST 157	The West in the World	3
HIST 255	The U.S.: From Discovery to Civil War	3
HIST	History electives (300 level or above)	3
Select three hours each from three of the following:		9
ECON, GEOG, PLSC, and SOCI		

Social Work

Mission

The Union College Social Work Program educates and empowers competent social workers in a Christian Seventh-day Adventist context for global service and leadership. Grounded in a liberal arts foundation, graduates demonstrate the ethical integration of faith and social work practice to promote social work values. Union College Social Work graduates are prepared for entry-level generalist practice and graduate school through the demonstration of competency to promote human and community well-being.

Goals

Students graduating from the social work program:

- demonstrate ethical and professional behavior with integrity and respect for human relationships;
- engage diversity and differences in practice as God loves all people, regardless of race, ethnicity, age, class, gender, sexual orientation, cultural background, religious belief, and ability;
- advance human rights and social, economic, and environmental justice with dignity and respect for God's creation;
- Engage in evidence-based practice techniques, research and policy procedures, through the Christian servant leadership perspective;
- apply a strengths-based generalist model to engage, assess, intervene, and evaluate social work practice with individuals, families, groups, organizations, and communities to promote healing and compassion for those in need.

Contact Information

Elizabeth Davis, Social Work Program Director
Dick Building, Room 406D
402.486.2522
lizz.davis@ucollege.edu
www.ucollege.edu/socialwork

Faculty

Elizabeth Davis, Jody Detwieler

Adjunct Faculty

Jodi Gabel

Academic Program

Social Work, BSW
Social Work Minor

SOCIAL WORK, BSW

Required courses (63 hours)

Core

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 345	Social Work in Healthcare	3
SOWK 390	Research Seminar	2
SOWK 405	Social, Economic, and Environmental Justice (WR)	3
SOWK 415	Crisis and Resilience	3
SOWK 437	Social Work Practice III	3
SOWK 475	Field Practicum	12

Cognates

PSYC 105	Introduction to Psychology	3
PSYC 340	Research Methods I	3
PSYC 341	Research Methods II (WR)	3
SOCI 105	Introduction to Sociology	3
SOCI 321	Diversity in Society (WR)	3

Select three hours from

PSYC 311	Introduction to Counseling Theory and Techniques (3)	3
PSYC 415	Abnormal Psychology (3)	
PSYC 425	Human Sexuality (3)	
SOCI 315	Marriage and Family (3)	

SOCIAL WORK Minor

Required courses (19 hours)

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 336	Social Work Practice I	3
SOWK 337	Social Work Practice II	3
Select three hours of approved SOWK electives		3

Theology

Mission

The theology program will prepare students for gospel ministry in the Seventh-day Adventist Church. The curriculum of the Theology major is designed to educate and empower those called to ministry to reach their world for Christ with hope and wholeness. Those pastors who are most effective in this mission are proficient in the seven core qualities of ministry as identified by the Ministerial department of the North American Division of Seventh-day Adventists. These core qualities are character, evangelism, leadership, worship, management, scholarship, and relationship.

Goals

Students graduating from the theology program will be prepared to

- express an active faith in a life of Christian discipleship;
- cultivate scholarship by proficiency in Biblical languages;
- exhibit scholarship in the knowledge and interpretation of the Bible;
- demonstrate scholarship through a substantial knowledge of the history, mission and theological beliefs of the Seventh-day Adventist church;
- demonstrate scholarship through knowledge of Christian theology and church history;
- integrate skills of leadership, management, and preaching in worship and pastoral ministry;
- apply skills of interpersonal relationships in pastoral ministry;
- utilize skills in personal and public evangelism;
- display Christian character by the ability to apply ethical principles in life situations; and
- pursue further scholarship in graduate studies.

Contact Information

Edward Allen, Chair, Division of Religion
 Sandy Tallman, Office Manager
 Dick Building, Room 412
 402.486.2526
ed.allen@ucollege.edu
www.ucollege.edu/religion-division

Faculty

Edward Allen, Robert Petrick, Ben Holdsworth, Thomas Toews

Adjunct Faculty

Harold Alomia, Richard Carlson, Michael Halfhill, Stan Hardt, Michael Henton, Michael Paradise, Lena Toews

Academic Programs

Theology, BA
 Biblical Languages Minor

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 local congregations for observation and practical experience.
- Senior year: Students will participate in the capstone Leadership in Ministry experience. This semester-long program is designed to immerse the student pastor in pastoral ministry.
- Completion of the Bachelor of Arts degree with a major in theology with a cumulative GPA of 2.5 is required 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.

THEOLOGY, BA

The general education requirement RELT 141 Christian Beliefs is met by RELT 337 Christian Theology I and RELT 338 Christian Theology II. The language requirement is met by the required Biblical languages minor. A student may not receive both a Theology BA degree and a Religion BS degree.

Required courses (80 hours)

Core

RELB 250	Revelation	3
RELB 255	Jesus and the Gospels	3
RELB 326	Old Testament Survey	3
RELB 335	New Testament Epistles	3
or RELB 360	Interpretation of Romans (3)	
RELB 348	Daniel (WR)	3
RELH 310	History of the Seventh-day Adventist Church (WR)	3
RELH 410	History of the Christian Church (WR)	4
RELP 125	Introduction to Pastoral Ministry	2
RELP 321, 322	Biblical Preaching I and II	3, 4
RELP 361, 362	Church Leadership I and II	3, 4
RELP 465	Personal Witnessing	3
or RELP 466	Public Evangelism (3)	
RELP 490	Senior Seminar	1
RELT 305	Christian Ethics	3
RELT 337, 338	Christian Theology I and II	3, 3
RELT 455	Prophetic Guidance in the Advent Movements	3

Cognates

Biblical Languages Minor (see below)		20
PSYC 105	Introduction to Psychology	3
PSYC 311	Introduction to Counseling Theory and Techniques	3
or COMM 465	Interpersonal Communication (3)	

Additional Courses Recommended

FNCE 215	Personal Finance (3)
HIST 220	World Antiquity (3)
LITR 366	Biblical Literature (WR) (3)
RELB 246	Sanctuary and Salvation (3)
SOCI 315	Marriage and Family (3)

BIBLICAL LANGUAGES Minor

Required courses (20 hours)

RELL 171, 172	Beginning New Testament Greek I and II	4, 4
RELL 273, 274	Intermediate New Testament Greek III and IV	3, 3
RELL 385, 386	Biblical Hebrew I and II	3, 3

Course Descriptions

DISCIPLINE	PREFIX	PAGE	DISCIPLINE	PREFIX	PAGE
Accounting	ACCT	186	Leadership	LEAD	231
Art	ART	188	Literature	LITR	231
American Sign Language	ASL	189	Mathematics	MATH	233
Astronomy	ASTR	190	Marketing	MRKT	237
Biology	BIOL	190	Music		
Biomedical Science	BIOM	195	Applications	MUAP	238
Business Analytics	BSAN	195	Education	MUED	239
Business Administration	BUAD	195	History and Literature	MUHL	240
Chemistry	CHEM	197	Performance	MUPF	240
Communication			Theory	MUTH	242
Drama	CODR	200	Nursing	NURS	243
Emerging Media	COEM	201	Occupational Therapy Assistant	OTAC	246
Journalism	COJR	202	Physician Assistant Studies	PHAS	248
Communication	COMM	202	Philosophy	PHIL	252
Public Relations	COPR	203	Photography	PHOT	252
Core	CORE	204	Physics	PHYS	253
Computing	CPTR	204	Political Science	PLSC	256
Economics	ECON	207	Psychology	PSYC	257
Education	EDUC	207	Religion		
English	ENGL	212	Biblical Studies	RELB	260
Engineering	ENGR	214	General Studies	RELG	261
Finance	FNCE	215	Religious History	RELH	262
Geography	GEOG	215	Biblical Languages	RELL	262
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Health and Human Performance			Theological Studies	RELT	264
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Varsity	HHPV	222	Social Work	SOWK	267
History	HIST	222	Spanish	SPAN	269
Human Development	HMDV	224	Teaching Learning Center	TLCM	269
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Courses are listed alphabetically by prefix.

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 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 basic accounting principles. Students gain further experience in setting up and maintaining basic accounting records, as well as preparing 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*

Covers accounting principles involved in the preparation and interpretation of financial statements. Topics include cash, receivables, inventory, property, depreciation, intangible assets and current liabilities. Accounting research using the FASB Codification, and International Financial Reporting Standards (IFRS) are 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**

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***Recommended preparation: 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, and the restructuring of organizations. 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***Prerequisite: ACCT 212 with a minimum grade of C*

Students learn the uses of accounting information by managers in directing internal affairs of 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 211 with a minimum grade of C*

Study of the concepts of accounting information systems, especially those pertaining to managerial decision-making and internal control. 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**2***Prerequisite: ACCT 314*

Study of fund accounting according to GASB principles for governmental entities, as well as FASB 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 313 with a minimum grade of C; ACCT 314 preferred*

Study of generally accepted auditing standards and rules of professional conduct as they relate to planning an audit, performing tests of controls and substantive tests, and issuing audit reports. Students will complete a case-study audit. *Spring semester.*

Art

ART 105 Drawing I**2**

Exploration of principles and techniques of drawing. Students 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**

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, odd 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. *Scheduled as needed.*

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. May be repeated for additional credit. *Scheduled as needed.*

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. *Scheduled as needed.*

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*Prerequisite: GRPH 150 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, odd 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. *Spring semester, even years.*

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, even years.*

ART 321 Art History I (WR) 3*Prerequisite: HIST 157 or permission of instructor*

A chronological survey of visual art from ancient times to the Renaissance. Emphasis is on art as a product of culture and society. Focus is also given to techniques of visual analysis. *Fall semester, even years.*

ART 322 Art History II (WR) 3

A chronological survey of visual art from the Renaissance to postmodernism. Emphasis is on art as a product of culture and society. Focus is also given to techniques of visual analysis. *Fall semester, odd years.*

ART 485 Senior Exhibit 1

The final event in an art major's college experience. Students exhibit a body of works and develop a statement of philosophy and a résumé. *Fall/spring semesters.*

American Sign Language

ASL 101 American Sign Language I 3

Introduces students to the wonderful world of communicating in American Sign Language. Covers the history of A.S.L. and deafness, basic grammatical structure of A.S.L., deaf culture, and basic A.S.L. vocabulary related to common conversational topics. *Fall semester, even years.*

ASL 102 American Sign Language II 3

Continuation of ASL 101. *Spring semester, odd years.*

Astronomy

ASTR 111 Astronomy

4

Prerequisite: MATH 111 or higher

An introduction for the general student to the basic elements of astronomy. Emphasis is placed on the scientific method as the structure and contents of the universe is explored. Classroom lectures cover the history of astronomy, the solar system, stellar evolution, galaxies, and cosmology. Laboratory activities emphasize personal observations of various astronomical objects, as weather permits. Three lectures and one evening laboratory weekly. *Fall semester, even years.*

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 104 Insects and You

3

An introductory entomology course designed for students who are non-science majors. This course will focus on the basic structure and function of insects, how insects interact with other insects, their environment and people. This course will also introduce the beneficial and damaging impacts that insects have on their environment, how insects were/are important to people not only in Biblical, folklore and current cultures, but also as pollinators, parasites, vectors of disease, pests of agriculture and urban areas, bio-control agents, environmental quality indicators, and crime-solving forensic agents. Does not apply toward a major or minor offered in the Division of Science and Mathematics. *Spring semester.*

BIOL 106 Human Biology

3

A survey of the human body and focusing on the structure and function of each physiological system. This course is designed for those not requiring the depth offered in BIOL 111, 112. May be taken with or without BIOL 107. Does not apply toward a major or minor offered in the Division of Science and Mathematics. May not be taken for credit if BIOL 111 or 112 previously taken. *Fall semester.*

BIOL 107 Human Biology Lab

1

Prerequisite or Corequisite: BIOL 106

Laboratory to accompany BIOL 106 covering the major structures and functions of the human body. *Fall semester.*

BIOL 111 Human Anatomy and Physiology I

4

Recommended preparation: 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 II

4

Prerequisite: BIOL 111

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 I

4

Prerequisites: One year of high school chemistry or CHEM 151 and an ACT Math Score of 20 (SAT Math score of 430 (old SAT 2400 scale) or SAT Math score of 470 (new SAT 1600 scale)) or sophomore standing or permission of instructor

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 and one three-hour laboratory per week. *Fall semester.*

BIOL 152 General Biology II

4

Prerequisite: BIOL 151

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 and animal development. Three lectures and one three-hour laboratory per week. *Spring semester.*

BIOL 205 Microbiology

4

Recommended preparation: BIOL 111 and CHEM 104

A survey of major groups of microbes with relationships to health and disease. Basic principles of microbial nutrition, metabolism, genetics, ecology, microbial control and microbe-human interactions are also considered. The laboratory introduces a variety of procedures, including asepsis, culture, isolation and identification of microorganisms, especially bacteria. Three lectures and one three-hour laboratory per week. Does not apply toward a biology major. *Fall semester and summer.*

BIOL 309 Medical and Veterinary Entomology

2

Prerequisite: BIOL 152

Many of the world's significant diseases (Malaria, Dengue, Yellow Fever, Lyme disease, West Nile and Zika viruses) are transmitted by insects - some of the deadliest animals on earth! Students taking this course will be introduced to medically significant arthropod pests and disease agents that impact human and animal health causing worldwide suffering and death. This course is designed for students interested in medicine, veterinary medicine, public health, or any aspect of vector biology. Two lectures per week. *Offered spring semesters, as needed.*

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, as needed.*

BIOL 321 Genetics (WR)

4

Prerequisite: BIOL 152 and CHEM 152 or CHEM 104

A study of classical and population genetics. Topics include the physical and chemical nature of genes, inheritance patterns, chromosome anomalies, behavior of genes in populations and speciation. One three-hour laboratory per week. *Spring semester.*

BIOL 338 Principles of Entomology**3***Prerequisite: BIOL 152*

Provides an introduction to the study of insects that addresses fundamental concepts such as insect classification, control, life history, structure, ecology, and basic physiology. This course will delve into areas of entomology included but not limited to medical and veterinary entomology, urban entomology, and agricultural entomology. Two lectures and one three-hour lab per week. Lab sessions will involve field trips, weather permitting. *Fall semester, even years as needed.*

BIOL 356 Animal Biology**4***Prerequisite: BIOL 152*

A survey of animal diversity, animal anatomy and physiology, animal ecology, and animal behavior and life history strategies. Three lectures and one three-hour laboratory per week. *Fall semester, as needed.*

BIOL 365 Plant Biology**4***Prerequisite: BIOL 152*

A survey of plant morphology, plant anatomy and physiology, plant ecology and the impact of plants in human life. Three lectures and one three-hour laboratory per week. *Fall semester, even years as needed.*

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. *Fall semester, odd years as needed.*

BIOL/CHEM/PHYS 386 Research Methods: Scientific Inquiry**I***Prerequisites: (BIOL 151 or CHEM 151 or PHYS 251) and (CHEM 296 or MATH 221 or PHYS 296)*

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: Writing Scientific Proposals (WR)**I***Prerequisite: BIOL 386*

Emphasizes research design. The student will interview science faculty to learn about potential research projects and will choose a project to work on with a faculty member. A research project is proposed, a literature review undergone, a research plan developed for the project and, depending upon the nature of the study, research initiated. *Fall/spring semesters.*

BIOL 403 Molecular Biology**3***Prerequisite: BIOL 321*

A study of DNA and RNA structure and function at the molecular level, understanding gene regulation and DNA technology and analysis. This course is organized in four parts: (1) Nucleic acid structure; (2) Molecular mechanisms related to both the flow of genetic information and regulation of gene expression (3) Genetic Recombination; and (4) DNA technology. Three lectures per week. *Fall semester, odd years.*

BIOL 404 Cell Biology**4***Prerequisites: BIOL 321 and CHEM 104 or CHEM 212 or concurrent enrollment in CHEM 212*

A study of cell structures and functions with an emphasis on cell signaling and regulation at the molecular level. The course is organized in four parts: (1) methods of cellular research, (2) cell composition and organization; (3) cell and organelle structure and function; (4) cell signaling and regulation; and (5) cell cycle regulation and cancer. Three lectures and one three-hour laboratory per week. *Spring semester.*

BIOL 411 Advanced Human Anatomy**4***Prerequisite: BIOL 112 or BIOL 152*

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, as needed.*

BIOL 416 Advanced Human Physiology (WR)**4***Prerequisite: BIOL 112 or BIOL 152*

Studies the physiology of the musculo-skeletal, nervous, endocrine, cardiovascular, respiratory, digestive, reproductive, and renal systems and metabolism with emphasis on regulatory mechanisms and integration. Three lectures and one three-hour laboratory per week. *Fall semester.*

BIOL 435 Animal Behavior**3***Prerequisite: BIOL 112, 152*

Focuses on understanding the behavior of diverse groups of animal species from both an ecological and Natural Selection approach. Topics include social organization, mating systems, foraging, aggression, animal learning, symbiosis, inter- and intra-specific interactions, and quantitative techniques in behavioral biology. The importance of understanding animals' behavior, their environmental interactions, and conservative applications will be emphasized. This course involves a major research paper and a minimum of one required field trip. *As needed.*

BIOL/CHEM 440 Biochemistry**4***Prerequisites: CHEM 212, BIOL 151*

Study of the fundamental principles of enzyme kinetics, enzyme mechanisms and enzyme regulation based on the structure and chemistry of biomolecules including amino acids, carbohydrates, lipids, proteins, nucleotides, nucleic acids, and biological membranes. This course is designed for pre-professional students. Does not include a lab. (Offered through Andrews University – distance learning.) *Summer.*

BIOL/CHEM 445 Biochemistry I**4***Prerequisites: CHEM 212, BIOL 151 or 111*

A study of the chemical properties and biological functions of amino acids, proteins, enzymes, carbohydrates, and lipids. 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 four-hour laboratory per week. *Fall semester.*

BIOL 450 Histology**3***Prerequisite: BIOL 112 or BIOL 152*

A study of the structure, organization and function of mammalian tissues, with emphasis on identification. (Offered through the Adventist Educational Alliance – distance learning.) May be taken with or without BIOL 451. *Fall semester, odd years as needed.*

BIOL 451 Histology Lab**1***Prerequisite or corequisite: BIOL 450*

Laboratory to accompany BIOL 450 Histology. *Fall semester, odd years as needed.*

BIOL 455 Immunology**3***Prerequisites: BIOL 152, BIOL 321*

Basic concepts of the innate and adaptive immune systems are covered including details about the molecules, cells and organs involved. Emphasis will be placed on mechanisms of immune system development, response to pathogens, and the classic experiments performed to make key discoveries in immunology. (Offered through the Adventist Educational Alliance – distance learning.) *Spring semester, even years.*

BIOL 477 Issues in Origins and Speciation**3***Prerequisites: One of BIOL/CHEM/PHYS 152 and Junior standing*

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. Designed for science majors. (Offered through the Adventist Educational Alliance – distance learning.) *Spring semester, even years.*

BIOL 496 Research Methods: Independent Biological Research (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.*

Walla Walla University Rosario Beach Marine Laboratory summer courses:

The following transfer courses have been approved by Union and are offered during the summer at the Walla Walla University Rosario Beach Marine Laboratory. Student must register for the course with Walla Walla University and Union College before the class begins.

BIOL 141, 142 General Biology**4, 4***Prerequisite: High school chemistry strongly recommended*

Equivalent to BIOL 151, 152 UC. 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. Quarter credits earned at Walla Walla will be reported and transferred to Union as semester credits. The student is required to register for classes at both schools as follows: WWU (BIOL 141, 142, 143 = 12 quarter credits) and UC (BIOL 141, 142 = 8 semester credits). (12 quarter credits = 8 semester credits). All three quarters at WWU (BIOL 141, 142, and 143) are required for the student to earn credit for the full year sequence at Union College (BIOL 141, 142). UC BIOL 141, 142 is equivalent to UC BIOL 151, 152. *Summer.*

Additional summer courses may be offered. For additional information, please contact Walla Walla University or visit their website at: <http://rosario.wallawalla.edu>.

Biomedical Science

BIOM 201 Professional Shadowing 1

This course provides students with opportunities to job shadow health professionals. Students will gain an understanding of their chosen profession and relate their experiences to each other during class time. This course must be taken no later than the spring of the sophomore year, or for students changing their major to biomedical science, within one year of their transfer into the major. *Spring semester.*

Business Analytics

BSAN 230 Information Display for Decision Making 3

Prerequisite: CPTR 220

Recommended: Laptop computer for use in class

Introductory exploration of the concepts and practices of data analysis and presentation. Examines information display theory and its application through dashboards using MS Excel and Tableau. Includes an intermediate Excel module. *Spring semester.*

Business Administration

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 310 Quality Management 3

Prerequisite: ENGL 212

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 100 or above

Recommended: CPTR 220

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 350 Project Management 2

Familiarizes the student with the basic concepts of project management through studying both theory and application. Provides experience using some basic tools. *Spring semester.*

BUAD 376 Human Resource Management 3

Prerequisite: Junior standing or permission of instructor

Emphasizes the basics of human resource management in business organizations and considers a variety of topics in human relations, personnel management, and organizational behavior. *Spring semester.*

BUAD 401 Life After College 1

Designed to help students as they transition from college to the workforce. The focus will be on providing an overview of practical topics that everyone has to deal with in life including debt, budgets, investing, taxes, law, insurance, job search and benefits. The course is offered on a CR/NC basis. *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 ethical issues in business while developing a personal code of ethics. *Spring semester.*

BUAD 425 Business Communications (WR) 3

Prerequisites: COMM 105 or COMM 205, CPTR 220; ENGL 212; 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 résumé writing, interview preparation, and professional wardrobe selection. *Fall semester.*

BUAD 428 Business Policies 3

Prerequisites: ENGL 212; 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

Prerequisites: ENGL 212; 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. Topics include building effective teams, biblical approaches to conflict, negotiation and effective accountability. *Fall semester.*

BUAD 445 Business Law 3

Prerequisite: Junior standing or permission of instructor

A study of: 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, ENGL 212*

Implementation of topics covered in BUAD 376 through a project-based structure. Topics covered include job descriptions, hiring, managing and evaluating employees, designing compensation plans, creating employee policies, and structuring orientation/training programs. *Fall semester.*

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: ACT Math score of 18 or SAT Math score of 430 (old SAT 2400 scale) or SAT Math score of 470 (new SAT 1600 scale) or higher or MATH 100 (prerequisite with a grade of C or higher or as co-requisite) or permission of instructor

Introduction to inorganic chemistry including atomic structure, chemical bonding, states of matter, chemical equations, stoichiometry concepts and applications, nomenclature, and energetics. Includes instruction on the metric system, the scientific method and some history of chemistry. One laboratory per week. Does not apply toward a division major or minor. *Scheduled as needed.*

CHEM 104 Introduction to General, Organic and Biochemistry**4**

Prerequisite: ACT math score of 18 or SAT Math score of 430 (old SAT 2400 scale) or SAT Math score of 470 (new SAT 1600 scale) or higher or ALEKS placement test of 46 or MATH 100 (prerequisite with a grade of C or higher or as co-requisite)

Comprehensive study of the basic principles of chemistry applicable to the health science professions. Topics covered include measurements, the scientific method, atomic structure, the use of radiation in cancer treatment, stoichiometry, pH, acids, bases and buffers in the body, organic functional groups and reactions, glycolysis, the citric acid cycle, oxidative phosphorylation and the biochemical functions of carbohydrates, protein structure and function, nucleic acids, fats and proteins in the body. One laboratory per week. Does not apply toward a division major or minor. *Fall/spring semesters.*

CHEM 151 General Chemistry I**4**

Prerequisite: ACT math score of 20 (SAT Math score of 480 (old SAT 2400 scale) or SAT Math score of 510 (new SAT 1600 scale)) or ALEKS placement test of 46, or MATH 100 (With a grade of C or higher)

A comprehensive introduction to the fundamental principles of chemistry for chemistry majors and pre-professional students (medical, dental, etc.). Topics include chemical nomenclature, unit analysis, reactions, the mole, stoichiometry, thermochemistry, atomic theory and structure, periodicity, molecular structure and bonding, gas laws, and kinetic theory. One laboratory per week. *Fall/spring semesters.*

CHEM 152 General Chemistry II**4**

Prerequisite: CHEM 151 (With a grade of C or higher)

A continuation of CHEM 151. Topics include intermolecular forces, crystal structure, solutions, chemical kinetics, chemical equilibrium, acid-base chemistry, reaction thermodynamics, electrochemistry, and nuclear chemistry. One laboratory per week. *Spring semester and summer.*

CHEM 211 Organic Chemistry I**4***Prerequisite: CHEM 152 (With a grade of C or higher)*

A systematic study of the important classes of carbon compounds including their nomenclature, preparation, characteristic reactions and reaction mechanisms. For chemistry majors and pre-professional students (medical, dental, etc.). One laboratory per week. *Fall semester.*

CHEM 212 Organic Chemistry II**4***Prerequisite: CHEM 211 (With a grade of C or higher)*

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. One laboratory per week. *Spring semester.*

CHEM 296 Research Methods I**1**

Prerequisite: ACT Math Score of 20 (SAT Math score of 480 (old SAT 2400 scale) or SAT Math score of 510 (new SAT 1600 scale)) or MATH 100 (With a grade of C or higher)

An introduction to the fields of descriptive and inferential statistics. Data sampling techniques, hypothesis testing and some applications of probability theory to science situations are examined. *Fall semester.*

CHEM 311 Analytical Chemistry**4***Prerequisite: CHEM 152 (With a grade of C or higher)*

An introduction to the principles and processes of chemical analysis with emphasis on classical techniques. Topics include solution concentration unit manipulation, analytical applications of statistics, gravimetric and volumetric analysis, calibration techniques, activity equilibria, titration equilibria, simultaneous equilibria, and basic electrochemistry. Labs employ gravimetric, volumetric, spectrophotometric, and potentiometric techniques. One laboratory per week. *Fall semester, as needed.*

CHEM 312 Instrumental Analysis (WR)**4***Prerequisites: CHEM 311, ENGL 212 (All grades C or higher) or permission of instructor.*

A continuation of CHEM 311. A study of the analytical process emphasizing instrumentation. Topics include applications of electronics, spectrometric, chromatographic, and electrochemical methods. Writing is emphasized through laboratory reports. One laboratory per week. *Spring semester, as needed.*

CHEM/BIOL/PHYS 386 Research Methods: Scientific Inquiry**1***Prerequisites: (BIOL 151 or CHEM 151 or PHYS 251) and (CHEM 296 or MATH 221 or PHYS 296) (All grades C or higher)*

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 (With a grade of C or higher)*

Emphasizes research design. The student will interview science faculty to learn about potential research projects and will choose a project to work on with a faculty member. A research project is proposed, a literature review undergone, a research plan developed for the project and, depending upon the nature of the study, research initiated. *Fall/spring semesters, as needed.*

CHEM 425 Inorganic Chemistry**2***Prerequisite: CHEM 152 (With a grade of C or higher)*

An introduction to the descriptive chemistry of the main group elements, coordination chemistry, molecular symmetry, and bio-inorganic chemistry. The course includes several “mini-labs” (done during class time) where inorganic materials are synthesized and/or investigated. *Spring semester, even years.*

CHEM/BIOI 440 Biochemistry**4***Prerequisites: BIOI 151, CHEM 212*

Study of the fundamental principles of enzyme kinetics, enzyme mechanisms and enzyme regulation based on the structure and chemistry of biomolecules including amino acids, carbohydrates, lipids, proteins, nucleotides, nucleic acids, and biological membranes. This course is designed for pre-professional students. Does not include a lab. (Offered through Andrews University – distance learning.) *Summer.*

CHEM/BIOI 445 Biochemistry I**4***Prerequisites: BIOI 151, CHEM 212 (All grades C or higher)*

A study of the chemical properties and biological functions of amino acids, proteins, enzymes, carbohydrates, and lipids. Covers metabolism including glycolysis, Krebs cycle and oxidative phosphorylation. The laboratory includes basic techniques and instruments used for biochemical research and biotechnology. One laboratory per week. *Fall semester.*

CHEM 446 Biochemistry II**3***Prerequisites: CHEM/BIOI 440 or CHEM/BIOI 445*

A continuation of CHEM 445 Biochemistry I. Includes a review of glycolysis, gluconeogenesis, TCA cycle and oxidative phosphorylation. An in-depth study of metabolism including the catabolism and biosynthesis of glycogen and fatty acids, and the pentose phosphate pathway and lipid synthesis. In addition, the class examines other aspects of biochemical systems. *Spring semester, odd years.*

CHEM/PHYS 451 Physical Chemistry: Thermodynamics**4***Prerequisites: CHEM 152, MATH 285, PHYS 252 (All grades C or higher)*

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. *Fall semester, even years.*

CHEM 452 Physical Chemistry: Quantum Mechanics and Kinetics**4***Prerequisites: CHEM 152, MATH 285, PHYS 252 (All grades C or higher)*

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. Five lectures per week for the first $\frac{3}{4}$ semester, and one lecture per week the last quarter of the semester. *Spring semester, odd years.*

CHEM 496 Research Methods IV (WR)**1***Prerequisites: CHEM 396, ENGL 212 (All grades C or higher)*

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

Communication—Drama

CODR 229 Play Production: Technical Design**1-3***Prerequisite: Permission of instructor*

This course is designed to give students an experiential overview of the production process for a live theatre production. Students will learn the fundamentals of all the dimensions of theatre production including: lighting design, set design, costume design, stage makeup, script analysis, and acting for stage. Students will first receive an overview of each design specialty then select an area to focus on. Working in teams, students will practice the design process by working through two mock productions. Number of credits is determined by the instructor based upon the extent of the student's involvement in a design project. May be repeated for credit with permission of instructor. *Fall semester.*

CODR 329 Play Production: Performance**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 theatre terminology, elements, and practice is delivered within the context of preparing a show for public performances. 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 instructor. *Spring semester.*

CODR 380 Script Writing**3***Prerequisite: ENGL 212*

Storytelling for stage and screen. Provides instruction in creating screenplays for film and scripts for live theatre. Learn to craft original plot with plausible characters who speak authentic dialog within industry-standard formats. *Fall semester.*

CODR 480 Advanced Studies Seminar**2***Prerequisites: CODR 229, 329 and permission of instructor*

The student will have the opportunity to select an area of special concentration in theatre (set design, lighting design, directing, or costume design) on which to focus and develop skills specific to that area. Working with the instructor, the student will develop a deeper knowledge and practical application of the chosen emphasis while producing a realized theatre project. *Spring semester, as needed.*

Communication—Emerging Media

COEM 260 Writing in the Digital World 3

Prerequisites: ENGL 110 and CPTR 245

Teaches students the techniques and technology of writing for digital audiences including blogging, social media, and content management systems. Students in the course are expected to purchase and maintain their own websites. *Fall semester.*

COEM 324 Web Research and Analytics 3

Prerequisites: CPTR 245 and COEM 260

Discover the power of the Internet as a research tool for journalism, marketing, and public relations, while learning to analyze data to develop effective communication strategies. *Fall semester.*

COEM 362 Interacting with an Online Audience 3

Prerequisites: CPTR 245 and COEM 260

This course explores the possibilities and challenges of communicating with a world-wide audience and learning to leverage the interactive nature of social media to improve communication strategies. Students will gain an experiential knowledge of the ever-changing world of social media marketing as they learn the guidelines and principles of how to employ social media platforms as tools to connect and interact with a target group of consumers using a variety of content mediums and social media platforms. *Fall semester.*

COEM 410 Digital Storytelling: The Creative Process 3

Prerequisites: CODR 380, PHOT 151

The purpose of this course is to translate storytelling and writing skills to a variety of digital media. Students will gain an understanding of the strengths and weaknesses of each medium and how to best use them individually and together to reach an audience and tell a story. Students will complete projects using audio story/interview, audio with stills/slideshows, and video shorts. Projects will employ a holistic approach taking students through the entire storytelling process: planning content, creating content, editing content, and presenting content. *Spring semester.*

COEM 411 Digital Storytelling: The Technical Process 3

Prerequisite: COEM 410

This course will build on skills learned in COEM 410, applying them to longer, more involved projects. The focus will be DSLR guerilla filmmaking, advanced editing techniques, and Hollywood style film production process. *Fall semester.*

COEM 440 Social Media Public Relations and Marketing 3

Prerequisite: COPR 241 or MRKT 327

Study techniques and strategies for using social media as a public relations and marketing tool. Students will examine the application of communication theories in the context of social media. *Spring semester.*

Communication—Journalism

COJR 221 Reporting (WR) 3

Prerequisite: Sophomore standing or permission of instructor

Introduces the student to basic newspaper reporting and writing. Students are encouraged to submit articles to *The Clocktower* and for publication online in the *Peanut Hill Courier*. *Spring semester.*

COJR 245 Editing 3

Covers principles of editing, copy editing, layout, headline writing, handling of graphic elements, and achieving editorial balance and integrity. Students concentrate on practical applications for actual publications. *Fall semester.*

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.*

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 205 Introduction to Interpersonal Communication 2

Introduces students to the psychology of communication and human relations on an interpersonal level. *Fall/spring semesters.*

COMM 290 Sophomore Seminar 1

Prerequisite: COMM 125

Prepares students to apply for internships with specific attention given to résumé preparation, preparation for job interviewing, development of a portfolio, and assistance in the job search process. *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 content delivery. *Spring semester, odd 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 direct mail appeals, maintaining donor records, conducting personal solicitation, and planning special events. *Spring semester, odd years.*

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, odd years.*

COMM 465 Interpersonal Communication 3

Prerequisite: COMM 105 or COMM 205

Explores traditional and contemporary models of communication theory, with particular application to the psychology of communication and human relations on an interpersonal level. *Spring semester.*

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, mentoring, and development of a portfolio. In addition, selected topics in communication are discussed. *Fall 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. *Fall 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. *Fall semester, even years.*

COPR 332 Rhetoric (WR) 3

Introduces students to the history, theory, and practice of rhetoric; addresses the use and impact of human language, particularly in contemporary contexts. Social, political, and popular mediated artifacts (such as television, film and music) are the focus of critique and analysis, making the course relevant to a wide range of disciplines. *Fall semester, odd years.*

COPR 377 Crisis Public Relations 3

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. *Fall semester, odd 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.*

Core

While learning fundamental concepts and methods for academic achievement in higher education, students experience the world within their chosen major. A course expected for all freshmen. Fall semester. Graded CR/NC.

CORE 109 FOCUS in General Studies |
 CORE 110 FOCUS in Business and Computer Science |
 CORE 111 FOCUS in Fine Art |
 CORE 112 FOCUS in Health and Human Performance |
 CORE 113 FOCUS in Human Development |
 CORE 114 FOCUS in Humanities |
 CORE 115 FOCUS in International Rescue and Relief |
 CORE 116 FOCUS in Music |
 CORE 117 FOCUS in Nursing |
 CORE 118 FOCUS in Religion |
 CORE 119 FOCUS in Science and Mathematics |
 CORE 120 FOCUS in Occupational Therapy Assistant |

Computing

CPTR 126 Fundamentals of Computer Science**3**

Introduction to elements of computer science. Provides an overview of the different areas that make up the computing field, including an introduction to number systems (binary, octal, and hex), Boolean logic, computer hardware design and an introduction to high-level computer programming. The student is also introduced to areas of ethics related to computing. *Fall semester.*

CPTR 220 Microcomputer Applications**3**

Extensive hands-on experience in word processing, electronic spreadsheets, presentation 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 226 Computer Science I**4**

Prerequisites: MATH 100 or higher or ACT math score of 20 (SAT math of 480 (old SAT 2400 scale) or SAT math of 510 (new SAT 1600 scale))

Recommended: CPTR 126 with a minimum grade of C

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, odd years.*

CPTR 240 Systems Administration**3***Prerequisite: CPTR 126 with a minimum grade of C*

An introductory course to systems administration. Topics include user management, computing systems management, server management, security, file management, backup management and scripting. Also covers how to communicate with customers/users. *Fall semester.*

CPTR 245 Web Development Basics**3**

An introduction to static web pages. Major emphasis is placed on designing and creating web pages using HTML5 with Cascading Style Sheets. *Spring semester.*

CPTR 265 Educational Technology**3***Prerequisite: Education majors only*

This course is an introduction to the effective use of computer technology as an integral part of teaching and learning in the elementary and secondary classroom. The course consists of classroom and lab instruction and is primarily project-based. *Spring semester.*

CPTR 320 Networking**3***Prerequisite: CPTR 126 with a minimum grade of C*

Overview of networking including networking hardware and software, local area networks, wide area networks and network communication. Emphasis is placed on how to apply networking theory and troubleshoot networking problems. *Fall semester.*

CPTR 322 SQL**3***Prerequisite: CPTR 126 with a minimum grade of C*

Introduction to using the Structured Query Language. The course focuses on the Data Manipulation Language (DML) division of SQL. The use of SELECT, INSERT, UPDATE and DELETE are covered in detail. Also covers triggers, stored procedures, cursors and embedded SQL. *Spring semester.*

CPTR 327 Systems Analysis and Design**3***Prerequisite: CPTR 220 with a minimum grade of C or CPTR 126 with a minimum grade of C*

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 226 with a minimum grade of C and CPTR 245 with a minimum grade of C*

Introduction to website publishing. Topics may include PHP, JavaScript, Ajax, database connectivity, application security and other related topics. Major emphasis is placed on designing and creating dynamic web sites. The course includes a group project to build an application for a website. *Fall semester.*

CPTR 420 Advanced Systems Administration**3***Prerequisite: CPTR 240 with a minimum grade of C*

Continuation course of CPTR 240 that focuses on directory services, project management, security issues, advanced scripting, and advanced interactions between services such as DNS, DHCP, web server, SQL and Mail Server. Emphasizing upfront design considerations, redundancy, scalability and total cost of ownership. *Spring semester.*

CPTR 424 Database Systems**3***Prerequisites: CPTR 322 with a minimum grade of C and CPTR 327 with a minimum grade of C*

Covers both a theoretical and practical understanding of database management systems. Emphasizes the relational database model. The Data Definition Language (DDL) of SQL is covered. Implementation of a database application that uses a relational database and SQL is required. *Fall semester.*

CPTR 435 Advanced Web Technologies**3***Prerequisite: CPTR 335 with a minimum grade of C*

The course consists of a major project for developing a web site using a framework of the students' choice. The project selected must be a comprehensive project showing the proficiency for the skills learned in other computer classes including but not limited to JavaScript, SQL, CSS and Ajax. The project may include applications for phones or tablets to integrate with the web site. *Fall semester, even years.*

CPTR 440 Cloud Computing**3***Prerequisite: CPTR 320 with a minimum grade of C*

Introductory course to cloud computing. Topics explored may include distributed data crunching, cloud and datacenter file systems, virtualization, security & privacy, and interactive web-based applications. *Spring semester, odd years.*

CPTR 460 Security**3***Prerequisite: CPTR 320 with a minimum grade of C*

Covers various topics of computer security, which may include: network security, database security, security auditing, data encryption, operating system security, vulnerabilities, user authentication, access control, malicious software, secure software development techniques, firewalls and intrusion detection, site security, legal and ethical security issues, and risk management. *Spring semester, even years.*

Economics

ECON 235 Principles of Microeconomics 3

Prerequisites: ENGL 110, MATH 100 or higher or ACT Math score of 20 (SAT of 480 (old SAT 2400 scale) or SAT of 510 (new SAT 1600 scale))

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 110, MATH 100 or higher or ACT Math score of 20 (SAT of 480 (old SAT 2400 scale) or SAT of 510 (new SAT 1600 scale)); 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. Praxis Core Test must be taken during this class. *Fall/spring semesters.*

EDUC 218 Philosophy of Christian Education (WR) 3

Prerequisites: ENGL 212 and provisional admission to the teacher preparation program; CORE test passed

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. Fifteen 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 the Elementary School 2

Prerequisite: EDUC 125 or permission of program director or division chair

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 342 Human Relations **I***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 218, PSYC 215, successfully passed the CORE test, and full admission to the teacher preparation program or permission of division chair.*

An interdisciplinary 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. Twenty to thirty 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 students with visual impairments, speech and language impairments, orthopedic handicap and other health impairments, mental handicaps, learning disabilities, behavior disorders, students who are gifted and talented, children whose first language (and home culture) is not English, and those who are abused and/or neglected or at-risk for school failure are all briefly studied. Overview of PL 94-142 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 350 Seminar in Classroom Management **I***Prerequisite: EDUC 218*

Focuses on current theories, strategies and research that teachers could apply in forming their own personal approach to classroom management. Includes an emphasis on teacher expectations, communication styles, classroom rules, procedures, consequences, bullying technology, and legal issues culminating in a major presentation that synthesizes the variety of theories from which to choose in developing their classroom management approach. *Fall semester.* *(Added 02/04/19 See Addendum on Page 287)*

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 30-35 hours of field experience required. *Spring semester.*

EDUC 357 Literature for Children and Adolescents **2***Prerequisite or co-requisite: 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. *Fall semester.*

EDUC 358 Special Child in the Classroom**3***Prerequisite: Practicing teacher*

Causes of developmental patterns, behavioral characteristics and educational alternatives associated with specific exceptionalities which include students with visual impairments, speech and language impairments, orthopedic handicap and other health impairments, mental handicaps, learning disabilities, behavior disorders, students who are gifted and talented, children whose first language (and home culture) is not English, and those who are abused and/or neglected or at-risk for school failure are all briefly studied. Overview of PL 94-142 is included. Course does not apply toward psychology minor. Twenty hours of field experience required (15 hours special needs; 5 hours gifted). *Summer.*

EDUC 360 General Elementary Methods**2***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. *Summer.*

EDUC 361 Art Methods**1***Prerequisite: Practicing teacher; Prerequisite or co-requisite: EDUC 355 or 360*

Directed specific assignments in subject area as applications of EDUC 355 or 360. *Summer.*

EDUC 362 Health Methods**1***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 363 History Methods**1***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 364 Language Arts/Reading Methods**1***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 365 Math Methods**1***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 366 Music Methods**1***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 367 Elementary Reading Methods**1***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 368 Religion Methods**1***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 Teacher; 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 Teacher; 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 412 Methods: Language Arts Education****3***Prerequisite or co-requisite: 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. *Spring semester.***EDUC 413 Methods: Mathematics Education****3***Prerequisite: EDUC 218 or permission of instructor*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 co-requisite: EDUC 218*Goals, objectives, organization, interrelationships between music and the entire curriculum. Includes 10 to 20 hours of classroom experiences and use of technology. *Spring semester.***EDUC 415 Methods: Social Science and Religious Education (K-12)****3***Prerequisite: EDUC 218*An exploration of secondary social science, teaching strategies, textbook selection criteria, planning and assessment. Also emphasizes techniques for teaching K-12 religion. Students will be trained on the Encounter program from the North American Division. Includes 10 to 20 hours of classroom experiences and use of technology. *Spring semester.***EDUC 416 Methods: Physical Education****3***Prerequisite or co-requisite: 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. *Spring semester.*

EDUC 418 Methods: Science Education**3***Prerequisite or co-requisite: 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. *Spring semester.*

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. *Fall 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 450 Methods in Reading and Language Arts (K-8)**5***Prerequisite: EDUC 345*

Emphasis is placed on elementary (K-8) language arts skills (viewing, listening, reading, speaking, visually representing, and writing) and reading skills (reading proficiencies, readiness, vocabulary instruction, study skills, comprehension, questioning, management, diagnostic skills, and assessment). Spelling, grammar, handwriting and reference skills are specifically included. A survey of language arts and reading programs, including Pathways, is included. Opportunity is given to plan and use varied instructional approaches in development of oral language, reading and writing. Traditional and whole language approaches are studied, as are multicultural literature. An evaluation and use of technology and the Internet will be included. Microteaching and up to 20 hours of field experience are included. *Fall 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 20 hours of field experiences are included. *Spring 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**I-16**

Prerequisite: Student Teaching Authorization from Teacher Preparation Committee. Passing Praxis II content test scores must be submitted to the Human Development Division prior to registration.

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. Elementary³⁰-Spring semester.*

EDUC 476 Content Reading and Writing**3**

Co-requisite: 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**I**

Prerequisite: EDUC 345

This course for secondary education majors includes discussion of contemporary educational trends and issues and certification procedures. *Spring semester.*

EDUC 490 Student Teaching Seminar-Elementary**I**

Prerequisite: EDUC 345

This course for elementary education majors includes discussion of classroom practice and management experiences, teaching methodology and materials, and current educational issues. *Spring semester.*

English

Courses numbered below 100 are considered developmental and do not count toward the 124 semester hours required for graduation. Similarly, grades in these courses do not affect a student's grade point average (GPA).

ENGL 080 Basic Skills in Grammar and Writing**3**

Prerequisite: TOEFL Writing score 46 or below, or TOEFL iBT or PDT Writing score 16 or below, or an ACT English score 13 or below, or an SAT Writing score of 359 or below (old SAT 2400 scale) or SAT Writing and Language test score of 20 or below (new SAT 1600 scale).

Emphasizes the basic sentence structures in English, including phrases and clauses. Provides practice with writing academic paragraphs, then focuses on the skills necessary to successfully complete ENGL 100. Three class sessions and two 50-minute labs per week. A minimum grade of C in ENGL 080 is required to enter ENGL 100. ENGL 080 does not satisfy general education requirements. *Fall semester.*

³⁰ Elementary: Pre-Session Student Teaching must be completed in August, even though Student Teaching does not begin until January. This experience consists of 10 days spent in an assigned classroom. It is considered to be part of EDUC 475.

ENGL 100 Basic Skills in English**3**

Prerequisite: TOEFL English score 47-54 or TOEFL iBT or PDT Writing score 17-23 or ACT English score 14-16 or SAT Writing score of 360-429 (old SAT 2400 scale) or SAT Writing and Language test score of 21-24 (new SAT 1600 scale) or a minimum grade of C in ENGL 080.

Focuses on the skills necessary to successfully complete ENGL 110 including sentence creation, sentence revision, and paragraph development. Students may be required to attend one lab per week throughout the semester. The course does not satisfy general education requirements but does count toward elective credit. *Fall/spring semesters.*

ENGL 103 Reading Skills**3**

Prerequisite: TOEFL Reading score 54 or below, or TOEFL iBT or PDT Reading score 21 or below, or ACT Reading score 16 or below, or an SAT Reading score of 429 or below (old SAT 2400 scale) or SAT Reading test score of 23 or below (new SAT 1600 scale).

Emphasizes vocabulary development and comprehension skills for academic reading, including increased reading rate. A minimum grade of C in ENGL 103 is required to enter ENGL 212. The course does not satisfy general education requirements but does count toward elective credit. *Fall/spring semesters.*

ENGL 110 Writing for General Audiences**3**

Prerequisites: (Minimum ACT English score of 17; or SAT Writing score of 430 (old SAT 2400 scale) or SAT Writing and Language test score of 25 (new SAT 1600 scale); or ENGL 098 or ENGL 100 with a minimum grade of C; or a minimum TOEFL English score of 55; or a minimum TOEFL iBT or PDT Writing score of 24) and (minimum ACT Reading score of 17; or SAT Reading score of 430 (old SAT 2400 scale) or SAT Reading test score of 24 (new SAT 1600 scale); or a minimum TOEFL Reading score of 55; or a minimum TOEFL iBT or PDT Reading score of 22; or ENGL 103 taken concurrently or completed with a minimum grade of C).

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 212 Writing for Scholarly Audiences**3**

Prerequisites: ENGL 110 with minimum grade of C; a minimum ACT Reading score of 17 or an SAT Reading score of 430 (old SAT 2400 scale) or SAT Reading test score of 24 (new SAT 1600 scale) or a minimum TOEFL Reading score of 55 or a minimum TOEFL iBT or PDT Reading score of 22 or ENGL 103 with a minimum grade of C; and Sophomore standing.

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 information literacy as well as to various styles of documentation. *Fall/spring semesters.*

ENGL 271 History of the English Language**3**

Prerequisite: ENGL 212

Introduces the student to the origin, history, and development of the English language including morphemes, phonemes, parts of speech, and basic diagramming. *Fall semester, even years.*

ENGL 272 Grammatical Systems**3**

Prerequisite: ENGL 212

Introduces the student to various grammatical systems, including structuralism, transformational grammar, and prescriptive grammar for writing formal documents. *Spring semester, odd years.*

ENGL 378 Technical Writing and Grant Proposals (WR) 3*Prerequisite: ENGL 212*

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, even years.*

ENGL 379 Creative Writing (WR) 3*Prerequisite: ENGL 212*

Focuses on the writing of short creative narratives, dramatic scripts, and poetry. *Spring semester, odd 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 I 2

Engineering communications with emphasis on problem solving skills, graphic techniques, engineering sketching and drafting practices including descriptive geometry and an introduction to Computer Aided Design (CAD). *Fall semester.*

ENGR 112 Introduction to Engineering II 2*Prerequisite: ENGR 111 or permission of instructor*

Continuation of ENGR 111. Includes a study of elementary engineering mechanics, electric circuits, energy concepts, the design process, elements of professional engineering and advanced CAD. *Spring semester.*

ENGR 211 Statics 3*Prerequisite: MATH 184*

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*

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, Ohm's and Kirchhoff's law, circuit equations, AC steady-state analysis, and frequency characteristics. Three lectures and one three-hour laboratory per week. *Fall semester.*

Finance

FNCE 215 Personal Finance 3

Prerequisite: Sophomore standing

Emphasizes 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, and retirement planning. *Fall semester.*

FNCE 325 Business Finance 3

Prerequisites: ACCT 212, MATH 100 or higher with a minimum grade of C or math ACT of 20 or higher

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 211, ECON 235 or 236, ENGL 212

A study of capital markets and financial institutions such as banks, thrifts and insurance companies. The study of capital markets focuses on understanding a wide range of instruments available for financing, investing, and controlling risk. *Fall semester.*

FNCE 332 Investments 3

A study of investment alternatives and investment objectives for the individual. Major types of investments studied in detail include stocks, bonds, money market instruments, mutual funds, and tax-sheltered investments. Approaches studied and contrasted for the review of equities include an analysis of company fundamentals and broad market indicators, as well as an examination of mathematical models. Tools and methodologies employed include an analysis of risk and return, time value of money, online sources, asset allocation and portfolio management. *Spring semester.*

FNCE 370 International Finance 3

Prerequisite: ENGL 212

Recommended: ACCT 212 and ECON 236

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.*

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. *Fall semester.*

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.*

Graphic Design

GRPH 150 Introduction to Graphic Arts 3

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 InDesign applications to create corporate logos, business materials, photo collages and print projects. *Fall/spring semesters.*

GRPH 175 Graphic Design Seminar .5

First in a series of courses designed to guide graphic design 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 GRPH 275, 375 and 475. *Spring semester.*

GRPH 210 Page Layout 3

Prerequisite: GRPH 150 or permission of instructor

Reviews fundamental skills and stresses intermediate and advanced skills using computer-based page layout software 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, odd 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, even years.*

GRPH 252 Computer Design 3

Prerequisite: GRPH 150 or permission of instructor

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, odd years.*

GRPH 254 Publication Design 3

Prerequisite: GRPH 150

Further study of design principles and page layout software. Includes production of print projects such as programs, brochures, magazine spreads and newsletters. *Spring semester.*

GRPH 275 Graphic Design Seminar .5

See GRPH 175 for description. *Spring semester.*

GRPH 301 Web Design 3

Prerequisite: CPTR 245 or permission of instructor

Introduction to the visual design and management of web sites. Includes the basics of site set up, user-centered design and integration of rich media. *Spring semester, odd years.*

GRPH 330 Digital Illustration 3

Prerequisites: ART 105 and GRPH 150

A study of intermediate to advanced digital illustration techniques, with an emphasis on the creation of vector graphics for a variety of design applications. Included is an introduction to digital scanners and pen tablets.

Spring semester, even years.

GRPH 350 History of Graphic 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, even 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, even years.*

GRPH 375 Graphic Design Seminar 0.5

See GRPH 175 for description. *Spring semester.*

GRPH 401 Interactive Web Design 3

Prerequisites: CPTR 245, GRPH 301 or permission of instructor

This course teaches the principles of user interaction design and how to apply them to the web using HTML, CSS, and JavaScript. Students will gain experience designing, testing, and developing highly interactive websites and web applications. *Fall semester, odd 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, even years.*

GRPH 475 Graphic Design Seminar .5

See GRPH 175 for description. *Spring semester.*

Health and Human Performance Activity

HHPA credits may be repeated for additional credit with permission of instructor.

HHPA 116 Leisure and Recreational Activities 1

Provides instruction as well as participation in selected leisure and recreational activities. *Fall semester, odd 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, odd years.*

HHPA 137 Gymnastics for Everyone |

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. *Scheduled as needed.*

HHPA 145 Beginning Badminton |

Instruction and practice of the fundamental skills and techniques essential for successfully playing badminton. Students provide their own equipment. *Fall/spring semesters.*

HHPA 146 Beginning Pickleball |

Instruction and practice of the fundamental skills and techniques essential for successfully playing Pickleball. Students provide their own equipment. *Fall/spring semesters.*

HHPA 147 Beginning Tennis |

Instruction and practice in the fundamental skills involved in playing tennis. Students provide their own equipment. *Scheduled as needed.*

HHPA 149 Beginning Golf (Fee) |

Instruction and practice in the skills essential to playing golf. Expenses in addition to tuition are necessary for greens fees. Students provide their own equipment. *Fall semester.*

HHPA 151 Beginning Volleyball |

Instruction and practice of basic skills for volleyball team participation. *Scheduled as needed.*

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. May not be repeated for additional credit. Laboratory required. *Fall/spring semesters.*

HHPA 210 Swimming |

Basic instruction in the six swimming strokes, treading water, turns, surface dives and other skills in the Red Cross Program. *Fall/spring semester.*

HHPA 216 Lifeguard Training |

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 219 Water Safety Instruction |

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.*

HHPA 220 Healthy Eating and Fitness |

Prerequisite: HHPA 155

A comprehensive approach to weight loss that focuses on healthy eating, physical activity and exercise. Students will learn a simple, fun, whole-diet approach that shows how to make gradual changes to improve healthy living. *Scheduled as needed.*

HHPA 235 Weight Training and Physical Conditioning |

Designed to give instruction for knowledge and experience in weight training relative to total fitness.

Fall/spring semesters.

HHPA 242 Cardio Fitness |

The emphasis is cardiovascular exercise in a variety of formats and includes instruction on proper warm up, cool down, heart rate monitoring, and stretching. *Scheduled as needed.*

HHPA 249 Fitness Walking |

Designed to assist walkers of any age, background, or fitness level to acquire the knowledge, skills, and attitudes necessary for participation in a lifelong program of fitness walking. *Scheduled as needed.*

HHPA 250 Running for Fitness |

Designed to increase cardiovascular fitness and a practical knowledge of the healthy benefits of running as a lifestyle. *Fall/spring semesters.*

Health and Human Performance Theory

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. *Fall semester.*

HHPT 216 Athletic Injuries 3

Focuses on skills for the treatment and care of athletic and recreational injuries. *Spring semester.*

HHPT 235 Principles of Sports Officiating I 1.5

Prerequisite: Permission of 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, even years.*

HHPT 236 Principles of Sports Officiating II**1.5***Prerequisite: HHPT 235 or permission of 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, odd 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 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, odd years.*

HHPT 326 Team Activities**2***Prerequisite: Permission of 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, odd years.*

HHPT 329 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 are included. This course requires ten (10) hours of field-based experience. *Fall semester, odd years.*

HHPT 335 Administration of Intramural Sports**1.5**

Designed to provide instruction and develop skills necessary to administer a successful intramural program. Laboratory experience required in administering, supervising and officiating intramural sports activities. *Spring semester, even years.*

HHPT 337 Gymnastics for Teachers**1***Prerequisite: HHPA 137 or permission of 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, odd 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, even years.*

HHPT 345 Sports Nutrition**2***Prerequisites: BIOL 111, 112*

Examines the interrelationships among nutrition, health, and exercise performance. General principles include: eating disorders, weight management, hydration, and ingested ergogenic aids, all of which are common among physically active individuals. *Fall semester, odd years.*

HHPT 350 Practicum**1***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. *Fall/spring semesters.*

HHPT 351 Practicum**1***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. *Fall/spring semesters.*

HHPT 356 Physiology of Exercise**3***Prerequisites: BIOL 111, 112*

Covers training, sedentary lifestyle and the study of the physiological factors related to human movement. *Fall semester, odd years.*

HHPT 357 Motor Learning (WR)**3***Prerequisites: BIOL 111, 112*

Covers neurological and psychological factors affecting the learning of movement skills. *Spring semester, odd years.*

HHPT 360 Biomechanics/Kinesiology**3***Prerequisites: BIOL 111, 112, MATH 111 or above*

Designed so the student may learn and apply the anatomical and mechanical principles relative to human movement. *Spring semester, even 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, even 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, even years.*

HHPT 437 Measurement and Evaluation in HHP (WR) 2*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, even years.*

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, even years.*

HHPT 485 Seminar in Health and Human Performance I

A study of health and human performance from a cultural perspective-past and present. *Spring semester.*

HHPT 486 Senior Capstone (WR) I

All Health and Human Performance and Exercise Science 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. *Spring semester.*

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 145 Varsity Sports I 0.5

Intercollegiate golf (men) and intercollegiate volleyball (women). Registration must be concurrent with participation on intercollegiate team. Credit available either semester but not both. Graded CR/NC. *Fall/spring semesters.*

HHPV 170 Varsity Sports II I

Intercollegiate basketball and college gymnastics team. Registration must be concurrent with participation on intercollegiate team. Credit available either semester but not both. Graded CR/NC. *Fall/spring semesters.*

History

HIST 157 The West in the World 3

Deals topically with the interactions and unique contributions of Europe, Asia, the Americas, and Africa in the shaping of the modern world from the late middle ages to the present day. Students are also introduced to the problems facing the historian who studies the past of various peoples and cultures. *Fall/spring semesters.*

HIST 220 World Antiquity 3*Prerequisite: HIST 157*

Introduction to the birth of civilizations in Mesopotamia, Egypt, and India and the development of classical Greece and Rome with special emphasis on the development of biblical civilizations. *Spring semester, odd years.*

HIST 255 The U.S.: From Discovery to Civil War 3

American history from the 1500s to 1850s including the discoveries, colonization, and struggle for independence, growth of slavery, expansion, and the years leading to the Civil War. *Fall semester.*

HIST/PLSC 258 Africa's Global Emergence 3

Recommended: ENGL 212

Focuses on the political relevance of the African continent in global affairs, particularly during the wars of colonization, World Wars I and II, the Cold War, and the present global war on terror. *Fall semester, odd years.*

HIST/PLSC 260 Latin America and the Caribbean 3

Recommended: ENGL 212

The politics and history of Central and South America and the Caribbean from the era of the Monroe Doctrine (c. 1823) to the present-day. *Fall semester.*

HIST/PLSC 346 Russia in Global Politics 3

This course reviews and analyzes the place of Russia in modern global affairs, especially U.S.-Russian geopolitical cooperation and contests from the Soviet era into present-day politics under Putin. *Spring semester, odd years.*

HIST 349 Medieval Europe (WR) 3

Prerequisite: HIST 157

Studies major institutional, intellectual, political, and economic developments in Europe between the fall of Rome and the Renaissance. *Fall semester, odd years.*

HIST 378 Early Modern Europe (WR) 3

Prerequisite: HIST 157

Examines the Early Modern Atlantic world including the political culture of Renaissance Italy and the Protestant Reformation as well as the age of exploration, piracy, and Atlantic slavery. *Spring semester, even years.*

HIST 380 The U.S.: Crisis, Consolidation, and Expansion 3

Prerequisite: ENGL 212

Studies the causes of the Civil War, the institution of slavery and emancipation, and the settler expansion and industrialization into the American frontier. *Spring semester.*

HIST/PLSC 383 The North Atlantic: War and Peace 1900s 3

Prerequisites: ENGL 212, HIST 157

Focuses on the United States and Europe during the turbulent period of the World Wars, the Holocaust, the Civil Rights movement, and the Cold War. *Spring semester.*

HIST 386 Economic History of the United States 3

Prerequisite: ENGL 212

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, odd years.*

HIST/PLSC 392 The Modern Middle East**3***Prerequisite: ENGL 212*

The history and the politics of the modern Middle East, from the Tanzimat period of the Ottoman Empire to the present period. Analysis of the various past and present conflicts in the Middle East. *Spring semester.*

HIST 401 Europe: 1789-1914 (WR)**3***Prerequisite: HIST 157*

Studies the political, economic, social, and cultural developments in Europe from the French Revolution to World War I. *Fall semester, even years.*

HIST/PLSC 430 Global Instability and Migrations**3***Prerequisite: ENGL 212*

Focuses on the history of internal and international migrations and their effects as mitigating critical resources—water, employment, arable land, etc. – and also as critical determining factors of political instability with various countries. *Fall semester, even years.*

HIST 450 American History: The 20th Century**3**

Focuses on the major and critical historical movements and events of the United States within the 20th Century. Reviews the historical developments that helped to define the United States from World Wars I and II to the onset of the George W. Bush presidency. *Fall semester, odd years.*

HIST/PLSC 465 The U.S. War on Terror**3***Prerequisite: ENGL 212*

The recent U.S. and global politics surrounding the commencement of the U.S. war on terror in 2001 until the present-day. *Fall semester, even years.*

HIST 497 Historiography (WR)**3***Prerequisites: HIST 157, ENGL 212, permission of instructor*

Research course for history and social science majors and minors. Includes historical schools of thought with special attention to method, research, and preparation of a paper. *Fall semester.*

Human Development

HMDV 265 Research Writing**1***Prerequisite: Human Development Division majors only*

This class introduces students to elements of research writing using the format and style from the Publication Manual of the American Psychological Association. Students will be exposed to writing varying types of papers including empirical studies, literature reviews and theoretical papers. They will apply the principles in writing a paper for a class in their discipline. *Spring semester.*

Humanities

HMNT 205 History of Popular Music in the US 2

Traces the history of pop music from its roots in folk music of various countries through country, western, bluegrass, big band, blues, bebop, the various Sun Records sounds, pre-Beatle British pop, skiffle, folk, the British Invasion, and other genres. Focuses on how the genres have reflected and helped shape global cultures today. Areas include neighboring through the music of labor, the various wars, communities, understanding others' "Englishes," environment, transportation, gender, dress, hairstyles, humor, etc. *Spring semester, even years.*

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 antiquity to 1900 A.D. *Fall semester.*

HMNT 332 Historical Issues in Leadership 2

An introduction to famous and infamous historical leaders. Students will be encouraged to develop their own leadership styles in dialogue with leaders and events of world history. *Spring semester.*

HMNT 376 Critiquing Film in a Global Context 3

Prerequisite: permission of instructor

Applies critical thinking to help participants understand the language of film, become conversant with various genres of film, and gain an appreciation for the craft of film-making while transcending personal preference in making judgments about films, all within a global context. *Spring semester, odd years.*

Honors—Union Scholars

Registration for HONS courses requires either membership in the Honors program, or permission from the Honors director for a qualified student, as provided by the "Guest Registration" policy.

HONS 135 Fine Arts for Honors 3

Great works of art, architecture, drama and music are explored with a focus on the major elements, themes, and works and their significance in the context of their historical place in time. Field trip participation is essential. Team taught. *Fall semester.*

HONS 225 Reading Philosophers 3

Explores significant philosophical and aesthetic issues in Western civilization through reading works by major figures from classical times through the Enlightenment. Considers artistic creations from all eras. Requires disciplined reflection in discussion and writing. Involves individual and team presentations as well as small and large group discussions. Field trips and cultural events enrich the classwork. *Fall semester, even years.*

HONS 260 Romans in Context 3

An intensive study of Paul's Epistle to the Romans within its sociocultural context that includes interpretation by the initial readers, and theological interpretation of Romans in relation to the contemporary world. Students make presentations and write research papers on issues related to the Pauline Epistles and Romans. *Spring semester.*

HONS 271 Civic Virtue, Politics & Christian Values 3

What are Christian responses to a country and world torn by conflicts between the ideas of conservatism, liberalism (in the American sense), religious extremism and populism? This seminar investigates the core ideas of each of these groups, the conflicts between them, and the variety of Christian responses. *Spring semester, even years.*

HONS 275 Theism, Modernity, and Post-Modernism 3

The ideas and thinkers that transformed Western society since the Renaissance and Reformation, culminating in today's post-modernism. Involves reading, discussion, and short papers. *Fall semester, odd years.*

HONS 289 Initial Disciplinary Research 1

This registration provides the opportunity to develop honors-quality research on a topic within a given major's course, which will be supervised by a faculty member. Students are expected to gain experience in selecting an appropriate research topic, discovering appropriate sources and methods, and demonstrating use of the discipline's conventions. A medium-length paper required. *Scheduled as needed.*

HONS 325 Science and Religion (WR) 3

Prerequisite: Junior standing

Explores the nature of scientific inquiry, the history of scientific thought around the globe, and the relationship between science and religion in various cultures. *Spring semester.*

HONS 345 The Global Environment 3

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. *Fall semester.*

HONS 370 Living as a Christian Professional 1

Intended for individuals who desire to live a moral life, in this course students will study and discuss the challenges and opportunities that Christian professionals face in their daily lives, primarily within the working environment. It includes an analysis of each individual's values and traits, and will be guided by a Christian professional. The field of emphasis may change from year to year (e.g., business, health, education, or other field). *Fall semester.*

HONS 389 Disciplinary Research 1

Prerequisite: ENGL 212 and Junior standing or permission of Honors director

This registration provides supervised research at a more advanced level than HONS 289, including a more extended literature review and more extensive research. May be repeated. *Scheduled as needed.*

HONS 391 Personal Achievement Project 1

Prerequisite: Permission of the Honors director

An optional registration for Scholars who wish to earn academic credit for their personal projects. Requirements are available at the Honors office. *Scheduled as needed.*

HONS 395 Honors International Study Tour

3

Prerequisite: Junior standing or permission of instructor

Scholars travel with their peers to international locations chosen for their importance in developing a cross-cultural perspective and understanding of particular societies' cultures and values. Selected topics from artistic, historical, literary, socio-economic, political or other elements perspectives will be emphasized. Regular tuition plus supplemental charges. *Summer, even years.*

HONS 398 Research Methods

2

Essential elements of research methods, primarily in the social sciences, and preparation of the Honors thesis proposal. Expectations for the thesis 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 Honors Program Advisory Committee. May be replaced by equivalent disciplinary courses. *Fall semester.*

HONS 498 Honors Thesis

1-2

Students conduct independent research, produce a creative project, or solve a problem typically within their major field under the primary supervision of a professor in that discipline and with the additional support of two advisors. The thesis culminates in a public presentation, and the research paper is filed in the Honors Program and in the Ella Johnson Crandall Memorial Library. May be replaced by designated disciplinary courses. May be repeated for additional credit. *Fall/spring semesters.*

HONS 499 Capstone

1

Prerequisite: HONS 498 or equivalent

The final Honors registration recognizes the scholar's accomplishments in both scholarship and the personal project. It includes submission of an approved project report, the thesis abstract, and the completed thesis. It culminates when the scholar displays the research at the poster session and communicates the findings at the formal research presentation. *Fall/spring semesters, as needed.*

International Rescue and Relief

Certificate courses are identified in course descriptions.

INRR 100 Emergency Medical Technician

7

Prerequisites: Completion of criminal background check, annual TB test, hepatitis B vaccine, and current influenza vaccine; current American Heart Association Heart Code BLS CPR certification and instructor permission.

Prepares students to deliver basic emergency care and transportation to patients at the scene of an accident or medical emergency. Emphasizes patient exam, assessment, and treatment; accurate observation, evaluation of emergency situations, effective communications with the medical network, scene safety, critical thinking, and high skill proficiency. After successful completion of the course, students are eligible to take the national registry certification examinations from the National Registry of Emergency Medical Technicians (NREMT). Certificate course. *Spring semester.*

INRR 105 Principles of Emergency Management

3

An overview of the major principles vital to emergency responders that includes mitigation, preparedness, response, and recovery. This class primarily focuses on the basics of emergency management related to response. Also includes the role of major stakeholders, response agencies, and the components of an effective emergency response organization. (Previously INRR 210) *Fall semester.*

INRR 110 Search and Rescue**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 wilderness search and rescue missions. The course provides opportunities for skill development in practical search missions. The course provides instruction in three main areas: survival and support, search, and rescue. Certificate course. *Summer.*

INRR 112 Swift Water Rescue and Flood Management**1***Prerequisite: INRR 100, or permission of instructor*

The course meets NFPA 1670 and 1006 standards for swift 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 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 I-VI whitewater, raising/lowering systems, a Search and Rescue (SAR) night scenario, and other subjects. Certificate course. *Summer.*

INRR 114 Technical Rope Rescue**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. TRR meets NFPA 1670 standards. Certificate course. *Summer.*

INRR 116 Basic Survival**1***Prerequisite: INRR 100, or permission of instructor*

Instructs and trains students to: prioritize the 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 natural aides. Certificate course. *Summer.*

INRR 202 Advanced Emergency Medical Technician**4***Prerequisites: INRR 100, current NREMT Certification, current American Heart Association Heart Code BLS CPR certification.*

Instructs and trains students in state approved supraglottic advanced airway management, intravenous (IV) administration and management. This course also includes Pre-Hospital Trauma Life Support (PHTLS) certification, a program designed to reduce death and disability for patients who suffer traumatic injuries such as accidents, drowning, and other injury related illnesses. Certificate course. *Fall semester.*

INRR 205 Disaster Management**3***Prerequisite: INRR 105, or permission of instructor*

Explores and researches current concepts of disaster management. An emphasis is placed on recovery needs, covering natural and man-made disasters, and acts of terrorism. Students explore the roles of the local, state and federal agencies during disasters and mass casualty events. *Spring semester.*

INRR/SOCI 300 Social Dimensions of Disaster**3**

Explores how broad concepts such as social conflict and social inequality are manifested in disasters throughout the world. Topics include demographics and disaster behavior distinctions, disaster culture, individual versus group response to disasters, and the link between social vulnerability and sustainable development. More broadly, students will examine the relationship between the social sciences and public policies in emergency management. (Previously INRR 220.) Certificate course. *Fall semester.*

INRR 310 Clinical & Emergency Care I**3**

Prerequisites: BIOL 106, 111, or 151, INRR 100, 110, 112, 114, 116, 202, current NREMT Certification, Nebraska State EMT License, current American Heart Association Heart Code BLS CPR certification or permission of instructor

Part one of medical care for those in rural communities, developing nations, disaster situations or other austere situations. Students learn how to treat patients when there are limited medical supplies and resources available. To prepare students for their overseas semester, they are taught suturing, basic pharmacology, women's health, village healthcare, prevention, and holistic treatment modalities. In addition, students are prepared for the cultural, social and political realities of overseas travel and the country where they will be stationed. *Fall semester.*

INRR 311 Clinical & Emergency Care II**3**

Prerequisite: INRR 310, or permission of instructor

The second part of clinical and 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. Classes will include lecture and didactic components with possible clinical experiences in primary care, medical emergencies, wound and fracture management, pediatric care, obstetrics and medical administration. Overseas—*Spring semester.*

INRR 312 Development, Logistics and Analytics**3**

Prerequisite: INRR 482, Global Community Development Emphases and permission of instructor

This class will focus primarily on the Implementation and ongoing assessment of projects running in the field. Those able to plan and carry out the mechanics of clinics and information evaluation and analysis will be able to successfully run and operate either humanitarian responses or long term development projects. The logistics that go into making everything run smoothly and according to plan is a full time job. Similarly, being able to gather pertinent information and analyze the findings appropriately help ensure the highest quality projects are being implemented in the community. Overseas—*Spring semester.*

INRR 316 Jungle, Coastal and Ocean Survival**1**

Prerequisite: INRR 482

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.

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. The experience includes not only testing of physical limits but also mental and emotional limits. Students will not only learn practical use of signaling devices, rationing of food and water, but how to survive together as a team using their skills, experience, and wits to thrive during a grueling 24 hours anchored at sea.

Overseas—*Spring semester.*

INRR 321 Global Health**3**

Prerequisite: INRR 482

Topics include: assessing local health needs and conditions; recognition and treatment of diseases; prevention of the spread of disease; developing and implementing strategies to improve health (nutrition, hygiene, water purification, waste control and safe living conditions); environmental toxicology. Overseas—*Spring semester.*

INRR 330 Travel and Tropical Medicine**3***Prerequisite: INRR 482*

This class 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 405-425

These online courses are offered in partnership with Southern Adventist University helping students become familiar with the core issues in preparing for deployment in global community development and relief. This series of courses is part of rotation 1 towards a Master of Science in Global Community Development. (Extra fee- \$150 per credit hour) *Fall, Spring, and Summer*.

INRR 405 Foundations of Christian Values and Witness in Dev./Relief	2
INRR 410 Theories of Global Community Development/Relief	2
INRR 415 Principles of Development Entrepreneurship	2
INRR 420 Techniques for Project Planning and Capacity Building	2
INRR 425 Methods of Scholarship in Development / Relief	2

INRR 430 Expeditionary Leadership**3***Prerequisite: INRR 482*

This class will focus on helping students understand their own unique leadership style. As a leader it is imperative to be aware of your strengths as well as your weaknesses in order to be most effective. Students will be exposed to some of the intricacies of being a leader through practical and hands on experience. Students will be given the opportunity to take charge of planning and implementing portions of the trip, such as planning travel, being responsible for schedules and timelines, being aware of group dynamics and being responsible for group morale. Overseas—*Spring semester*.

INRR 482 Development and Project Implementation (WR)**3***Prerequisite: Junior or Senior standing*

This class examines the skills and tools needed to adjust to life and work in a development or humanitarian aid project. Cultural sensitivity and integration is emphasized in the context of sensible, sustainable development. Students are tasked with developing critical thinking skills in the project management cycle from the conception to evaluation stages. *Fall semester*.

INRR 483 Cultural Perspectives in Development (WR)**3**

A class that examines the skills and tools needed to adjust to life and work in a developing country. Cultural sensitivity and integration is emphasized in the context of sensible, sustainable development. Students are asked to examine critical shifts between their primary cultural perspective and the social dynamics of cultures around the world. Being informed about a country and its history helps to encourage understanding of that culture. We will be exploring the history of Nicaragua in order to prepare students, in a practical manner, for the overseas semester. *Fall semester*.

Foreign Language Studies

LANG 485 Research in a Foreign Culture and Language**2**

Students conduct independent research in the culture, language, and/or history of the region of their Adventist Colleges Abroad experience. The final product is a paper that incorporates the foreign language in which the student is majoring to a significant degree. *Fall semester*.

Leadership

LEAD 225 Creative Leadership 3

Through the study of personal assessments and major leadership models, students will understand their personal leadership strengths and incorporate them into a personal philosophy of leadership. They will develop a personal leadership portfolio, complete a citizen leadership project, and complete a servant leadership project as a group. *Fall/spring semesters.*

LEAD 245 Leadership Cohort I

Prerequisite: LEAD 225

Cohort members develop leadership skills by reading leadership literature, discussing leadership issues and visiting local leaders. Credit/No Credit. *Fall/spring semesters.*

LEAD 345 Leadership Cohort I

Prerequisite: LEAD 245

Cohort members develop leadership skills by reading leadership literature, discussing leadership issues and visiting local leaders. Credit/No Credit. *Fall/spring semesters.*

LEAD 350 Leadership Perspectives in History 2

The leadership styles of significant men and women in history will be the backdrop for a deeper understanding of leadership. Students will become familiar with the way these leaders shaped history, and the pitfalls and triumphs of these leaders. *Fall semester.*

LEAD 425 Experiences in Leadership 3

Prerequisite: LEAD 225

Based on leadership theories and models, students will apply their knowledge in group and individual leadership projects. They will test one model in a leadership situation and participate in a leadership experience. Previous experiences have varied, including an extended canoe trip, visits with political leaders in Washington D.C., and service projects. *Summer.*

Literature

LITR 231 Ancient Western Literature 3

A chronological approach to major works of literature influencing Western culture from major genres. The course covers the ancient Greek and Roman worlds through the Renaissance. A chief aim is the appreciation and enjoyment of various cultures. Either this class or LITR 232 will meet the general education requirement for educational certification. *Fall/spring semesters.*

LITR 232 Modern Western Literature 3

A chronological approach to major works of literature influencing Western culture from major genres. The course covers the seventeenth century through today including non-U.S. Western Hemisphere. Either this class or LITR 231 will meet the general education requirement for educational certification. *Spring semester.*

LITR 240 Travel Literature**3***Prerequisite: Permission of instructor*

Explores texts that reveal authors in relation to an environment that is foreign. Activities include close reading of texts, thinking about, discussing, and writing about those texts with attention to genre, historical period, and employment of various literary techniques. Offered as part of Central America Study Tour (tour application and fees apply). *Summer, odd years.*

LITR 299 Seminar in Non-Western Literature**3**

An overview of major non-Western writers, including African, Indian, Chinese, Japanese, Middle Eastern, et al. Encouraged for students interested in international service. *Fall semester, even years.*

LITR 345 Studies in Early American Literature (WR)**3***Prerequisites: ENGL 212 and LITR 231, 232, or 299, or permission of instructor*

Configuration varies each time the course is offered, with alternate concentration on the Colonial (1620-1820) or the Romantic Period (1820-1865). Recommended for students with some experience in literature. May be repeated for credit with permission of instructor. *Spring semester, even years.*

LITR 348 Studies in British Literature (WR)**3***Prerequisites: ENGL 212 and LITR 231, 232, or 299, or permission of 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, odd years.*

LITR 352 Women and Minority Writers (WR)**3***Prerequisites: ENGL 212 and LITR 231, 232, or 299, or permission of instructor*

A consideration and evaluation of works by women and minority writers in the US from the eighteenth century to the present in conjunction with an overview of feminist and minority critical stances. *Fall semester, odd years.*

LITR/RELB 366 Biblical Literature (WR)**3***Prerequisites: ENGL 212 and LITR 231, 232, or 299, or permission of 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 LITR or RELB general education requirements but not both. *Fall semester, even years.*

LITR 436 Studies in American Literature (WR)**3***Prerequisites: ENGL 212 and LITR 231, 232, or 299, or permission of instructor*

A consideration and evaluation of significant literary works of American Realism, Naturalism, and Modernism, Post-Civil War through the twentieth century. Recommended for students with some experience in literature. *Fall semester, even years.*

LITR 440 Travel Literature (WR)**3***Prerequisites: ENGL 212 and LITR 231, 232, or 299, and permission of instructor*

Explores texts that reveal authors in relation to an environment that is foreign. Activities include close reading of texts, thinking about, discussing, and writing about those texts with attention to genre, historical period, and employment of various literary techniques. Readings in critical theory are also assigned. Offered as part of Central America Study Tour (tour application and fees apply). *Summer, odd years.*

LITR 445 Early British Literature (WR)

3

Prerequisites: ENGL 212 and LITR 231, 232, or 299, or permission of 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. *Spring semester, odd years.*

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. 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: When a MATH course that is higher in a sequence has been passed with a grade of a C or above, that course will meet the requirements of a lower MATH course in the same sequence. No credit will be given for taking a lower course in the sequence after a higher course has been passed with a grade of C or above. MATH 017, 100, 111, and 119 are a sequence; MATH 184, 285, and 286 are a sequence; and MATH 221 and 331 are a sequence.

Courses numbered below 100 are considered developmental and do not count toward the 124 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, 119 or 221. *Fall semester.*

MATH 100 Intermediate Algebra

3

Prerequisites: One year of high school algebra and an ACT math score of 16 (SAT Math score of 380 (old SAT 2400 scale) or SAT Math score of 420 (new SAT 1600 scale)), or UC ALEKS test score of 30, or completion of MATH 017

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 Math score of 480 (old SAT 2400 scale) or SAT Math score of 510 (new SAT 1600 scale)), or UC ALEKS test score of 46, 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-84 (highly recommended) or other graphing calculator with comparable features is required for this course. Does not apply toward a mathematics major or minor. *Fall/spring semesters.*

MATH 117 College Algebra Concise**2**

Prerequisites: Two years of high school algebra and an ACT math score of 20 (SAT Math score of 480 (old SAT 2400 scale) or SAT Math score of 510 (new SAT 1600 scale)), or UC ALEKS test score of 46, or MATH 100

Corequisite: MATH 119

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-84 (highly recommended) or other graphing calculator with comparable features is required for this course. Does not apply toward a mathematics major or minor. *Fall semester.*

MATH 119 Trigonometry**3**

Prerequisites: Two years of high school algebra and a year of high school geometry and an ACT math score of 22 (SAT Math score of 520 (old SAT 2400 scale) or SAT Math score of 550 (new SAT 1600 scale)), or UC ALEKS test score of 55, or MATH 111, or MATH 117 taken concurrently

Study of the identities and applications of trigonometry, including definitions of the six trigonometric functions, the unit circle, reciprocal identities, Pythagorean identities, reduction formulas, sum and difference formulas, the laws of sines and cosines, and other trigonometric topics typically covered in standard trigonometry classes. A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Fall semester.*

MATH 184 Calculus I**4**

Prerequisites: MATH 121, or MATH 119, or both of the following: ACT math score of 25 with UC ALEKS test score of 76.

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-84 (highly recommended) or other graphing 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 Math score of 480 (old SAT 2400 scale) or SAT Math score of 510 (new SAT 1600 scale)), or UC ALEKS test score of 46 or MATH 100

Explores basic frequency distributions, probability, sampling, estimations, testing hypotheses, correlation, regression, chi-square and analysis of variance. A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. Does not apply toward a mathematics major or minor. *Fall/spring semesters and summer.*

MATH 240 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 covers infinite processes, continuous change, and intervals of real numbers. A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Fall semester.*³¹

MATH 285 Calculus II**4**

Prerequisite: 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. A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Fall semester.*

³¹ Course may have additional availability. Talk with a math professor for details.

MATH 286 Calculus III**4***Prerequisite: MATH 285*

Continuation of the Calculus sequence. Includes multivariable functions, partial derivatives, multiple integrals, vector differential operators, line integrals and Green's theorem. A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Spring semester.*

MATH 320 Mathematical Concepts for Elementary School Teachers**3***Prerequisite: MATH 111 or UC ALEKS test score of 61**Corequisite: EDUC 345*

Builds upon previous mathematics courses as well as classroom observation. Standards for mathematics published by the National Council of Teachers of Mathematics (NCTM) form the basis for the selection of topics: number, operations, and elementary algebra. This course is directed toward thorough comprehension of elementary mathematics and interconnections among mathematical ideas and grade levels. Cooperative learning teams prepare, present, and critically reflect on lessons—to guarantee their students will gain in-depth understanding of mathematics. *Fall semester.*

MATH 331 Statistics and Probability**4***Corequisite: 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). A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Fall semester, even years.*³²

MATH 335 Exam P Prep**3***Prerequisite: MATH 331*

A preparatory class for Society of Actuaries' Exam P – Probability. Develops knowledge of the fundamental probability tools for quantitatively assessing risk. Furthermore, the use of these tools in actuarial science applications is highly emphasized. *Spring semester, even years.*³²

MATH 351 Abstract Algebra**3***Prerequisite: MATH 240*

Introduction to the basic concepts of abstract algebra presenting the elements of the theory of number systems, groups, fields, etc. *Spring semester, even years.*³²

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-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Spring semester.*

³² Course may have additional availability. Talk with a math professor for details.

MATH 360 History of Mathematics (WR)**3***Prerequisites: MATH 184, ENGL 212*

A brief history of the origins of current mathematical practices. Topics may include an introduction to primitive number systems, the origins of our current mathematical notation systems, and key mathematical discoveries in their historical contexts. *Spring semester, odd years.*³³

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, odd years.*³³

MATH 386 Partial Differential Equations**3***Prerequisite: MATH 385*

Partial differential equations, Fourier series, boundary value problems, Bessel functions, Legendre polynomials. *Fall semester, even years, as needed.*

MATH 40I 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. May be repeated for additional credit. *Summer, as needed.*

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. May be repeated for additional credit. *Summer, as needed.*

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. A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Fall semester, odd years.*³³

MATH 45I Mathematical Connections for Secondary Teachers**4***Prerequisites: EDUC 475 or 27 of the 36 MATH hours required for the BS in Mathematics Education or permission of instructor*

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. A TI-84 (highly recommended) or other graphing calculator with comparable features is required for this course. *Scheduled as needed.*

³³ Course may have additional availability. Talk with a math professor for details.

MATH 486 Numerical Analysis**3***Prerequisites: MATH 285, 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. *Scheduled as needed.*³⁴

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, even years.*³⁴

MATH 492 Complex Variables**3***Prerequisite: MATH 286*

An introduction to the theory of analytic functions of a complex variable, including mappings by elementary functions, complex integration, Cauchy's integral formula, power series, Laurent series, theory of residues and conformal mapping. *Spring semester, odd years.*³⁴

MATH 498 Mathematics Seminar**I***Prerequisite: Junior or Senior Mathematics major (BS, BA, or Education) in good standing*

A series of topics not necessarily covered in other mathematics classes offered at Union College. Topics will vary from year to year, but may include introduction to number theory, topology, ring theory, use of Mathematica and/or Maple, game theory. *Scheduled as needed.*³⁴

MATH 499 Mathematics Seminar**I***Prerequisite: Junior or Senior Mathematics major (BS, BA, or Education) in good standing*

A continuation of MATH 498. *Scheduled as needed.*³⁴

Marketing

MRKT 327 Marketing (WR)**3***Prerequisite: ENGL 110*

A general survey of major marketing methods, institutions and practices, and their effects on producers and consumers. Students integrate marketing concepts through case study analysis and a business simulation. *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, even years.*

³⁴ Course may have additional availability. Talk with a math professor for details.

MRKT 443 Consumer Behavior**3**

Prerequisites: ENGL 212; MRKT 327 with a minimum grade of C or PSYC 105 with a minimum grade of C

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, odd years.*

MRKT 456 Marketing Research**3**

Prerequisites: COPR 241 or MRKT 327; ENGL 212

Focuses on planning investigations, gathering and interpreting data, and presenting findings in a professional manner. *Fall semester, odd years.*

Music Applications

MUAP 110 Introduction to Music Production and Technology**3**

An introduction to various music technologies and skills necessary for music production. Topics in technology include signal flow, microphones, digital/audio recording, midi sequencing, sound synthesis, and notation software. Production topics will cover basic chord progressions, song and lyric writing, and music marketing. Copyright, royalties, and music business will also be covered. See MUAP 310. Students may receive credit for both MUAP 110 and MUAP 310. *Fall semester.*

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, 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, 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. *Spring semester, 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, 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, as needed.*

MUAP 257 Woodwind Techniques and Materials |

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, as needed.*

MUAP 310 Introduction to Music Production and Technology |

See MUAP 110 for description. Students may receive credit for both MUAP 110 and MUAP 310. *Fall semester.*

Music Education

MUED 275 Music Practicum |

Prerequisite: Permission of supervising instructor

Teach private music lessons under the supervision of the instructor. Participate in other hands-on activities of a music teacher. Each hour of credit represents 45 clock hours of contact time. May be repeated for additional credit. *Scheduled as needed.*

MUED 307 Keyboard Pedagogy |

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. *Scheduled as needed.*

MUED 317 Instrumental Pedagogy |

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. *Scheduled as needed.*

MUED 327 Vocal Pedagogy |

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, as needed.*

MUED 347 Music in the Elementary School |

Prerequisite: EDUC 218 or 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 2

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 2

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. *Scheduled 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, even years.*

MUHL 352 Music History II (WR) 2

Prerequisite: Permission of instructor

Western music from late Renaissance through the Baroque period. *Spring semester, odd years.*

MUHL 353 Music History III (WR) 2

Prerequisite: Permission of instructor

A study of the Classical and early Romantic periods. *Fall semester, odd years.*

MUHL 354 Music History IV (WR) 2

Prerequisite: Permission of instructor

Music from the late Romantic period to the present, including an overview of jazz. *Spring semester, even years.*

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 music majors.

MUPF 101, 201, 301, 401 Voice	I-3
MUPF 105, 205, 305, 405 Flute	I-3
MUPF 106, 206, 306, 406 Oboe	I-3
MUPF 107, 207, 307, 407 Clarinet	I-3
MUPF 108, 208, 308, 408 Bassoon	I-3
MUPF 109, 209, 309, 409 Saxophone	I-3
MUPF 111, 211, 311, 411 Piano	I-3
MUPF 112, 212, 312, 412 Organ	I-3
MUPF 113, 213, 313, 413 Harpsichord	I-3
MUPF 114, 214, 314, 414 Harp	I-3
MUPF 115, 215, 315, 415 Trumpet	I-3
MUPF 116, 216, 316, 416 Horn	I-3
MUPF 117, 217, 317, 417 Euphonium (Baritone Horn)	I-3
MUPF 118, 218, 318, 418 Trombone	I-3
MUPF 119, 219, 319, 419 Tuba	I-3
MUPF 121, 221, 321, 421 Percussion	I-3
MUPF 125, 225, 325, 425 Violin	I-3
MUPF 126, 226, 326, 426 Viola	I-3
MUPF 127, 227, 327, 427 Cello	I-3
MUPF 128, 228, 328, 428 String Bass	I-3
MUPF 129, 229, 329, 429 Guitar	I-3
MUPF 130, 230, 330, 430 Composition	I-3
MUPF 131, 231, 331, 431 Theory	I-3

Band, Orchestra, Choir and Ensembles

May be repeated for additional credit. Fall/spring semesters.

Prerequisite: Permission of instructor

MUPF 175/375 Symphonic Concert Band	I
MUPF 176/376 Chamber Orchestra	I
MUPF 177/377 Chamber Choir	I
MUPF 185/385 Advanced Choir (Unionaires)	I
MUPF 191/391 Brass Ensemble (Brass Union)	I
MUPF 192/392 Guitar Ensemble	I
MUPF 193/393 Handbell Ensemble	I
MUPF 194/394 Keyboard Ensemble	I
MUPF 195/395 String Ensemble (Golden Cords)	I
MUPF 196/396 Vocal Ensemble	I
MUPF 197/397 Woodwind Ensemble	I

MUPF 257 Introduction to Conducting I

Prerequisite: Permission of instructor

Spring semester.

MUPF 266 English-Italian Diction I

Prerequisite: Permission of instructor

Fall semester, even years.

MUPF 267 German-French Diction I

Prerequisite: Permission of instructor

Spring semester, odd years.

MUPF 34I Choral Conducting |*Prerequisites: MUPF 257; permission of instructor**Spring semester, as needed.***MUPF 342 Instrumental Conducting** |*Prerequisites: MUPF 257; permission of instructor**Scheduled as needed.***MUPF 346 Service Playing** |*Prerequisite: Permission of instructor*The role of the organist in the church service; practical procedures. *Scheduled as needed.***MUPF 35I Junior Recital** |*Prerequisite: Permission of instructor***MUPF 45I Senior Recital** |*Prerequisites: MUTH 254 and permission of instructor*

Music Theory

MUTH 15I 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 16I Sight-Singing and Ear Training I** |*Corequisite: MUTH 151*Lab course to accompany Theory I. *Fall semester.***MUTH 162 Sight-Singing and Ear Training II** |*Prerequisite: MUTH 161**Corequisite: MUTH 152*Lab course to accompany Theory II. *Spring semester.***MUTH 163 Sight-Singing and Ear Training III** |*Prerequisite: MUTH 162**Corequisite: MUTH 253*Lab course to accompany Theory III. *Fall semester.*

MUTH 164 Sight-Singing and Ear Training IV **1**

Prerequisite: MUTH 163

Corequisite: MUTH 254

Lab course to accompany Theory IV. *Spring semester.*

MUTH 253 Theory III **3**

Prerequisites: MUTH 152, 162 with a minimum grade of C

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 with a minimum grade of C

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. *Scheduled as needed.*

MUTH 462 Introduction to Counterpoint **2**

Prerequisite: MUTH 254 or permission; MUHL 352 recommended

Introduction to contrapuntal procedures from the 18th century. *Fall semester, as needed.*

MUTH 465 Orchestration **2**

Prerequisite: MUTH 254

Spring semester, as needed.

Nursing

NURS 204 Introduction to Professional Nursing **3**

Prerequisites: Admission to the nursing program, and successful completion of prerequisite courses

Focuses on the role of the professional nurse in the current system of healthcare delivery. Sociological theories are included. Basic concepts of communication, safety, quality patient-centered care, and clinical judgment are introduced. *Fall/spring semesters.*

NURS 208 Fundamentals **6**

Prerequisites: Admission to the nursing program, and successful completion of prerequisite courses

Corequisite: NURS 305

Introduces basic psychomotor skills and other concepts of physiologic and psychosocial integrity. Nutritional concepts and basic medical terminology are included. Students provide safe care to one adult patient per clinical experience in a variety of healthcare settings. Withdrawal from NURS 305 requires withdrawal from NURS 208. *Fall/spring semesters.*

NURS 243 Evidence-Based Practice (WR)**3***Prerequisites: Admission to the nursing program, and successful completion of prerequisite courses**Corequisites: NURS 204, 208, 305*

Focuses on the process of evidence-based research and its relationship to the profession of nursing. Students learn the components of the research process and the basic concepts and terms associated with research. Emphasis is placed on evaluation of published research studies for use in evidence-based nursing practice. *Fall/spring semesters.*

NURS 305 Physical Assessment**3***Prerequisites: Admission to the nursing program, and successful completion of prerequisite courses**Corequisite: NURS 208*

Introduces skills, concepts, and medical terminology necessary to obtain a health history, perform a physical examination, and accurately document findings. Emphasis is placed on how to differentiate between normal and abnormal findings for patients of varying ages and cultural backgrounds. Withdrawal from NURS 305 requires withdrawal from NURS 208. *Fall/spring semesters.*

NURS 315 Pathophysiology & Pharmacology I**4***Prerequisites: NURS 208, 305, or permission of instructor**Corequisite: NURS 321*

Examines normal physiology and pathophysiologic responses that accompany commonly occurring acute and chronic illnesses. Discussion includes physiologic responses that begin at the cellular level and progress to individual and related organ systems. Pathophysiologic alterations to disease management and prevention to promote quality patient-centered care are included. The nursing application of pharmacokinetics, pharmacodynamics, and pharmacotherapeutics of drugs related to health promotion and treatment of disease processes is emphasized. Withdrawal from NURS 315 requires withdrawal from NURS 321. Fee applicable for non-nursing students. *Fall/spring semesters.*

NURS 316 Pathophysiology & Pharmacology II**3***Prerequisite: NURS 315 or permission of instructor**Corequisite: NURS 322*

Builds upon the concepts of Pathophysiology & Pharmacology I and continues the examination of normal physiology and the pathophysiologic responses that accompany commonly occurring acute and chronic illnesses. Discussion includes physiologic responses that begin at the cellular level and progress to individual and related organ systems. Pathophysiologic alterations to disease management and prevention to promote quality patient-centered care are included. The nursing application of pharmacokinetics, pharmacodynamics, and pharmacotherapeutics of drugs related to health promotion and treatment of disease processes is emphasized. Withdrawal from NURS 316 requires withdrawal from NURS 322. Fee applicable for non-nursing students. *Fall/spring semesters.*

NURS 321 Medical-Surgical I**6***Prerequisites: NURS 208, 305**Corequisite: NURS 315*

Introduces the application of concepts necessary to provide safe, patient-centered care to adults with commonly occurring acute and/or chronic illnesses. Students provide safe care for one or more patients per clinical experience in an acute care environment. *Fall/spring semesters.*

NURS 322 Medical-Surgical II**6***Prerequisite: NURS 321**Corequisite: NURS 316*

Expands on the application of advanced concepts necessary to provide safe, patient-centered care to adults with acute and/or chronic illnesses of more complex body systems. Students manage safe care for two or more patients per clinical experience in an acute care environment. *Fall/spring semesters.*

NURS 334 Gerontology**2***Corequisite: NURS 321*

Focuses on foundational concepts and issues important for the care of older adults. Nutritional concepts, psychological and sociological theories related to the elderly are included. Nursing care implications related to the physiologic and psychosocial changes of aging are explored. *Fall/spring semesters.*

NURS 347 Nursing Program Integration**3***Prerequisite: Admission to the nursing program as a transfer nursing student or BSN Completion student.*

Focuses on the role of the professional nurse in the current system of healthcare delivery and facilitates Union College Nursing program integration while addressing gaps in content knowledge for the transfer nursing or BSN Completion student. Sociological theories are included. Basic concepts of communication, safety, quality patient-centered care, and clinical judgment are introduced. *Fall/spring semesters.*

NURS 383 Mental Health**3***Prerequisites: NURS 315, 321, 334, PSYC 215**Corequisite: NURS 316*

Builds upon sociological and psychological concepts in the promotion of mental health. Exploration of the therapeutic nurse/patient relationship to promote optimal mental health in individuals experiencing disorders that affect thinking, cognition, behavior, and communication is included. *Fall/spring semesters.*

NURS 391 Global Health Nursing**2***Prerequisite: NURS 322**Corequisite: NURS 415 or permission of instructor*

Introduces the nursing student to principles and practices of healthcare on the frontiers of developing countries. Students may have the opportunity as part of a multidisciplinary healthcare team to provide patient-centered care with cultural humility in a global community. Limited enrollment and an additional fee for field experience. Elective course. *Spring semester.*

NURS 415 Maternal Child Health**6.5***Prerequisites: NURS 316, 322, 383, PSYC 215*

Focuses on family-centered care from the development of a family through adolescence. Nutritional, psychological, and sociological concepts related to this stage of life are included. Students care for one or more patients and their families per clinical experience in acute and ambulatory settings to promote wellness and restore health. *Fall/spring semesters.*

NURS 423 Medical-Surgical III**5***Prerequisites: NURS 316, 322, 383*

Focuses on the application of critical care concepts necessary to provide safe, patient-centered care to critically ill adults with multisystem or complex healthcare needs. Students provide safe care for one to two patients per clinical experience in an acute care environment. *Fall/spring semesters.*

NURS 433 Disaster Nursing**2***Prerequisites: NURS 243, 305, 315, 316*

Focuses on emergency preparedness and disaster response management concepts with an emphasis on essential safety, communication, collaboration, and leadership skills. Clinical judgment and decision-making skills are evaluated for appropriate, safe nursing care during a mock disaster and mass casualty event. Sociological theories related to disaster management are included. *Fall/spring semesters.*

NURS 453 Management & Leadership**3***Prerequisites: NURS 415, 423*

Focuses on the nurse as a leader and manager of care in professional practice. An awareness of complex healthcare systems and the impact of power, politics, policy, and regulatory guidelines in a changing environment will be developed. *Fall/spring semesters.*

NURS 474 Community Health (WR)**3.5***Prerequisites: NURS 383, 415, 433*

Focuses on family and community health promotion including disease and injury prevention. Indicators of global and population health are studied in vulnerable groups across the lifespan with application of clinical prevention strategies and inter-professional collaboration. Clinical experiences are in the community setting. Nutritional and sociological concepts related to the community are included. *Fall/spring semesters.*

NURS 495 Transition to Professional Practice**2***Prerequisite: Completion or concurrent registration of all required NURS courses except NURS 499*

Focuses on workplace and new graduate issues including interviewing, résumés, licensure, and professional practice standards. Synthesis of knowledge and skill is demonstrated by successful completion of an NCLEX-RN® readiness assessment. *Fall/spring semesters.*

NURS 499 Preceptorship**4***Prerequisite: Completion or concurrent registration of all required NURS courses*

The capstone experience for students to demonstrate competencies consistent with Union College Division of Nursing New Graduate Outcomes. The clinical immersion experience refines clinical reasoning, fosters self-confidence, and promotes a sense of belonging in the nursing profession. Students manage care for multiple patients under the guidance of a qualified preceptor. *Fall/spring semesters.*

Occupational Therapy Assistant Program

Changes in this section made as of 02/19/19 (See Addendum on Page 287)**OTAC 100 Introduction to Occupational Therapy****2***Prerequisite: PreAcceptance into the OTA program*

This course offers a complete overview of the profession of occupational therapy and the role of the occupational therapy assistant. Students will be prepared for the roles, responsibilities and interpersonal relationships expected of an OT practitioner. At the culmination of this course students will have a foundation in the history, philosophy, practice frameworks and evidence-based practice the profession is built upon, as well as be able to identify treatment settings across the lifespan. *Fall semester.*

OTAC 200 Neuroanatomy & Human Movement**4***Prerequisite: PreAcceptance into the OTA program*

This course provides a foundational understanding of neuroanatomy, the analysis of body movement, range of motion and manual muscle testing. *Fall semester.*

OTAC 215 Human Occupations: Analysis, Documentation and Evidence Based Practice**2***Prerequisite: PreAcceptance into the OTA program*

This course will introduce the steps of activity analysis, intrinsic values, creative and critical thinking, interpersonal communication and professional language and terminology. At the culmination of the course students will be able to determine what is important to the client, how the environment influences activity and what body functions, structures and performance skills are required to complete human occupations. Learners will be prepared to read and use evidence-based practice to make appropriate decisions for treatment. Documentation skills will be developed utilizing the S.O.A.P notes method. *Fall semester.*

OTAC 220 Clinical Conditions**2***Prerequisite: PreAcceptance into the OTA program*

This course will introduce learners to conditions commonly treated by occupational therapy practitioners. Learners will get an overview on condition etiology, incidence, signs and symptoms, medical management, prognosis and the impact of these conditions on occupation. *Fall semester.*

OTAC 225 Therapeutic Adaptations**3***Prerequisite: OTAC 200*

This course provides students with the basic knowledge in splinting, modalities and assistive technology available throughout the lifespan. Hands-on experiences will be provided through a two-day workshop where students will get to experience fabrication, application, and effective administration of superficial thermal modality agents. *Spring semester.*

OTAC 230 Pediatric Theory & Occupations**4***Prerequisite: OTAC 200*

This course addresses foundational theories, practice models, intervention approaches and practice arenas for occupational therapy practice with children. This may include but is not limited to sensory integration, developmental, and motor learning as well as neurodevelopmental treatment. *Spring semester.*

OTAC 240 Level IA Practicum**I***Prerequisite: OTAC 200*

This course is designed to enhance the learning from OTAC course work by providing opportunities for learners to experience the clinical setting under the supervision of a qualified OT professional. *Fall semester.*

OTAC 250 Adult Theory & Physical Rehabilitation**4***Prerequisite: OTAC 200*

This course provides learners with an understanding of the occupational therapy process in physical disabilities resulting from illness, disabling conditions, or injury and how this impacts occupation across the adult lifespan. *Spring semester.*

OTAC 260 Psychosocial Theory & Occupations**3***Prerequisite: OTAC 240*

This course introduces the scope and standards of practice in mental health occupational therapy in the treatment of psychosocial dysfunction across the developmental continuum. Group dynamics and processes are addressed during class activities as well as during the student's level 1 fieldwork experience. *Spring semester.*

OTAC 270 Clinical Ethics, Reasoning and Management**2***Prerequisite: OTAC 240*

This course addresses ethics, leadership, advocacy, credentialing and clinical competence as it relates to the OTA. *Fall semester.*

OTAC 275 NBCOT Preparation**1***Prerequisite: OTAC 240*

This course will prepare students for taking the National Board for Certification of Occupational Therapy exam (NBCOT). *Summer.*

OTAC 280 Level 2A Fieldwork-Rehabilitation**6***Prerequisite: OTAC 240*

This course is designed to enhance the learning from coursework by providing opportunities for learners to experience the clinical setting under the supervision of a qualified OT professional. (8 weeks)

*Summer.***OTAC 290 Level 2B Fieldwork****6***Prerequisite: OTAC 240*

This course is designed to enhance the learning from coursework by providing opportunities for learners to experience the clinical setting under the supervision of a qualified OT professional. (8 weeks) *Summer.*

Physician Assistant Studies

*Prerequisite for all PHAS courses: Admission to the PA Program***PHAS 505 Medical Literature Review (WR)****2**

Focuses on basic research concepts and methodology involved in clinical research. Students learn to 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**

Students will learn the basics of nutritional science, digestion, the importance of vitamins and minerals, nutrition during the lifecycle, prevention of and medical nutrition therapy for a variety of chronic disease states (including diabetes and cardiovascular disease), weight management, eating disorders, and sports nutrition. The student will become a good nutritional resource and be able to counsel patients to provide better care in medicine. *Fall semester.*

PHAS 511 Human Anatomy**5***Recommended preparation: Undergraduate anatomy*

A focused study of the structure and organization of the human body with particular emphasis on macroscopic anatomy. Lecture and laboratory with cadaver work is required. *Fall semester.*

PHAS 514 Medical History and Physical Examination Skills**4**

Students learn communication skills related to obtaining a comprehensive medical history followed by instruction on the techniques required in performing a thorough and technically correct physical examination. Forms and descriptive language used to compile patient medical reports are utilized. The course emphasizes normal and typical adult findings on examination, and selected normal and abnormal variants are reviewed. Additionally, specific aspects of neonatal/pediatric, obstetric, and geriatric examinations are included. *Fall semester.*

PHAS 515 Clinical Diagnostic Procedures**3**

The indications for the use and interpretation of fundamental diagnostic tests are presented, including blood cell counts, complete metabolic profile, serum chemistries, HIV tests, urinalysis, bone and organ radiography, culture and sensitivity tests, Pap smears, and other common pathologic reports. Indications for specialized procedures, such as MRI, CT, ultrasound, echocardiogram, stress EKG, mammography, colonoscopy, and endoscopy, are reviewed. This course also explores pathological conditions and how they affect radiographic images by comparing and contrasting various diagnostic radiologic procedures. Emphasis is placed on the indications, contraindications, and risks/side-effects of various therapies, as well as technical proficiency. *Fall semester.*

PHAS 518 Psychiatry and Behavioral Medicine**3**

Provides understanding and development of interviewing, diagnostic, and treatment skills of the following psychiatric disorders: mood, (depressive and bipolar), anxiety, schizophrenia, cognitive, pediatric, geriatric, sleep, personality, somatization, eating, dissociative, impulse control, and gender identity disorders. It is heavily weighted on the psychopharmacotherapy of the disorders. Additional topics include human development and life-cycle changes (normal and abnormal); human sexuality; issues of death, dying, and loss; response to illness, injury, and stress; principles of violence identification and prevention; substance abuse; suicide; hospice; and ethical and legal issues. This course involves the acquisition of counseling skills necessary in communicating with and educating patients facing common psychological, psychiatric, and behavioral conditions. *Spring semester.*

PHAS 519 Differential Diagnosis and Case Development**2**

Emphasizes problem-based learning with applied exam skills required to properly diagnose various diseases. Clinical cases are presented, and 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 regimens discussed. The course is designed to demonstrate that the student has achieved proficiency in multiple didactic and clinical disciplines prior to beginning rotations. *Summer.*

PHAS 525 PA Professional Issues**2**

The history and practice issues of the PA profession are explored, 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 oral presentations and student debates to hone communication skills. *Spring semester.*

PHAS 531 Clinical Medicine I**6**

With PHAS 532 and 534, provides a comprehensive review of the different organ systems of the body, their normal function, and the diseases that affect them. Emphasis is given to the diagnosis, differential diagnosis, and management of various disease states. *Fall semester.*

PHAS 532 Clinical Medicine II**6**

Continuation of PHAS 531. *Spring semester.*

PHAS 533 Preventive Health**1**

Students will utilize medical knowledge to provide preventive health across the lifespan of the patient; incorporate guidelines for screening for and prevention of various disease states; describe the principles of risk assessment; review public health programs; and learn how to participate in disease surveillance, reporting, and intervention. Emphasis is placed on the role of the practitioner in tailoring successful preventive health goals for patients of all ages. Students will study and practice the principles of motivational interviewing that support patients in making positive changes in their lives. Students will also participate in system-based objective simulated clinical exams (OSCEs) five times during the semester; these are designed to help students maintain their clinical examination skills throughout the semester and learn how to do more focused exams. *Spring semester.*

PHAS 534 Clinical Medicine III**3**

Taught concurrently with PHAS 532, Clinical Medicine III focuses on clinical concerns specific to pediatrics and women's health. *Spring semester.*

PHAS 539 Christian Health Care and Bioethics (WR)**3**

This course examines bioethics in interaction with the healing ministry of Jesus Christ and a Christian worldview. The health care ethics principles of autonomy, beneficence, nonmaleficence, justice, fairness, and dignity, as used with the PA profession, are applied to clinical and professional situations and dilemmas within the shift to population health and precision medicine. *Fall semester.*

PHAS 546 Clinical Skills I**4**

Specific skill instruction is provided in universal/standard precautions, sterile technique, injections and infusions, wound assessment, suturing, specialized wound care, airway management, nasogastric tube placement, splinting, casting, joint procedures, catheterizations, special procedures, biopsies, foreign body removal and specialty practice procedures. Students receive special training in Basic Disaster Life Support. The class includes exposure to clinical case presentations and discussions of appropriate clinical skills in order to provide a high level of hands-on experience. *Fall semester.*

PHAS 547 Clinical Skills II**2**

Emphasizes application of clinical skills in the actual clinical arena, with students performing physical examinations in real and simulated health care settings under the guidance of physicians and PAs. In the classroom students become experienced with common physical examination skills in the patient care setting, provide thorough pediatric, obstetric/gynecologic, geriatric, and genitourinary examinations (using models and facilitators), and gain skills in writing history and physicals, SOAP notes, and hospital orders. Dictation of notes and diagnostic coding are also covered. *Spring semester.*

PHAS 553 Diversity in Medicine**1**

This course is designed to help students develop an awareness of the differences in race, gender, class, sexual preference, and physical ability. Students will experience a variety of opportunities to develop skills, knowledge, and attitudes that will enable them to demonstrate an understanding of and a respect for the values, beliefs, and expectations of their patients. *Spring semester.*

PHAS 557 Electrocardiography**1**

Specific instruction is provided in understanding electrophysiology of the heart, preparing the student to discriminate among normal, variations of normal, and abnormal electrocardiographic studies (six-second strips and 12-lead EKGs). There is a strong emphasis on identification of acute myocardial infarction. *Fall semester.*

PHAS 558 Medical Physiology**3**

Provides an advanced understanding of human physiology with in-depth study of the physiology of the cardiovascular, respiratory, renal, endocrine, and reproductive systems. Emphasis will be placed on the normal functions of these systems. *Fall semester.*

PHAS 559 Clinical Pathophysiology**4**

Studies the pathophysiology of cellular, immune, nervous, endocrine, cardiovascular, respiratory, renal, reproductive, genomic, musculoskeletal, hepatic and gastrointestinal 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 562 Medical Genetics**1**

Designed to give the student an advanced understanding of human genetics, this course will study inheritance patterns, polymorphisms, mutations, and genetic tests. Emphasis will be given to the clinical application of these concepts. *Spring semester.*

PHAS 564 Clinical Therapeutics**4**

Using problem-based learning principles, concepts in disease management are explored 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. Rational drug therapy is reviewed with actual patient drug treatment plans and outcomes. The course is designed to provide sufficient depth of material to prepare students to develop a foundation for a life of learning in medical care of patients. Students are required to pass the Advanced Cardiovascular Life Support (ACLS) course. *Spring semester.*

PHAS 584 Pharmacology**5**

Introduces the PA student to a wide variety of pharmacological agents used in the practice of medicine. Drugs are categorized 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 Medical Literature Review to involve the student in an independent research review project that is presented in both written and oral formats. The topic for review is chosen by the student, meeting provided guidelines that confirm clinical relevancy and patient-oriented evidence that matters (POEM). *Summer.*

PHAS 594 Master's Capstone Project I**3**

Co-requisites: PHAS 505, PHAS 585

A continuation of PHAS 585, students work independently, under faculty advisement, to complete research on their assigned topics and write a thesis paper describing their findings. *Summer.*

PHAS 595 Master's Capstone Project II**1**

Prerequisites: PHAS 505, PHAS 585, PHAS 594

The culmination of skills learned in Medical Literature Review, Master's Research Seminar, and Master's Capstone Project I. This project provides the environment for students to present the results of their individual research projects. Students work with assigned faculty advisors. *Fall semester.*

PHAS 620 – 630 Clinical Rotations

Prerequisite: Completion of didactic program of studies in the PA Program

During clinical rotations with assigned preceptors, 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 the required rotations listed below, four weeks of 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 list of required rotations. *Fall/spring semesters and summer.*

PHAS 620 Family Practice I Rotation	4
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	4
PHAS 629 Psychiatry Rotation	4
PHAS 630 Elective Rotation	4

Philosophy

PHIL 335 Introduction to Philosophy**3**

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. *Spring semester.*

Photography

PHOT 151 Introduction to Photography**3**

A study of the basic techniques and principles of photography, including camera usage, photographic technique, composition and aesthetic concerns. *Fall semester.*

PHOT 225 Intermediate Photography**3**

Prerequisites: GRPH 150, PHOT 151 or permission of instructor

A study of photography using digital tools, technology, and output. Students will review 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. Digital camera required, DSLR preferred. *Spring semester, odd years.*

PHOT 250 Travel Photography**3**

Emphasizes practical applications of photographic technique in areas such as landscape, portraiture, photojournalism, nature, and wildlife photography with emphasis on development of a personal vision. Participants are required to contribute to a book project and to a class exhibition. *Summer, odd years.*

PHOT 285 Advanced Photography**3***Prerequisites: GRPH 150, PHOT 151, PHOT 225, PHOT 325, or permission of instructor*

Advanced work in studio and product lighting, portraiture, location work, advertising/illustration, and still life photography. *Spring semester, as needed.*

PHOT 325 Commercial Photography**3***Prerequisites: GRPH 150, PHOT 151, and PHOT 225, or permission of instructor*

The study and practice of techniques for producing commercially viable images in studio and on location. Emphasis on using necessary skills and techniques to achieve client's desired results, in areas such as product, architecture, and portrait photography. *Fall semester, as needed.*

PHOT 450 Travel Photography**3***Prerequisites: Previous photography experience or coursework and permission of instructor*

Emphasizes practical applications of photographic technique in areas such as landscape, portraiture, photojournalism, nature, and wildlife photography with emphasis on development of a personal vision. Participants are required to contribute to a book project and to a class exhibition. *Summer, odd years.*

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 Introduction to Physics**4***Prerequisites: A knowledge of high school algebra and fulfillment of MATH 100 or higher.*

Course intended to give the non-science 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 three-hour 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 higher. Does not apply toward a physics major or minor. *Fall semester, odd years.*

PHYS 151 General Physics I**4***Prerequisite: MATH 111, 117, 119, 121 or 184*

An algebra-based physics course to fulfill the requirements for various pre-professional programs. 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 II**4***Prerequisite: PHYS 151 or 251*

A continuation of PHYS 151 covering electricity, magnetism, simple circuits, optics, special relativity and modern physics. 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 252. *Spring semester.*

PHYS/ENGR 228 Electric Circuit Analysis**4***Prerequisite: MATH 184*

Introduces electric circuit variables and parameters, Ohm's and Kirchhoff's law, circuit equations, AC steady-state analysis, and frequency characteristics. Three lectures and one three-hour laboratory per week. *Fall semester.*

PHYS 251 College Physics I**4.5***Prerequisite: MATH 184*

A calculus-based physics course designed for science majors. 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. Four lectures and one three-hour laboratory per week. *Fall semester.*

PHYS 252 College Physics II**4.5***Prerequisite: PHYS 251*

A continuation of PHYS 251 covering electricity, magnetism, simple circuits, optics, special relativity and modern physics. Discussion of the historical development of our understanding, along with references to environmental and social impacts of applied technology. Four lectures and one three-hour laboratory per week. *Spring semester.*

PHYS 296 Research Methods I**I**

Prerequisite: ACT Math Score of 20 (SAT of 480 (old SAT 2400 scale) or SAT of 510 (new SAT 1600 scale)) or MATH 100

Introduces the fields of descriptive and inferential statistics. Data sampling techniques, hypothesis testing and some applications of probability theory to science situations are examined. *Fall semester.*

PHYS 350 Modern Physics (WR)**4***Prerequisites: PHYS 252, MATH 286*

An introduction to the revolutionary changes in the understanding of physics that occurred in the 20th 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. *Fall semester, as needed.*

PHYS 351 Quantum Mechanics**4***Prerequisites: CHEM 152, MATH 286, PHYS 252**Recommended: MATH 352, MATH 385, PHYS 350*

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. Both the differential equations approach and the matrix approach are explored and utilized along with a historical perspective of the development of our understanding of quantum mechanics. Four lectures per week. *Spring semester, odd years as needed.*

PHYS/BIOL/CHEM 386 Research Methods: Scientific Inquiry**I***Prerequisites: (BIOL 151 or CHEM 151 or PHYS 251) and (CHEM 296 or MATH 221 or PHYS 296)*

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**I***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. *Scheduled as needed.*

PHYS/CHEM 45I Physical Chemistry: Thermodynamics**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. *Fall semester, even years.*

PHYS 496 Research Methods IV (WR)**I***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. *Scheduled as needed.*

PHYS 3000 Mechanics³⁵**4***Prerequisites: PHYS 252, MATH 285 and computer programming skills or permission of instructor;**Co-requisite: MATH 286 or 385*

An advanced study of the mechanics of particles, systems of particles, and rigid bodies, with an emphasis on Newton's laws, conservation of energy, and conservation of linear and angular momentum. The behavior of moving, rotating, and oscillating systems will be studied, using both analytical and numerical approaches. Lagrangian and Hamiltonian formalisms will be introduced as complementary to Newtonian mechanics. Vector calculus will be developed and used as needed. Three lectures per week. One recitation per week. *Fall semester, even years.*

PHYS 3100 Electromagnetism and Optics³⁵**4***Prerequisites: PHYS 252, MATH 285 and computer programming skills or permission of instructor;**Co-requisite: MATH 286 or 385*

This course builds upon the foundation of electromagnetism and optics developed in introductory physics, and the quantum nature of photons introduced in modern physics. Topics include electrostatic forces, fields, and potentials; magnetic forces on charges and currents; magnetic fields produced by steady currents; light as an oscillating electromagnetic field; polarization of light; ray tracing of optical systems; optical interference; and electric, magnetic, and optical properties of matter. Vector calculus will be developed and heavily used. Three lectures per week. One recitation per week. *Fall semester, odd years.*

PHYS 4100 Thermal and Statistical Physics³⁵**4***Prerequisites: PHYS 350, MATH 286 or MATH 385 and computer programming skills or permission of instructor*

An introduction to classical and statistical thermodynamics. Topics include the ideal gas equation of state, the First and Second Laws of Thermodynamics, the thermodynamic identity, engines and refrigerators, the thermodynamic potentials, and classical and quantum distribution functions. Vector calculus will be developed and heavily used. Three lectures per week. One recitation per week. *Spring semester, odd years.*

³⁵ Available through Nebraska Wesleyan University, Lincoln, NE.

Political Science

PLSC 105 Introduction to International Relations

3

An introduction to the study of international relations: the basic theories and conceptual foundations of the discipline. *Fall semester.*

PLSC 208 American Politics

3

Analysis of the organic development and construction of American politics, including the making and functioning of the United States Constitution, the functioning of the Supreme Court, the U.S. Congress, and the Presidency. *Spring semester.*

PLSC/HIST 258 Africa's Global Emergence

3

Recommended: ENGL 212

Focuses on the political relevance of the African continent in global affairs, particularly during the wars of colonization, World Wars I and II, the Cold War, and the present global war on terror. *Fall semester, odd years.*

PLSC/HIST 260 Latin America and the Caribbean

3

Recommended: ENGL 212

The politics and history of Central and South America and the Caribbean from the era of the Monroe Doctrine (1820s) to the present-day. *Fall semester.*

PLSC/RELG 345 Global Environment and International Policy

3

Prerequisite: ENGL 212

This course examines the intersection of the Christian world view, climate change causes, current and future climate and social impacts, and the international efforts to address those impacts through governmental and non-governmental policy and relations. *Fall semester.*

PLSC/HIST 346 Russia in Global Politics

3

Prerequisite: ENGL 212

This course reviews and analyzes the place of Russia in modern global affairs, especially U.S.-Russian geopolitical cooperation and contests from the Soviet era into present-day politics under Putin. *Spring semester, odd years.*

PLSC/HIST 383 The North Atlantic: War and Peace 1900s

3

Prerequisite: ENGL 212

Focuses on the United States and Europe during the turbulent period of the World Wars, the Holocaust, the Civil Rights movement, and the Cold War. *Spring semester.*

PLSC/HIST 392 The Modern Middle East

3

Prerequisite: ENGL 212

The history and the politics of the modern Middle East, from the Tanzimat period of the Ottoman Empire to the present period. Analysis of the various past and present conflicts in the Middle East. *Spring semester.*

PLSC 396 The Politics of East and South Asia**3***Prerequisite: ENGL 212*

The politics and history of East Asia from the Ming period in China and the Mughal era in the subcontinent. Meiji Restoration in Japan and the effect of the world wars on both South and East Asia are also covered. *Spring semester, even years.*

PLSC/HIST 430 Global Instability and Migrations**3***Prerequisite: ENGL 212*

Focuses on the history of internal and international migrations and their effects as mitigating critical resources – water, employment, arable land, etc. – and also as critical determining factors of political instability with various countries. *Fall semester, even years.*

PLSC 460 Global Political Economy and International Labor**3***Prerequisite: ENGL 212*

This capstone course in the International Relations major focuses on how wealthy countries depend on international labor for their economic growth and how poor countries are deprived of this resource. *Spring semester, even years.*

PLSC/HIST 465 The U.S. War on Terror**3***Prerequisite: ENGL 212*

The recent U.S. and global politics surrounding the commencement of the U.S. War on Terror in 2001 until the present-day. *Fall semester, even years.*

Psychology

PSYC 100 Careers in Psychology**0.5**

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. Credit/no credit. Does not apply to general education requirements. *Fall semester.*

PSYC 105 Introduction to Psychology**3**

Explores the science of psychology, its theories, basic concepts, and research methods. Students are introduced to the major subfields in psychology. *Fall/spring semesters.*

PSYC 215 Developmental Psychology**3**

Studies the physical, emotional, cognitive and psycho-social development through each of the life stages, prenatal through old age. *Fall/spring semesters.*

PSYC 225 Psychology of Religion**3**

An examination of the psychological processes involved in religious experiences from personal, developmental, social and emotional perspectives. *Fall semester.*

PSYC 300 Career and Graduate School Preparation 0.5*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. Credit/no credit. *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 Christian perspective. Students participate in skill development activities. *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, even years.*

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. 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 340, covering experimental and descriptive 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, odd years.*

PSYC 380 Biopsychology 3

Prerequisite: PSYC 105 or 215

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, even 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, even 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. *Spring semester, even years.*

PSYC 450 Psychological Testing 3

Prerequisites: PSYC 105, 340, 341, or permission of instructor

Introduction to psychometric methods and the practice involved in individual and group testing of ability, personality, interest and achievement. *Spring semester, odd years.*

PSYC 455 Practicum in Psychology 1-3

Students participate in supervised practicum activities in professional psychology, human service or research settings. Students complete 45 clock hours of practicum for one hour of credit.

PSYC 460 Forensic Psychology 3

This course provides a basic overview to the field of forensic psychology, focusing primarily on the application of the findings of research in psychology within the American civil and criminal justice systems. Mental health issues that impact law enforcement and judicial practice are also examined. *Spring semester, odd years.*

PSYC 475 Current Issues in Psychology 2

Prerequisite: PSYC 105

Investigates the research and dialogue surrounding issues that are current in the field of psychology. Students are required to do in-depth investigations on issues and to develop a personal position on the issues investigated. *Fall semester.*

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 115 Encountering Jesus as Savior 3

Prerequisite: Freshmen only

Encountering Jesus as Savior and Lord through a study of the Gospels and an intentional devotional experience. Intended to help a student develop an intimate relationship with Jesus that is real and personal. Credit is not given for both this course and RELT 110 or RELT 141. *Fall semester.*

RELB 135 Heroic Characters of the Bible I 3

A study of the Old Testament as a story with a focus on the journeys and interactions of the major characters and the lessons that can be applied to life today. Attention will be given to historical and geographical content and processes for developing approaches for a lifelong study of the Bible. *Fall semester.*

RELB 136 Heroic Characters of the Bible II 3

A study of the New Testament as a story with a focus on the journeys and interactions of the major characters and the lessons that can be applied to life today. Attention will be given to historical and geographical content and processes for developing approaches for a lifelong study of the Bible. *Spring semester.*

RELB 225 Prophets 3

An introduction to the Major and Minor Prophets of the Old Testament. Attention will be given to the structure, themes, theology, historical setting, and significance of this literature for Christians. *Fall semester.*

RELB 226 Old Testament Survey 3

A survey of the Old Testament providing an overview of the significant historical events and people of the Hebrew Bible. Emphasis is placed on the creation and fall of humans, the calling of Israel with its covenant relationship, and on developing an appropriate understanding of the God who saves as revealed in this time period. *Spring 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 sacrifice of Christ and the heavenly fulfillments in Christ's ministry. *Fall semester, even years.*

RELB 250 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 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 semesters.*

RELB 260 Interpretation of Romans 3

Prerequisites: ENGL 212, non-Theology majors only

Examines the interpretation of Romans within its sociocultural context. This includes interpretation by the initial readers, and theological interpretation of Romans in relation to our contemporary world. *Spring semester.*

RELB 325 Prophets**3***Prerequisite: Theology majors*

An introduction to the Major and Minor Prophets of the Old Testament. Attention will be given to the structure, themes, theology, historical setting, and significance of this literature for Christians. *Fall semester.*

RELB 326 Old Testament Survey**3***Prerequisite: Theology majors*

A survey of the Old Testament providing an overview of the significant historical events and people of the Hebrew Bible. Emphasis is placed on the creation and fall of humans, the calling of Israel with its covenant relationship, and on developing an appropriate understanding of the God who saves as revealed in this time period. *Spring semester.*

RELB 335 New Testament Epistles**3***Prerequisite: ENGL 212*

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 360 Interpretation of Romans**3***Prerequisites: ENGL 212, Theology majors only*

Examines the interpretation of Romans within its sociocultural context. This includes interpretation by the initial readers, and theological interpretation of Romans in relation to our contemporary world. *Spring semester.*

RELB/LITR 366 Biblical Literature (WR)**3***Prerequisites: ENGL 212, LITR 231, 232, or 235, or permission of 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 LITR general education requirements but not both. *Fall semester, even years.*

Religion—General Studies

RELG/PLSC 345 Global Environment and International Policy**3***Prerequisite: ENGL 212*

Examines the intersection of the Adventist Christian worldview with creation care, causes of climate change, and social impacts. Also studies the international efforts to address social impacts through governmental and non-governmental policy and relations, and in relation to Adventist understandings of eschatology. *Fall semester.*

Religion—Religious History

RELH 310 History of the Seventh-day Adventist Church (WR) 3

Prerequisite: ENGL 212

A study of the Advent movement of the early 19th century and the subsequent growth of the Seventh-day Adventist Church. *Spring semester.*

RELH 410 History of the Christian Church (WR) 4

Prerequisite: ENGL 212

History of the development of the Christian church from the first century to modern times. *Spring semester.*

Religion—Biblical Languages

RELL 171 Beginning 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. Four lectures and one tutorial session per week. *Fall semester.*

RELL 172 Beginning New Testament Greek II 4

Prerequisite: RELL 171

Continuation of RELL 171. Four lectures and one tutorial session per week. *Spring semester.*

RELL 273 Intermediate 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 pastoral work and study. *Fall semester.*

RELL 274 Intermediate 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.*

Religion—Professional Training

REL P 125 Introduction to Pastoral Ministry 2

Prerequisite: Theology majors

A study of the principle elements in pastoral ministry and biblical discipleship through class discussion, observation and report writing. *Spring semester.*

REL P 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.*

REL P 175 How to Study the Bible 3

Introduces the principles of interpreting the Bible including practical skills in using concordances, Bible dictionaries and commentaries, instruction in how to evaluate and choose a Bible translation, and Bible study for application in personal life. *Fall/spring semester.*

REL P 235 Introduction to Youth Leadership 3

A survey 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, even years.*

REL P 321 Biblical Preaching I 3

Prerequisite: COMM 105

A study of sermon methodology designed to train students to be Biblical preachers. Preaching skills are developed through theory, class and field experience. Emphasizes narrative and expository preaching. *Spring semester.*

REL P 322 Biblical Preaching II 4

Prerequisite: REL P 321

Continuation of REL P 321. Taken in conjunction with the capstone Leadership in Ministry senior year. *Fall semester.*

REL P 335 Youth Leadership in the Seventh-day Adventist Church 3

Developing 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 lifelong youth ministry, both professional and volunteer. *Spring semester, odd years.*

REL P 336 Youth Leadership Practicum 3

Prerequisites: REL P 235, 335

Internship in Union College Campus Ministries and/or externships in a local academy, Youth Sabbath School, Pathfinder organization, summer camp, or conference office. Open only to Youth Ministry minors.

REL P 361 Church Leadership I 3

Combines a study of the theology and the practice of church leadership with on-the-job training by assisting pastors in nearby churches. Taken in conjunction with REL P 321. *Spring semester.*

RELP 362 Church Leadership II**4***Prerequisite: RELP 361*

Continuation of RELP 361. Taken in conjunction with the capstone Leadership in Ministry senior year. *Fall semester.*

RELP 465 Personal Witnessing**3**

Designed to help students gain the knowledge and skills 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. Theology majors take in conjunction with the capstone Leadership in Ministry senior year. *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. Taken in conjunction with the capstone Leadership in Ministry senior year. *Fall semester.*

RELP 490 Senior Seminar**1**

As part of the capstone for all Theology majors, this course gives students the opportunity to review and report the competencies they have learned in their academic experience. Specific attention is given to résumé preparation, preparation for job interviewing, and development of a portfolio. Taken in conjunction with the capstone Leadership in Ministry senior year. *Fall semester.*

Religion—Theological Studies

RELT 110 Introduction to Christian Faith and Adventism**3***Prerequisite: Permission of 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. Credit is not given for both this course and RELB 115 or RELT 141. *Fall/spring semesters.*

RELT 141 Christian Beliefs**3**

Surveys fundamental Biblical doctrines of the Christian Church from a Seventh-day Adventist perspective. Credit is not given for both this course and RELB 115 or RELT 110. *Fall/spring semesters.*

RELT 305 Christian Ethics**3***Prerequisite: ENGL 212*

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: Theology majors or permission of instructor

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, Judaism, Islam and Christianity. The relationship of Christianity to these religions is discussed, including the Christian mission to the world. *Fall semester.*

RELT 350 Developing the Christian Mind 3

Prerequisite: ENGL 212 or acceptance into the Honors program.

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. Taught in a seminar format with an emphasis on class discussion, this class includes significant reading and writing components. *Fall semester.*

RELT 455 Prophetic Guidance in the Advent Movements 3

Study of the gift of prophecy as a method of divine communication. Special attention given to 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 111 Physical Science 4

Prerequisite: MATH 111 or higher

Course intended to give the non-science major an insight into the physical world. Emphasis is placed on the scientific method as topics in physics, chemistry, astronomy, meteorology, and geology are explored. Three lectures and one three-hour laboratory per week. This course is designed for elementary education majors. Does not apply toward a science major or minor. *Spring semester.*

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. *Scheduled as needed.*

SCNC 377 Origins**3***Prerequisite: 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 are considered. Does not apply toward a biology major or minor. *Spring semester, even years.*

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, education, minority groups, and family. *Fall/spring semesters.*

SOCI/INRR 300 Social Dimensions of Disaster**3**

Explores how broad concepts such as social conflict and social inequality are manifested in disasters in the United States and internationally. Topics include demographics and disaster behavior distinctions, disaster culture, individual versus group response to disasters and community social systems in relation to pre- and post-disaster situations. More broadly, students will examine the relationship between the social sciences and public policies in emergency management. *Fall semester.*

SOCI 315 Marriage and Family**3**

Assists students in their understanding of relationships by examining friendships, courtship, marriage, and family life. Discusses the issues of divorce, single parenting, sexuality, death and dying, finances and pre-marital counseling from a sociological perspective. *Fall semester.*

SOCI 321 Diversity in Society (WR)**3***Prerequisite: SOCI 105*

This course surveys diversity in society from a sociological perspective. Concepts such as privilege, prejudice, racism, institutional discrimination, and assimilation and pluralism are applied to understanding minority-majority relations in society. A strong emphasis is placed on community engagement through the exploration of course topics. *Fall semester.*

SOCI/SOWK 337 Interventions with Groups**3***Prerequisite: PSYC 105*

Assists students in developing generalist skills in work with couples, families and group levels of practice. Students practice relationship building, problem solving, interviewing, assessment, intervention, termination, and documentation. Special focus is given to the evaluation process with the introduction of qualitative research methods to evaluate and improve practice. *Spring semester.*

SOCI/SOWK 405 Social, Economic, and Environmental Justice (WR)**3***Prerequisite: ENGL 212*

Basic human rights such as freedom, safety, privacy, an adequate standard of living, health care, and education are examined. Explores the forms and mechanisms of oppression and discrimination. Uses a strength's perspective to advocate for human rights and social and economic needs of vulnerable populations. Includes engagement in practices that advance social and economic justice within local, national and international communities. *Spring semester, odd years.*

SOCI/SOWK 415 Crisis and Resilience**3**

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 a crisis. Prepares the student to develop creative coping skills, and promote crisis resolution within themselves as well as with individuals, groups and communities. *Spring 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. Introduces the history of social work and its professional roles, knowledge base, values, and skills. Explores a variety of professional areas in social work generalist practice to understand the processes, challenges, and joys of social service delivery. Laboratory required. *Spring semester.*

SOWK 227 Human Behavior in the Social Environment I**3***Prerequisite: SOWK 115 or permission of instructor*

First of a two course sequence that considers the interaction between humans and the social environment across the lifespan, utilizing multi-dimensional frameworks that underpin generalist social work practice. Through a critical examination of empirically-based theories, students gain an appreciation for the inherent strengths, complexities, and variations in the human experience. Content includes social systems from birth to young adulthood with emphasis on the biological, psychological, social, and spiritual developments. *Fall semester.*

SOWK 228 Human Behavior in the Social Environment II**3***Prerequisite: SOWK 227 or permission of instructor*

Second of a two course sequence that considers the interaction between humans and the social environment across the lifespan, utilizing multi-dimensional frameworks that underpin generalist social work practice. Through a critical examination of empirically-based theories, students gain an appreciation for the inherent strengths, complexities, and variations in the human experience. Content includes social systems from middle adulthood to late adulthood with emphasis on the biological, psychological, social, and spiritual developments. *Spring semester.*

SOWK 316 Social Welfare Policy**3***Prerequisite: SOWK 228*

Studies the history of social welfare and the purpose of social welfare policy at the federal, state, local, and institutional level. Additionally teaches methods to analyze policy and methods for policy change. Strategies to analyze, formulate, and advocate for policies are demonstrated. *Spring semester, even years.*

SOWK 336 Social Work Practice I 3*Prerequisite: SOWK 228*

Utilizing a generalist framework for social work with individuals, students integrate knowledge of human behavior and the social environment to deepen their understanding of engagement, assessment, intervention, and evaluation skills on a micro-level. Includes simulations, community engagement projects, and personal reflection. *Fall semester.*

SOWK/SOCI 337 Social Work Practice II 3*Prerequisites: SOWK 228; SOWK 336*

Building on the knowledge, values, and skills introduced in Practice I, this course assists students in developing generalist skills in work with couples, families, and group levels of practice. Students integrate knowledge of human behavior and the social environment to deepen their engagement, assessment, intervention, and evaluation skills on a mezzo-level. Includes simulations, community engagement projects, and personal reflection. *Spring semester.*

SOWK 345 Social Work in Healthcare 3*Prerequisite: SOWK 228 or permission of instructor*

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 and the various groupings of illnesses, including their impact on individual, family, and community systems. *Fall semester, even years.*

SOWK 390 Research Seminar 2*Prerequisite: PSYC 341*

Students will apply the principles of research design learned in the Research Methods classes to design and carry out a research project, analyze resulting data and write a project report following the APA guidelines for scholarly manuscripts. Students will also create a poster presentation of their projects and present them at a relevant venue. *Fall semester.*

SOWK/SOCI 405 Social, Economic, and Environmental Justice (WR) 3*Prerequisite: SOWK 228*

Basic human rights such as freedom, safety, privacy, an adequate standard of living, health care, and education are examined from a social work perspective. Explores the forms and mechanisms of oppression and discrimination. Uses a strength's perspective to advocate for human rights and social and economic needs of vulnerable populations. Includes engagement in practices that advance social and economic justice within local, national and international communities. *Spring semester, odd years.*

SOWK/SOCI 415 Crisis and Resilience 3*Prerequisite: SOWK 228*

Students develop 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 a crisis. Prepares the student to develop creative coping skills through self-care, and promote crisis resolution within themselves as well as with individuals, groups and communities. *Spring semester.*

SOWK 437 Social Work Practice III **3**

Prerequisite: SOWK 336

This course is designed to teach entry level macro practice skills from a generalist perspective. Students are introduced to the knowledge base, values, and skills in research-informed community and organizational practice to advance social, economic, and environmental justice. Includes simulations, community engagement projects, and personal reflection. Laboratory required. *Fall semester.*

SOWK 475 Field Practicum **I-12**

Prerequisites: SOWK 228; SOWK 336; *full admission into the social work program*

The field practicum serves as a link between knowledge gained in the classroom and the practice of social work from a generalist perspective. The course is designed to enhance the student's ability to apply social work values, theory, skills and knowledge to a broad range of systems. Students complete a total of 480 hours in a field placement. Placements are completed over a one or two semester plan in the senior year. Attendance at the weekly seminar 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.*

Teaching Learning Center

TLCM III Bridge: Learning and Communities **I**

Concentrating on engaging student's views and attitudes between their calling and contribution to society, increase their knowledge and access to finding resources and information on a variety of topics, and build problem-solving, communication, and professional skills to connect their roles in academics today for their mission tomorrow.

Union College Student Mission Service

UCSM 205 Introduction to Overseas Service **2**

An orientation course limited to those who have applied as student missionaries that prepares them for service by focusing on cross-cultural mission ministry. Does not apply toward religion general education requirement. *Spring semester.*

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***Prerequisites: 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

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***Prerequisites: 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

Board of Directors (as of October 2017)

Gary Thurber, Chair	NE	Mildred Greer	MO
Gil Webb, Vice Chair	NE	LouAnn Howard	NE
Vinita Sauder, Secretary	NE	Rob Koch	KS
Harold Alomia	NE	Jack Krogstad	IA
Ken Bacon	CO	Rick Krueger	NE
Ed Barnett	CO	Kevin Lang	CA
Steve Bascom	IA	Justin Lyons	MN
Roger Bernard	KS	Tanya Martin-Dick	NE
Neil Biloff	ND	James McArthur	NE
Mardian Blair ³⁶	FL	Troy Peoples	NE
Ron Carlson	KS	Jeff Peterson	TN
Steven Chavez	OH	Barbara Prowant	WA
Dean Coridan	IA	Rich Reiner	FL
Morre Dean	CO	Susan Reiswig-Haines	OH
Cary DeCamp	KS	Sam Shum	CT
Garth Fletcher	NE	Kent Thompson	NE
Doug Goetz	CO		

By Invitation: Director, North American Division Higher Education Cabinet

Committees of the Union College Board of Trustees:

Academic Committee	Investment Committee
Audit Committee	Master Planning and Facilities Committee
Campus Life and Retention Committee	Marketing and Recruitment Committee
Compliance Committee	Trusteeship Committee
Finance and Development Committee	

Current membership of these committees can be found in the Union College President's Office.

³⁶Board Member Emeritus

Union College Presidents

W. W. Prescott	1891-1893	E. E. Cossentine	1942-1946
J. W. Loughhead	1893-1896	R. W. Woods	1946-1950
E. B. Miller	1896-1897	H. C. Hartman	1950-1957
N. W. Kauble	1897-1898	D. J. Bieber	1957-1964
W. T. Bland	1898-1901	R. W. Fowler	1964-1970
L. A. Hoopes	1901-1904	R. H. Brown	1970-1973
C. C. Lewis	1904-1910	M. O. Manley	1973-1980
Frederick Griggs	1910-1914	Dean L. Hubbard	1980-1984
H. A. Morrison	1914-1922	Benjamin R. Wygal	1985-1985
O. M. John	1922-1924	John Wagner	1986-1991
W. W. Prescott	1924-1925	John Kerbs	1991-1998
Leo Thiel	1925-1928	David C. Smith	1998-2011
P. L. Thompson	1928-1931	John Wagner	2011-2014
M. L. Andreasen	1931-1938	Vinita Sauder	2014-
A. H. Rulkoetter	1938-1942		

College Administration 2017-2018

Dates in parentheses indicate the date of current appointment.

Officers of the College

Vinita Sauder (2014-) President

B.A. 1978, Southern Missionary College; M.B.A. 1989, University of Tennessee-Chattanooga; Ph.D. 2008, Andrews University

Frankie Rose (2016-) Vice President for Academic Administration, Associate Professor

B.S. 2002, Union College; Ph.D. 2009, University of Missouri

Steve Trana (2016-) Vice President for Financial Administration

B.S. 1985, Union College

Major Administrative Officers

Kim Canine (2016-) Vice President for Student Services

B.A. 2000, La Sierra University; M.B.A. 2001, La Sierra University

Rich 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

Michelle Velazquez-Mesnard (2017-) Vice President for Enrollment Services

B.S. 1989, Pacific Union College; M.S. 2001, Golden Gate University

Staff Emeriti 2017-2018

Janella Abbey, Staff Emerita, Administrative Assistant for Academic Administration
 Linda Becker, PhD, Administrative Emerita, Vice President for Student Services
 Tom Becker, BS, Staff Emeritus, Director of Information Systems
 Osa-Karin Berg, MA, Staff Emerita, Director of Records Office
 Gary Bollinger, MBA, Administrator Emeritus, Vice President for Financial Administration
 Randy Bollinger, Staff Emeritus, Grounds Supervisor for Plant Services
 Karla Britain, MLS, Staff Emerita, Technical Services Librarian for Ella Johnson Crandall Memorial Library
 Martha Cash, BS, Staff Emerita, Cashier for Accounting Office
 Tommy Cash, BS, Staff Emeritus, Chief Accountant for Accounting Office
 Cheryl Crawford, Staff Emerita, Manager of Union Manor
 Wilma Darcy, Staff Emerita, Director of Transportation and Housing, Administrative Assistant for Financial Administration
 Dean Dittberner, BS, Staff Emeritus, Operations Manager of Information Systems
 Jennifer Enos, BS, Staff Emerita, Enrollment and Student Financial Services
 Buell Fogg, MEd, Staff Emeritus, Associate Chaplain for Campus Ministries
 Sharon Gregory, Staff Emerita, Office Manager for Division of Human Development
 Anita Kidwiler, MS, Staff Emerita, Associate Director of Records
 Stan Hardt, MA, Staff Emeritus, Student Services Counselor
 LeAnn Merth, MSW, Staff Emerita, Dean of Women for Rees Hall
 Leona Murray, BA, Administrator Emerita, Director of Enrollment Services
 Malcolm Russell, PhD, Administrative Emeritus, Vice President for Academic Administration
 Sharon Russell, MA, Staff Emerita, Coordinator for Ortner Conference & Guest Services
 Patricia Venis, Staff Emerita, Cook for Union Market
 John Wagner, PhD, Administrator Emeritus, President of Union College

Faculty Emeriti 2017-2018

Don Abbey, PhD, Professor Emeritus of Biology
 Chris Blake, MA, Associate Professor Emeritus of English and Communication
 Kathy Bollinger, MEd, Associate Professor Emerita of Education
 Sylvester Case, MA, MDiv, Professor Emeritus of Religion
 Arlie Fandrich, MAT, Professor Emeritus of Computer Science
 Wayne Fleming, EdD, Professor Emeritus of Health and Human Performance
 George Gibson, PhD, Professor Emeritus of History and Economics
 Lowell Hagele, EdD, Professor Emeritus of Mathematics
 Cliff Korf, MPAS, Professor Emeritus of Physician Assistant Studies
 Valeree Krueger, MSN, Associate Professor Emerita of Nursing
 Daniel Lynn, DMA, Professor Emeritus of Music
 Marilyn McArthur, PhD, Professor Emerita of Nursing
 Jim McClelland, MA, Professor Emeritus of Art
 Robert Murray, PhD, Professor Emeritus of Music
 Beatrice Neall, PhD, Professor Emerita of Religion
 Ralph Neall, PhD, Professor Emeritus of Religion
 Keith Riese, MSEE, Professor Emeritus of Engineering
 Sieg Roeske, PhD, Professor Emeritus of Religion
 Charlotte Schober, MSN, Associate Professor Emerita of Nursing
 Karl-Heinz Schroeder, MA, Professor Emeritus of History
 Virginia Simmons, PhD, Professor Emerita of Education and Psychology

Faculty 2017-2018

Date(s) in parentheses indicate years of faculty service at Union College

Edward M. Allen (2005-) Professor of Religion

BA 1975, Loma Linda University; MDiv 1979, Andrews University; DMin 1991, PhD 2008, Fuller Theological Seminary

Nick Axmaker (2015-) Visiting Assistant Professor of Mathematics

BS 2003, University of Alaska Southeast; MS 2013, Wright State University

Christopher Banks (2015-) Assistant Professor of International Relations

BA 2003, Brown University; MIA 2006, Columbia University

Kelly Boyd (2010-) Assistant Professor of Nursing

BSN 2002, Union College; MSN 2013, Nebraska Wesleyan University

Michelle Buller (2009-) Professor of Physician Assistant Studies

BS 2000, University of Nebraska-Lincoln; MMS 2004, Midwestern University

Christina Burden (2016-) Assistant Professor of Biology & Physician Assistant Studies

BS 2006, MS 2009, Andrews University; PhD 2016, Arizona State University

Susan Byers (2016-) Assistant Professor of Education

BS 1986, Union College; MA 1993, Andrews University

Jodi Chewakin (2011-2017) Associate Professor of Physician Assistant Studies

BSN 1991, University of Mary; PA-C 1996, University of North Dakota; MS 2008, Arizona School of Health Sciences, A.T. Still University

Richard Clark (2012-) Professor of Chemistry

BA 1979, Union College; PhD 1992, Kansas State University

Tanya R. Cochran (2005-) Professor of English

BA 1995, Southern Adventist University; MA 2000, University of Tennessee-Chattanooga; PhD 2009, Georgia State University

Pam Cotton (2017-) Assistant Professor of Education

BS 1989, Union College; MA 1997, California State University

Elizabeth Davis (2017-) Assistant Professor of Social Work

BSW 2001, MSW, 2003, Andrews University

Krystal Davis (2014-) Assistant Professor of Nursing

BSN 2010, Nebraska Wesleyan University; MSN 2013, Nebraska Wesleyan University

Jody Detwieler (2012-) Assistant Professor of Social Work

BSW 2004, Union College; MSW 2005, Walla Walla University

Gary Dickerson (2007-) Associate Professor of Computer Science

BS 1984, Union College; MBA 1989, University of Nebraska-Lincoln; MS 2002, Andrews University

Debbie Eno (2003-) Associate Professor of Nursing
BS 1999, Union College; MSN 2004, University of Phoenix

Larinda Fandrich (2014-) Assistant Professor of Nursing
BSN 1986, Union College; MSN, MHA 2014, University of Phoenix

Robert Fetrick (1996-) Associate Professor of Religion
BA 1972, Pacific Union College; 1978 MDiv, Andrews University

William Fitts (1985-) Professor of English
BA 1974, Southwestern Adventist University; MAT 1976, Andrews University; PhD 1985, Texas A&M University

Kristine Follett (2010-) Assistant Professor of Nursing
BSN 1995, Southwestern Adventist University; MSN 2008, Southern Adventist University

Barry Forbes (1988-) Professor of Business
BS 1987, Southwestern Adventist University; MBA 1988, Texas A&M University; DBA 2016, Anderson University

Bruce Forbes (2000-) Professor of Art and Graphic Design
BS 1986, Union College; MFA 1996, Savannah College of Art and Design

Lisa L. Forbes (2002-) Professor of Accounting and Finance
BS 1992, Union College; MBA 1995, University of Nebraska-Lincoln; DBA 2016, Anderson University

Melanie Gabbert (2008-) Associate Professor of Psychology
BS 1992, Union College; MA 1995, Andrews University

Amy Golter (2006-) Associate Professor of Nursing
BSN 2002, Union College; MSN 2009, Nebraska Wesleyan University

Brett Hadley (2015-) Assistant Professor of Communications
BA 1987, Southern Adventist University; MFA 2003, University of California, Davis

Tracy Hagele (2014-) Assistant Professor of Nursing
BSN 1993, Union College; MSN 2015, American Sentinel University

Megan Heidtbrink (2013-) Associate Professor of Physician Assistant Studies
BA 2006, Tulane University; MPAS 2010, Union College

Ben Holdsworth (2009-) Professor of Religion
BA 1980, Columbia Union College; MBA 1987, Florida Institute of Technology; MA 2003, Newbold College; PhD 2010, University of Durham

Cami Hollins (2017-) Assistant Professor of Occupational Therapy Assistant Studies
BS 2001, MS 2002, University of Mary

Trudy Holmes-Caines (1994-) Professor of Psychology
BA 1986, West Indies College; MA 1991, PhD 1995, Andrews University

Laura Karges (1998-) Associate Professor of Nursing
BSN 1985, Southwest Missouri State University; MS 1992, Andrews University

Lesia Kean (2014-) Associate Professor of Mathematics
BS 1994, Union College; MA 2006,; PhD 2012, Illinois Institute of Technology

Kyle Kuehmichel (2017-) Lecturer of International Rescue and Relief
BS 2010, Union College

Tim Kuntz (2017-) Assistant Professor of Physician Assistant Studies
BS 2004, Union College; MPAS 2012, University of Nebraska Medical Center

Dwain Leonhardt (1996-) Professor of Physician Assistant Studies
BA 1972, Union College; MD 1975, Loma Linda University

Ricky Little (2015-) Professor of Music
BA 1980, Oakwood College; MA 1981, Ohio State University; DMA 1985, The Ohio State University

Corrairie McNeill (2013-) Associate Professor of Biology
BS 2005, Randolph-Macon Woman's College; MS 2008, PhD 2012, University of Florida

Seth McNeill (2014-) Assistant Professor of Engineering
BS 2001, Walla Walla University; MS 2004, PhD 2009, University of Florida

Ruth Mendenhall (1986-) Associate Professor of Nursing
BS 1980, Union College; MSN 1986, University of Texas at Arlington

Kurt Miyashiro (2013-) Associate Professor of Music
BS 1987, Pacific Union College; PhD 2005, University of Minnesota

Salvador Moguel (2006-) Associate Professor of Biology
BS 1983, Autonomous University of Guadalajara; MS 1995, State University of New York; PhD 2004, New Mexico State University

Elysia Ockenga (2011-2014, 2015-) Assistant Professor of Nursing
BSN 2002, Union College; MSN 2009, Nebraska Wesleyan University

Nicole Orian (2007-) Associate Professor of Nursing
BSN 2004, Union College; MSN 2009, Nebraska Wesleyan University; DNP 2016, University of Pittsburgh

Alan Orrison (2017-) Assistant Professor of Graphic Design
BA 2006, Southern Adventist University; MFA 2012, Savannah College of Art and Design

Kenneth Osborn (2011-) Professor of Chemistry
BS 1996, Missouri Western State College; PhD 2003, University of Kansas

Lori Peckham (2017-) Assistant Professor of English and Communication
BA 1984, Pacific Union College; MA 1986, La Sierra University

Nancy Petta (1981-) Professor of Health and Human Performance
BS 1980, University of Wisconsin; MAT 1980, Andrews University; EdD 1999, University of Nebraska-Lincoln

Aaron Purkeypile (2014-) Assistant Professor of Accounting
BS 2006, Union College; MBA 2015, Washington State University

Rebecca Randa (2014-) Assistant Professor
BSN 2007, Union College; DNP 2018, Capella University

Shawntae Razo (2013-) Associate Professor of Health and Human Performance
BS 2011, DPT 2011, Loma Linda University

Patricia Maxwell Robertson (2015-) Assistant Professor of Communications
BA 1987, Walla Walla University; MBA 1993, Loma Linda University

Mark Robison (1996-) Professor of English
BA 1977, Walla Walla University; MA 1993, St John's College; PhD 2008, University of Nebraska-Lincoln

Ellen Rose (2012-) Assistant Professor of Nursing
BSN 2002, Union College; MSN 2016, Bryan College of Health Sciences

Andrew Saunders (2017-) Instructor of International Rescue and Relief
BS 2012, Union College; MIDA 2017, Andrews University

Kelila Saunders (2017-) Lecturer of International Rescue and Relief
BS 2013, Union College

Kent Stahly (1988-2017) Associate Professor of Finance
BS 1967, MA 1969, University of Nebraska-Lincoln

Thomas Toews (2011-) Associate Professor of Religion
BA 1993, Pacific Union College; MDiv 1995, PhD 2011, Andrews University

Jon Turk (2013-) Assistant Professor of Marketing
BA 1991, MBA 2005, Southern Adventist University

Benjamin Tyner (2010-) Associate Professor of History
BA 2002, La Sierra University; MA 2008, City University of New York; PhD 2015, City University of New York

Debbie Unterseher (1990-) Associate Professor of Computer Information Systems
BS 1987, Union College; MA 1993, University of Nebraska-Lincoln

Peggy Wahlen (1996-) Associate Professor of English
BA 1970, Union College; MA 1979, Loma Linda University; MLS 1981, San Jose State University

Richard Webb (2003-) Professor of Physics
BS 1988, Loma Linda University; MS 1990, PhD 1995, Washington State University

Carrie Wolfe (1999-) Professor of Chemistry
BA 1990, Union College; PhD 1995, University of Nebraska-Lincoln

Austin Young (2017-) Assistant Professor of Physician Assistant Studies
BS 2006, University of Nebraska-Kearney; MPAS 2009, University of Nebraska Medical Center

Rick Young (2011-) Assistant Professor of International Rescue and Relief
BA 2009, MEd 2011, Regis University

Librarians Holding Faculty Rank

Kieren Bailey (2016-2018) Library Director; Associate Professor
BS 2002, Walla Walla University; MLIS 2009, University of Western Ontario; EdD 2017, University of Calgary

Melissa Hortemiller (2017-) Public Services Librarian, Assistant Professor
BA 2010, Southern Adventist University; MLS 2010, Indiana University

Teachers at George Stone Laboratory School

Jenienne Kriegelstein (2013-) Assistant Professor of Education
BS 1973, Atlantic Union College; MEd 1977 Walla Walla University

Jacquelyn Simpson (1989-95, 2000-) Assistant Professor of Education
BS 1988, Union College; MA 1993, La Sierra University

Adjunct Lecturers

These individuals carry continuing teaching responsibilities

Harold Alomia, MDiv, Religion
Linda Becker, PhD, Leadership
Denise Bulling, PhD, IRR
Rich Carlson, PhD, Human Development, Religion
LuAnn Davis, MBA, Humanities
Marina Fabrikant, DMA, Fine Arts
Jodi Gabel, MSW, Human Development
George Gibson, PhD, Humanities
Sarah Gilbert, MM, Human Development
Jason Gildow, PhD, Humanities
Phyllis Gorton, BS, HHP
Michael Halfhill, MA, Religion
Stan Hardt, MA, Religion
Mic Henton, MDiv, Religion
Darrel Huenergardt, JD, Business and Computer Science

Jenienne Kriegelstein, MEd, Human Development
Mike Mennard, MA, Humanities
Jill Morstad, PhD, Humanities
Michael Paradise, MDiv, Religion
Melinda Pearson, PsyD, Human Development
Ryan Perry, MS, HHP
Robert Ruyle, PhD, Science and Mathematics
Mary Schleider, EdD, Human Development
Janet Scott, MA, Business and Computer Science
Jacquelyn Simpson, MA, Human Development
Natalie Swift, PsyD, Human Development
Lena Toews, MA, Religion
Dan Wheeler, PhD, Leadership

Adjunct Clinical Instructors in Nursing

These individuals carry continuing clinical instructor responsibilities

Whitney Bernecker, BSN, Nursing
Alane Britt, BSN, Nursing
Kayla Hallock, BSN, Nursing
Lisa Kendle, MSN, Nursing

Rebecca Lamoree, BSN, Nursing
Diane McMurray, MSN, Nursing
Jayne Nelson, BSN, Nursing
Molly Sass, MSN, Nursing

Charlotte Schober, MSN, Nursing
Amber Schuler, MSN, Nursing
Stephanie Semerad, MSN, Nursing

Rebekah Trevino, MSN, Nursing
Terra Vejraska, MSN, Nursing
Jill Weyers, MSN, Nursing

Individual Music Instructors

Patrick Brown, DMA
Marina Fabrikant, DMA
Sarah Gilbert, MM
Elizabeth Grunin, DMA
Kevin Kroon, BS
Daniel Martinez, BS

Lisa Nielsen, MM
Lisette Deemer Parks, MM
Darcy Jo Percy, MM
Jennifer Reeves, DMA
Bobby Scharmann, MM

Physician Assistant Preceptors

Abbie Oran, PA-C
Alysia Sheets, PA-C
Amber Widstrom, PA-C
Amy Barker, MD
Amy Garwood, MD
Amy Meeks, MD
Andrea Johnson, PA-C
Andy Dibelka, PA-C
Angie Robb, PA-C
Anna Menter, PA-C
Anthony Akainda, MD
April Rostvet, PA-C
Ashely Krohn, PA-C
Ashley Waldrep, PA-C
Ben Westerfield, PA-C
Benjamin Hung, MD
Beth Anderson, PA-C
Bhavish Aubeelauck, MD
Brenda Hausserman, APRN
Brent Willman, MD
Brett Fischer, MD
Brett Loseke, PA-C
Brian Grubbs, MD
Brian Reger, PA-C
Brianna Bankson, PA-C
Brittany Bauer, PA-C
Brooke Huxoll, PA-C
Bryan Hynes, MD
Bryan Mizner, PA-C
Chelsie Doane, PA-C
Chris Darst, PA-C
Christine Hunter, PA-C
Christopher Kampfe, PA-C
Clint Whitwer, PA-C
Craig Bartruff, MD
Curtis Reimer, MD

Dallas Schlegel, PA-C
Daniel Grownney, MD
Daniel Leonard, DO
Dave Running, MD
Dave Vuchetic, PA-C
David Duensing, DO
David Oberst, PA-C
David Samani, MD
Deann Paulson, MD
Dennis Sewell, PA-C
Dianna Clyne, MD
Don Harmon, PA-C
Douglas Tewes, MD
Emma Edwards, PA-C
Erich Fruehling, MD
Fran Barnes, PA-C
Francisca Acosta-Carlson, MD
Gabriel Jefferson, PA-C
Gary Milius, MD
Giana Boyle, PA-C
Grant Anderson, PA-C
Gregg Stevens, PA-C
Hannah Pick, PA-C
Heidee Hanson, PA-C
Hugo Gonzales, MD
Isam Dafdony, MD
Jacqueline Stewart, CPNP
Janet Oberhauser, PA-C
Jason Forsythe, PA-C
Jason Potts, MD
Jaylene Zanker, PA-C
Jed Hollenbeck, PA-C
Jeff Coffman, MD
Jeff Hudson, PA-C
Jeff Loehr, PA-C
Jen Flider, PA-C

Jenny Hanshaw, APRN
Jennifer Stanton, PA-C
Jessica Stanton, PA-C
Jill Hentzen, PA-C
John Lammler, MD
John Trapp, MD
Juliana Yates, PA-C
Kaitlyn Beranek, PA-C
Karen Johnson, APRN
Karen Schrader, PA-C
Kelly Fields, APRN
Kim Wragge, PA-C
Kit Kwan, PA-C
Kurt Schmeckpeper, PA-C
Kyleen Klinkbiel, PA-C
Leah Vogel, PA-C
Lee Bailey, MD
Linda Tucker, PA-C
Lisa Hayes, PA-C
Lisa Johnson, PA-C
Lygia Plioplis, PA-C
Mansoor Khan, MD
Mark Davis, MD
Mark Heibel, MD
Mark Howerter, MD
Mary Severson, APRN
Matthew Gatlin, MD
Matthew Rivard, MD
Michael McGahan, MD
Michael Pace, MD
Michael Woods, MD
Michelle Tyser, PA-C
Mitchell Henry, MD
Mohamed Jasser, MD
Mohammad Shoiab, MD
Nagi Ayoub, MD

Narayana Koduri, MD	Robin Allen, MD	Steve Gabriel, PA-C
Nick Wulf, MD	Rodett Osorio, PA-C	Steven Husan, MD
Nila Novotny, MD	Rodney Basler, MD	Steven Koukol, MD
Paul Kampfe, MD	Roger Rudloff, MD	Susan Howard, MD
Rachael McMahon, PA-C	Ron Bear, MD	Susan Peterlin, PA-C
Rajani Vanam, MD	Ron Ross, PA-C	Tara Callison, PA-C
Ray Kidwell, MD	Roy Maurer, PA-C	Thomas Beutler, MD
Raymond Carlson, DO	Sachit Patel, MD	Tiffany Byrkit, PA-C
Raymond Taddeucci, MD	Sandy Henry, PA-C	Todd Orchard, MD
Reba Grovjohn, PA-C	Sarah Grady, PA-C	Todd Sorenson, PA-C
Rebecca Chittenden, PA-C	Sarah Minarick, PA-C	Trinity Fuss, PA-C
Renee Johnson, FNP-BC	Sean Kenny, MD	Tyler Adams, MD
Richard Cimpl, MD	Shannon Wakeley, MD	Walter Duffy, MD
Rick Windle, MD	Shawn Lawrence, MD	Wendy VanSkiver, PA-C
Robert Dugas, MD	Sinha Ray, MD	Yajuan Leonard, MD
Robert Koch, MD	Stacy Goodrich, MD	Zakaria Siddiqui, MD
Robert McKeeman, MD	Stanley Okosun, MD	
Robert Pitsch, MD	Stephen Nagengast, MD	
Robert Reilly, PA-C	Stephen Swanson, MD	

Administrative Staff (2017-2018)

Date(s) in parentheses indicate years of employment in the most recent position at Union College.

Academic Services

Kieren Bailey (2017-2018) Library Director, Associate Professor
BS 2002, Walla Walla University; MLIS 2009, University of Western Ontario; EdD 2017, University of Calgary

Debbie Forshee-Sweeney (2002-) Director of Teaching Learning Center; Instructor
BSW 1994, Union College; MEd 2008, University of Nebraska-Lincoln

Salli Jenks (2016-) Director of Records
AS 1986, Southern College of Seventh-day Adventists; BS 2008, Capella University

Matthew Roque (2013-) Director of Institutional Research
BS 2005, Union College; MCRP 2010 University of Nebraska

Taryn Rouse (2017-) Executive Director for Student Success
BA 2003, William Penn University

Michelle Velázquez-Mesnard (2015-2017) Associate Vice President for Academic Initiatives; Associate Professor
BS 1990, Pacific Union College; MS 2000, Golden Gate University

Campus Services

Peter Blankenship (2009-) Director of Food Service
BS 2003, Eastern Washington University

Lori Brasuell (1997-) Director of Custodial Service

Chris Canine (2016-) Business Office Operations Specialist
AS 1996, Union College; BS 1996, Union College; MA 2003, University of Northern Colorado

Richard Henriques (2013-) Director of Information Systems

Paul Jenks (2012-) Director of Plant Services

Terri Lair (2004-) Manager of Campus Store
BA 1985, Union College

Ric Spaulding (1988-) Director of Larson Lifestyle Center; Athletic Director; Assistant Professor of Health and Human Performance
BS 1983, Andrews University; MEd 1988, University of Missouri

Student Life

Tammy Adams (2015-) Director of Student Health
BSN 1989, Union College

Donene Braithwaite (2005-2018) Dean of Students
BS 2000, Union College

Ron Dodds (1990-) Associate Dean of Men
BS 1990, Union College

Teresa Edgerton (2010-2017) Career Center Coordinator
BS 2001, Union College

Lorie Escobar (2009-) Counselor
BA 2003, Union College; MA 2010, Doane College

Stan Hardt (1995-) Counselor
BS 1968, Union College; MA 1973, Andrews University

Benjamin Moore (2017-) Director of Campus Safety
BA 2016, Union College

Emily Patterson (2014-) Assistant Dean of Women
BS 2011, Union College

Doug Tallman (2005-) Dean of Men
BA 1977, Southern Missionary College; MEd 2000, Southern Adventist University

Enrollment and Student Financial Services

Rachael Boyd (2015-) Campus Visit Coordinator
BBA 2008, Southern Adventist University

Teresa Edgerton (2017-) Director of Student Accounts
BS 2001, Union College

Kevin Erickson (2007-) Director of Admissions
BS 2006, Union College

Jonathan Rickard (2010-2017) Director of Student Accounts
BS 2000, Pacific Union College; MBA 2002, University of California-Riverside

Taryn Rouse (2013-) Director of Student Financial Services
BA 2003, William Penn University

College Advancement

Kenna Lee Carlson (1994-) Director of Alumni Activities
BA 1973, Union College

Ken Farrow (2017-) Director of Leadership Giving
BS, 2016, University of Nebraska-Lincoln

Stephanie Meyer (1989-) Director of Scholarships & Special Events
BS 1989, Union College

Marcia Nordmeyer (2015-) Director of Conference and Guest Services
BS 2007, Union College

Jennifer Schall (2017-) Director of Major Gifts
BS 2005, Union College

Linda Skinner (1983-2018) Director of Donor Relations

Integrated Marketing Communications

Scott Cushman (2006-) Director of Digital Communications
BA 2003, Union College

Becky Daniel (2016-) Director of Strategic Marketing
BS 2008, Union College

Steve Nazario (1997-) Director of Visual Communication
BA 1980, Loma Linda University

Ryan Teller (2016-) Executive Director of Integrated Marketing Communication
BA 1997, Union College

Financial Administration

Lisa R. Forbes (2015-) Director for Human Resources
BA 2007, Doane College

Lonnie Kreiter (2010-2017) Senior Accountant
BS 1983, Loma Linda University

Harvey Meier (1977-2017) Controller
BA 1973, Union College

Jonathan Rickard (2017-) Controller
BS 2000, Pacific Union College; MBA 2002, University of California-Riverside

Administrative Councils (2017-2018)

President's Council

Vinita Sauder, President, Chair
Kim Canine, Vice President for Student Services
Rich Carlson, Vice President for Spiritual Life
LuAnn Davis, Vice President for Advancement
Larinda Fandrich, Faculty Senate Chair
Frankie Rose, Vice President for Academic Administration
Steve Trana, Vice President for Financial Administration
Michelle Velazquez-Mesnard, Vice President for Enrollment Services

Academic Council

Frankie Rose, Vice President for Academic Administration, Chair
Edward Allen, Chair, Division of Religion
Barry Forbes, Chair, Division of Business and Computer Science
Bruce Forbes, Chair, Division of Fine Arts
Debbie Forshee-Sweeney, Director, Teaching Learning Center
Megan Heidtbrink, Program Director, Physician Assistant Studies
Trudy Holmes-Caines, Chair, Division of Human Development
Salli Jenks, Director, Records
Nicole Orian, Chair, Division of Nursing
Mark Robison, Chair, Division of Humanities
Carrie Wolfe, Chair, Division of Science and Mathematics
Rick Young, Chair, Division of Emergency Management and Exercise Science

Dean's Council

Donene Braithwaite, Chair
Ron Dodds

Emily Patterson
Doug Tallman

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ADDENDUMS 2018-19 Bulletin

1. Academic Year Calendar 2018-2019 (Page 5) *04/26/18 Approval voted by Academic Council*

2018

~~Nov. 4~~ Nov. 8 Last Day to Withdraw from a Class/Receive a “W”

2019

~~Mar. 21~~ Mar. 28 Last Day to Withdraw from a Class/Receive a “W”

2. Update to Refund Policy (Page 12) *04/26/18 Approval voted by Academic Council*

Refund	Calendar Days
100%	Up to and including Last Day to Add/Drop Classes
80%	days 10 to 20
60%	days 21 to 39
40%	days 40 to 58
20%	days 59 to 77
None	Exceeding 77 days

3. Update to PA Program Mission and Added Goal (Page 54)

05/18/18 Approved by Dr. Frankie Rose

Mission:

To equip PA students, through rigorous training and caring mentorship in a **quality program** within a Christian atmosphere, to work in a team environment, demonstrate academic excellence, practice clinical acumen, show a high degree of professionalism, and exhibit servanthood.

Goals:

1. Work in a Team Environment
2. Demonstrate Academic Excellence
3. Practice Clinical Acumen
4. Show A High Degree of Professionalism
5. Exhibit Servanthood
6. **Quality**

4. Update to “Last Day to Complete December Graduation Requirements” (Page 5)

07/23/18 Approved by Dr. Frankie Rose

~~Dec. 13~~ Dec. 12 Last Day to Complete December Graduation Requirements

5. Update to Education degrees (Pages 104-108).

Specific changes here: https://ugroups.ucollege.edu/get_file?eid=4ec31d78946f6fe7f9fced9a7a5315d

02/22/19 Approved by Academic Council

6. Update to Nursing Division information (Page 70).

Specific changes here: https://ugroups.ucollege.edu/get_file?eid=8224528e56a34bc69d374f5ae39b4489

02/22/19 Approved by Academic Council

7. **Update to Nursing degree information (Pages 157-163).**

Specific changes here: https://ugroups.ucollege.edu/get_file?eid=d968b1a564b0bfe73d98d358388fb482

02/22/19 Approved by Academic Council

8. **Update to Occupational Therapy Assistant degree information (Pages 164-166).**

Specific changes here: https://ugroups.ucollege.edu/get_file?eid=2856a8cd76cca903093db33691f1f4c6

02/22/19 Approved by Academic Council

9. **Addition of EDUC 350 course (Page 208).**

02/22/19 Approved by Academic Council

10. **Update to OTAC course description section (Pages 246-248).**

Specific changes here: https://ugroups.ucollege.edu/get_file?eid=b5b11afaebf1c5a64b3b53a2a1b801c3

02/22/19 Approved by Academic Council



Contact

www.ucollege.edu
records@ucollege.edu

P 402.486.2529

F 402.486.2584

Union College
3800 South 48th Street
Lincoln, NE 68506

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