Wisconsin’s Oldest College

In 1841, settlers living in the Wisconsin Territory community of Prairieville established the academy that five years later would become Carroll College. Soon after its founding, Carroll affiliated with the Presbyterian Church and adopted the motto, "Christo et Litteris," which means "for Christ and Learning." The University's early patrons believed that higher education would serve as an instrument for civilizing the wilderness, spreading the Gospel and planting the roots of democracy deep in the prairie soil. They also sought to provide for the prosperity of their children and future generations. As Wisconsin’s oldest institution of higher learning, Carroll is known today as the "Pioneer College." Carroll became Carroll University in 2008.

Throughout its history, the hallmarks of the Carroll educational experience have been teaching excellence and individualized attention. These values find expression in The Mission Statement and The Four Pillars of a Carroll University Education.

Carroll University Mission Statement

"Carroll University provides a superior education, rooted in its Presbyterian and liberal arts heritage, and draws upon its Christian tradition to prepare all students for vocational success, lifelong learning and service in a diverse and global society."

The Four Pillars of a Carroll University Education

Today, the institution draws upon its rich liberal arts tradition to prepare students to achieve their full potential in our ever-changing society. The University's educational philosophy is sustained by the four pillars of integrated knowledge, lifelong skills, gateway experiences and enduring values.

- **Integrated Knowledge** is the very foundation of a quality liberal arts program. The Carroll curriculum emphasizes breadth and depth of learning. Our purpose is to encourage students to recognize the interrelationships among ideas. We believe that students with this understanding will continue to learn, grow and succeed long after they leave the campus.

- **Lifelong Skills** help students prepare for life and work in a world of rapid and constant change. We believe that graduates will continue to evolve and contribute to their communities long after they earn their degrees. To that end, our mission is to help students learn to think critically and creatively, adapt to changing technologies, work efficiently and effectively, collaborate with others, and communicate clear, compelling ideas.

- **Enduring Values** help students to consider always the impact of their actions on the world around them. We believe that effective leaders draw their inspiration from strong personal value systems. Our goal, therefore, is to offer students multiple opportunities to make decisions and then to reflect upon their consequences.

- **Gateway Experiences** occur both upon entering and upon leaving Carroll University. We believe that our educational responsibility extends beyond the classroom into every aspect of our students’ lives. That is why we place a special emphasis on preparing incoming students for university life and on helping graduates make successful transitions into their first jobs, or graduate and professional schools.

The four pillars undergird all that we do at Carroll University. They are integral to our undergraduate curriculum and guide our post-baccalaureate and graduate programs. In other words, they provide the broad inspiration for the Carroll experience and the many relationships we nurture with other organizations and institutions.
Carroll University
100 N. East Avenue
Waukesha, WI 53186

For general information, call 262.547.1211
To contact the Admission Office, call 262.524.7220 locally
or toll-free at 1.800.CARROLL (1.800.227.7655)
FAX: 262.524.7139

Carroll University Web site

Visits to Carroll University are encouraged. The Admission Office is open from 8 a.m. to 4:30 p.m., Monday through Friday. During the school year, the office is open from 9 a.m. to noon on Saturdays. Visits should be arranged in advance by calling or writing the admission office.

The offices of Admission, Part-Time Studies and Student Financial Services are located in Voorhees Hall, at the northwest corner of East and College Avenues.
Notice of Non-Discrimination Policy

Carroll University does not discriminate in any manner contrary to law or justice on the basis of race, color, sex, age, religion, sexual orientation, national origin, disability or veteran’s status in administration of its educational, admission, financial aid, athletic or other university policies and programs nor in the employment of its faculty and staff.
Academic Programs

Department of Business, Accounting and Economics
College of Humanities and Social Sciences
College of Natural Sciences and Health Sciences
Alphabetical List of Majors/Minors
Enrichment Programs
The Pioneer Core Program (General Education)
Department and Major Codes
Department: Business, Accounting, and Economics

Chairperson: Carol Tallarico
Room: Business Hall 101
Email: ctallari@carrollu.edu
Telephone: 262-951-3027
Fax: 262-524-7397

DEPARTMENT FACULTY

Name                  Title                  Area                      Email
Dennis Debrecht      Associate Professor      Economics             ddebrech@carrollu.edu
Sarah Esveldt        Senior Lecturer         Health Care Administration sesveldt@carrollu.edu
Gregory Kuhlemeyer   Professor              Finance                gkuhlem@carrollu.edu
Jeffery Kunz         Assistant Professor      Accounting             jkunz@carrollu.edu
Michael Levas        Associate Professor      Marketing             mlevas@carrollu.edu
Canchu Lin           Associate Professor      Management & Leadership clin@carrollu.edu
Gary Olsen           Professor              Accounting             gol@carrollu.edu
Carol Tallarico      Professor              Economics             ctallari@carrollu.edu
Mary Ann Wisniewski  Professor              Management & Leadership mwisniew@carrollu.edu
Shaoqiong (Annie) Zhao  Assistant Professor   Marketing             szhao@carrollu.edu

PROGRAMS OF STUDY

Majors
- Accounting Major (80 credits)
- Business Economics Major (64 credits)
- Finance Major (64 credits)
- Management and Leadership Major (64 credits)
- Marketing Major (64 credits)
- Health Care Administration Major (46 credits)
- Business Administration Major (44 credits)

Minors
- Accounting Minor (16 credits)
- Economics Minor (20 credits)
- Finance Minor (16 credits)
- Management and Leadership Minor (16 credits)
- Marketing Minor (16 credits)
- Health Care Administration Minor (22 credits)

Course Categories

Courses offered by this Department

ACC100: Personal Finance
ACC205: Financial Accounting
ACC206: Managerial Accounting
ACC207: Intermediate Accounting I
ACC208: Intermediate Accounting II
ACC305: Advanced Accounting I
ACC306: Advanced Accounting II
ACC306: Advanced Cost Accounting and Budgeting
ACC324: Advanced Business Law
ACC375: Pre-internship Seminar
ACC405: Tax Accounting I
ACC406: Tax Accounting II
ACC407: Auditing
ACC414: Accounting Theory
ACC480: Internship in Accounting
ACC483: Internship Option-Prior Work Experience
ACC498: Independent Study in Accounting
BUS101: Introduction to Business
BUS250: Ethics in Business, Govt, and Society
BUS265: Human Resource Management
BUS290: Principles of Business Law
BUS291: Special Topics
BUS301: Principles of Marketing
BUS302: Principles of Management
BUS304: Principles of Finance
BUS305: Principles of Operations Management
BUS320: Promotion Management
BUS321: Careers in Finance
BUS327: Business to Business Marketing
BUS341: Applied Risk Management
BUS342: Investment Management
BUS344: Management of Financial Institutions
BUS356: Applied Financial Management
BUS360: Career Development
BUS435: Marketing Research
BUS479: Consulting Management
BUS480: Internship in Business
BUS483: Internship Option—Prior Work Experience
BUS496: Business Policies
BUS498: Independent Study in Business
ECO124: Principles of Economics I - Microeconomics
ECO225: Principles of Economics II - Macroeconomics
ECO306: Microeconomic Theory
ECO307: Macroeconomic Theory
ECO314: Econometrics
ECO343: Money and Banking
ECO363: International Economics
HCA100: Health Care Terminology
HCA150: Introduction to Health Care
HCA200: Health Care Economics and Policy
HCA300: Health Care Management
HCA350: Health Care Law and Ethics
HCA400: Health Care Financial Management
HCA450: Health Care Information Management
LEA190: Leadership and Personal Effectiveness
LEA302: Leadership Theory and Practice
LEA499: Leading Change

Majors and Minors

Accounting Major (80 credits)
Accounting Minor (16 credits)
Business Administration (44 credits)
Business Economics Major (64 credits)
Economics Minor (20 credits)
Finance Major (64 credits)
Finance Minor (16 credits)
Health Care Administration Major (46 credits)
Health Care Administration Minor (22 credits)
Management and Leadership Major (64 credits)
Management and Leadership Minor (16 credits)
Marketing Major (64 credits)
Marketing Minor (16 credits)

Business, Accounting, and Economics Internship documents
## ACCOUNTING MAJOR - 4 year plan

### Year 1

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<td>CMP112</td>
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<tr>
<td>ECO225</td>
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<td>BUS290 (2 hours)</td>
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<td>ACC414</td>
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<td>BUS305</td>
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<td>CCS400 (2 hours)</td>
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2015-16 catalog
**PIONEER CORE**

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<td>ACC208</td>
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<td>ACC306</td>
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<td>ACC480</td>
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<td>CSC109</td>
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<td>CSC220</td>
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**ACCOUNTING MAJOR** (80 credit hours)

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<td>ACC310</td>
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<td>CSC220</td>
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**Recommended courses for students who wish to sit for the CPA exam**

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<tbody>
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<td>BUS301</td>
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<td>BUS302</td>
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<tr>
<td>MAT130 or higher</td>
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**Note:** for CPA licensure, 150 credit hours need to be completed
## ACCOUNTING MAJOR / CPA - 4 year plan

### Year 1 (32 hours)

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### Year 2 (40 hours)

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### Year 4 (34 hours)

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Note: The CPA license requires 150 hours of credit. Elective credits and ACC 480 credits can be taken during winter and summer terms as fits the student's schedule.

2015-16 catalog
# ACCOUNTING MAJOR / CPA / MBA - 4 year plan

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2015-16 catalog
Additional Certifications for Accountants

With careful planning, the 150-credit accounting curriculum (CPA Emphasis) can provide the competency needed to sit for examinations that can lead to the following professional designations:

**CIA-CERTIFIED INTERNAL AUDITOR:**
Major: Accounting (CPA) Emphasis
Electives: CSC 110, CSC 271, and CSC 409.

**For more information contact:**
Institute of Internal Auditors
247 Maitland Avenue
Altamonte Springs, FL 32701
407-937.1111 www.theiia.org

**CMA-CERTIFIED MANAGEMENT ACCOUNTANT:**
Major: Accounting (CPA) Emphasis
Electives: BUS 260, BUS 341, BUS 342, ECO 343 or BUS 344 and BUS 361.

**CFM-CERTIFIED FINANCIAL MANAGER:**
Major: Accounting (CPA) Emphasis
Electives: ACC 100, BUS 341, BUS 342, ECO 343 or BUS 344, and BUS 446.

**For more information on the CMA/CFM contact:**
Institute of Certified Management Accountants
10 Paragon Drive, Suite 1
Montvale, NJ 07645-1760
800-638-4427 www.imanet.org

**CFE-CERTIFIED FRAUD EXAMINER:**
Major: Accounting (CPA) Emphasis
Electives: SOC 103, SOC 212, SOC 303, SOC 304, and CHE 104.

**For more information contact:** Association of Certified Fraud Examiner Gregor Building
716 West Avenue
Austin, TX 78701-2727
800-245-3321 www.acfe.com

Students seeking multiple certifications are encouraged to add specific electives to the 150-credit CPA Emphasis in preparation for the national exams.

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The Accounting program provides superior educational opportunities that increase students’ professional effectiveness and career success in complex business environments. Carroll University offers three options for students interested in preparing for a position of leadership and responsibility in accounting, whether it is in the public, private or governmental sectors of our economy.

**Learning Outcomes for Accounting**

1. Define and describe accounting-related terminology and concepts.
2. Solve complex accounting problems using appropriate tools and techniques.
3. Formulate accounting policies and strategies and evaluate their effectiveness.
4. Integrate global considerations in accounting decisions.
5. Demonstrate multiple effective communication skills.
6. Work effectively in team environments.
7. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

**Option 1: Accounting Major** is designed for students wishing to complete an accounting major that will enable them, upon graduation, to obtain a position in a corporate or not-for-profit organization.

**Accounting Four Year Plan** | **Accounting Advising Worksheet**

**Option 2: Accounting major / CPA** is designed for students interested in obtaining a Certified Public Accountant (CPA) designation. The CPA designation requires the completion of 150 credit hours. Students wishing to meet the requirements to "sit" for the CPA exam can do so in four years by following a specified curriculum. Through careful planning additional competencies can be gained that will allow the student to consider other certifications.

**Accounting / CPA Four Year Plan**

**Option 3: Accounting major / CPA / MBA** is designed for students wishing to major in accounting, obtain the CPA designation, and complete the MBA program within a four year period.

**Accounting / CPA / MBA Four Year Plan**

- **Additional Certifications for Accountants**
  - Required Courses: (80 Credits)
    - ACC205: Financial Accounting (4 hours)
    - ACC207: Intermediate Accounting I (4 hours)
    - ACC208: Intermediate Accounting II (4 hours)
    - ACC305: Advanced Accounting I (4 hours)
    - ACC306: Advanced Accounting II (4 hours)
    - ACC310: Advanced Cost Accounting and Budgeting (4 hours)
    - ACC324: Advanced Business Law (4 hours)
    - ACC375: Pre-internship Seminar (2 hours)
    - ACC405: Tax Accounting I (4 hours)
    - ACC406: Tax Accounting II (4 hours)
    - ACC407: Auditing (4 hours)
    - ACC414: Accounting Theory (4 hours)
    - ACC480: Internship in Accounting (1 TO 12 hours)
    - Note: A minimum of 2 hours in ACC480 is required for the major.
    - BUS290: Principles of Business Law (2 hours)
    - BUS304: Principles of Finance (4 hours)
    - BUS305: Principles of Operations Management (4 hours)
    - CMP112: Computational Thinking I (4 hours)
    - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
    - CSC109: Technological Productivity (2 hours)
    - CSC220: Information Systems (4 hours)
    - ECO124: Principles of Economics I - Microeconomics (4 hours)
    - ECO225: Principles of Economics II - Macroeconomics (4 hours)
  - Recommended Courses for students who wish to sit for the CPA Exam
    - BUS301: Principles of Marketing (4 hours)
    - BUS302: Principles of Management (4 hours)
MAT130: Elementary Functions (4 hours)
OR -HIGHER: Other higher level course of the same subject

Transfer students must complete 20 hours of Accounting courses required for the major at Carroll University. Students transferring in Accounting courses required for the Accounting major must have completed the course within 4 years of the transfer date to Carroll University. The transfer date is defined as the start date of courses at Carroll.

Any 300 or 400 level Accounting courses applied to the Accounting major requirements must have been completed within 5 years of completion of the undergraduate degree.

Note: For students intending to double major in Management & Leadership and Accounting, MATH 130 or higher is an additional requirement that must be fulfilled in order to complete the double major.

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

Note: Each major may have specific course sequencing requirements. For specific requirements, see "Required Support Courses" within each major.

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.
Business Economics Major (64 credits)

PROGRAM ADVISOR:
Dennis Debrecht, Associate Professor (ddebrech@carrollu.edu)

Students who major in Business Economics complete coursework in all of the functional areas of business and then specialize in economics by taking upper division courses in microeconomics, macroeconomics, money and banking, international economics, and econometrics. Students in this major will use quantitative skills and economic theory to analyze varying economic problems. Business Economics prepares students for careers in both the private and public sectors of our economy.

Learning Outcomes for Business Economics

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.
7. Define and describe economics specific terminology and concepts.
8. Solve complex economic problems using appropriate tools and techniques.

Required Courses (64 credits)

- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ACC205: Financial Accounting (4 hours)
- ACC206: Managerial Accounting (2 hours)
- BUS290: Principles of Business Law (2 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS304: Principles of Finance (4 hours)
- BUS305: Principles of Operations Management (4 hours)
- BUS496: Business Policies (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- ECO306: Microeconomic Theory (4 hours)
- ECO307: Macroeconomic Theory (4 hours)
- ECO314: Econometrics (4 hours)
- ECO343: Money and Banking (4 hours)
- ECO363: International Economics (4 hours)

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

Business Economics Four Year Plan (PDF)  Business Economics Advising Worksheet (PDF)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.
# BUSINESS ECONOMICS MAJOR - 4 year plan

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<th>Spring</th>
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<td>MAT 101 or GE 1</td>
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<tr>
<td>Fall</td>
<td>ACC 205</td>
<td>ACC 206 (2 hours)</td>
<td>Internship Experience Recommended</td>
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<td>CMP 112</td>
<td>BUS 290 (2 hours)</td>
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<td>ECO 225</td>
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<td>GE2</td>
<td>CMP 114</td>
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Note: Fall and Spring can be reversed depending on CCE choices.

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<td>BUS 496</td>
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<td>CCS 400 (2 hours)</td>
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<td>ECO 343</td>
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<td>ECO 343</td>
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Note: ACC 100 is recommended elective.

2015-16 catalog
### PIONEER CORE

**Cross-Cultural Component**

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**Distribution Component**

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<td>GE1</td>
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<td>Philosophy/Ethics/Religion</td>
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<td>GE1</td>
<td>Natural Sciences</td>
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<td>2nd course in 1 of the GE1 disciplines above</td>
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### BUSINESS ECONOMICS MAJOR (64 credit hours)

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<td>BUS290</td>
<td>Principles of Business Law</td>
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<td>Principles Of Marketing Pre-req: ECO124 or sophomore standing</td>
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<td>BUS302</td>
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<td>ECO225</td>
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<td>ECO306</td>
<td>Microeconomic Theory Pre-req: ECO124</td>
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<td>ECO307</td>
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<td>Econometrics Pre-req: CMP114 and either ECO124 or ECO225</td>
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<td>ECO343</td>
<td>Money and Banking Pre-req: ECO225</td>
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<td>ECO363</td>
<td>International Economics Pre-req: ECO124 and ECO225</td>
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</table>

128 credit hours needed for graduation

Credit hours earned

__________
The Finance major teaches managers how to make the best long-term decisions for their organizations. Students learn how to plan, manage, analyze, interpret and present information with the goal of maximizing the wealth of business owners. A finance major should be good with numbers, a team player, a creative problem solver and an effective communicator.

Learning Outcomes for Finance

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.
7. Define and describe finance specific terminology and concepts.
8. Solve complex financial problems using appropriate tools and techniques.

Required Courses (64 credits)

- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ACC205: Financial Accounting (4 hours)
- ACC206: Managerial Accounting (2 hours)
- BUS290: Principles of Business Law (2 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS304: Principles of Finance (4 hours)
- BUS305: Principles of Operations Management (4 hours)
- BUS321: Careers in Finance (2 hours)
- BUS341: Applied Risk Management (4 hours)
- BUS342: Investment Management (4 hours)
- BUS344: Management of Financial Institutions (4 hours)
- BUS356: Applied Financial Management (4 hours)
- BUS480: Internship in Business (1 TO 12 hours)
- BUS496: Business Policies (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

A minimum of 2 hours in BUS480 is required for the major.

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

Finance Four Year Plan (PDF) | Finance Advising Worksheet (PDF)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.
## FINANCE MAJOR - 4 year plan

### Year 1

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<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
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<td>CCS 100</td>
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### Year 2

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<th>Winter</th>
<th>Spring</th>
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### Year 3

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*Note: Fall and Spring can be reversed depending on CCE choices.*

### Year 4

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<td>BUS 321 (2 hours)</td>
<td>BUS 356</td>
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<td>BUS 342</td>
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<td>BUS 344</td>
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<td>BUS 480 - Internship (2 hours)</td>
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<td>CCS 400 (2 hours)</td>
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*Note: ACC 100 is recommended elective.*

2015-16 catalog
### ADVISING WORKSHEET – CARROLL UNIVERSITY – FINANCE 2015-16

**Name_____________________________**

**ID #______________**

**Faculty Advisor_____________________**

#### PIONEER CORE

**Cross-Cultural Component**

<table>
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**Distribution Component**

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**FINANCE MAJOR** (64 credit hours)

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</table>

128 credit hours needed for graduation

Credit hours earned ________________
Management and Leadership Major (64 credits)

PROGRAM ADVISOR:
Mary Ann Wisniewski, Professor (mwisniew@carrollu.edu)

A major in Management and Leadership prepares students to work in a variety of organizations, from small businesses, to nonprofit organizations, to multinational companies. Students will develop skills in setting compelling organizational goals and in leading others to effectively and efficiently use resources to achieve those goals. A degree in Management and Leadership can be applied to practically every industry and organization, including department managers, team managers, project managers, to CEOs.

Learning Outcomes for Management and Leadership

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.
7. Define and describe management and leadership specific terminology and concepts.
8. Solve complex management and leadership problems using appropriate tools and techniques.

Required Courses (64 hours)

- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ACC205: Financial Accounting (4 hours)
- ACC206: Managerial Accounting (2 hours)
- BUS265: Human Resource Management (4 hours)
- BUS290: Principles of Business Law (2 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS304: Principles of Finance (4 hours)
- BUS305: Principles of Operations Management (4 hours)
- BUS479: Consulting Management (4 hours)
- BUS496: Business Policies (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- CSC220: Information Systems (4 hours)
- LEA302: Leadership Theory and Practice (4 hours)
- LEA499: Leading Change (4 hours)

Note: For students intending to double major in Management & Leadership and Accounting, MATH 130 or higher is an additional requirement that must be fulfilled in order to complete the double major. CMP112 and CMP114 satisfy the Bachelor of Science requirement.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

Note: Each major may have specific course sequencing requirements. For specific requirements, see "required support courses" within each major.

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

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# MANAGEMENT AND LEADERSHIP MAJOR - 4 year plan

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Note: Fall and Spring can be reversed depending on CCE choices.

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Note: BUS 360 and ACC 100 are recommended electives.

2015-16 catalog
### PIONEER CORE

#### Cross-Cultural Component

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<th>Semester</th>
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#### Distribution Component

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### MANAGEMENT AND LEADERSHIP MAJOR (64 credit hours)

<table>
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<td>BUS265</td>
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<td>Principles of Business Law</td>
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128 credit hours needed for graduation

Credit hours earned

________
A Carroll University Marketing major allows students to study all of the functional areas of business and then specialize further within the field of marketing. Students will take courses in business to business marketing, promotion management, and market research as well as additional elective courses in marketing. Students who major in Marketing are prepared for a variety of fulfilling and challenging careers with domestic and international organizations. These organizations need articulate, well-reasoning, effective leaders to help build their brands as they compete in a global environment.

Learning Outcomes for Marketing

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.
7. Define and describe marketing specific terminology and concepts.
8. Solve complex marketing problems using appropriate tools and techniques.

Required Courses (56 credits)

- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ACC205: Financial Accounting (4 hours)
- ACC206: Managerial Accounting (2 hours)
- BUS290: Principles of Business Law (2 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS304: Principles of Finance (4 hours)
- BUS305: Principles of Operations Management (4 hours)
- BUS320: Promotion Management (4 hours)
- BUS327: Business to Business Marketing (4 hours)
- BUS435: Marketing Research (4 hours)
- BUS496: Business Policies (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

Choose 8 credit hours from the following:

- ART258: Visual Communication (4 hours)
- BUS360: Career Development (4 hours)
- BUS480: Internship in Business (1 TO 12 hours)
- COM208: Introduction to Public Relations (4 hours)
- GRC106: Intro-Communication Technology (2 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- GRC360: Interactive Media (4 hours)
- PSY228: Consumer Behavior (4 hours)

A maximum of 4 hours in BUS480 can be applied toward the major requirements.

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

Marketing Four Year Plan (PDF) | Marketing Advising Worksheet (PDF)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;
**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, [click here.](#)
# MARKETING MAJOR - 4 year plan

**Year 1**

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<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
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<tr>
<td>CCS 100</td>
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<td>ENG 170 or GE 1</td>
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**Year 2**

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<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
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<tr>
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<td>BUS 290 (2 hours)</td>
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**Year 3**

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*Note: Fall and Spring can be reversed depending on CCE choices.*

**Year 4**

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<td>BUS 360 (recommended)</td>
<td>BUS 327</td>
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<td>BUS 435</td>
<td>BUS 496</td>
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*Note: ACC 100 and BUS 360 are recommended electives.*

---

2015-16 catalog
# ADVISING WORKSHEET – CARROLL UNIVERSITY – MARKETING 2015-16

Name_________________________________  ID #______________  Faculty Advisor__________________________

## PIONEER CORE

### Cross-Cultural Component

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### Distribution Component

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128 credit hours needed for graduation

Credit hours earned __________________________

## MARKETING MAJOR (64 credit hours)

### Course # | Name                               | Credits | Semester | Grade |
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<td>Managerial Accounting Pre-req: ACC 205</td>
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<td>BUS290</td>
<td>Principles of Business Law</td>
<td>2</td>
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<tr>
<td>BUS301</td>
<td>Principles Of Marketing Pre-req: ECO124 or sophomore standing</td>
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<td>Principles Of Finance Pre-req: ECO124, ECO225, CMP114 and either ACC310 or ACC206</td>
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Choose 8 credit hours from the following:

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<td>Internship in Business Pre-req: approval of instructor Note: a maximum of 4 credit hours in BUS480 can be applied toward the major</td>
<td>1 to 12</td>
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<td>GRC106</td>
<td>Introduction to Communication Technology</td>
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<tr>
<td>GRC150</td>
<td>Digital Toolbox – Photoshop/Illustrator 1</td>
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<td>Consumer Behavior Pre-req: PSY101</td>
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</table>

128 credit hours needed for graduation

Credit hours earned __________________________
Health Care Administration Major (46 credits)

PROGRAM ADVISOR:
Sarah Esveldt, Senior Lecturer (sesveldt@carrollu.edu)

Carroll University’s Health Care Administration major will prepare students to lead and manage in the contemporary health care market. The HCA program will prepare graduates for entry-level positions in the health care industry. Graduates will have an understanding of the health care delivery system, the factors that influence the health care system, the knowledge to apply health care management concepts, and the skills and abilities that are necessary to be successful in health care management and leadership roles.

Learning Outcomes for Health Care Administration

1. Demonstrate an understanding of management, leadership, and economic theories and practices as they relate to complex, formal health care organizations.
2. Using problem solving skills, demonstrate an understanding and application of financial and reimbursement strategies needed to resolve financial issues unique to health care organizations.
3. Display an understanding and application of various health care administration practices, including organizational management, marketing, human resources, and information management.
4. Demonstrate an understanding and ability to analyze and interpret legal theories, ethical principles and regulatory structures in health care necessary for organizations and governments to serve health care consumers.
5. Develop and enhance, through practical experiences, the ability to collaborate with others to examine, analyze and make recommendations concerning health care organizational issues.

Required Courses (46 credits)

- ACC205: Financial Accounting (4 hours)
- BUS101: Introduction to Business (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- COM290: Intro to Health Communication (4 hours)
- HCA100: Health Care Terminology (2 hours)
- HCA150: Introduction to Health Care (4 hours)
- HCA200: Health Care Economics and Policy (4 hours)
- HCA300: Health Care Management (4 hours)
- HCA350: Health Care Law and Ethics (4 hours)
- HCA400: Health Care Financial Management (4 hours)
- HCA450: Health Care Information Management (4 hours)

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

Bachelor of Science Requirement

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.
## HEALTH CARE ADMINISTRATION MAJOR - 4 year plan

### 2015-16 catalog

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<td><strong>Summer</strong></td>
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Note: a foreign study experience can occur in spring of year 3.

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2015-16 catalog
**PIONEER CORE**

**Cross-Cultural Component**

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**Distribution Component**

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**HEALTH CARE ADMINISTRATION MAJOR** (46 credit hours)

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<td>ACC205</td>
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<td>Introduction to Business</td>
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<td>Computational Thinking I Pre-req: MAT 101</td>
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<td>Computational Thinking II Pre-req: CMP 112</td>
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<td>COM290</td>
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<td>Health Care Terminology</td>
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128 credit hours needed for graduation

Credit hours earned: __________
### 2015-16 Health Care Administration / Doctorate of Physical Therapy 6-year Plan

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<td>FOUNDATIONS OF PROF. PRACTICE</td>
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<td>STATISTICAL &amp; RESEARCH METHODS</td>
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<td>PTH 404</td>
<td>BIOMECHANICS</td>
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<td>PTH 406</td>
<td>EXERCISE PHYSIOLOGY</td>
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<td>PTH 408</td>
<td>INTRODUCTION TO PATIENT MANAGEMENT</td>
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<td>CLINICAL INTERNSHIP I (FINAL 7 WKS)</td>
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<td>APPLIED HUMAN BEHAVIOR (ENTIRE SEMESTER)</td>
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<td>HUMAN MOTOR LEARNING (FINAL 7 WKS)</td>
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**FALL-6**

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**Notes:**

1. The GE1 scheduled in summer of year 1 can also be taken in summer of years 2 or 3
2. HCA 100 can also be taken in spring of year 1 or can be waived with appropriate documentation. Specific PT department approved online medical terminology course would meet HCA 100 requirements.
3. ACC 205 can also be taken in summer I of year 1 or winter of years 1 or 2
A Carroll University Business Administration degree facilitates integration of knowledge, development of lifelong skills, career preparation, and formulation of enduring personal values. Students who major in Business Administration are prepared for a variety of fulfilling and challenging careers with domestic and international organizations. These organizations need articulate, well-reasoning, effective leaders to manage business environments that are dynamic and increasingly complex.

Learning Outcomes for Business Administration

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

Required Courses (44 credits)

- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ACC205: Financial Accounting (4 hours)
- ACC206: Managerial Accounting (2 hours)
- BUS290: Principles of Business Law (2 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS304: Principles of Finance (4 hours)
- BUS305: Principles of Operations Management (4 hours)
- BUS496: Business Policies (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

Business Administration Four Year Plan (PDF)   Business Administration Advising Worksheet (PDF)

Pre-Physical Therapy 4 year plan
Click here for a four year plan with a major in Business Administration.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.
## BUSINESS ADMINISTRATION MAJOR - 4 year plan

### Year 1

<table>
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<tr>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
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<tr>
<td>CCS 100</td>
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<tr>
<td>ENG 170 or GE 1</td>
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<td>ACC 205</td>
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<td>BUS 290 (2 hours)</td>
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<td>CMP 112</td>
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<tr>
<td>BUS 305</td>
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*Note: Fall and Spring can be reversed depending on CCE choices.*

### Year 4

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<th>Fall</th>
<th>Winter</th>
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<tr>
<td>Elective</td>
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<td>Elective</td>
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<tr>
<td>BUS 360 (recommended)</td>
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<td>CCS 400 (2 hours)</td>
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<td>Elective</td>
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<tr>
<td>ACC 100 (recommended-2 hours)</td>
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*Note: BUS 360 and ACC 100 are recommended electives.*

2015-16 catalog
<table>
<thead>
<tr>
<th>Name_________________________________</th>
<th>ID #______________</th>
<th>Faculty Advisor__________________________</th>
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**PIONEER CORE**

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**Distribution Component**

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<td>GE1</td>
<td>Humanities</td>
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<td>Philosophy/Ethics/Religion</td>
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<tr>
<td>GE2</td>
<td>2nd course in 1 of the GE1 disciplines above</td>
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**BUSINESS ADMINISTRATION MAJOR** (44 credit hours)

<table>
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<th>Semester</th>
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<td>ACC206</td>
<td>Managerial Accounting Pre-req: ACC 205</td>
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<td>BUS290</td>
<td>Principles of Business Law</td>
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<tr>
<td>BUS301</td>
<td>Principles Of Marketing Pre-req: ECO124 or sophomore standing</td>
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<td>BUS302</td>
<td>Principles Of Management Pre-req: ECO124 or sophomore standing</td>
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<td>BUS304</td>
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<td>BUS305</td>
<td>Principles Of Operations Mgmt Pre-req: CMP114</td>
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<td>BUS496</td>
<td>Business Policies Pre-req: BUS301, BUS302, BUS304, and BUS305</td>
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<td>CMP112</td>
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<td>CMP114</td>
<td>Computational Thinking II Pre-req: CMP 112</td>
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<td>ECO124</td>
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<td>ECO225</td>
<td>Macroeconomics Pre-req: ECO124 or sophomore standing</td>
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128 credit hours needed for graduation

Credit hours earned            ______________
Accounting Minor (16 credits)

CONTACT PEOPLE:
Jeffrey T. Kunz, Assistant Professor (jkunz@carrollu.edu)
Gary L. Olsen, Associate Professor (golsen@carrollu.edu)

- ACC205: Financial Accounting (4 hours)
- ACC207: Intermediate Accounting I (4 hours)
- ACC208: Intermediate Accounting II (4 hours)
- Choose 4 or more hours from the following:
  - ACC206: Managerial Accounting (2 hours)
  - ACC305: Advanced Accounting I (4 hours)
  - ACC310: Advanced Cost Accounting and Budgeting (4 hours)
  - ACC324: Advanced Business Law (4 hours)
  - ACC405: Tax Accounting I (4 hours)
  - ACC406: Tax Accounting II (4 hours)

Transfer credit for Accounting courses required for the Accounting minor will only be accepted if the course was taken in four years prior to the date of transfer to Carroll University. The transfer date is defined as the date of the start of courses at Carroll.
Economics Minor (20 credits)

CONTACT PERSON:
Dennis Debrecht, Associate Professor (ddebrech@carrollu.edu)

- Required Courses (16 credits)
  - ECO124: Principles of Economics I - Microeconomics (4 hours)
  - ECO225: Principles of Economics II - Macroeconomics (4 hours)
  - ECO306: Microeconomic Theory (4 hours)
  - ECO307: Macroeconomic Theory (4 hours)
- Choose 4 or more credit hours from the following:
  - ECO314: Econometrics (4 hours)
  - ECO343: Money and Banking (4 hours)
  - ECO363: International Economics (4 hours)
Finance Minor (16 credits)

CONTACT PERSON:
Gregory Kuhlemeyer, Professor (gkuhleme@carrollu.edu)

- Required Courses (8 credits)
  - BUS101: Introduction to Business (4 hours)
  - BUS304: Principles of Finance (4 hours)
- Choose 8 or more credit hours from the following:
  - BUS341: Applied Risk Management (4 hours)
  - BUS342: Investment Management (4 hours)
  - BUS344: Management of Financial Institutions (4 hours)
Management and Leadership Minor (16 credits)

CONTACT PERSON:
Mary Ann Wisniewski, Professor (mwisniew@carrollu.edu)

- Required Courses (8 credits)
  - BUS101: Introduction to Business (4 hours)
  - BUS302: Principles of Management (4 hours)
- Choose 8 or more credit hours from the following:
  - BUS265: Human Resource Management (4 hours)
  - BUS479: Consulting Management (4 hours)
  - LEA190: Leadership and Personal Effectiveness (4 hours)
  - LEA302: Leadership Theory and Practice (4 hours)
  - LEA499: Leading Change (4 hours)

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Marketing Minor (16 credits)

CONTACT PERSON:
Michael Levas, Associate Professor (mlevas@carrollu.edu)

- Required Courses (8 hours)
  - BUS101: Introduction to Business (4 hours)
  - BUS301: Principles of Marketing (4 hours)
- Choose 8 or more credit hours from the following:
  - BUS320: Promotion Management (4 hours)
  - BUS327: Business to Business Marketing (4 hours)
  - BUS435: Marketing Research (4 hours)
Health Care Administration Minor (22 credits)

CONTACT PERSON:
Sarah Esveldt, Senior Lecturer (sesveldt@carrollu.edu)

- Required Courses (14 credits)
  - BUS101: Introduction to Business (4 hours)
  - HCA100: Health Care Terminology (2 hours)
  - HCA150: Introduction to Health Care (4 hours)
  - HCA300: Health Care Management (4 hours)
- Choose two courses from the following:
  - HCA200: Health Care Economics and Policy (4 hours)
  - HCA350: Health Care Law and Ethics (4 hours)
  - HCA400: Health Care Financial Management (4 hours)
  - HCA450: Health Care Information Management (4 hours)
  - COM290: Intro to Health Communication (4 hours)
College of Humanities and Social Sciences

Dean/Director: Charles Byler, Dean
Room: Betty Lou Tikalsky House 203
Telephone: 262-650-4836
Fax: 262-574-2608
Email: cbyler@carrollu.edu

Departments

English and Modern Languages
History, Political Science and Religious Studies
Visual and Performing Arts
Education
Communication and Sociology
Department: English and Modern Languages

Chairperson: Deirdre Keenan
Room: MacAllister 302 Email: dkeenan@carrollu.edu
Telephone: 262-524-7254 Fax: 262-650-4837

Programs

Undergraduate

English
Modern Languages and Literatures
Professional Writing
The English Program offers a major in English and a minor in English.

English Major (40 credits)

---

**Learning Outcomes for English**

Upon successful completion of major requirements students will be proficient in the following:

1. Develop strategies for originating and answering questions about literature.
2. Employ a variety of critical approaches to literature.
3. Use language specific to the discourses of poetry, drama and fiction.
4. Demonstrate their knowledge of literary canonicity as part of their preparation for citizenship in a diverse community.
5. Analyze and respond critically to literature using research and bibliographic materials appropriate to the discipline.

---

**Core Courses**

I. British and American Literature Survey: Students must complete the following three survey courses. (12 credits)

- ENG240: British Literature I - Medieval to 1700 (4 hours)
- ENG241: British Literature II - 1700 to Contemporary (4 hours)
- ENG242: American Literature: One Nation, Many Voices (4 hours)

II. Diversity/World Literature: students must complete one of the following courses: (4 credits)

- ENG162: Science Fiction and Gender (4 hours)
- ENG164: American Indian Literature and Spirituality (4 hours)
- ENG165: Writing the Body: Cultural Explorations of Race, Gender and Class (4 hours)
- ENG210: African American Literature (4 hours)
- ENG226: Africa: Literature and Culture of Its Many Nations (4 hours)
- ENG255: Postcolonial Literature and Theory (4 hours)

III. Visual Literacy: students must complete one of the following courses:

- ENG214: Global Film Theory and Criticism (4 hours)
- ENG288: Spectacle and Text: Visual Culture 1700 - 1920 (4 hours)

IV. Great Figures: students must complete one of the following courses: (4 credits)

- ENG200: Great Authors (4 hours)
- ENG301: Chaucer (4 hours)
- ENG303: Milton and Moral Choice - His Age and Ours (4 hours)
- ENG304: Shakespeare: From Stage to Screen (4 hours)

V. Upper Division Literature requirement: students must complete 3 additional literature courses at the upper-division level ("upper-division" is defined as any course numbered 300 and above).

VI. Senior capstone experience: English 499, advanced literature seminar. (4 credits)

---

Students seeking education certification must take the following courses;

- ENG219: Introduction to Linguistics (4 hours)
Undergraduate

- ENG240: British Literature I - Medieval to 1700 (4 hours)
- ENG304: Shakespeare: From Stage to Screen (4 hours)
- ENG305: Advanced Exposition and the Rhetorical Tradition (4 hours)

English majors are required to complete a Modern Language through 202.

This Modern Language requirement is in addition to the minimal Bachelor of Arts language requirement.

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.

NOTE: FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

English Minor (24 credits)

Students must take six courses in English (excluding English 170 and English 140). At least 8 credits must be at the 300-level in English and no more than 8 credits may be at the 100-level.

- ENG164: American Indian Literature and Spirituality (4 hours)
- ENG165: Writing the Body: Cultural Explorations of Race, Gender and Class (4 hours)
- ENG210: African American Literature (4 hours)
- ENG226: Africa: Literature and Culture of Its Many Nations (4 hours)
- ENG255: Postcolonial Literature and Theory (4 hours)
- ENG240: British Literature I - Medieval to 1700 (4 hours)
- ENG242: American Literature: One Nation, Many Voices (4 hours)
- ENG255H: Postcolonial Literature and Theory (4 hours)
- ENG288: Spectacle and Text: Visual Culture 1700 - 1920 (4 hours)
- ENG219: Introduction to Linguistics (4 hours)
- ENG240: British Literature I - Medieval to 1700 (4 hours)
- ENG242: American Literature: One Nation, Many Voices (4 hours)
- ENG305: Advanced Exposition and the Rhetorical Tradition (4 hours)

Major Courses

The list below displays all the courses offered by the program:

- ENG140: Introductory Language Skills for Liberal Arts (4 hours)
- ENG162: Science Fiction and Gender (4 hours)
- ENG164: American Indian Literature and Spirituality (4 hours)
- ENG165: Writing the Body: Cultural Explorations of Race, Gender and Class (4 hours)
- ENG170: Writing Seminar (4 hours)
- ENG170H: Writing Seminar (4 hours)
- ENG190: Intro to Creative Writing - Imagination and Rhetoric (4 hours)
- ENG206: Fiction Writing (4 hours)
- ENG207: Poetry Writing (4 hours)
- ENG210: African American Literature (4 hours)
- ENG211: Intro Literary Study I - Poetry (4 hours)
- ENG212: Intro to Literary Study II - Short Fiction & Drama (4 hours)
- ENG214: Global Film Theory and Criticism (4 hours)
- ENG219: Introduction to Linguistics (4 hours)
- ENG226: Africa: Literature and Culture of Its Many Nations (4 hours)
- ENG240: British Literature I - Medieval to 1700 (4 hours)
- ENG241: British Literature II - 1700 to Contemporary (4 hours)
- ENG242: American Literature: One Nation, Many Voices (4 hours)
- ENG255: Postcolonial Literature and Theory (4 hours)
- ENG255H: Postcolonial Literature and Theory (4 hours)
- ENG288: Spectacle and Text: Visual Culture 1700 - 1920 (4 hours)
- ENG298: Independent Study in English (1 TO 4 hours)
- ENG299: Introduction to Medical Humanities (4 hours)
- ENG300: Great Authors (4 hours)
- ENG301: Chaucer (4 hours)
- ENG303: Milton and Moral Choice - His Age and Ours (4 hours)
- ENG304: Shakespeare: From Stage to Screen (4 hours)
- ENG305: Advanced Exposition and the Rhetorical Tradition (4 hours)
- ENG309: Romantic and Victorian Literature (4 hours)
- ENG312: Modernism (4 hours)
- ENG323: Early Modern British Literature (4 hours)
- ENG333: Advanced Creative Writing (4 hours)
- ENG380: Internship in English (2 TO 4 hours)
- ENG398: Independent Study in English (1 TO 4 hours)
- ENG480: Internship in English (4 hours)
- ENG497: Guided Senior Thesis (2 hours)
- ENG499: English Major Capstone-Advanced Literature Seminar (4 hours)
Modern Languages and Literatures
Jessica Boll  Assistant Professor of Spanish
Elena M. DeCosta  Associate Professor of Spanish
Michael Koch  Instructor of German
Katarzyna Rotte  Instructor of German

The Modern Languages program offers a major in Spanish and minors in French, German, and Spanish.

Spanish Major (38 credits)

Within the framework of a liberal arts education, the Spanish major provides students with direct linguistic contact with a culture different from their own. A culture expresses itself primarily through its language and its literature, and to comprehend another's, one must be able to communicate with the peoples of that culture.

As a general rule, courses are conducted in the target language. All majors should spend a summer, semester or year abroad. Students may choose to study abroad during a summer, semester, or full academic year by applying to the Office of International Education. Recent graduates have studied in Costa Rica, Ecuador, Guatemala, Mexico, and Spain.

Learning Outcomes for Spanish

A student successfully completing a Spanish major at Carroll University:

- Can understand with ease virtually everything heard or read.
- Can summarize information from spoken and written sources and reconstruct arguments in a coherent presentation.
- Can express oneself spontaneously, fluently and precisely, differentiating meaning in complex situations.
- Can summarize cultural texts (literary and sociopolitical) intended for native speakers to support analysis, reflection, and research related to global issues while integrating cross-cultural perspectives.
- Can utilize a wide range of sources on cultural themes, including international and domestic sources in the target language (e.g., heritage/immigrant community newspapers, radio and TV broadcasts, or websites.
- Can utilize information from a variety of sources in the target language, including sources produced by writers in the target culture for target culture readers and listeners as well as sources produced by writers in the base culture (e.g., émigré community, for émigré readers and listeners) in order to create one's own argument, drawing appropriately on research for evidence of cultural significance.
- Can balance perspectives across cultures and evaluate sources of target culture information.

Core Courses

- SPA201: Intermediate Spanish I (4 hours)
- SPA202: Intermediate Spanish II (4 hours)
- SPA300: Introduction to Spanish Phonetics and Phonology (4 hours)
- SPA301: Conversation and Composition I (4 hours)
- SPA302: Conversation & Composition II (4 hours)
- SPA305: Spanish for the Professions (4 hours)
- OR - SPA325: Spanish for the Professions (4 hours)
- SPA307: Latin American Civilization (4 hours)
- SPA308: Hispanic Civilization (4 hours)
- SPA401: Advanced Conversation (2 hours)

One elective course in Spanish (Usually satisfied with Spanish 480 or Spanish 498).

Capstone Experience

- SPA480: Internship/Capstone Internship in Spanish (2 TO 4 hours)
- OR - SPA498: Indep Directed/Capstone Study (2 TO 4 hours)

Required Support Courses (Required for primary majors only)

- ENG255: Postcolonial Literature and Theory (4 hours)
- HIS103: Roots of the Western World (4 hours)
- OR - HIS104: Europe and the Modern World (4 hours)
- OR - HIS112: Intro to Latin America History (4 hours)
- REL106: Understanding Religion (4 hours)

NOTE: Successful completion of the Spanish major fulfills both the B.A. and department modern language requirements.

Pre-Physical Therapy 4 year plan

Click here for a four year plan with a major in Spanish beginning with SPA102.

Click here for a four year plan with a major in Spanish beginning with SPA201.

Bachelor of Arts Requirement

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.
The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

B.A. Spanish - Pre-Physical Therapy

B.S. Spanish - Pre-Physical Therapy

Click here for an example of an academic plan for Spanish - Pre-Physical Therapy with a SPA102 placement.

Click here for an example of an academic plan for Spanish - Pre-Physical Therapy with a SPA201 placement.

Spanish Minor (22 credits)

- Core Courses
  - SPA201: Intermediate Spanish I (4 hours)
  - SPA202: Intermediate Spanish II (4 hours)
  - SPA301: Conversation and Composition I (4 hours)
  - SPA302: Conversation & Composition II (4 hours)
  - SPA305: Spanish for the Professions (4 hours)
  - OR - SPA307: Latin American Civilization (4 hours)
  - OR - SPA308: Hispanic Civilization (4 hours)
  - OR - SPA325: Spanish for the Professions (4 hours)
  - SPA401: Advanced Conversation (2 hours)

The Education Department requires students seeking MC-EA (Middle Childhood through Early Adolescence) or EA-A (Early Adolescence through Adolescence) licensure in Spanish to complete Education 355, Special Methods in Teaching Modern Languages.

French Minor (20 credits)

A student successfully completing a French minor at Carroll University:

1. Attains intermediate/advanced to advanced-level speaking, listening, writing, reading proficiency.
2. Is able to express her/himself in written and spoken French in most everyday situations with mistakes that do not hinder meaning.
3. Understands French-speaking individuals in most everyday situations, as well as written materials in French covering topics in various genres.
4. Is knowledgeable with regard to histories, cultures, customs, major political and literary events and movements, and contemporary society and issues in countries where French is the dominant language.
5. Has participated throughout her/his studies in academic, cultural or social activities off-campus, in and beyond the Carroll University and Waukesha communities, ideally through study abroad or substantial immersion experience in the target language.

- Core Courses
  - FRE201: Intermediate French I (4 hours)
  - FRE202: Intermediate French II (4 hours)
  - FRE301: Conversation & Composition (4 hours)
  - FRE307: French Civilization (4 hours)
  - FRE318: Topics in French and Francophone Literatures (4 hours)

The Paris NCEP may not be used to complete the minor.

The Education department requires students seeking MC-EA (Middle Childhood through Early Adolescence) or EA-A (Early Adolescence through Adolescence) licensure in French to complete Education 355: Special Methods in Teaching Modern Languages.

German Minor (22 credits)

A student successfully completing a German minor at Carroll University:

1. Attains intermediate/advanced to advanced-level speaking, listening, writing, reading proficiency.
2. Is able to express her/himself in written and spoken German in most everyday situations with mistakes that do not hinder meaning.
3. Understands German-speaking individuals in most everyday situations, as well as written materials in German covering topics in various genres.
4. Is knowledgeable with regard to histories, cultures, customs, major political and literary events and movements, and contemporary society and issues in countries where German is the dominant language.
5. Has participated throughout her/his studies in academic, cultural or social activities off-campus, in and beyond the Carroll University and Waukesha communities, ideally through study abroad or substantial immersion experience in the target language.

- Core Courses
  - GER201: Intermediate German I (4 hours)
  - GER202: Intermediate German II (4 hours)
  - GER301: Conversation & Composition (4 hours)
  - GER318: Topics in German Culture and Literature (4 hours)
  - GER401: Advanced Conversation (2 hours)

(Although not required, students are strongly encouraged to enroll in HIS 329, The German Experience.)

Note: Students taking HIS 329 or POL 329, The German Experience, and/or NCEP 321, Contemporary Germany: Its Culture, Economy, and Politics, and planning to use those courses for credit toward their German language minor need to...
work with the course instructor in the semester before they plan to take the course to develop a plan for ways to adapt their coursework to incorporate and demonstrate appropriate use of the language.

The Education department requires students seeking MC-EA (Middle Childhood through Early Adolescence) or EA-A (Early Adolescence through Adolescence) licensure in German to complete Education 355, Special Methods in Teaching Modern Languages.

- **Notes on Modern Languages**

  To begin in any course other than 101 in Modern Languages, students need to take the placement test in French, German, or Spanish prior to the start of the semester. Placement tests will also be administered during the first weeks of classes, and placement can be changed. Any student who needs the placement test at other times should contact the program faculty to arrange a time for administration of the test. Please consult program faculty for guidance in registering for the first language course. Either placement into a course numbered 301 or higher in any of the three languages, or completion of a 202 course will demonstrate competency in that language. In order to satisfy the language requirement for the Bachelor of Arts degree, a student must take 8 credits in a modern language (MLL) other than English.

  A student enrolled at Carroll in a degree program, who has completed work in French, German, or Spanish language courses in high school and then enrolls in the appropriate course at Carroll (as determined by the program) and completes that course with a grade of B or higher will receive credit toward graduation for the previously completed work. This must be the student's first enrollment in an advanced university-level course. Special provisions are made for native and near-native speakers of French, German, and Spanish.

  Teaching majors and minors consist of the specific modern language courses listed below plus (1) an immersion experience, e.g., New Cultural Experiences Program (NCEP) or study abroad, (2) successful completion of a language competency exam in the semester prior to the semester of student teaching, and (3) the requirements in the Teacher Education Program.

  The Education department requires students seeking MC-EA (Middle Childhood through Early Adolescence) or EA-A (Early Adolescence through Adolescence) licensure in French, German, or Spanish to complete Education 355, Special Methods in Teaching Modern Languages.

- **Major Courses**

  The list below displays all the courses offered by the program:

  - FRE101: Elementary French I (4 hours)
  - FRE102: Elementary French II (4 hours)
  - FRE201: Intermediate French I (4 hours)
  - FRE202: Intermediate French II (4 hours)
  - FRE298: Independent Studies in French (2 TO 4 hours)
  - FRE301: Conversation & Composition (4 hours)
  - FRE307: French Civilization (4 hours)
  - FRE318: Topics in French and Francophone Literatures (4 hours)
  - FRE398: Independent Studies in French (2 TO 4 hours)
  - GER101: Elementary German I (4 hours)
  - GER102: Elementary German II (4 hours)
  - GER201: Intermediate German I (4 hours)
  - GER202: Intermediate German II (4 hours)
  - GER298: Independent Studies in German (2 TO 4 hours)
  - GER301: Conversation & Composition (4 hours)
  - GER318: Topics in German Culture and Literature (4 hours)
  - GER398: Independent Studies in German (1 TO 4 hours)
  - GER401: Advanced Conversation (2 hours)
  - GER498: Independent Directed Study (2 TO 4 hours)
  - SPA101: Elementary Spanish I (4 hours)
  - SPA102: Elementary Spanish II (4 hours)
  - SPA201: Intermediate Spanish I (4 hours)
  - SPA202: Intermediate Spanish II (4 hours)
  - SPA290: Spanish for Health and Human Services (2 hours)
  - SPA298: Independent Studies in Spanish (4 hours)
  - SPA300: Introduction to Spanish Phonetics and Phonology (4 hours)
  - SPA301: Conversation and Composition I (4 hours)
  - SPA302: Conversation & Composition II (4 hours)
  - SPA305: Spanish for the Professions (4 hours)
  - SPA307: Latin American Civilization (4 hours)
  - SPA308: Hispanic Civilization (4 hours)
  - SPA325: Spanish for the Professions (4 hours)
  - SPA398: Independent Studies in Spanish (2 TO 4 hours)
  - SPA401: Advanced Conversation (2 hours)
  - SPA480: Internship/Capstone Internship in Spanish (2 TO 4 hours)
  - SPA498: Indep Directed/Capstone Study (2 TO 4 hours)

- **Professional Writing**

  The Professional Writing Program prepares writers to engage meaningfully with the world around them through the creation of powerful and persuasive texts. By integrating rhetorical theory, knowledge in a discipline, technological skills, and a thorough exploration of the writing process, the Program cultivates reflective thinkers who can communicate complex ideas in a variety of contexts. This preparation not only allows our graduates to succeed in a wide range of professions, but it also gives them the intellectual tools to be self-directed, creative individuals in a rapidly changing world.

  The Professional Writing major requires students to complete a second major or minor along with their writing coursework. Accordingly, students can receive either a Bachelor of Arts or a Bachelor of Sciences degree in professional writing, depending on their chosen major or minor.

  **Professional Writing Major (34 credits)**

  The professional writing major requires students to complete a second major or minor along with their writing coursework.
The goals of the Professional Writing Program are:

1. To provide students with a grounding in the principles of rhetoric and their application, so that graduates will be able to understand the social dynamics of the communication process and create effective arguments in a wide range of real-world contexts.
2. To teach students the critical thinking and writing skills that will help them to develop their own ideas and values.
3. To develop students’ knowledge base in their chosen fields, and to help them extend that knowledge through independent research.
4. To acquaint students with a variety of professional writing contexts and prepare them to succeed in diverse occupations.

Learning Outcomes for Professional Writing

Students graduating with a degree in professional writing will be able to:

1. Demonstrate their ability to synthesize and organize ideas.
2. Communicate effectively in different contexts using suitable grammar, syntax, and vocabulary.
3. Demonstrate their knowledge of a writing process that includes reading, research, drafting, editing, and revising, and be able to analyze that process in their own writing and the writing of others.
4. Convey their ideas appropriately in a professional context.
5. Demonstrate their mastery of content knowledge, research methods, and documentation procedures in a subject other than writing by completing a major or minor in that area.

 Core Courses

I. Student must take the following four courses (10 credits):
   - WRI120: Introduction to Professional Writing (4 hours)
   - GRC106: Intro-Communication Technology (2 hours)
   - ENG305: Advanced Exposition and the Rhetorical Tradition (4 hours)
   - ENG499: English Major Capstone-Advanced Literature Seminar (4 hours)

II. Students must take two of the following courses (8 credits):
   - WR1199: Reading and Writing in the Sciences (4 hours)
   - WR1230: Grant Writing (4 hours)
   - WR1350: Literary Magazine Publishing (4 hours)
   - COM227: Technical Writing in Organizations (4 hours)
   - COM255: Digital Journalism (4 hours)

III. Choose three of the following, two of which must be 200-level or higher (12 credits):
   - ACC324: Advanced Business Law (4 hours)
   - ART212: Introduction to Book Art (4 hours)
   - ART258: Visual Communication (4 hours)
   - BIO324: Bioethics (4 hours)
   - COM137: Introduction to Newswriting and Reporting (4 hours)
   - COM150: Research Methodology (4 hours)
   - COM208: Introduction to Public Relations (4 hours)
   - COM227: Technical Writing in Organizations (4 hours)
   - COM237: Advanced Newswriting and Reporting (4 hours)
   - COM255: Digital Journalism (4 hours)
   - COM275: Feature Writing (4 hours)
   - COM290: Intro to Health Communication (4 hours)
   - COM317: Communication Criticism (4 hours)
   - COM350: Communication Law (4 hours)
   - ECO105: History of Economic Thought (4 hours)
   - ENG190: Intro to Creative Writing - Imagination and Rhetoric (4 hours)
   - ENG206: Fiction Writing (4 hours)
   - ENG207: Poetry Writing (4 hours)
   - ENG241: British Literature II - 1700 to Contemporary (4 hours)
   - ENG242: American Literature: One Nation, Many Voices (4 hours)
   - ENG333: Advanced Creative Writing (4 hours)
   - PHI205: Philosophy, Politics, and Economics (4 hours)
   - PHI207: History and Philosophy of Science (4 hours)
   - WR1199: Reading and Writing in the Sciences (4 hours)
   - WR1230: Grant Writing (4 hours)
   - WR1350: Literary Magazine Publishing (4 hours)
   - WR1391: Topics in Professional Writing (4 hours)

Students majoring in Communications and Professional Writing must substitute either ART258 or ENG208 for COM150

 Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

 Bachelor of Science Requirement
The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

    For a complete list of CCD courses, click here.

- Professional Writing Minor (22 credits)
  - I. Students must take the following three courses (10 credits):
    - WR1120: Introduction to Professional Writing (4 hours)
    - GRC106: Intro-Communication Technology (2 hours)
    - ENG305: Advanced Exposition and the Rhetorical Tradition (4 hours)
  - II. Students must take two of the following courses (8 credits):
    - WR1199: Reading and Writing in the Sciences (4 hours)
    - WR1230: Grant Writing (4 hours)
    - WR1350: Literary Magazine Publishing (4 hours)
    - COM150: Research Methodology (4 hours)
    - COM227: Technical Writing in Organizations (4 hours)
  - III. In addition, students must complete one of the following (4 credits):
    - ACC324: Advanced Business Law (4 hours)
    - ART258: Visual Communication (4 hours)
    - BIO324: Bioethics (4 hours)
    - COM227: Technical Writing in Organizations (4 hours)
    - COM237: Advanced Newswriting and Reporting (4 hours)
    - COM275: Feature Writing (4 hours)
    - COM290: Intro to Health Communication (4 hours)
    - COM317: Communication Criticism (4 hours)
    - COM350: Communication Law (4 hours)
    - ENG206: Fiction Writing (4 hours)
    - ENG207: Poetry Writing (4 hours)
    - ENG240: British Literature I - Medieval to 1700 (4 hours)
    - ENG241: British Literature II - 1700 to Contemporary (4 hours)
    - ENG242: American Literature: One Nation, Many Voices (4 hours)
    - ENG333: Advanced Creative Writing (4 hours)
    - PHI207: History and Philosophy of Science (4 hours)
    - WR1199: Reading and Writing in the Sciences (4 hours)
    - WR1230: Grant Writing (4 hours)
    - WR1350: Literary Magazine Publishing (4 hours)
    - WR1391: Topics in Professional Writing (4 hours)

- Major Courses

**The list below displays all the courses offered by the program:**
- WR1120: Introduction to Professional Writing (4 hours)
- WR1199: Reading and Writing in the Sciences (4 hours)
- WR1230: Grant Writing (4 hours)
- WR1350: Literary Magazine Publishing (4 hours)
- WR1380: Internship in Writing (4 hours)
- WR1391: Topics in Professional Writing (4 hours)
- WR1496: Writing Major Capstone (4 hours)
Department: History, Political Science and Religious Studies

Chairperson: James Grimshaw
Room: MacAllister 002B Email: jgrimsha@carrollu.edu
Telephone: 262-524-7293 Fax: 262-650-4837

Programs

Undergraduate

Global Studies
History
Philosophy, Political Science and Economics
Political Science
Religious Studies
Medieval and Renaissance Studies Minor
Philosophy Minor (20 credits)
The Global Studies Program offers a major and a minor in global studies and in political science.

Global Studies Major (48 credits)

Global studies is an interdisciplinary major that gives students a global perspective on political and economic problems, preparing them for careers in government, business and the nonprofit sector. Students are encouraged to become fluent in a modern foreign language, and the faculty works to arrange for students to spend a semester or year of study abroad.

Learning Outcomes for Global Studies

Upon completing the global studies major students should:

1. View global challenges from a perspective that integrates political, historical, economic, cultural and normative perspectives.
2. Be able to articulate the primary theoretical frameworks used to understand the global arena.
3. Understand the role of important state and non-state actors (international and non-governmental groups and organizations) in the global arena.
4. Demonstrate strong communication skills (reading, writing and listening) as well as analytical and critical skills that enable them to dissect and solve complex problems effectively.
5. Demonstrate the capacity to conduct independent research (identify and develop a research question, design research strategies based on the application of quantitative and/or qualitative methodologies, access and interpret information from print and electronic sources, write and present a critical and analytical argument).

Core Courses

- POL103: Politics of the World's Nations (4 hours)
- POL155: Contemporary Global Politics (4 hours)
- POL200: Social Science Inquiry (4 hours)
- POL276: Democracy, Globalization, and International Governance (4 hours)
- POL399: Capstone in Political Science and Global Studies (4 hours)

Elective Courses: (7 courses or 28 credits)

Students must complete at least 1 course from each track. In addition, students select a track of concentration taking an additional 4 courses within that track. Of those four courses within that track, at least 2 courses must be at the 200 or 300 level and one course must be a 200- or 300-level course coming from History, Religious Studies or Philosophy.

Regional Track

- HIS104: Europe and the Modern World (4 hours)
- HIS110: History of Modern China (4 hours)
- HIS112: Intro to Latin America History (4 hours)
- HIS329: The German Experience (4 hours)
- ENG164: American Indian Literature and Spirituality (4 hours)
- ENG226: Africa: Literature and Culture of Its Many Nations (4 hours)
- POL301: Politics of Developed Nations (4 hours)
- POL303: Politics of Developing Nations (4 hours)
- REL306: Asian Religions (4 hours)

Issues Track

- ENV138: Cultural Geography (4 hours)
- ENV160: World Regional Geography (4 hours)
- ENV222: Environmental Sustainability (4 hours)
- EUS391: Topics in European Studies (4 hours)
- HIS108: Understanding Our Contemporary World (4 hours)
- PBH102: Global Health (4 hours)
- POL285: International Conflict and Security (4 hours)
- POL291: Topics in Politics (2 TO 4 hours)
- POL321: International Law (4 hours)
- POL391: Topics in Politics (4 hours)

Economics Track

- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ECO306: Microeconomic Theory (4 hours)
- ECO307: Macroeconomic Theory (4 hours)
- ECO363: International Economics (4 hours)
PHI205: Philosophy, Politics, and Economics (4 hours)

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

Global Studies Minor (24 credits)

To complete a minor in Global Studies, students will take the 3 core courses and then choose 3 electives from one of the tracks in the Global Studies major with 2 of the 3 being courses at the 200 or 300 level.

A student interested in international business is able to pursue both an emphasis in Business and a Global Studies minor with an emphasis in international business. Regardless of track/emphasis, all students are required to take the core courses.

- Core Courses
  - POL103: Politics of the World's Nations (4 hours)
  - POL155: Contemporary Global Politics (4 hours)
  - POL276: Democracy, Globalization, and International Governance (4 hours)

The Pioneer Core Program

Cross-Cultural Component
Distribution Component
GE1 and GE2 Courses
Cross Cultural Development

For a complete list of CCD courses, click here.

The History Program offers a major in history and a minor in history.

History Major (36 credits)
Bachelor of Arts

The nine-course history major serves students who not only seek an education in the liberal arts, but who also realize the value of history for understanding themselves and their world. Because the study of history enhances analytical, communicative and critical thinking skills, and because our courses often encourage an interdisciplinary approach, a history major prepares students for careers in research, public service, education and/or the private sector, while also offering a strong foundation for advanced study.

Learning Outcomes for History

Upon successful completion of major requirements students will be able to:

1. Employ tools of historical analysis such as cause and effect, sequence and change over time to explain past experiences and developments.
2. Define a historical question and use appropriate methodologies to develop and evaluate possible answers.
3. Find evidence and evaluate primary and secondary sources to form sustainable conclusions in a well-argued paper.
4. Articulate and/or resolve conflicting interpretations and explain the changing nature of historical inquiry.
5. Communicate original, convincing ideas in well-organized oral and written formats.
6. Identify and explain central themes and problems of the Western World.
7. Identify and explain central themes and problems of a non-western culture.

Core Courses

- I. Three courses, with one course in each area, from the following:
  - A
    - HIS103: Roots of the Western World (4 hours)
    - HIS104: Europe and the Modern World (4 hours)
  - B
    - HIS105: America to 1877 (4 hours)
    - HIS106: America since 1877 (4 hours)
  - C
    - HIS107: Understanding the Premodern World (4 hours)
    - HIS108: Understanding Our Contemporary World (4 hours)
    - HIS110: History of Modern China (4 hours)
    - HIS112: Intro to Latin America History (4 hours)
  - II. History 200, Workshop for Historians
    - HIS200: Workshop for Historians (4 hours)
  - III. Two courses at the 200 level from the following:
I. Three courses, with one course in each area, from the following:

A

- HIS103: Roots of the Western World (4 hours)
- HIS104: Europe and the Modern World (4 hours)

B

- HIS105: America to 1877 (4 hours)
- HIS106: America since 1877 (4 hours)

C

- HIS107: Understanding the Premodern World (4 hours)
- HIS108: Understanding Our Contemporary World (4 hours)
- HIS110: History of Modern China (4 hours)
- HIS112: Intro to Latin America History (4 hours)

II. Three additional courses;

Note:
- All 300-level classes are conceived as research courses in which the major focus will be on research methodology and utilization of primary sources to produce a work of serious scholarship.
- At least one of the 4 courses chosen to fulfill III and IV above must be a 200 or 300-level course in Political Science, Philosophy, or Religious Studies.

IV. Two courses at the 300 level from the following:

- HIS301: The Forging of a Nation - The Colonial and Revolutionary Experience in North America (4 hours)
- HIS305: Recent America (4 hours)
- HIS316: Renaissance and Reformation Europe (4 hours)
- HIS318: American Indian History (4 hours)
- HIS329: The German Experience (4 hours)
- HIS391: Topics in History (4 hours)
- HIS398: Independent Study in History (2 TO 4 hours)

Other pre-approved courses

Note:
- HIS 499 requires students to submit a portfolio of written work. History majors should keep copies of papers and projects from their other classes for this purpose.

V. History 499, Capstone: Senior Seminar for Historians

Note:
- HIS 499 requires students to submit a portfolio of written work. History majors should keep copies of papers and projects from their other classes for this purpose.

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.
Three additional courses at the 200-and 300-course levels. One of those three courses must be a 300-level research course and not all of them may be taken in United States History.

- **Major Courses**

**The list below displays all the courses offered by the program:**

- HIS103: Roots of the Western World (4 hours)
- HIS104: Europe and the Modern World (4 hours)
- HIS105: America to 1877 (4 hours)
- HIS106: America since 1877 (4 hours)
- HIS106H: America Since 1877 (4 hours)
- HIS107: Understanding the Premodern World (4 hours)
- HIS108: Understanding Our Contemporary World (4 hours)
- HIS110: History of Modern China (4 hours)
- HIS112: Intro to Latin America History (4 hours)
- HIS200: Workshop for Historians (4 hours)
- HIS203: The American Civil War (4 hours)
- HIS210: Hist-American Foreign Relations (4 hours)
- HIS213: Women in American History (4 hours)
- HIS215: American Encounters: Natives, Africans, and Europeans in the Americans, 1350-1750 (4 hours)
- HIS216: Philosophy and History of Science (4 hours)
- HIS224H: The World Since 1945 (4 hours)
- HIS225H: Medieval Europe, China, and the Islamic Crescent (4 hours)
- HIS254: Topics in Medieval European History (4 hours)
- HIS280: Internship in History (2 TO 4 hours)
- HIS291: Topics in History (2 TO 4 hours)
- HIS298: Independent Study in History (2 TO 4 hours)
- HIS301: The Forging of a Nation - The Colonial and Revolutionary Experience in North America (4 hours)
- HIS305: Recent America (4 hours)
- HIS316: Renaissance and Reformation Europe (4 hours)
- HIS318: American Indian History (4 hours)
- HIS329: The German Experience (4 hours)
- HIS391: Topics in History (4 hours)
- HIS398: Independent Study in History (2 TO 4 hours)
- HIS495: Kennan Seminar (1 hours)
- HIS499: Capstone - Senior Seminar for Historians (4 hours)

- **Philosophy, Political Science and Economics**

**Dennis Debrecht**  
Associate Professor of Economics  

**Lilly Goren**  
Professor of Political Science  

**Kevin Guilfoy**  
Associate Professor of Philosophy  

**Max Rondolino**  
Assistant Professor of Philosophy  

The Philosophy, Political Science and Economics Program offers a major:

- **Philosophy, Political Science and Economics Major (52 credits)**

  **Philosophy, Political Science and Economics Program (52 credits)**

  **Bachelor of Arts**

The philosophy, political science and economics (PPE) major provides students with the opportunity to form an interdisciplinary integrated knowledge that combines foundational understanding of each discipline. In order to understand complex social phenomena one must approach them from several complementary disciplinary directions and analytical frameworks. The study of philosophy equips students with broad knowledge of the ideas and theories that shape society and culture, and the intellectual tools needed for ethical reflection. The study of political science acquaints students with the political structures that govern society and introduces the complexities involved in the choices political systems and regimes regularly make. Knowledge of economics is vital for explaining and understanding the social world. There is at least some truth to Marx's claim that all social phenomena are at their core economic. All three disciplines equip students with meta-tools such as the ability to think rigorously and logically, but each employs different methodologies. This is what makes the PPE major genuinely interdisciplinary: PPE students explore contemporary questions about distributive justice; the ethical significance of the competitive market economy; and the dynamic relationships between the economic, political and legal orders by employing and integrating the tools methods and perspectives of each discipline. The PPE major provides career oriented liberal arts students with the Integrated Knowledge and Lifelong Skills necessary for success and leadership in a rapidly evolving world.

**Learning Outcomes for PPE**

1. Students will be able to identify and critically discuss in written and oral fashion government structures and decision making processes.
2. Students will be able to identify and critically discuss in written and oral fashion key concepts, figures, movements, and ideas in philosophy.
3. Students will be able to identify and critically discuss in written and oral fashion the function of market forces and the larger social issues related to economic forces and decision making.
4. Students will be able to identify and critically discuss in written and oral fashion the integration of the fundamental concepts and ideas of Philosophy, Political Science, and Economics and the way these ideas shape fundamental societal issues of justice, citizenship, social order, wealth and poverty, globalization, freedom, et. al.
5. Students will be able to identify, analyze, and respond critically to relevant issues using appropriate research and bibliographic materials and facilities commonly employed in the fields of Philosophy, Political Science, and Economics.

- **Core Courses**

  - I All Philosophy, Political Science and Economics majors must take:
    - A.
      - PHI205: Philosophy, Politics, and Economics (4 hours)
    - B. Philosophy
      - PHI101: Introduction to Philosophy (4 hours)

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catalog.carrollu.edu/contentm/blueprints/blueprint_display.php?bp_listing_id=160&blueprint_id=20&sid=18&menu_id=109
- PHI320: Ancient and Mediaeval Philosophy (4 hours)
- PHI321: Modern and Contemporary Philosophy (4 hours)

One additional Philosophy course at any level (Pre-law students are encouraged to take Philosophy 105, Logic).

C. Political Science
- POL141: Intro to American Politics (4 hours)
- POL201: Politics of the World's Nations (4 hours)
- POL275: Political Theory (4 hours)
- POL301: Politics of Developed Nations (4 hours)
- OR - HIGHER: Other higher level course of the same subject

D. Economics
- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ECO306: Microeconomic Theory (4 hours)
- OR - HIGHER: Other higher level course of the same subject
- OR - BUS290: Principles of Business Law (2 hours)
- OR - BUS304: Principles of Finance (4 hours)

E. Capstone
- PPE499: Capstone in Philosophy, Politics, and Economics (4 hours)

II
All PPE majors will select a concentration in either Philosophy, Political Science, or Economics. Majors must complete two additional courses in either Philosophy, Political Science, or Economics. At least one of these courses must be at the 300 level.

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:
- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

The list below displays all the courses offered by the program:
- PHI101: Introduction to Philosophy (4 hours)
- PHI105: Introduction to Logic (4 hours)
- PHI106: Ethics, Values and Judgment (4 hours)
- PHI194: Bioethics (4 hours)
- PHI205: Philosophy, Politics, and Economics (4 hours)
- PHI206: Ethics (4 hours)
- PHI206H: Ethics (4 hours)
- PHI207: History and Philosophy of Science (4 hours)
- PHI213: Philosophy of Art (4 hours)
- PHI298: Independent Study in Philosophy (1 TO 4 hours)
- PHI307: World Philosophy (4 hours)
- PHI308: Philosophy of Religion (4 hours)
- PHI320: Ancient and Mediaeval Philosophy (4 hours)
- PHI321: Modern and Contemporary Philosophy (4 hours)
- PHI398: Independent Study in Philosophy (1 TO 4 hours)
- PPE499: Capstone in Philosophy, Politics, and Economics (4 hours)

Political Science

Lilly Goren
Professor of Political Science

Kelly O'Reilly
Assistant Professor of Political Science

The Political Science Program offers a major and a minor in global studies and in political science.

Political Science Major (44 credits)

The major in political science prepares students for a lifetime of informed and active citizenship while teaching the skills necessary to succeed in our knowledge-based, globalized economy.

Learning Outcomes for Political Science

Political Science majors at Carroll University will develop a general knowledge of the following:

1. Major institutions (e.g., legislatures, executives, judiciaries, bureaucracies) and processes (e.g., voting, policy-making) of American governments and of diverse national political systems.
2. The main theories used to understand the global arena as well as the impact of globalization on global and national politics.

3. The structure and functions of political theorizing as well as an overview of its history.

4. Important processes and agencies within public organizations and the ethical dimensions of public service.

5. Students develop strong communication skills (reading, writing, listening) as well as analytical and critical skills, which enable them to dissect and solve complex problems effectively.

6. Students develop the capacity to conduct independent research (identify and develop a research question, design research strategies based on the application of quantitative and/or qualitative methodologies, access and interpret information from print and electronic sources, write and present a critical and analytical argument).

7. Students are strongly encouraged to develop an understanding of the world of work by completing an internship or by participating in an off-campus program that involves contact with governments or non-governmental organizations engaged in the public policy process.

   - **Core Courses**
     - POL103: Politics of the World's Nations (4 hours)
     - POL141: Intro to American Politics (4 hours)
     - POL155: Contemporary Global Politics (4 hours)
     - POL200: Social Science Inquiry (4 hours)
     - POL275: Political Theory (4 hours)
     - At least one of the following:
       - POL332: Public Policy (4 hours)
       - POL335: Public Administration (4 hours)
       - POL336: The American Presidency (4 hours)
       - POL344: Constitutional Law and Politics (4 hours)
     - At least one of the following:
       - POL301: Politics of Developed Nations (4 hours)
       - POL303: Politics of Developing Nations (4 hours)
     - POL399: Capstone in Political Science and Global Studies (4 hours)
     - Plus two additional Politics courses
     - One 200 or 300-level course in History, Philosophy, or Religious Studies

   - **Bachelor of Arts Requirement**

   - **Core Courses**
     - POL103: Politics of the World's Nations (4 hours)
     - POL141: Intro to American Politics (4 hours)
     - POL155: Contemporary Global Politics (4 hours)
     - POL200: Social Science Inquiry (4 hours)
     - POL275: Political Theory (4 hours)
     - POL269: The American Congress (4 hours)
     - POL276: Democracy, Globalization, and International Governance (4 hours)
     - POL280: Politics and Culture (4 hours)
     - POL285: International Conflict and Security (4 hours)
     - POL291: Topics in Politics (2 TO 4 hours)
     - POL298: Independent Study in Politics (1 TO 4 hours)
     - POL301: Politics of Developed Nations (4 hours)
     - POL303: Politics of Developing Nations (4 hours)
     - POL321: International Law (4 hours)
     - POL329: The German Experience (4 hours)
     - POL332: Public Policy (4 hours)
     - POL335: Public Administration (4 hours)
     - POL336: The American Presidency (4 hours)
     - POL344: Constitutional Law and Politics (4 hours)
     - POL381: Internship in Politics (4 TO 12 hours)
     - POL382: Internship in Global Studies (4 hours)
     - POL391: Topics in Politics (4 hours)
     - POL398: Independent Study in Politics (1 TO 4 hours)
     - POL399: Capstone in Political Science and Global Studies (4 hours)

   - **Bachelor of Arts Requirement**

   - **Core Courses**
     - POL103: Politics of the World's Nations (4 hours)
     - POL141: Intro to American Politics (4 hours)
     - POL155: Contemporary Global Politics (4 hours)
     - POL200: Social Science Inquiry (4 hours)
     - POL275: Political Theory (4 hours)
     - At least one of the following:
       - POL332: Public Policy (4 hours)
       - POL335: Public Administration (4 hours)
       - POL336: The American Presidency (4 hours)
       - POL344: Constitutional Law and Politics (4 hours)
     - At least one of the following:
       - POL301: Politics of Developed Nations (4 hours)
       - POL303: Politics of Developing Nations (4 hours)
     - POL399: Capstone in Political Science and Global Studies (4 hours)
     - Plus two additional Politics courses
     - One 200 or 300-level course in History, Philosophy, or Religious Studies

   - **Bachelor of Arts Requirement**

   - **Core Courses**
     - POL103: Politics of the World's Nations (4 hours)
     - POL141: Intro to American Politics (4 hours)
     - POL155: Contemporary Global Politics (4 hours)
     - POL200: Social Science Inquiry (4 hours)
     - POL275: Political Theory (4 hours)
     - POL276: Democracy, Globalization, and International Governance (4 hours)
     - POL280: Politics and Culture (4 hours)
     - POL285: International Conflict and Security (4 hours)
     - POL291: Topics in Politics (2 TO 4 hours)
     - POL298: Independent Study in Politics (1 TO 4 hours)
     - POL301: Politics of Developed Nations (4 hours)
     - POL303: Politics of Developing Nations (4 hours)
     - POL321: International Law (4 hours)
     - POL329: The German Experience (4 hours)
     - POL332: Public Policy (4 hours)
     - POL335: Public Administration (4 hours)
     - POL336: The American Presidency (4 hours)
     - POL344: Constitutional Law and Politics (4 hours)
     - POL381: Internship in Politics (4 TO 12 hours)
     - POL382: Internship in Global Studies (4 hours)
     - POL391: Topics in Politics (4 hours)
     - POL398: Independent Study in Politics (1 TO 4 hours)
     - POL399: Capstone in Political Science and Global Studies (4 hours)
The Religious Studies Program offers a major and a minor in religious studies.

Religious Studies Major (36 credits)

The religious studies major is designed to provide students with depth and breadth in the study of religion as universal to human experience, fundamental to human efforts to find meaning in the universe, and central to cultures around the world, past and present. As an inherently interdisciplinary field, the study of religion incorporates a wide variety of approaches, including historical, psychological, sociological, anthropological, literary, and philosophical. In addition to being provided opportunities to reflect extensively on the big questions of human existence, students majoring in religious studies become familiar with many religious traditions, and are equipped with multiple ways of thinking about the nature of religion, its role in society, and its place in the lives of individuals. Religious studies majors may go on to careers in counseling, journalism, ministry, social work, or any number of other professions requiring strong critical thinking skills, good writing ability, and careful reading. Graduate school in a variety of fields is possible, and religious studies majors historically score very well on the LSAT for law school admission. As a minor, Religious Studies can very effectively supplement a number of majors, including, for example, literature, history, writing, psychology, or Philosophy, Political Science and Economics. Likewise, the philosophy minor not only provides a strong grounding in reasoning skills, but also background in the variety of ways human beings think about, and have thought in the past about, what matters and why.

Learning Outcomes for Religious Studies

Upon successful completion of major requirements students should be able to:

1. Articulate how religion has the power to shape individual lives and social values.
2. Critically read, evaluate, and write on the foundational texts and the significant ideas, concepts, and questions in the study of religion.
4. Show a basic understanding of a breadth of religious traditions including Judaism, Islam, Buddhism, Hinduism and Native American traditions.
5. Use library research tools specific to religious studies, and religious studies methodologies to construct papers, essays and class presentations.
6. Use these perspectives and skills to become a responsible citizen in a religiously plural world.
7. Identify, analyze, and compare understandings of the meaning of life, the human condition, and the nature of the good life in several religious traditions.

Core Courses

A. Two introductory courses (100 level)
   - REL106: Understanding Religion (4 hours)
   - REL102: Introduction to the Hebrew Bible (4 hours)
   OR -REL103: Intro to the New Testament (4 hours)

B. Six intermediate courses (200 and 300 level); at least two must be from 300 level:
   - Two in Christian Tradition
     - Choose one from:
       - REL230: Foundations of Christianity (4 hours)
       - REL231: Christianity in the Modern World (4 hours)
   - Choose one from:
     - REL201: Jesus of Nazareth (4 hours)
     - REL202: Religious Traditions in America (4 hours)
     - REL210: Suffering and Hope (4 hours)
     - REL291: Topics in Religious Studies (4 hours)
     OR -REL391: Topics in Religious Studies (4 hours)
     - REL310: Powers, Politics, and Pluralism in Biblical Interpretation (4 hours)
   - Two in Religious Traditions
     - REL215: Women in Religion (4 hours)
     - REL220: Health and Religion (4 hours)
     - REL306: Asian Religions (4 hours)
     - REL316: Judaism, Christianity, and Islam (4 hours)
   - Two electives
     - One 200 or 300-level course in Religious Studies or Philosophy
     - One 200 or 300-level course in History, Philosophy, or Political Science
   - C. One advanced course (400 level)
     - REL499: Capstone: Senior Seminar (4 hours)

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

The Pioneer Core Program
Undergraduate

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

### Religious Studies Minor (20 credits)

- Two introductory courses (100 level)
  - REL102: Introduction to the Hebrew Bible (4 hours)
  - OR: REL103: Intro to the New Testament (4 hours)
  - REL106: Understanding Religion (4 hours)
- One course in Christian Tradition
  - REL201: Jesus of Nazareth (4 hours)
  - REL202: Religious Traditions in America (4 hours)
  - REL210: Suffering and Hope (4 hours)
  - REL230: Foundations of Christianity (4 hours)
  - REL231: Christianity in the Modern World (4 hours)
  - REL291: Topics in Religious Studies (4 hours)
  - OR: REL391: Topics in Religious Studies (4 hours)
- One in Religious Traditions
  - REL215: Women in Religion (4 hours)
  - REL220: Health and Religion (4 hours)
  - REL306: Asian Religions (4 hours)
  - REL316: Judaism, Christianity, and Islam (4 hours)
- One elective in Religion or Philosophy, 300 or above

### Major Courses

The list below displays all the courses offered by the program:

- REL100: World Religions (4 hours)
- REL102: Introduction to the Hebrew Bible (4 hours)
- REL103: Intro to the New Testament (4 hours)
- REL106: Understanding Religion (4 hours)
- REL201: Jesus of Nazareth (4 hours)
- REL202: Religious Traditions in America (4 hours)
- REL210: Suffering and Hope (4 hours)
- REL215: Women in Religion (4 hours)
- REL220: Health and Religion (4 hours)
- REL230: Foundations of Christianity (4 hours)
- REL231: Christianity in the Modern World (4 hours)
- REL291: Topics in Religious Studies (4 hours)
- REL298: Independent Study in Religious Studies (1 TO 4 hours)
- REL306: Asian Religions (4 hours)
- REL308: Philosophy of Religion (4 hours)
- REL310: Powers, Politics, and Pluralism in Biblical Interpretation (4 hours)
- REL316: Judaism, Christianity, and Islam (4 hours)
- REL362: New Testament Greek Tutorial (2 hours)
- REL364: Hebrew Tutorial (2 hours)
- REL380: Internship in Religious Studies (1 TO 4 hours)
- REL391: Topics in Religious Studies (4 hours)
- REL398: Independent Study in Religious Studies (1 TO 4 hours)
- REL480: Internship in Religious Studies (1 TO 4 hours)
- REL499: Capstone: Senior Seminar (4 hours)

### Medieval and Renaissance Studies Minor

The Medieval and Renaissance eras were periods of great change in European society. Many of the components of our modern world developed during these periods, from ideas such as the contract theory of government to institutions such as the Catholic Church, Parliament, and universities. This interdisciplinary minor integrates approaches from various areas of scholarship within the humanities, such as history, philosophy, English, and religious studies, to allow students to develop a holistic understanding of Medieval and Renaissance Europe.

#### Program Administration

Students minoring in Medieval and Renaissance Studies should meet with an advisor who teaches courses within the minor, in order to assure that requirements are met.

#### Mission and Program Goals

Students will gain a broad understanding of the Medieval and Renaissance eras in European history, while learning the approach that scholars in the field take to understanding these eras.

#### Program Learning Outcomes

1. Develop an understanding of the history and culture of Medieval and Renaissance Europe.
2. Employ tools from a variety of disciplines to identify, explore, and explain socio-cultural problems during the period.
3. Understand the reception and impact of ideals from classical antiquity on medieval and Renaissance cultures.

#### Required Courses

The student in the Medieval and Renaissance Studies minor will be required to take five (5) courses, drawn from the following lists. Students must take at least one (1) class from each of the three areas of concentration (Literature, History, Religion and Philosophy):

- Literature
ENG240: British Literature I - Medieval to 1700 (4 hours)
ENG301: Chaucer (4 hours)
ENG304: Shakespeare: From Stage to Screen (4 hours)
ENG323: Early Modern British Literature (4 hours)

History
HIS225H: Medieval Europe, China, and the Islamic Crescent (4 hours)
HIS254: Topics in Medieval European History (4 hours)
HIS316: Renaissance and Reformation Europe (4 hours)

Religion and Philosophy
PHI320: Ancient and Mediaeval Philosophy (4 hours)
REL230: Foundations of Christianity (4 hours)

Philosophy Minor (20 credits)

<table>
<thead>
<tr>
<th>Kevin Guilfoy</th>
<th>Associate Professor of Philosophy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Rondolino</td>
<td>Assistant Professor of Philosophy</td>
</tr>
</tbody>
</table>

Core Courses
PHI101: Introduction to Philosophy (4 hours)
PHI105: Introduction to Logic (4 hours)
PHI206: Ethics (4 hours)
Two additional philosophy courses; at least one must be at the 300 level
Department: Visual and Performing Arts

Chairperson: Amy Cropper
Room: Humphrey Art Center 112
Email: acropper@carrollu.edu
Telephone: 262-524-7191
Fax: 262-574-2629

Programs

Undergraduate

Art and Photography
Graphic Communication
Music and Music Education
Music Therapy Program
Theatre & Arts Management
Program: Undergraduate
College of Humanities and Social Sciences
Department: Visual and Performing Arts

Art and Photography
Amy A. Cropper  Department Chair and Associate Professor of Art
Peggy Thurston Farrell  Associate Professor of Art
Phillip L. Krejcarek  Professor of Art
Jennifer A. Moon  Assistant Professor of Photography and Digital Media
Pacia Sallomi  Professor of Art

Art Major

The art major offers several directions for the student who has an interest and talent in the visual expressive arts. Individualized advising helps the student choose a major with one of the following two emphases:

1. Fine arts which prepares students for careers in gallery/museum or arts administration, or for graduate work in studio art, commercial art, art therapy, or art history.
2. Art education which prepares students for K-12 teaching certification.

All majors are encouraged to attend art exhibition openings and/or workshops and field trips sponsored or approved by the art faculty. All majors are required to create a sophomore portfolio and have a senior show and portfolio to be approved by the art faculty.

Learning Outcomes for Art

Upon graduation, the art student will be able to demonstrate:

1. Mastery of skills in his/her chosen area of emphasis.
2. Familiarity with the history of art and the ability to discuss it within the context of their work.
3. Ability to write articulately about art.
4. Ability to present self and work professionally.
5. Ability to develop a cohesive body of work.

Core Courses
- ART103: Prehistoric to Renaissance- Art History Survey (4 hours)
- ART104: Renaissance to Early Modernism- Art History Survey (4 hours)
- ART106: Drawing and Composition (4 hours)
- ART107: Beginning Design 2D and 3D (4 hours)
- ART206: Intermediate and Life Drawing (4 hours)
- ART300: Early Modernism to Present-Art History Survey (4 hours)
- ART490: Capstone in Art (4 hours)

Fine Arts Emphasis

Fine Arts Emphasis
- Core Courses, plus
  - ART201: Painting I (4 hours)
  - ART209: Photography I (4 hours)
  - OR -ART230: Printmaking I (4 hours)
  - ART220: Sculpture I (4 hours)
  - ART225: Ceramics I (4 hours)
  - OR -ART235: Art Metals (4 hours)
  - ART301: Painting II (4 hours)
  - OR -ART320: Sculpture II (4 hours)
  - OR -ART325: Ceramics II (4 hours)
  - OR -ART330: Printmaking II (4 hours)

In Addition:

Fine Arts students interested in gallery/museum, art therapy, arts administration or commercial art should plan to take an internship in the field. Those interested in graduate work in studio art or art history should work to fit in extra studio or art history courses, respectively, as time allows. Students planning to go on for Art Therapy should consider adding a Psychology Minor.

Double majoring or minorin in Business or Graphic Communication may also be of interest to Fine Art students.
Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT105 or higher

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Art Education Emphasis

- Core Course, plus
  - ART201: Painting I (4 hours)
  - ART209: Photography I (4 hours)
  - ART211: Gallery/Museum Experience (1 TO 2 hours)
  - ART220: Sculpture I (4 hours)
  - ART223: Creative Arts for Children (2 hours)
  - ART225: Ceramics I (4 hours)
  - ART230: Printmaking I (4 hours)
  - ART235: Art Metals (4 hours)
  - ART353: Methods of Teaching Secondary Art (2 hours)
  - ART258: Visual Communication (4 hours)
  - One 4-credit elective course in art.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Photography Major (56 credits)

Students seeking an in-depth study of photography as a fine art may choose the photography major.

All majors are encouraged to attend art exhibition openings and workshops and field trips sponsored or approved by the Department of Visual and Performing Arts. All majors are required to create a sophomore portfolio and have a senior show and portfolio to be approved by the art faculty.

**Learning Outcomes for Photography**

Upon graduation, the photography student will be able to demonstrate:

1. Proficiency in the use of a variety of cameras, including digital and video.
2. Mastery in the creation and analysis of photographic images.
3. Mastery in the development of film and printing and in the presentation of the final image.
5. Proficiency in the use of software to edit and manipulate images.
6. Ability to write articulately about art.
7. Ability to develop a cohesive body of work

Core Courses

- ART106: Drawing and Composition (4 hours)
- ART209: Photography I (4 hours)
- ART215: History of Photography (4 hours)
ART258: Visual Communication (4 hours)
ART300: Early Modernism to Present-Art History Survey (4 hours)
ART309: Photography II - Fine Art (4 hours)
ART310: Photography II - Commercial (4 hours)
ART314: Photography II Studio Lighting (4 hours)
ART480: Internship in Art (1 TO 4 hours)
ART490: Capstone in Art (4 hours)
GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
GRC330: Digital Video I (4 hours)

In addition, students are encouraged to select from the following courses:
BUS101: Introduction to Business (4 hours)
COM203: Advertising (4 hours)
COM246: Video Production (4 hours)
COM254: Photojournalism (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Art Minor (24 credits)
Three 4-credit elective courses in art as well as the following:
- ART103: Prehistoric to Renaissance- Art History Survey (4 hours)
  OR -ART104: Renaissance to Early Modernism- Art History Survey (4 hours)
- ART106: Drawing and Composition (4 hours)
- ART107: Beginning Design 2D and 3D (4 hours)

Photography Minor (24 credits)
- ART106: Drawing and Composition (4 hours)
  OR -ART107: Beginning Design 2D and 3D (4 hours)
- ART209: Photography I (4 hours)
- ART215: History of Photography (4 hours)
- ART309: Photography II - Fine Art (4 hours)
  OR -ART310: Photography II - Commercial (4 hours)
- ART340: Advanced Media Studies (4 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)

Major Courses

The list below displays all the courses offered by the program:
- ART103: Prehistoric to Renaissance- Art History Survey (4 hours)
- ART104: Renaissance to Early Modernism- Art History Survey (4 hours)
- ART106: Drawing and Composition (4 hours)
- ART107: Beginning Design 2D and 3D (4 hours)
- ART201: Painting I (4 hours)
- ART206: Intermediate and Life Drawing (4 hours)
- ART209: Photography I (4 hours)
- ART211: Gallery/Museum Experience (1 TO 2 hours)
- ART212: Introduction to Book Art (4 hours)
- ART215: History of Photography (4 hours)
- ART220: Sculpture I (4 hours)
- ART223: Creative Arts for Children (2 hours)
- ART225: Ceramics I (4 hours)
- ART230: Printmaking I (4 hours)
- ART235: Art Metals (4 hours)
- ART258: Visual Communication (4 hours)
- ART291: Special Topics in Art (2 TO 4 hours)
- ART298: Independent Study (1 TO 4 hours)
- ART300: Early Modernism to Present-Art History Survey (4 hours)
- ART301: Painting II (4 hours)
- ART306: Advanced and Life Drawing (4 hours)
- ART309: Photography II - Fine Art (4 hours)
- ART310: Photography II - Commercial (4 hours)
- ART313: Travel Journals-Italy (4 hours)
- ART314: Photography II Studio Lighting (4 hours)
- ART320: Sculpture II (4 hours)
- ART325: Ceramics II (4 hours)
- ART330: Printmaking II (4 hours)
- ART340: Advanced Media Studies (4 hours)
- ART353: Methods of Teaching Secondary Art (2 hours)
- ART391: Special Topics in Art (4 hours)
- ART398: Independent Study in Art (1 TO 4 hours)
- ART401: Painting III (4 hours)
- ART480: Internship in Art (1 TO 4 hours)
Students wishing to excel in this area may consider a second major or minor in business or computer science.

• The web design emphasis is for students who particularly wish to develop projects for placement on the World Wide Web.

• The design/management/business concepts.

County Technical College. The print management emphasis is based upon both the actual operation of print presses as well as during their senior year.

• The digital video production emphasis is for students who wish to pursue employment within the video, film or television work environments. At the completion of the program, students will be proficient at video editing, audio editing, lighting, animation, green screen, storyboards, talent assessment, and marketing. Students must create and showcase a film reel portfolio of their work during their senior year.

• The print management emphasis is for students who wish to enter the print industry and is a collaborative program with Waukesha County Technical College. The print management emphasis is based upon both the actual operation of print presses as well as design/management/business concepts.

• The web design emphasis is for students who particularly wish to develop projects for placement on the World Wide Web.

The design management emphasis is for students who wish to evolve their graphic communication skills into management publishing professionals. Students may also consider a second major or a minor in computer science.

• The design management emphasis is for students who wish to evolve their graphic communication skills into management publishing professionals. Students may also consider a second major or a minor in computer science.

There are five emphases within graphic communication:

• The graphic design emphasis is for students interested in using their artistic bridging technology and graphic communication skills across a variety of media (print, web, new media, etc.). They may work as graphic artists, as web page designers or as desktop publishing professionals. Students may also consider a second major or a minor in computer science.

• The design management emphasis is for students who wish to evolve their graphic communication skills into management publishing professionals. Students may also consider a second major or a minor in computer science.

• The digital video production emphasis is for students who wish to pursue employment within the video, film or television work environments. At the completion of the program, students will be proficient at video editing, audio editing, lighting, animation, green screen, storyboards, talent assessment, and marketing. Students must create and showcase a film reel portfolio of their work during their senior year.

• The print management emphasis is for students who wish to enter the print industry and is a collaborative program with Waukesha County Technical College. The print management emphasis is based upon both the actual operation of print presses as well as design/management/business concepts.

• The web design emphasis is for students who particularly wish to develop projects for placement on the World Wide Web.

Students wishing to excel in this area may consider a second major or minor in business or computer science.

Graphic Communication Major

Graphic Design Emphasis (76 credits)

- GRC106: Intro-Communication Technology (2 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- GRC200: Color and Typography (4 hours)
- GRC210: History of Graphic Design (2 hours)
- GRC230: Digital Photography (4 hours)
- GRC290: Digital Design Studio (4 hours)
- GRC295: 3-D Digital Design (4 hours)
- GRC320: Intro to Multimedia Production (4 hours)
- GRC330: Digital Video I (4 hours)
- GRC340: Digital Video II (4 hours)
- GRC360: Interactive Media (4 hours)
- GRC450: Capstone-Projects for Graphic Communication Majors (4 hours)
- GRC480: Internship-Graphic Communication (1 TO 12 hours)

Required Support Courses
- ART106: Drawing and Composition (4 hours)
- ART107: Beginning Design 2D and 3D (4 hours)
- ART206: Intermediate and Life Drawing (4 hours)
  OR - ART230: Printmaking I (4 hours)
- BUS101: Introduction to Business (4 hours)
- BUS301: Principles of Marketing (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Design Management Emphasis (72 credits)
- GRC106: Intro-Communication Technology (2 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- GRC200: Color and Typography (4 hours)
- GRC320: Intro to Multimedia Production (4 hours)
- GRC450: Capstone-Projects for Graphic Communication Majors (4 hours)
- GRC480: Internship-Graphic Communication (1 TO 12 hours)

Required Support Courses
- ACC105: Introduction to Acct Basics (2 hours)
- ART106: Drawing and Composition (4 hours)
- ART107: Beginning Design 2D and 3D (4 hours)
- ART206: Intermediate and Life Drawing (4 hours)
- BUS101: Introduction to Business (4 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS320: Promotion Management (4 hours)
- COM203: Advertising (4 hours)
- COM227: Technical Writing in Organizations (4 hours)
- CSC107: Problem Solving Using Information Technology (2 hours)
- CMP112: Computational Thinking I (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Digital Video Production Emphasis (70 credits)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- GRC290: Digital Design Studio (4 hours)
- GRC295: 3-D Digital Design (4 hours)
- GRC320: Intro to Multimedia Production (4 hours)
- GRC330: Digital Video I (4 hours)
- GRC340: Digital Video II (4 hours)
- GRC350: Digital Video III (4 hours)
- GRC355: Digital Video IV (4 hours)
- GRC450: Capstone-Projects for Graphic Communication Majors (4 hours)
- GRC480: Internship-Graphic Communication (1 TO 12 hours)

Required Support Courses
- ACC105: Introduction to Acct Basics (2 hours)
- ART209: Photography I (4 hours)
- COM217: Film Critique/Film Review & Analysis (4 hours)
- ENG206: Fiction Writing (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
• MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Print Management Emphasis (65 credits)

- GRC110: Print Media/Digital Publishing I (3 hours)
- GRC120: Print Media II (3 hours)
- GRC121: Digital Illustration (3 hours)
- GRC122: Post Press/Distribution (3 hours)
- GRC130: Print Media III (3 hours)
- GRC135: Digital Workflows (3 hours)
- GRC140: Print Materials and Estimating (3 hours)
- GRC141: Production Coordination/Customer Service (3 hours)
- GRC142: Color Management (3 hours)
- GRC450: Capstone-Projects for Graphic Communication Majors (4 hours)
- GRC480: Internship-Graphic Communication (1 TO 12 hours)

Required Support Courses

- ACC205: Financial Accounting (4 hours)
- BUS101: Introduction to Business (4 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS305: Principles of Operations Management (4 hours)
- CSC109: Technological Productivity (2 hours)
- CMP112: Computational Thinking I (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Web Design Emphasis (64 credits)

- GRC106: Intro-Communication Technology (2 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- GRC200: Color and Typography (4 hours)
- GRC230: Intro to Multimedia Production (4 hours)
- GRC330: Digital Video I (4 hours)
- OR -GRC295: 3-D Digital Design (4 hours)
- GRC360: Interactive Media (4 hours)
- GRC450: Capstone-Projects for Graphic Communication Majors (4 hours)
- GRC480: Internship-Graphic Communication (1 TO 12 hours)

Required Support Courses

- ART106: Drawing and Composition (4 hours)
- ART107: Beginning Design 2D and 3D (4 hours)
- COM370: Communication Technology and Society (4 hours)
- CSC109: Technological Productivity (2 hours)
- CSC110: Problem Solving through Programming (4 hours)
- CSC220: Information Systems (4 hours)
- CSC319: World Wide Web Programming (4 hours)
- CSC351: Database Design and Implementation (4 hours)
- CMP112: Computational Thinking I (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
Cross Cultural Development

For a complete list of CCD courses, click here.

Graphic Design Minor (20 credits)
- GRC106: Intro-Communication Technology (2 hours)
- GRC110: Print Media/Digital Publishing I (3 hours)
- GRC120: Print Media II (3 hours)
- GRC121: Digital Illustration (3 hours)
- GRC122: Post Press/Distribution (3 hours)
- GRC130: Print Media III (3 hours)
- GRC135: Digital Workflows (3 hours)
- GRC140: Print Materials and Estimating (3 hours)
- GRC141: Production Coordination/Customer Service (3 hours)
- GRC142: Color Management (3 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- OR - GRC330: Digital Video I (4 hours)
- GRC320: Intro to Multimedia Production (4 hours)

Web Design Minor (20 credits)
- CSC109: Technological Productivity (2 hours)
- GRC106: Intro-Communication Technology (2 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- GRC200: Color and Typography (4 hours)
- GRC320: Intro to Multimedia Production (4 hours)
- GRC360: Interactive Media (4 hours)

Major Courses

The list below displays all the courses offered by the program:

- GRC106: Intro-Communication Technology (2 hours)
- GRC110: Print Media/Digital Publishing I (3 hours)
- GRC120: Print Media II (3 hours)
- GRC121: Digital Illustration (3 hours)
- GRC122: Post Press/Distribution (3 hours)
- GRC130: Print Media III (3 hours)
- GRC135: Digital Workflows (3 hours)
- GRC140: Print Materials and Estimating (3 hours)
- GRC141: Production Coordination/Customer Service (3 hours)
- GRC142: Color Management (3 hours)
- GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)
- GRC200: Color and Typography (4 hours)
- GRC210: History of Graphic Design (2 hours)
- GRC230: Digital Photography (4 hours)
- GRC290: Digital Design Studio (4 hours)
- GRC295: 3-D Digital Design (4 hours)
- GRC320: Intro to Multimedia Production (4 hours)
- GRC330: Digital Video I (4 hours)
- GRC340: Digital Video II (4 hours)
- GRC350: Digital Video III (4 hours)
- GRC355: Digital Video IV (4 hours)
- GRC360: Interactive Media (4 hours)
- GRC391: Special Studies/Topics (1 TO 4 hours)
- GRC450: Capstone-Projects for Graphic Communication Majors (4 hours)
- GRC480: Internship-Graphic Communication (1 TO 12 hours)
- GRC491: Special Studies/Topics (1 TO 4 hours)

Music and Music Education

Larry D. Harper  Professor of Music
Joel Matthys  Lecturer in Music

The Music Program offers majors in music and music education, as well as a minor in music.

Music Major

The music major offers both liberal arts and professional degrees as a preparation for a variety of careers, including music performance, music education, and business. For the performance emphasis, two one-hour recitals are required in successive years, usually during the junior and senior year. The liberal arts emphasis requires a half-hour recital in the final semester of study. A proficiency in piano must be passed by students with the performance emphasis or bachelor of music education degree. This competency should be completed by the end of the sophomore year. Acceptance into the performance emphasis requires a special audition. Performance juries are required of all music majors and minors each semester.

Students with prior music theory training may take a music theory diagnostic examination to determine placement.

Performing organizations are open to all students by audition.

Learning Outcomes for Music

Students studying music will develop:
1. The ability to hear, identify, and work conceptually with the elements of music such as rhythm, melody, harmony, structure, timbre, and texture.
2. The ability to read, realize, and understand musical notation.
3. An understanding of compositional processes, aesthetic properties of style, and the ways these shape and are shaped by artistic and cultural forces.
4. An acquaintance with a wide selection of musical literature, the principal eras, genres, and cultural sources.
5. The ability to develop and defend musical judgments.
6. The ability to perform appropriate undergraduate level music with proficiency alone and in ensemble settings.
7. Understanding of procedures for realizing a variety of musical styles.
8. Knowledge and/or skills in one or more areas of music beyond basic musicianship appropriate to the individual's needs and
interests.

9. Understanding of and experience in one or more art forms other than music.

- **Music Major - Liberal Arts Emphasis**
  - Core Courses
    - MUS111: Music Theory I (3 hours)
    - MUS112: Music Theory II (3 hours)
    - MUS113: Musicianship I (1 hour)
    - MUS114: Musicianship II (1 hour)
    - MUS303: Conducting I (2 hours)
    - MUS471: Senior Recital (1 hour)
    - MUS499: Music Capstone (2 hours)
  - Pick two of the following
    - MUS151: History of Jazz (4 hours)
    - MUS156: Listening to Classical Music (4 hours)
    - MUS158: Rock Music - Roots and History (4 hours)
    - MUS311: Music History I - Early Music through the Baroque Period (4 hours)
    - MUS312: Music History II - The Classic and Romantic Periods (4 hours)
  - Applied Music (7 credits)
  - Ensemble (eight semesters in Music 185, 187 or 188)
  - Four additional credits of music coursework.
  - Four credits of elective VPA coursework outside of music.

- **Bachelor of Arts Requirement**

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

- **The Pioneer Core Program**
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development
  
  For a complete list of CCD courses, click here.

- **Music Major - Performance Emphasis**
  - Core Courses
    - MUS111: Music Theory I (3 hours)
    - MUS112: Music Theory II (3 hours)
    - MUS113: Musicianship I (1 hour)
    - MUS114: Musicianship II (1 hour)
    - MUS213: Musicianship III (1 hour)
    - MUS214: Musicianship IV (1 hour)
    - MUS211: Music Theory III (3 hours)
    - MUS212: Music Theory IV (3 hours)
    - MUS303: Conducting I (2 hours)
    - MUS307: Practical Keyboard Harmony (1 hour)
    - MUS311: Music History I - Early Music through the Baroque Period (4 hours)
    - MUS312: Music History II - The Classic and Romantic Periods (4 hours)
    - MUS313: Music History III - The 20th Century (2 hours)
    - MUS499: Music Capstone (2 hours)
  
  In addition to the course below:

  Eight semesters in a major ensemble
  (Wind Symphony, Concert Choir, or Women's Ensemble)
  (Piano performance majors may elect Music 190 as a major ensemble.)
  Music 366, Voice Pedagogy or two credits of Instrumental Techniques (Music 251, 252, 253, 254, 255, 256)
  Music 430, Vocal Literature
  Applied Music
  Major instrument (fifteen credits, including Music 499, Capstone)
  Minor instrument (4 credits)
  Music 470 and 471, Junior and Senior Recital
  The following diction classes for the vocal performance major only:
  Music 323 (English, German) Music 324 (French, Italian)

- **Bachelor of Arts Requirement**

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher
NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.

- Double Major in Musical Liberal Arts and Business Administration

Double Major in Musical Liberal Arts and Business Emphasis

Students interested in the field of music business may double-major in Music Liberal Arts and Business Administration and/or minor in Arts Management.

Click here to view a four-year plan.

- Bachelor of Music Education

The bachelor of music education prepares students to a high level within the discipline of music, including performance, theory and history, and, at the same time, prepares future teachers for careers of distinction and leadership. The central philosophy of the degree is that music teachers can be most effective only by first becoming accomplished musicians themselves, capable of performing, conducting and analyzing at a sophisticated level.

Two half-hour recitals are required in successive years, usually during the junior and senior year. A voice competency is required of all instrumental music education majors. A proficiency in piano must be passed by all bachelor of music education majors. This competency should be completed by the end of the sophomore year.

Students planning to major in music are required to satisfactorily complete an audition for the music faculty, usually in the month of February preceding the freshman year.

Transfer students must take a music theory placement examination before registering for music courses.

Performing organizations are open to all students by audition. Qualified students may also receive ensemble credit by performing in the Waukesha Symphony, the Waukesha Choral Union, or the Waukesha Area Symphonic Band.

Students in the BME degree program must meet all requirements of the secondary education minor including the required core (except EDU 100, EDU 209, EDU 265, EDU 353 and EDU 304), including the required core, all General Education courses required by the Education Department, and state licensing requirements of the Teacher Education Program (TEP).

- Core Courses
  - Applied Lessons (13 credits)
    - Ensemble (7 semesters required)
      - MUS105: Class Piano I (1 hours)
      - MUS106: Class Piano II (1 hours)
      - MUS107: Class Piano III (1 hours)
      - MUS108: Class Piano IV (1 hours)
      - MUS111: Music Theory I (3 hours)
      - MUS112: Music Theory II (3 hours)
      - MUS113: Musicianship I (1 hours)
      - MUS114: Musicianship II (1 hours)
      - MUS213: Musicianship III (1 hours)
      - MUS214: Musicianship IV (1 hours)
      - MUS140: Foundations of Music Education (2 hours)
      - MUS141: Workshop - Intro to Education
      - MUS211: Music Theory III (3 hours)
      - MUS212: Music Theory IV (3 hours)
      - MUS241: Workshop - Education in a Multicultural Context
      - MUS303: Conducting I (2 hours)
      - MUS307: Practical Keyboard Harmony (1 hours)
      - MUS311: Music History I - Early Music through the Baroque Period (4 hours)
      - MUS312: Music History II - The Classic and Romantic Periods (4 hours)
      - MUS313: Music History III - The 20th Century (2 hours)
      - MUS470: Junior Recital (1 hours)
      - MUS471: Senior Recital (1 hours)
  - Required Support Courses
    - EDU203: Educational Psychology (4 hours)
    - EDU210: Field Experience in Educ I (1 hours)
    - EDU261: Educ of the Exceptional Child (4 hours)
    - EDU301: Democracy, Schools, and Society (4 hours)
    - EDU306: Literacy in Middle/Secondary School Content Areas (3 hours)
    - EDU311: Field Experience in Education II (1 hours)
    - EDU409: Secondary and K-12 Student Tchng (6 hours)
    - EDU410: Secondary and K-12 Student Tchng (6 hours)

- Bachelor of Music Education (BME)
B.M.E. students will meet the Bachelor of Arts requirements (B.M.E. students, as teachers, need the language experience to support their humanities education).

Bachelor of Arts students must take 8 credits in a modern language (MLL) other than English and MAT106 or higher.

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.**

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.

- Instrumental Emphasis
  - Core Courses, and Required Support Courses plus
    - MUS117: Class Voice (1 hours)
    - MUS251: String Methods (1 hours)
    - MUS252: Percussion Methods (1 hours)
    - MUS253: Woodwind Methods (1 hours)
    - MUS255: Brass Methods (1 hours)
    - MUS305: Conducting II - Instrumental (2 hours)
    - MUS355: Instrumental Methods (4 hours)
    - MUS358: Wind Literature and Performance Practice (2 hours)

- Choral Emphasis
  - Core Courses and Required Support Courses plus
    - Secondary Applied Instrument (3 credits)
      - MUS304: Conducting II - Choral (2 hours)
      - MUS323: Diction - German and English (1 hours)
      - MUS324: Diction - French and Italian (1 hours)
      - MUS353: Choral Methods and Literature (4 hours)
      - MUS357: Choral Literature & Performance Practice (2 hours)
      - MUS366: Voice Pedagogy (2 hours)

- General Emphasis
  - Core Courses, plus
    - Secondary Applied Instrument (3 credits)
      - MUS304: Conducting II - Choral (2 hours)
      - MUS305: Conducting II - Instrumental (2 hours)
      - MUS354: General Music in the Schools (2 hours)
      - MUS359: Orff/Kodaly Methods (4 hours)

- Music Minor (24-28 credits)
  - Core Courses
    - MUS111: Music Theory I (3 hours)
    - MUS112: Music Theory II (3 hours)
    - MUS113: Musicianship I (1 hours)
    - MUS114: Musicianship II (1 hours)
    - MUS117: Class Voice (1 hours)
    - MUS140: Foundations of Music Education (2 hours)
    - MUS141: Workshop - Intro to Education
    - MUS151: History of Jazz (4 hours)
    - MUS156: Listening to Classical Music (4 hours)
    - MUS157: Beethoven (4 hours)
    - MUS158: Rock Music - Roots and History (4 hours)
    - MUS159: Digital Music Production (4 hours)
    - MUS161: Violin (1 TO 2 hours)
    - MUS162: Viola (1 TO 2 hours)
    - MUS163: Cello (1 TO 2 hours)
    - MUS164: Bass (1 TO 2 hours)
    - MUS165: Guitar (1 TO 2 hours)
    - MUS166: Harp (1 TO 2 hours)

- Major Courses

  The list below displays all the courses offered by the program:

    - MUS105: Class Piano I (1 hours)
    - MUS106: Class Piano II (1 hours)
    - MUS107: Class Piano III (1 hours)
    - MUS108: Class Piano IV (1 hours)
    - MUS111: Music Theory I (3 hours)
    - MUS112: Music Theory II (3 hours)
    - MUS113: Musicianship I (1 hours)
    - MUS114: Musicianship II (1 hours)
    - MUS117: Class Voice (1 hours)
    - MUS140: Foundations of Music Education (2 hours)
    - MUS141: Workshop - Intro to Education
    - MUS151: History of Jazz (4 hours)
    - MUS156: Listening to Classical Music (4 hours)
    - MUS157: Beethoven (4 hours)
    - MUS158: Rock Music - Roots and History (4 hours)
    - MUS159: Digital Music Production (4 hours)
    - MUS161: Violin (1 TO 2 hours)
    - MUS162: Viola (1 TO 2 hours)
    - MUS163: Cello (1 TO 2 hours)
    - MUS164: Bass (1 TO 2 hours)
    - MUS165: Guitar (1 TO 2 hours)
    - MUS166: Harp (1 TO 2 hours)
MUS167: Piano (1 TO 2 hours)
MUS168: Organ (1 TO 2 hours)
MUS169: Voice (1 TO 2 hours)
MUS170: Flute (1 TO 2 hours)
MUS171: Oboe (1 TO 2 hours)
MUS172: Clarinet (1 TO 2 hours)
MUS173: Bassoon (1 TO 2 hours)
MUS174: Saxophone (1 TO 2 hours)
MUS175: Horn (1 TO 2 hours)
MUS176: Trumpet (1 TO 2 hours)
MUS177: Trombone (1 TO 2 hours)
MUS178: Tuba (1 TO 2 hours)
MUS179: Percussion (1 TO 2 hours)
MUS183: Men's Chorus (1 hours)
MUS185: Concert Choir (1 hours)
MUS186: Chamber Singers (1 hours)
MUS188: Wind Symphony (1 hours)
MUS189: Jazz Lab (1 hours)
MUS190: Chamber Music (1 hours)
MUS191: Chamber Orchestra (1 hours)
MUS192: The Carroll Chorale (1 hours)
MUS211: Music Theory III (3 hours)
MUS212: Music Theory IV (3 hours)
MUS213: Musicianship III (1 hours)
MUS214: Musicianship IV (1 hours)
MUS241: Workshop - Education in a Multicultural Context
MUS251: String Methods (1 hours)
MUS252: Percussion Methods (1 hours)
MUS253: Woodwind Methods (1 hours)
MUS255: Brass Methods (1 hours)
MUS291: Topics in Music (2 TO 4 hours)
MUS298: Independent Study in Music (1 TO 4 hours)
MUS303: Conducting I (2 hours)
MUS304: Conducting II - Choral (2 hours)
MUS305: Conducting II - Instrumental (2 hours)
MUS307: Practical Keyboard Harmony (1 hours)
MUS311: Music History I - Early Music through the Baroque Period (4 hours)
MUS312: Music History II - The Classic and Romantic Periods (4 hours)
MUS313: Music History III - The 20th Century (2 hours)
MUS323: Diction - German and English (1 hours)
MUS324: Diction - French and Italian (1 hours)
MUS350: Materials/Techniques Elem Music (2 hours)
MUS353: Choral Methods and Literature (4 hours)
MUS354: General Music in the Schools (2 hours)
MUS355: Instrumental Methods (4 hours)
MUS357: Choral Literature & Performance Practice (2 hours)
MUS358: Wind Literature and Performance Practice (2 hours)
MUS359: Orff/Kodaly Methods (4 hours)
MUS366: Voice Pedagogy (2 hours)
MUS391: Topics in Music (2 TO 4 hours)
MUS398: Independent Study in Music (1 TO 4 hours)
MUS430: Vocal Literature (2 hours)
MUS470: Junior Recital (1 hours)
MUS471: Senior Recital (1 hours)
MUS499: Music Capstone (2 hours)

- Music Therapy Program

Pending AMTA approval

Music Therapy Mission

The Music Therapy Program at Carroll University seeks to develop individuals with musical sensitivity and performance proficiency, an understanding of the principles and goals of music therapy, and a complete clinical training in the techniques of therapeutic practice in preparation for the music therapy board certification exam and a career as a fully licensed and qualified music therapist.

Music Therapy Goals

- Preparation for Professional Practice - Professional preparation requires the development of knowledge, skills, and abilities through education, supervision, and pre-professional experiences.
- Musical Development - Musical development is the acquisition of music knowledge, aesthetic sensitivity, and skills relevant to music therapy, and the application of those skills to clinical practice.
- Personal Development of the Therapist - Personal development involves becoming self-aware and actively seeking to further develop the self.
- Clinical Experience - Clinical experience involves observation and provision of music therapy services under the direct supervision of a certified music therapist. The student learns music therapy techniques to meet clients musically and clinically, demonstrating basic knowledge of assessment, treatment, documentation, and evaluation; communicates empathy and establishes therapeutic relationships; and demonstrates understanding of ethical principles and current standards of practice.

Progression Standards for Music Therapy Program

1. A cumulative GPA of 2.75 and satisfactory completion of the piano, guitar, and voice proficiency exams is required for admission to the professional phase (junior and senior years) of the program.

2. A student must maintain a cumulative university GPA and a semester GPA of 2.75 throughout the professional phase. A student who gets below a 2.75 cumulative and/or session GPA will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.75 session GPA or higher in subsequent semesters.
3. If a student fails to attain a 2.75 session GPA, s/he will be dismissed from the program.

4. Grades of C or better are required in all music therapy (MTY designation) courses. A satisfactory (S) is required in all completed practica. If a grade below a C is achieved or an S is not achieved, the student may not progress to subsequent courses in the program until the course is successfully repeated.

5. A course may be repeated only one time. A student receiving a D, F, or U twice in music therapy courses (including practica) will be dismissed from the program.

6. When repeating a professional phase music therapy course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge.

7. The piano, guitar, and voice proficiency exams will only be administered once per semester. They may be repeated as often as necessary.

- **Core Music Courses**
  - MUS105: Class Piano I (1 hours)
  - OR - MUS167: Piano (1 TO 2 hours)
  - MUS106: Class Piano II (1 hours)
  - OR - MUS167: Piano (1 TO 2 hours)
  - MUS111: Music Theory I (3 hours)
  - MUS112: Music Theory II (3 hours)
  - MUS113: Musicianship I (1 hours)
  - MUS114: Musicianship II (1 hours)
  - MUS151: History of Jazz (4 hours)
  - MUS158: Rock Music - Roots and History (4 hours)
  - MUS169: Voice (1 TO 2 hours)
  - MUS181: Class Guitar (1 hours)
  - OR - MUS165: Guitar (1 TO 2 hours)
  - MUS182: Introduction to Rhythmic Movement (1 hours)
  - MUS211: Music Theory III (3 hours)
  - MUS213: Musicianship III (1 hours)
  - MUS214: Musicianship IV (1 hours)
  - MUS215: Songwriting and Improvisation (1 hours)
  - MUS220: Functional Guitar (1 hours)
  - MUS252: Percussion Methods (1 hours)
  - MUS303: Conducting I (2 hours)
  - MUS307: Practical Keyboard Harmony (1 hours)
  - MUS312: Music History II - The Classic and Romantic Periods (4 hours)

- **Music Ensemble (must be taken 7 times {1 credit x 7})**

- **Applied Lessons (8 credits)**
  - **Core Music Therapy Courses**
    - MTY101: Introduction to Music Therapy (2 hours)
    - MTY180: Music Therapy Practicum (1 or 2 hours)
    - MTY251: Psychology of Music (3 hours)
    - MTY301: Music Therapy Foundations and Principles (2 hours)
    - MTY304: Influence of Music on Behavior (3 hours)
    - MTY382: Music Therapy Activities for Specific Populations (2 hours)
    - MTY401: Music Therapy Procedures and Applications (2 hours)
    - MTY480: Music Therapy Internship (12 hours)

- **Required Support Courses**
  - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  - AND - ANP130L: Intro to Human Anat and Phys I Lab
  - PSY101: Introductory Psychology (4 hours)
  - PSY201: Abnormal Psychology (4 hours)
  - PSY221: Life-Span Psychology (4 hours)

- **Bachelor of Music Therapy Requirements**

**Bachelor of Music Therapy**

The requirements for a Bachelor of Music Therapy degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING**

- **The Pioneer Core Program**
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- **Major Courses**

  The list below displays all the courses offered by the program:

  - MTY101: Introduction to Music Therapy (2 hours)
  - MTY180: Music Therapy Practicum (1 or 2 hours)
  - MTY251: Psychology of Music (3 hours)
  - MTY301: Music Therapy Foundations and Principles (2 hours)
  - MTY304: Influence of Music on Behavior (3 hours)
  - MTY382: Music Therapy Activities for Specific Populations (2 hours)
The Theatre & Arts Management Program offers a major and a minor in Theatre Arts, and a minor in Arts Management.

### Theatre Arts Major (40 credits)

The theatre arts major is intended to prepare students for continued engagement in the theatre arts, arts management, theatre education, or graduate studies. Through traditional classroom work, participation in fully produced mainstage productions, a multifaceted student theatre season, and in-depth community partnerships, we strive to train the artist of today for the theatre of tomorrow.

#### Learning Outcomes for Theatre Arts

Upon successful completion of major requirements students will be able to demonstrate:

1. An understanding of theatre history and literature in a global context.
2. The skills necessary to take part in the collaborative theatre process.
3. A contextual view of theatre as a unique and vital art form serving a diverse community.

#### Core Courses

- THE100: Theatre Participation (1 hours)
- AND/OR -THE300: Theatre Practicum (1 hours)
- THE101: Introduction to Theatre Arts (4 hours)
- AND -THE101L: Performance Field Trips
- THE102: Oral Interpretation and Presentation (4 hours)
- THE120: Theatre Crew (2 hours)
- THE121: Theatre Crew (2 hours)
- THE215: Theatre History and Literature I (4 hours)
- THE216: Theatre History and Literature II (4 hours)

#### Advanced Theatre Courses (minimum of four courses/16 credits chose from the following)

- THE301: Contemporary Acting Styles (4 hours)
- THE302: Period Acting Styles (4 hours)
- THE305: Principles of Production Management (4 hours)
- THE306: Principles of Theatre Design (4 hours)
- THE307: Directing for the Stage (4 hours)
- THE308: Writing for the Stage (4 hours)
- THE291: Special Studies/Topics in Theatre (1 TO 4 hours)
- AND/OR -THE391: Special Studies/Topics in Theatre (1 TO 4 hours)
- THE380: Internship in Theatre Arts (1 TO 4 hours)
- AND/OR -THE480: Internship in Theatre Arts (1 TO 4 hours)
- THE390: Theatre Projects (1 TO 4 hours)
- AND/OR -THE490: Theatre Projects (1 TO 4 hours)

#### Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.

**FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR.**

#### The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

#### Theatre Arts Minor (16 credits)

The Theatre Arts minor is intended for students who are interested in participating in theatre production, both onstage and off.

#### Core Courses

- THE100: Theatre Participation (1 hours)
- AND/OR -THE300: Theatre Practicum (1 hours)
- THE101: Introduction to Theatre Arts (4 hours)
- AND -THE101L: Performance Field Trips
- OR -THE102: Oral Interpretation and Presentation (4 hours)
THE120: Theatre Crew (2 hours)  
**OR** - THE121: Theatre Crew (2 hours)

THE215: Theatre History and Literature I (4 hours)  
**OR** - THE216: Theatre History and Literature II (4 hours)

In addition, Theatre Arts Minor students are required to take one Advanced Theatre Course.

- **Arts Management Minor (26 credits)**
  
  **Arts Management Minor**
  
The Arts Management minor is designed for students with a major in Art, Graphic Communications, Photography, Theatre Arts, or Music, although it may have a broader appeal and is open to any student who is interested.

  **Learning Outcomes for Arts Management**
  
  Upon completion of the minor, students will be able to:

  1. Demonstrate knowledge and understanding of arts organizations and venues, how they are managed, and their relevance within the larger community.
  2. Demonstrate awareness of the role and responsibilities of the manager within arts organizations and/or venues and within the larger cultural and social context.
  3. Explain and respond to the challenges faced by arts managers and arts organizations in the areas of organization, promotion, funding and legal issues

  Please note: ACC205, ECO124, and CMP112 required for admission consideration to MBA program.

  - **Courses required for the minor**
    - BUS290: Principles of Business Law (2 hours)
    - BUS301: Principles of Marketing (4 hours)
    - BUS302: Principles of Management (4 hours)
    - ECO124: Principles of Economics I - Microeconomics (4 hours)
    - THE160: Introduction to Fine Arts Administration (4 hours)

  - **One of the following:**
    - ART103: Prehistoric to Renaissance- Art History Survey (4 hours)
    - ART104: Renaissance to Early Modernism- Art History Survey (4 hours)
    - ART215: History of Photography (4 hours)
    - MUS151: History of Jazz (4 hours)
    - MUS156: Listening to Classical Music (4 hours)
    - MUS158: Rock Music - Roots and History (4 hours)
    - THE101: Introduction to Theatre Arts (4 hours)
    - THE215: Theatre History and Literature I (4 hours)
    - THE216: Theatre History and Literature II (4 hours)

  - **One of the following:**
    - ACC205: Financial Accounting (4 hours)
    - BUS260: Ethics in Business, Govt, and Society (4 hours)
    - BUS265: Human Resource Management (4 hours)
    - COM208: Introduction to Public Relations (4 hours)
    - ECO225: Principles of Economics II - Macroeconomics (4 hours)
    - WRI230: Grant Writing (4 hours)

  - **Major Courses**
    
The list below displays all the courses offered by the program:

    - **THE100**: Theatre Participation (1 hours)
    - **THE101**: Introduction to Theatre Arts (4 hours)
    - **THE101L**: Performance Field Trips
    - **THE102**: Oral Interpretation and Presentation (4 hours)
    - **THE120**: Theatre Crew (2 hours)
    - **THE121**: Theatre Crew (2 hours)
    - **THE200**: Theatre Workshops (1 TO 2 hours)
    - **THE215**: Theatre History and Literature I (4 hours)
    - **THE216**: Theatre History and Literature II (4 hours)
    - **THE291**: Special Studies/Topics in Theatre (1 TO 4 hours)
    - **THE296**: Special Studies/Research in Theatre (1 TO 4 hours)
    - **THE298**: Independent Study in Theatre (1 TO 4 hours)
    - **THE300**: Theatre Practicum (1 hours)
    - **THE301**: Contemporary Acting Styles (4 hours)
    - **THE302**: Period Acting Styles (4 hours)
    - **THE305**: Principles of Production Management (4 hours)
    - **THE306**: Principles of Theatre Design (4 hours)
    - **THE307**: Directing for the Stage (4 hours)
    - **THE308**: Writing for the Stage (4 hours)
    - **THE380**: Internship in Theatre Arts (1 TO 4 hours)
    - **THE390**: Special Studies/Topics in Theatre (1 TO 4 hours)
    - **THE396**: Special Studies/Research in Theatre (1 TO 4 hours)
    - **THE398**: Independent Study in Theatre (1 TO 4 hours)
    - **THE460**: Applied Theatre - Capstone Experience (2 hours)
    - **THE461**: Applied Theatre - Capstone Experience (2 hours)
    - **THE480**: Internship in Theatre Arts (1 TO 4 hours)
    - **THE490**: Theatre Projects (1 TO 4 hours)
## Music Liberal Arts & Business Administration double major
### Four Year Plan

**Year 1 (36 hours)**

<table>
<thead>
<tr>
<th>Fall</th>
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<td>MUS 114 (1 hour)</td>
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**Year 2 (32 hours)**

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<td>ECO 124 (4 hours)</td>
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**Year 3 (32 hours)**

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<td>CCE (2 or 4 hours)</td>
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<td>BUS 302 (4 hours)</td>
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**Year 4 (28 hours)**

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<td>BUS 304 (4 hours)</td>
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<td>BUS 305 (4 hours)</td>
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<tr>
<td>Ensemble and Lesson (2 hours)</td>
<td>Music History Elective (4 hours)</td>
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Department: Education
Chairperson: Kimberly White
Room: Barstow 203B
Email: whitek@carrollu.edu
Telephone: 262-650-4920
Fax: 262-524-7571

Programs

Undergraduate

Education
Undergraduate Program in Education

Mission Statement: The Teacher Education Program at Carroll University prepares reflective, culturally sensitive teachers who are capable of creating and implementing an interdisciplinary, intercultural curriculum. The intellectual foundation of the program is embedded in constructivist practice. The Wisconsin Department of Public Instruction (DPI) approves the Teacher Education Program at Carroll.

The Department of Education believes that the combination of a strong liberal arts background with the scholarly application of theory, methods, and skills related to learning is integral to the program. We foster in students a commitment to the idea that all children can learn. Students are expected to demonstrate the following guiding principles as learning outcomes throughout their coursework and clinical experiences:

- Constructivism; Cultural Sensitivity; Curricular Integration; Multiculturalism; and Reflection
- In addition, students are expected to demonstrate proficiency in:
  - Knowledge of subjects they are teaching
  - Knowledge of how children grow
  - Understanding that children learn differently
  - Knowledge of how to teach
  - Ability to effectively manage a classroom
  - Effective verbal and nonverbal communication techniques
  - Ability to plan different kinds of lessons
  - Knowledge of formal and informal assessment strategies
  - Ability to self-evaluate
  - Fostering relationships with school colleagues, parents, and community agencies

Because the DPI may revise its requirements for teacher licensing at any time, the Teacher Education Programs are subject to change. Students must maintain contact with their education advisor to learn about changes related to licensure requirements.

Admission and Retention

Admission and Retention in the Teacher Education Program (TEP)³

The Wisconsin Department of Public Instruction requires all teacher education students in the state of Wisconsin to meet certain standards to be admitted and retained in a TEP and to be admitted to a student teaching semester. Admission to the Carroll University TEP requires formal application by all students seeking licensure. Full-time Carroll undergraduate students are encouraged to apply in the spring of their sophomore year. All other students should apply as soon as they have completed 40 credits, including at least 12 credits in Carroll University courses. An appointment should be made with an Education advisor/mentor to obtain information regarding policies and procedures for the application process. Students are cautioned that early application to the program and careful planning are necessary to avoid additional semesters or summer course work to finish the program.
Admission, retention and student teaching requirements are summarized here. The Teacher Education Handbook, available from the Education Program Information MyGroups page or the Education Office, contains all specific requirements.

### Program Admission

To be eligible for program admission, students need to have completed at least 40 undergraduate credits with a minimum grade point average of 2.50. Students will need 150 documented clock hours of work with children as well as a grade of C or better in all education major and minor courses, English 170, and CCS 100 or COM 101 or equivalent. Students also need to have completed the CORE or PPST skills test in mathematics, reading, and writing with passing scores in all three areas. Students with a qualifying ACT/SAT/GRE score are not required to take the CORE/PPST exam. Students submit their Phase I portfolio to provide initial evidence of their development as a teacher and learner. Students are admitted to the TEP before enrolling in upper-level education courses. Students who leave the University for one year or more are required to reapply for admission to the TEP. The criteria for re-admission will be those in effect at the time of reapplication. Application deadlines are September 25 or January 25 each year. A small percentage of students may be admitted to the program or to the student teaching semester on exception if they meet all other criteria and meet either the GPA or Praxis I requirement.

Students who have already completed a bachelor's degree and who are attending Carroll only for teacher certification may obtain a waiver from the CORE/PPST, provided their cumulative undergraduate grade point average is 2.75 or above. The course requirements for Wisconsin teaching licensure are the same, but transfer and prior course work are evaluated and considered in the overall plan for certification. Elementary education majors are required to take the Foundations of Reading Test prior to application to student teach. All students are required to successfully complete the PRAXIS II Content Exam for their certification area(s) prior to application to student teach. Students completing majors or minors for licensure in Modern Languages must successfully complete the ACTFL Language Exam prior to application to student teach.

Students not admitted to the Teacher Education Program on their first attempt are eligible to reapply. If students are denied on their second application, however, they may not reapply to the Teacher Education Program. Students who are unsuccessful in admission to the TEP have access to alternative career counseling through their Education advisor/mentor and Career Services.

### Program Guidelines

Students who plan to enter and complete the TEP are expected to demonstrate appropriate ethical and professional behavior throughout their university years, and particularly during their course work, fieldwork, and other professional experiences in education. A pattern of ethical lapses may affect admission to or retention in the TEP in respective stages. In their Phase I portfolios, submitted upon application to enter the TEP, students are asked to demonstrate evidence of their existing commitments to the field of education.

This is accomplished, in part, by documenting high school and/or university experiences with children prior to entering the TEP. One hundred fifty clock hours of involvement are required. Experiences may include teaching, coaching, tutoring, or other forms of educational service to children or to schools. Volunteer and service work that is done to benefit children is also considered evidence of existing commitment. The TEP Handbook contains further information on this requirement and its documentation.

All students are expected to:

- Engage in formal or informal experiences, service work with children or in schools prior to applying to the TEP.
- Present all required program application materials by established deadlines.
- Submit satisfactory Phase I, II and edTPA portfolios, each with a maximum of one revision.
- Submit qualifying ACT/SAT/GRE scores or pass each segment of the CORE/PPST on either the first or the second attempt (Subsequent attempts are at the student's option.)
- Complete EDU 210 or 215, 311 or 315, and/or 312 with an overall maximum of one unsatisfactory experience.
- Undergo a background and criminal history check in EDU 100/EDU 102, when applying to the Teacher Education Program, and when applying to Student Teach.
- Demonstrate punctuality, dependability, and professional integrity in the completion of courses and course assignments, and in all field placements. Note: Students should be aware that deadlines for field experience forms and TB test results occur the semester prior to placement/enrollment: Fall enrollment – May 15, Winter Session Enrollment – November 15, Spring Enrollment – December 15, Summer I Enrollment – March 30.
- Follow university rules pertaining to social conduct, classroom conduct, and academic integrity.
- Maintain ethical, professional, and respectful behavior in all contacts with school children, school personnel, university peers and faculty, and professional colleagues.

Students who are denied admission to, or continuation in, any part of the TEP have the right of appeal, using the grade appeal procedure contained in the Student Handbook. All students who are unsuccessful in the TEP have access to alternative career counseling through their Education advisor/mentor or through Career Services, or both.

### Program Retention

The TEP requires that students demonstrate knowledge, skills and dispositions toward teaching. All Elementary Education major and Secondary Education minor course work must be completed with a grade of C or better. In addition to a minimum overall GPA of 2.75, students must demonstrate professional behavior throughout their university years. Reference to these criteria can be found in the Teacher Education Handbook. The Education Department reserves the right to counsel students out of the program when appropriate.

### Student Teaching Admission

Admission to the student teaching semester requires a grade of C or better in all Education major and minor courses and a
minimum overall GPA of 3.0 or a combined 3.0 in the major and the DPI-Approved Teaching Minor. All students are required to successfully complete the PRAXIS II Content Exam for their certification area(s), and students with Modern Language majors or minors must complete the ACTFL Language Exam prior to application to student teach. All Elementary Education majors seeking licensure are required to successfully complete the Foundations of Reading Test. Students applying for student teaching must submit their Phase II portfolio. Application deadlines are August 25 or January 25 each year. Those students who are not accepted into student teaching have the option to complete a degree in Educational Studies. No teaching license is granted with this major.

One semester in the senior year must be reserved solely for student teaching. All required coursework for the major and minor must be completed prior to student teaching. No other courses may be taken during any part of the student teaching semester. The Education Placement Coordinator arranges student teaching assignments in schools within approximately a 30 mile radius of the campus. Students must provide their own transportation to the placement site(s).

The student teaching semester is a full-time, semester-length experience, which follows the semester calendar used by the school in which the student is placed. School calendars are frequently very different from the university calendar. Fall student teachers may begin as early as mid-August, and finish their placement in late January. These students will receive their degrees when student teaching is completed and participate in the commencement ceremony in May following the student teaching semester. Seniors who student teach in the spring may participate in the commencement ceremony in May and receive their diplomas when student teaching is completed. Students who complete their student teaching during the spring semester are required to teach into June to be recommended for a Wisconsin teaching license.

Due to the complexities of both university and state requirements, students need to meet with an Education advisor very early in their university programs in order to develop a workable program plan of coursework. Carroll University TEPs may be completed in four years only with very careful and early planning. Winter and/or summer attendance may be necessary. Because education students engage in significant amounts of fieldwork in conjunction with the coursework in education, the planning process is also extremely important to permit scheduling of fieldwork. Students need to maintain continual contact with an Education advisor/mentor in order to update their plans and to ensure that any changes in the DPI requirements are incorporated into the student’s program.

To obtain a Wisconsin teaching license, students must meet all applicable DPI requirements, including any new requirements, which may be introduced by the DPI while the student is enrolled in a Carroll University program. Any substitutions of courses or variations in a student’s program must be approved by the Registrar and by the Department Chair to assure eligibility for a teaching license. Students must complete all TEP requirements and all university degree requirements to receive any teaching license.

Students may complete coursework leading to a Carroll University degree and to a Wisconsin license in any of the following areas:

- Various Licenses

  **License including Early Childhood through Middle Childhood levels**
  (approximate ages - birth through 11)

  Students major in Elementary Education and minor in Early Childhood Education. This minor, combined with successful completion of placements in both early childhood and elementary settings, permits students to earn a license to teach in pre-kindergarten through sixth grades.

  **Licenses including Early Childhood through Middle Childhood and Special Education**
  (approximate ages - birth through 11)

  The Education Department offers dual licensure programs in Elementary Education and Special Education. Candidates completing licensure in Special Education/Early Childhood Education (EC-MC) earn Dual Certification in Elementary Regular Education (#777) and Early Childhood Special Education (#809).

  **License including Middle Childhood through Early Adolescence level**
  (approximate ages - 6 through 12 or 13)

  Students major in Elementary Education and extend their license to include the middle-school level. This extension requires completion of a DPI-Approved Teaching Minor in French, German, health, language arts, mathematics, science, social studies, or Spanish. In addition to the PRAXIS II Middle School Content Knowledge Exam, students seeking certification in Health Education must successfully complete the Praxis II Content test in Health. Those completing minors in International Language must successfully complete the ACTFL Language Exam. The extended license also requires successful completion of placements in both elementary and middle school settings.

  **Licenses including Middle Childhood through Early Adolescence and Special Education**
  (approximate ages - 6 through 12 or 13)

  The Education Department offers dual licensure programs in Elementary Education and Special Education. Candidates completing licensure in Special Education/Elementary Education (MC-EA) earn Dual Certification in Elementary Regular Education (#777) and Cross-Categorical Special Education (#801).

  **License in Early Adolescence through Adolescence level**
  (approximate ages - 10 through 21)
Students who wish to earn a license in early adolescence through adolescence complete the minor in Secondary Education and an approved major in another Carroll University program. They are placed at both middle and high school sites during their student teaching semester. Currently, approved majors for secondary licensure are available in biology, chemistry, English, environmental science, and mathematics. Students majoring in a science area are encouraged to complete the additional coursework required to earn the Broad Field Science license. There are also approved majors in history, politics, psychology, and sociology, and students earning majors in these areas are urged to complete the additional coursework required to earn the Broad Field Social Studies license, which will significantly improve their hiring potential upon graduation. See your Education advisor for additional information regarding the Broad Field Science and Broad Field Social Studies licenses.

The Early Adolescence through Adolescence level license allows students to teach secondary school subjects in their approved major after successful completion of student teaching. Students may extend the subject areas they are licensed to teach by completing one or more DPI-Approved secondary education teaching minors. (See available DPI Minors - Secondary). Those in Broad Field Areas may also complete approved concentration areas. In addition, students seeking additional licenses will need to successfully complete the PRAXIS II Content Knowledge or ACTFL Language Exam in the teaching area prior to application to student teach.

**License in Art, Music, Theatre Arts, Spanish, or Physical and Health Education**

(early childhood through adolescence level - a wide range of all ages in public schools)

Licensure in any of these areas require completion of the Secondary Education minor and an approved major in Spanish, art, music, theatre arts, or physical and health education. Successfully completed placements in both elementary and secondary school settings are required during the student teaching semester.

**Additional License in Adaptive Education**

Students who wish to earn an additional license in adaptive education complete the initial requirements in their major/minor certification areas and the DPI-Approved minor in Adaptive Education. This additional license better prepares the student to meet the diverse needs of all students within the general education classroom.

- Elementary Education Major

**ELEMENTARY EDUCATION MAJOR**

- **Courses in the Major**
  - EDU102: Exploration in Education and Society (4 hours)
  - EDU202: Intercultural Context in Education (4 hours)
  - EDU203: Educational Psychology (4 hours)
  - EDU210: Field Experience in Educ I (1 hours)
  - EDU261: Educ of the Exceptional Child (4 hours)
  - EDU270: Using Data and Assessment for Planning, Instruction, and Learning (2 hours)
  - EDU301: Democracy, Schools, and Society (4 hours)
  - EDU311: Field Experience in Education II (1 hours)
  - EDU321: Social Studies in the Elementary /Middle School (2 hours)
  - EDU323: Literacy I: Early Childhood - Middle Childhood (4 hours)
  - EDU324: Literacy II: Middle Childhood - Early Adolescence (4 hours)
  - EDU326: Mathematics in the Elementary/ Middle School (4 hours)
  - EDU327: Science Methods in the Elementary/Middle School (2 hours)
  - EDU360: Teaching and Learning with English Language Learners (4 hours)
  - EDU419: Early Childhood/Elementary Student Teaching (6 hours)
  - EDU420: Early Childhood/Elementary Student Teaching (6 hours)

- **Required Support Courses**
  - ART223: Creative Arts for Children (2 hours)
  - MUS350: Materials/Techniques Elem Music (2 hours)
  - PED328: Elem Phy Ed Activities and Health Education (3 hours)

- **Bachelor of Science for Elementary Education**

The requirements for the Bachelor of Science Degree in Elementary Education are:

- CMP112, MAT104 and MAT201

**The Pioneer Core Program**

- **Cross-Cultural Component**
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

**Required Core and General Education Program Area Courses**

*Students should consult with their Education advisor to select courses that meet the GE1 and GE 2 course sequence requirements, the Cross-Cultural Development course and Cross-Cultural Experience.

- ENG170: Writing Seminar (4 hours)
- MAT104: Foundations of Elementary Mathematics I (4 hours)
- MAT201: Foundations of Elementary Mathematics II (4 hours)
- ENV120: Conservation and Environmental Improvement (4 hours)

In addition:

Elementary Education candidates enroll in POL 141
Education candidates are required to fulfill a fine arts requirement. Completing the Gen Ed F1 course meets this competency.

Education candidates must fulfill biological and physical sciences competency requirement. This includes completing a lab science course. ENV 120 meets these requirements. Students who complete a biological or physical lab science course can enroll in the 2-credit ENV 252 to meet the DPI requirement.

Education candidates are required to take a Literature course to demonstrate competency in literature. Course descriptions will be reviewed to determine whether courses meet the literature support course requirement.

Education students will fulfill the western and nonwestern support course requirement by completing one General Education Course with a Cross Cultural Development designation and completing EDU 202.

Coursework transferred from other institutions to fulfill support course requirements will be subject to review by the Department of Education.

• **Educational Studies Major**

  EDUCATIONAL STUDIES MAJOR

  The Educational Studies major provides students with a foundation in preparation for possible education-related careers outside of the field of traditional K-12 classrooms. Through course selection and possible minors, students design a focus relative to their career interests. This non-licensure major is also appropriate for those who desire an educational foundation to supplement their graduate majors or other professional fields of study.

  Students in this major complete all Education Foundation coursework. (EDU 102, EDU 202, EDU 203, EDU210, EDU 261, EDU 270, EDU 301, EDU 360)

  Additional requirements for Educational Studies include:

  • EDU 391,
  • EDU 400, Principles, Theory and Practice in Elementary Educational Studies,
  • Education elective (consider 32 Education credits must be completed)

  The Educational Studies major culminates with a self-selected experience involving a research-based project connecting the Education Program’s Guiding Principles with experiences in an education-related field.

  • EDU102: Exploration in Education and Society (4 hours)
  • EDU202: Intercultural Context in Education (4 hours)
  • EDU203: Educational Psychology (4 hours)
  • EDU210: Field Experience in Educ I (1 hours)
  • EDU261: Educ of the Exceptional Child (4 hours)
  • EDU270: Using Data and Assessment for Planning, Instruction, and Learning (2 hours)
  • EDU301: Democracy, Schools, and Society (4 hours)
  • EDU360: Teaching and Learning with English Language Learners (4 hours)
  • EDU391: Special Topics in Education (1 TO 4 hours)
  • EDU400: Capstone in Elementary Educational Studies (4 hours)

  • Special and Elementary Education Dual Certification

  ELEMENTARY EDUCATION AND SPECIAL EDUCATION DUAL CERTIFICATION

  The Teacher Education Program offers Elementary and Special Education with two certification tracks: 1) Special Education/Early Childhood (EC-MC), and 2) Special Education/Elementary Education (MC-EA). The program focuses on research-based models, including effective strategies and interventions to meet the academic, social and emotional needs of all students.

  Elementary Education Major – Special Education Emphasis – Dual Certification in Elementary Regular Education (#777) and Early Childhood Special Education (#809) and Dual Certification in Elementary Regular Education (#777) and Cross-Categorical Special Education (#801)

  • Core Courses in Elementary Education Major
    • EDU102: Exploration in Education and Society (4 hours)
    • EDU202: Intercultural Context in Education (4 hours)
    • EDU203: Educational Psychology (4 hours)
    • EDU210: Field Experience in Educ I (1 hours)
    • EDU261: Educ of the Exceptional Child (4 hours)
    • EDU270: Using Data and Assessment for Planning, Instruction, and Learning (2 hours)
    • EDU301: Democracy, Schools, and Society (4 hours)
    • EDU360: Teaching and Learning with English Language Learners (4 hours)

  • Emphasis in Dual Certification: Elementary Regular Education and Early Childhood Special Education (EC-MC)
    • EDU248: Early Childhood Education: Home, School, and Community Relationships (4 hours)
    • EDU249: Development, Observation, and Assessment of Young Children with Exceptional Needs (4 hours)
    • EDU250: Collaboration and Inclusion (4 hours)
    • EDU312: Field Experience-Adaptive Educ (1 hours)
    • EDU321: Social Studies in the Elementary /Middle School (2 hours)
    • EDU323: Literacy I: Early Childhood - Middle Childhood (4 hours)
    • EDU324: Literacy II: Middle Childhood - Early Adolescence (4 hours)
    • EDU326: Mathematics in the Elementary/ Middle School (4 hours)
    • EDU327: Science Methods in the Elementary/Middle School (2 hours)
    • EDU332: Instructional Strategies for an Inclusive Classroom (4 hours)
    • EDU334: Language Development and Disorders of the Exceptional Child (4 hours)
    • EDU341: Integrated Curriculum in Early Childhood I - Literacy and Social Emotional Development (4 hours)
    • EDU349: Curriculum Development in Special Education/Special Education Methods (4 hours)
    • EDU419: Early Childhood/Elementary Student Teaching (6 hours)
    • EDU423: Special Education Student Teaching (6 hours)

  • Emphasis in Dual Certification: Elementary Regular Education and Cross-Categorical Special Education (MC-EA)
• EDU264: Collaboration for Academic, Social and Career Development (4 hours)
• EDU312: Field Experience-Adaptive Educ (1 hours)
• EDU321: Social Studies in the Elementary /Middle School (2 hours)
• EDU323: Literacy I: Early Childhood - Middle Childhood (4 hours)
• EDU324: Literacy II: Middle Childhood - Early Adolescence (4 hours)
• EDU326: Mathematics in the Elementary/ Middle School (4 hours)
• EDU327: Science Methods in the Elementary/Middle School (2 hours)
• EDU330: Introduction to Diagnostic Assessment of Students with Exceptional Needs (4 hours)
• EDU332: Instructional Strategies for an Inclusive Classroom (4 hours)
• EDU334: Language Development and Disorders of the Exceptional Child (4 hours)
• EDU372: Instructional Design and Methodology for Students with Mild to Moderate Learning Disabilities (2 hours)
• EDU373: Instructional Design and Methodology for Students with Emotional/Behavioral Disabilities (2 hours)
• EDU419: Early Childhood/Elementary Student Teaching (6 hours)
• EDU423: Special Education Student Teaching (6 hours)

Required Support Courses
• ART223: Creative Arts for Children (2 hours)
• MUS350: Materials/Techniques Elem Music (2 hours)
• PED328: Elem Phy Ed Activities and Health Education (3 hours)

Required Core and General Education Program Area Courses
*Students should consult with their Education advisor to select courses that meet the GE1 and GE 2 course sequence requirements, the Cross-Cultural Development course and Cross-Cultural Experience.

• ENG170: Writing Seminar (4 hours)
• ENV120: Conservation and Environmental Improvement (4 hours)
• AND-ENV120L: Conservation and Environmental Improvement Laboratory
• MAT104: Foundations of Elementary Mathematics I (4 hours)
• MAT201: Foundations of Elementary Mathematics II (4 hours)

In addition:
Elementary Education candidates enroll in POL 141

Education candidates are required to fulfill a fine arts requirement. Completing the Gen Ed F1 course meets this competency.

Education candidates must fulfill biological and physical sciences competency requirement. This includes completing a lab science course. ENV 120 meets these requirements. Students who complete a biological or physical lab science course can enroll in the 2-credit ENV 252 to meet the DPI requirement.

Education candidates are required to take a Literature course to demonstrate competency in literature. Course descriptions will be reviewed to determine whether courses meet the literature support course requirement.

Education students will fulfill the western and nonwestern support course requirement by completing one General Education Course with a Cross Cultural Development designation and completing EDU 202.

Coursework transferred from other institutions to fulfill support course requirements will be subject to review by the Department of Education.

• DPI-Approved Teaching Minors - Elementary

A student majoring in Elementary Education must complete one of the elementary minors listed below.

Caution: The course requirements in most elementary DPI-Approved teaching minors are different from those listed in the catalog for Carroll University minors in the same areas. Therefore, students are strongly advised to obtain information on course requirements in DPI minors from www.carrollu.edu/programs/education or the Education Office.

The DPI teaching minors certify the Elementary Education Major to teach either at the early childhood through middle childhood level (ages birth through 11) or at the middle childhood through early adolescence level (ages 6 through 12 or 13):

Early Childhood Education Teaching license includes: early childhood through middle childhood level

The following minors license students to teach at the middle childhood through early adolescence level (the student teaching semester must include placement at both the elementary and middle school levels to complete eligibility for the license):

Language Arts
Mathematics
Science
Social Studies

The following licenses require successful completion of the ACTFL Language Exam in addition to the PRAXIS II Middle School Content Knowledge Exam.

French
German
Spanish

Students completing a minor in Health Education must successfully complete the Praxis II Content Exam in Health along with the PRAXIS II Test in Middle School Content Knowledge.

• Adaptive Education Minor

The Adaptive Education Minor prepares a student for an additional license to meet the diverse needs of all students within the general education classroom.
This minor is in addition to the first license and at this time does not require an additional PRAXIS II Content Knowledge Exam.

- **Courses in the Minor**
  - EDU261: Educ of the Exceptional Child (4 hours)
  - EDU264: Collaboration for Academic, Social and Career Development (4 hours)
  - EDU312: Field Experience-Adaptive Educ (1 hours)
  - EDU330: Introduction to Diagnostic Assessment of Students with Exceptional Needs (4 hours)
  - EDU332: Instructional Strategies for an Inclusive Classroom (4 hours)
  - EDU334: Language Development and Disorders of the Exceptional Child (4 hours)

- **Early Childhood Education Minor**

  Students who complete coursework for the Elementary Education Major elect the Early Childhood Education Minor to be licensed to teach pre-kindergarten through grade 6 (early childhood through middle childhood level).

  - **Courses in the Minor**
    - EDU248: Early Childhood Education: Home, School, and Community Relationships (4 hours)
    - EDU249: Development, Observation, and Assessment of Young Children with Exceptional Needs (4 hours)
    - EDU341: Integrated Curriculum in Early Childhood I - Literacy and Social Emotional Development (4 hours)
    - EDU342: Integrated Curriculum in Early Childhood II: Physical and Mathematical Knowledge (4 hours)

- **Secondary Education Minor**

  Students complete the Secondary Education Minor and one of the approved majors listed for licensure in the early adolescence through adolescence level. This qualifies the student to teach school subjects related to their major in grades 6 to 12 (early adolescence through adolescence level - approximate ages of 10 through 21). Students who complete the Secondary Education Minor with an approved major in art, music, physical and health education, theatre arts, or Spanish and who have placements in both elementary and secondary school settings during the student teaching semester are eligible for licensure in their subject area in pre-kindergarten through grade 12 (early childhood through adolescence level - a wide range of all ages in public schools).

  - **Courses in the Minor**
    - EDU102: Exploration in Education and Society (4 hours)
    - EDU202: Intercultural Context in Education (4 hours)
    - EDU203: Educational Psychology (4 hours)
    - EDU210: Field Experience in Educ I (1 hours)
    - EDU251: Educ of the Exceptional Child (4 hours)
    - EDU301: Democracy, Schools, and Society (4 hours)
    - EDU303: Instructional Design for the Early Adolescent/Adolescent Learner (2 hours)
    - EDU305: Foundations of Reading (3 hours)
    - EDU306: Literacy in Middle/Secondary School Content Areas (3 hours)
    - EDU311: Field Experience in Education II (1 hours)
    - EDU333: Special Methods in Teaching Secondary School Subjects (2 hours)
    - OR - EDU355: Special Methods in Teaching Elementary and Secondary Subjects - Modern Languages (3 hours)
    - EDU360: Teaching and Learning with English Language Learners (4 hours)
    - EDU409: Secondary and K-12 Student Tchng (6 hours)
    - EDU410: Secondary and K-12 Student Tchng (6 hours)

EDU270, Using Data and Assessment for Planning, Instruction, and Learning (2 hours) is recommended.

- **Required Core and General Education Program Area Courses**

  Students should consult with their Education advisor to select courses that meet the GE1 and GE 2 course sequence requirements, the Cross-Cultural Development course and Cross-Cultural Experience. Distribution courses are determined by the student’s major area; however, additional courses in Distribution Areas may need to be completed to fulfill DPI requirements.

  - ENG170: Writing Seminar (4 hours)
  - HIS105: America to 1877 (4 hours)
  - OR - HIS106: America since 1877 (4 hours)
  - OR - POL141: Intro to American Politics (4 hours)

  In addition:

  Education candidates are required to fulfill a fine arts requirement. Completing the Gen Ed F1 course meets this competency.

  Education candidates must fulfill biological and physical sciences competency requirement. This includes completing a lab science course. ENV 120 meets these requirements. Students who complete a biological or physical lab science course can enroll in the 2-credit ENV 252 to meet the DPI requirement.

  Education candidates are required to take a Literature course to demonstrate competency in literature. Course descriptions will be reviewed to determine whether courses meet the literature support course requirement.

  Education candidates are required to fulfill a Western and non-Western competency requirement. Taking a CCD course in the General Education program and successful completion of EDU 202 meets this requirement.

- **DPI-Approved Teaching Minors - Secondary**

  Students can increase the number of subject areas in which they are licensed and enhance their employment prospects by completing either an additional DPI-approved secondary minor or a set of approved courses, which lead to a DPI Broad Field
Broad Field licensure is available in either social studies or science. The course requirements for broad field licensure are available from the Education office.

**Caution:** Since many secondary DPI-approved teaching minors must be matched with particular Carroll University majors, students should also contact the Education faculty for advice regarding selection of teaching minors and course requirements. Students majoring or minoring in any natural science subject, or in any social science subject, which they intend to teach, must take ENV 120. Students seeking licensure in a minor must also successfully complete the PRAXIS II Content Knowledge Exam or ACTFL Language Test for that area prior to application to student teach.

DPI-approved secondary minors may be chosen from those listed below:

<table>
<thead>
<tr>
<th>Biology</th>
<th>Health Education(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>History</td>
</tr>
<tr>
<td>Communication (Speech Education)</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Earth and Space Science</td>
<td>Physics</td>
</tr>
<tr>
<td>English</td>
<td>Politics</td>
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<tr>
<td>Environmental Studies</td>
<td>Psychology</td>
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<tr>
<td>French</td>
<td>Sociology</td>
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<tr>
<td>Geography</td>
<td>Spanish</td>
</tr>
<tr>
<td>German</td>
<td>Theatre Arts</td>
</tr>
</tbody>
</table>

\(^1\) The courses required in these DPI-approved teaching minors are not listed in this catalog. See the Education office for current lists of course requirements.

Any education course taken more than seven years prior to enrollment at Carroll University will be subject to the approval of the department chair.

### Major Courses

The list below displays all the courses offered by the program:

- EDU102: Exploration in Education and Society (4 hours)
- EDU202: Intercultural Context in Education (4 hours)
- EDU203: Educational Psychology (4 hours)
- EDU210: Field Experience in Educ I (1 hours)
- EDU215: Intercultural Immersion Field Experience I (2 hours)
- EDU246: Development, Observation and Assessment in Early Childhood (4 hours)
- EDU248: Early Childhood Education: Home, School, and Community Relationships (4 hours)
- EDU249: Development, Observation, and Assessment of Young Children with Exceptional Needs (4 hours)
- EDU250: Collaboration and Inclusion (4 hours)
- EDU261: Educ of the Exceptional Child (4 hours)
- EDU264: Collaboration for Academic, Social and Career Development (4 hours)
- EDU270: Using Data and Assessment for Planning, Instruction, and Learning (2 hours)
- EDU301: Democracy, Schools, and Society (4 hours)
- EDU303: Instructional Design for the Early Adolescent/Adolescent Learner (2 hours)
- EDU305: Foundations of Reading (3 hours)
- EDU306: Literacy in Middle/Secondary School Content Areas (3 hours)
- EDU311: Field Experience in Education II (1 hours)
- EDU312: Field Experience-Adaptive Educ (1 hours)
- EDU315: Intercultural Immersion Field Experience II (2 hours)
- EDU321: Social Studies in the Elementary/Middle School (2 hours)
- EDU323: Literacy I: Early Childhood - Middle Childhood (4 hours)
- EDU324: Literacy II: Middle Childhood - Early Adolescence (4 hours)
- EDU326: Mathematics in the Elementary/Middle School (4 hours)
- EDU327: Science Methods in the Elementary/Middle School (2 hours)
- EDU330: Introduction to Diagnostic Assessment of Students with Exceptional Needs (4 hours)
- EDU332: Instructional Strategies for an Inclusive Classroom (4 hours)
- EDU334: Language Development and Disorders of the Exceptional Child (4 hours)
- EDU341: Integrated Curriculum in Early Childhood I - Literacy and Social Emotional Development (4 hours)
- EDU342: Integrated Curriculum in Early Childhood II: Physical and Mathematical Knowledge (4 hours)
- EDU349: Curriculum Development in Special Education/Special Education Methods (4 hours)
- EDU353: Special Methods in Teaching Secondary School Subjects (2 hours)
- EDU355: Special Methods in Teaching Elementary and Secondary Subjects - Modern Languages (3 hours)
- EDU360: Teaching and Learning with English Language Learners (4 hours)
- EDU372: Instructional Design and Methodology for Students with Mild to Moderate Learning Disabilities (2 hours)
- EDU373: Instructional Design and Methodology for Students with Emotional/Behavioral Disabilities (2 hours)
- EDU391: Special Topics in Education (1 TO 4 hours)
- EDU398: Independent Study in Education (1 TO 4 hours)
- EDU400: Capstone in Elementary Educational Studies (4 hours)
- EDU409: Secondary and K-12 Student Tchng (6 hours)
- EDU410: Secondary and K-12 Student Tchng (6 hours)
- EDU419: Early Childhood/Elementary Student Teaching (6 hours)
- EDU420: Early Childhood/Elementary Student Teaching (6 hours)
- EDU422: Special Student Teaching Practicum (1 TO 5 hours)
- EDU423: Special Education Student Teaching (6 hours)

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## Department: Communication and Sociology

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**Telephone:** 262-951-3011  
**Fax:** 262-574-2608

### Programs

**Undergraduate**  
- Communication  
- Criminal Justice  
- Sociology
The Communication program offers a major in communication, as well as minors in liberal arts communication and secondary education speech communication. The goal of the program is to develop graduates who possess communication competence, in both theory and practice.

Communication Major

The communication major prepares students for careers in journalism, public relations, advertising, teaching, management, human resources and for advanced education in graduate school. The curriculum follows a sequence for student development. As freshmen, students learn the principles of, and have experiences in, various contexts of communication. They also become familiar with the methods of communication research (100-level courses). As sophomores, students become acquainted with specialized subject matters and hone skills in research, writing and critical thinking (200-level courses). As juniors, students engage in deeper exploration of theoretical and ethical perspectives (300-level courses). As seniors, students participate in advanced research and work-oriented experiences.

Learning Outcomes for Communication

Upon successful completion of major requirements, students are expected to demonstrate:

1. An understanding of the theories and principles of human communication that will facilitate their professional and personal effectiveness.
2. Skill in responsible and sensitive communication with diverse others.
3. The ability to conduct systematic inquiry skillfully.
4. The ability to develop and convey oral and written messages effectively.

Suggested Tracks in the Communication Major

Journalism: COM 137, COM 237, COM 250, COM 255, COM 275, COM 278, COM 350
Public Relations: COM 137, COM 203, COM 208, COM 227, COM 317, COM 350
Relational: COM 200, COM 202, COM 230, COM 250, COM 290, COM 319

Communication Major

Core Courses

- COM101: Principles of Communication (4 hours)
- COM150: Research Methodology (4 hours)
- COM207: Intercultural Communication (4 hours)
- COM499: Senior Capstone Seminar (4 hours)

Communication Major (B.A.) (40 credit hours)

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.
The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Communication Major (B.S.) (40 credit hours)
- Core courses plus four additional 4-credit 100- or 200-level courses in Communication
- Two 4 credit 300-level courses in Communication
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- Bachelor of Science Requirement

Bachelor of Science Requirement
The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Pre-Physical Therapy 4 year plan
Click here for a four year plan with a major in Communication.

Liberal Arts Communication Minor
- COM101: Principles of Communication (4 hours)
- One of the following:
  - COM317: Communication Criticism (4 hours)
  - COM319: Communication Theory (4 hours)
  - COM350: Communication Law (4 hours)
  - COM370: Communication Technology and Society (4 hours)

Three elective four-credit courses in Communication.

Secondary Education Speech Communication Minor
One elective four-credit course in Communication.
- COM101: Principles of Communication (4 hours)
- COM111: Debate and Forensic Activities (1 hours)
- COM200: Interpersonal Communication (4 hours)
  OR -COM202: Small Group Communication (4 hours)
- COM250: Society and Mass Media (4 hours)
- COM317: Communication Criticism (4 hours)
- COM319: Communication Theory (4 hours)

Major Courses
The list below displays all the courses offered by the program:
- COM101: Principles of Communication (4 hours)
- COM111: Debate and Forensic Activities (1 hours)
- COM137: Introduction to Newswriting and Reporting (4 hours)
- COM150: Research Methodology (4 hours)
- COM200: Interpersonal Communication (4 hours)
- COM202: Small Group Communication (4 hours)
- COM203: Advertising (4 hours)
- COM207: Intercultural Communication (4 hours)
- COM208: Introduction to Public Relations (4 hours)
- COM227: Technical Writing in Organizations (4 hours)
- COM230: Organizational Communication (4 hours)
- COM237: Advanced Newswriting and Reporting (4 hours)
- COM241: Communication and Conflict (4 hours)
- COM250: Society and Mass Media (4 hours)
- COM255: Digital Journalism (4 hours)
- COM275: Feature Writing (4 hours)
- COM278: Broadcast News Reporting (4 hours)
- COM290: Intro to Health Communication (4 hours)
- COM290H: Intro to Health Communication (4 hours)
- COM291: Topics in Communication (1 TO 4 hours)
- COM296: Research in Communication (1 TO 4 hours)
- COM298: Independent Study in Communication (1 TO 4 hours)
- COM317: Communication Criticism (4 hours)
- COM319: Communication Theory (4 hours)
- COM350: Communication Law (4 hours)
- COM370: Communication Technology and Society (4 hours)
- COM380: Internship in Communication (1 TO 4 hours)
Criminal Justice
Richard H. Coon  Associate Professor of Sociology
Jennifer L. Huck  Assistant Professor of Sociology and Criminal Justice
Camie Morris  Lecturer of Sociology and Criminal Justice

Criminal Justice Major (48 credit hours)

Bachelor of Science

The criminal justice major is designed to meet the needs of students considering a career in the criminal justice system, including law enforcement, law and the courts and corrections. The major has an interdisciplinary liberal arts focus, emphasizing social science knowledge as well as basic communication and intellectual skills. We offer courses that help students understand the structure and philosophy of the American criminal justice system including the dimensions and causes of crime and delinquency, theories of crime prevention and control, the history, nature and theories of law enforcement, the basis and operation of criminal courts, and the philosophies and practices of various correctional institutions and programs, including corrections in the community.

Learning Outcomes for Criminal Justice

Students successfully completing the major are expected to:

1. Demonstrate an understanding of the structure, philosophy and administration of the criminal justice system and its components of law enforcement, courts, and corrections.
2. Describe and apply criminological theory to understand why individuals engage in crime, how criminals are created, and how policies connect to theoretical underpinnings.
3. Utilize and evaluate appropriate research and analytical methods in criminal justice.
4. Demonstrate the ability to develop and convey oral and written messages effectively in a professional manner.

Core Courses

- SOC102: Sociology of Social Problems (4 hours)
- SOC103: Introduction to Criminal Justice (4 hours)
- SOC211: Juvenile Delinquency (4 hours)
- SOC212: Criminology (4 hours)
- SOC240: Victims and Victimology (4 hours)
- SOC311: Methods of Social Research (4 hours)
- SOC499: Capstone - What works in criminal justice policy (2 hours)

Three electives from the following:

- SOC213: Race and Ethnicity Studies in Criminal Justice (4 hours)
- SOC220: Police in Society (4 hours)
- SOC303: Criminal Procedure, Evidence and Investigation (4 hours)
- SOC304: Introduction to Criminal Law (4 hours)
- SOC307: Corrections in American Society (4 hours)
- SOC481: Internship in Criminal Justice (4 hours)

Required Support Courses

- IDS200: Interdisciplinary Studies (2 hours)
- POL141: Intro to American Politics (4 hours)
- WRI199: Reading and Writing in the Sciences (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Criminal Justice Minor

Core Courses

- SOC103: Introduction to Criminal Justice (4 hours)
- SOC212: Criminology (4 hours)
- WRI199: Reading and Writing in the Sciences (4 hours)

Three elective courses from among the following:

- SOC211: Juvenile Delinquency (4 hours)
- SOC213: Race and Ethnicity Studies in Criminal Justice (4 hours)
- SOC220: Police in Society (4 hours)
- SOC240: Victims and Victimology (4 hours)
- SOC303: Criminal Procedure, Evidence and Investigation (4 hours)
Sociology

Jennifer L. Huck  Assistant Professor of Sociology and Criminal Justice
Camie Morris  Lecturer of Sociology and Criminal Justice

The Sociology Program offers majors in criminal justice and sociology, as well as minors in criminal justice and sociology.

Sociology Major

Bachelor of Science

The mission of the Sociology major is to prepare students to use sociological theory, methods and empirical evidence to critically examine the social world. Students will develop a sociological perspective grounded in social justice and sustainability. Primary to the mission of the major is the cultivation of a well-rounded understanding of the discipline of sociology that contributes to informed citizenship, lifelong learning, and an understanding of a diverse and changing social world.

There are two separate emphases in the Sociology program:

1. "Sociology of the Social World" (SSW) Emphasis MAJOR (10 courses—40 credit hours);
   the 4 core courses plus 6 elective courses in Sociology.

   "Sociology of the Social World" Emphasis MINOR (5 courses—20 credit hours);
   SOC 101, SOC 308 or 311 plus 3 elective courses in Sociology.

2. "Sociology Of Sustainability" (SOS) Emphasis MAJOR (14 courses—56 credit hours);
   the 4 core courses plus the 7 required courses in SOS and 3 courses within a career pathway.

   "Sociology Of Sustainability" Emphasis MINOR (6 courses—24 credit hours); see list of 6 required courses below.

Learning Outcomes for Sociology

Both emphases share these, and upon successful completion of major requirements students will be able to:

1. Demonstrate an awareness of the scope and diversity of societal/cultural elements addressed by the field of sociology.
2. Use and apply sociological concepts, research methods and theoretical perspectives to make sense of their world.
3. Use the sociological imagination to recognize and describe how institutional patterns and social structural forces shape many aspects of individual life.

There are additional Learning Outcomes for the SOS emphasis, and upon successful completion of the Sociology of Sustainability emphasis students are expected to be able to:

1. Explain the scale and variety of major systems interconnections among people, planet, purposes and progress; and how social justice, ecological stewardship, and equitable prosperity relate to those systems as well as to Carroll’s four pillars.
2. Demonstrate how to use and apply SOS concepts through community engagement and collaboration, organizational leadership and responsibility, and/or environmental advocacy and well-being.
3. Integrate development for careers or graduate studies in sustainability with personal lifestyle and financial planning.

Core Courses

- SOC101: Introduction to Sociology (4 hours)
- SOC308: Sociological Theory (4 hours)
- SOC311: Methods of Social Research (4 hours)
- SOC399: Capstone in Sociology (4 hours)

Required Support Courses (Required for primary majors only)

- COM207: Intercultural Communication (4 hours)
- OR- ENG255: Postcolonial Literature and Theory (4 hours)
- OR-PHI207: History and Philosophy of Science (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II -Statistical Analysis Emphasis (4 hours)

Required Courses for the Sociology of Sustainability Emphasis

In addition to the Core Courses, these 7 courses are required for the SOS emphasis:

- ENV120: Conservation and Environmental Improvement (4 hours)
- ENV222: Environmental Sustainability (4 hours)
- SOC102: Sociology of Social Problems (4 hours)
- SOC202: Society and Ecology (4 hours) AND -SOC202L: Society and Ecology Laboratory
- SOC301: Social Change and the Future of Society (4 hours)
- SOC302: Complex Organizations and Work Life (4 hours)
- SOC390: Sustainability Field Project (2 to 4 credits hours)

Elective Courses for the "Sociology Of Sustainability" Emphasis:

An additional 3 elective courses from among the following are chosen with student advisor to round out student’s "triple bottom line", or completion of one RECOMMENDED career pathway.

At least one of the courses must be from Environmental Science or Organizational Leadership:

- SOC 103, 211, 212, or 213; or COM 207 or 241; or UWM-UN (adds 2 credits as it=6 credit double course);
- or ENV 201, 252, 277, 292, 349 or 375; or LEA 190, 302, 375 or 390; or BUS 250 or 260.

- Recommended for SOCIAL JUSTICE career pathway
  - SOC103: Introduction to Criminal Justice (4 hours)
  - OR-SOC212: Criminology (4 hours)
SOC211: Juvenile Delinquency (4 hours)
OR - SOC213: Race and Ethnicity Studies in Criminal Justice (4 hours)
ENV292: Environmental Ethics (4 hours)
OR - LEA375: Nonprofit Leadership (4 hours)

Recommended for ECOLOGICAL STEWARDSHIP career pathway

ENV201: Problem Solving in Environmental Systems (4 hours)
COM241: Communication and Conflict (4 hours)
OR - COM207: Intercultural Communication (4 hours)
LEA190: Leadership and Personal Effectiveness (4 hours)
OR - LEA302: Leadership Theory and Practice (4 hours)

Recommended for EQUITABLE PROSPERITY career pathway

BUS260: Ethics in Business, Govt, and Society (4 hours)
ENV349: Environmental Planning and Policy (4 hours)
OR - ENV252: Contemporary Issues in Environmental Science (2 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Sociology Minors

- Sociology of the Social World Emphasis Minor (5 courses - 20 credit hours)
  Students will choose from the courses below plus 3 elective courses in Sociology to equal 20 credits.
  - SOC101: Introduction to Sociology (4 hours)
  - SOC308: Sociological Theory (4 hours)
  OR - SOC311: Methods of Social Research (4 hours)
- Sociology of Sustainability Emphasis Minor (6 courses - 24 credit hours)
  See list of 6 required courses below:
  - SOC101: Introduction to Sociology (4 hours)
  - SOC308: Sociological Theory (4 hours)
  OR - SOC311: Methods of Social Research (4 hours)
  - ENV120: Conservation and Environmental Improvement (4 hours)
  AND - ENV120L: Conservation and Environmental Improvement Laboratory
  - ENV222: Environmental Sustainability (4 hours)
  - SOC202: Society and Ecology (4 hours)
  AND - SOC202L: Society and Ecology Laboratory
  - SOC302: Complex Organizations and Work Life (4 hours)

Major Courses

The list below displays all the courses offered by the program:

- SOC101: Introduction to Sociology (4 hours)
- SOC102: Sociology of Social Problems (4 hours)
- SOC102H: Sociology of Social Problems (4 hours)
- SOC103: Introduction to Criminal Justice (4 hours)
- SOC110: Cultural Anthropology (4 hours)
- SOC130: Culture and Crime (4 hours)
- SOC202: Society and Ecology (4 hours)
- SOC202L: Society and Ecology Laboratory
- SOC211: Juvenile Delinquency (4 hours)
- SOC212: Criminology (4 hours)
- SOC213: Race and Ethnicity Studies in Criminal Justice (4 hours)
- SOC217: Social Psychology (4 hours)
- SOC220: Police in Society (4 hours)
- SOC291: Special Topics in Sociology or Criminal Justice (4 hours)
- SOC296: Reading and Research in Sociology (1 TO 3 hours)
- SOC298: Independent Study in Sociology (4 hours)
- SOC301: Social Change and the Future of Society (4 hours)
- SOC302: Complex Organizations and Work Life (4 hours)
- SOC303: Criminal Procedure, Evidence and Investigation (4 hours)
- SOC304: Introduction to Criminal Law (4 hours)
- SOC305: Marriage & Family-Contmp Society (4 hours)
- SOC307: Corrections in American Society (4 hours)
- SOC308: Sociological Theory (4 hours)
- SOC311: Methods of Social Research (4 hours)
- SOC318: Sociology of Sex Roles (4 hours)
- SOC380: Internship in Applied Sociology (4 hours)
- SOC390: Sustainability Field Project (2 to 4 credits hours)
- SOC391: Special Topics in Sociology (4 hours)
- SOC396: Reading and Research in Sociology (1 TO 3 hours)
- SOC398: Independent Study in Sociology (4 hours)
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<td>Internship in Criminal Justice (4 hours)</td>
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<td>SOC499</td>
<td>Capstone - What works in criminal justice policy (2 hours)</td>
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College of Natural Sciences and Health Sciences

Dean/Director: Jane Hopp, Dean
Telephone: 262-524-7294
Fax: 262-524-7112 attn: Jan Dargatz

Email: jhopp@carrollu.edu
Room: Research and Development House, Room 103

Departments

- Department of Physical Therapy
- Computational and Physical Sciences
- Health and Medicine
- Human Movement Sciences
- Life Sciences
- Nursing
The aim of the professional phase of the Doctor of Physical Therapy Program is to produce clinicians, trained for general practice in a dynamic health care environment, who provide best care, respectful of patient/client values, grounded in evidence-based practice and clinical reasoning, and contribute to the profession and their community.

The Entry-level Doctor of Physical Therapy Program is fully accredited by the Higher Learning Commission of the North Central Association. The Doctor of Physical Therapy Program at Carroll University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703-706-3245; email: accreditation@apta.org; website: http://www.capteonline.org.

Curriculum

The Carroll University Entry-level Physical Therapy Program consists of a six-year course of study, divided into pre-professional and professional phases.

During the pre-professional phase (freshman, sophomore and junior years), students complete their undergraduate course work while fulfilling the requirements to enter the professional phase. Pre-physical therapy education at Carroll University is grounded in the humanities and the natural, behavioral and social sciences. For pre-Physical Therapy students pursuing an undergraduate degree at Carroll University, a Bachelor of Science degree in Psychology, Exercise Science, Biology, Health Care Administration, Communications, History or Spanish is typically used to complete the Physical Therapy Program in six years.

The professional phase begins the senior year, lasts eight semesters, and is subdivided into two phases, Phase I and Phase II. During Phase I of the professional program, fall and spring terms of senior year, course work in physical therapy begins at the 400 level. The 400 level courses present the basic, behavioral, professional, and applied science foundations that are subsequently applied in the 500 and 600 level courses taken during Phase II of the professional program. Bachelor’s degrees are awarded at the conclusion of the senior year to those individuals satisfying all Carroll undergraduate requirements.

Immediately following Commencement, students begin the graduate segment of Phase II course work within the professional program. Here the 500 and 600 level courses in physical therapy are offered in a developmental sequence that integrates knowledge throughout the student’s professional education. Upon successful completion of Phase I and II of the professional curriculum, an Entry-level Doctor of Physical Therapy degree is awarded. Graduates participate in the University’s Commencement ceremony in May of year six.

Admission

See the Admission section of this catalog.

Academic Progression

The Academic Progression standards for the Pre-Physical Therapy Program are presented in the Academic Program and Policies section of this catalog.

NOTE: See the Carroll University Graduate Catalog for descriptions of Physical Therapy (PTH) courses in Phase II of the Entry-level Physical Therapy Program.

Pre-Physical Therapy Majors (98 credits)
Pre-Physical Therapy Majors (98 credits)

Athletic Training (Bachelor of Science)
Biology Major (Bachelor of Science)
Business Administration (Bachelor of Science)
Communication Major (Bachelor of Science)
Exercise Science Major (Bachelor of Science)
Healthcare Administration (Bachelor of Science)
History (Bachelor of Arts)
Psychology Major (Bachelor of Science)
Spanish (Bachelor of Arts)

Optional Minors: Biology, Business, Chemistry, Psychology, Public Health, Sociology

- Professional Program
  Senior Year for Direct Admission and Transfer Students (30 credits).
  - Phase I
    - Fall Semester 15 credits
      - PTH400: Foundations of Professional Practice (3 hours)
      - PTH401: Statistical and Research Methods (3 hours)
      - PTH404: Biomechanics (3 hours)
      - PTH404L: Biomechanics Laboratory
    - Spring Semester 15 credits
      - PTH405: Neuroscience (3 hours)
      - PTH411: Foundations of Clinical Research (2 hours)
      - PTH412: Tests & Measures (3 hours)
      - PTH414: Advanced Kinesiology (3 hours)
      - PTH414L: Advanced Kinesiology Laboratory
      - PTH416: Therapeutic Exercise (4 hours)
      - PTH416L: Therapeutic Exercise Lab
  - Phase II (30 credits)
  - Summary of Credits
    - Pre-Professional Phase 98 credits
    - Professional Phase 1 30 credits

Pre-Physical Therapy Emphasis with undergraduate major 128 credits

See the Carroll University Graduate Catalog for descriptions of Physical Therapy (PTH) courses in Phase II of the Entry-level Physical Therapy Program.

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Athletic Training Education

The Athletic Training Education Program at Carroll University is accredited by the Commission on Accreditation of Athletic Training Education (CAATE).

The aim of the athletic training program is to train qualified health care professionals at the baccalaureate level who are educated and experienced in the management of health care problems associated with physical activity across the life span as defined by the National Athletic Trainers’ Association. Students are educated to work with athletic and physically active populations in a variety of settings including, but not limited to, secondary schools, universities, professional sports programs, sports medicine clinics, prevention and wellness settings, and industrial settings.

The graduate athletic trainer is competent in the delivery of athletic training. The graduate possesses the knowledge and skills needed for risk management and prevention of injuries associated with physical activity, the pathology of injuries and illnesses, assessment and evaluation, and acute care of injury and illnesses for the physically active. The graduate applies knowledge and skills concerning pharmacology, therapeutic modalities, therapeutic exercise, general medical conditions and disabilities, and nutritional aspects of injury and illness for the physically active population. The athletic trainer demonstrates the ability to carry out psychosocial intervention and referral, perform health care administration, and uphold professional development and responsibilities as outlined by the National Athletic Trainers’ Association. To ensure that the program is reflective of the development of athletic trainers at the baccalaureate level in a changing health care environment, ongoing student, faculty, program, institutional, and professional assessments occur regularly.

To meet the education mission for service and scholarly activity, the program utilizes a variety of individuals including, but not limited to, academic and clinical athletic trainers; basic, behavioral, and social scientists; other health care professionals; athletes and coaches; and community members. The athletic training academic faculty is responsible for design, implementation, and evaluation of the professional curriculum. In addition to the academic training of future athletic trainers, the program is committed to intra- and interdisciplinary service and scholarly activity in the delivery of athletic training.

Learning Outcomes for Athletic Training Education Program

Upon graduation and entry into the field of athletic training, the individual:

1. Will possess the knowledge and skills of an entry-level athletic trainer in the six practice domains of athletic training set forth by the National Athletic Trainers’ Association Board of Certification: Prevention of Injuries; Recognition, Evaluation & Assessment of Injuries; Immediate Care of Injuries; Treatment, Rehabilitation & Reconditioning of Injuries; Organization & Administration; and Professional Development & Responsibility.
2. Will have experience with multiple athletic training and health care settings including interactions with health care providers from various disciplines.
3. Will be able to think critically to effectively solve problems in a variety of dynamic athletic training environments.
4. Will understand the importance and process of becoming life-long learners in order to contribute to the field of athletic training.
5. Will be an effective communicator among health care providers, administrators, coaches, athletes, family, and community in their delivery of athletic training.
6. Will practice with professionalism and integrity and adhere to the professional code of ethics outlined by the National Athletic Trainers’ Association.

Academic Progression Standards

The academic progression standards for the athletic training education program are presented in the Academic and Program Policies section of this catalog.

Admission Requirements

The admission requirements for the athletic training education program are presented in the Admission section of the catalog.

Technical Standards for Admission to and Progression in the Athletic Training Education Program

Successful participation in the Athletic Training Education Program requires that a student possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide a handicapped person (handicapped is defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973) with an equivalent
opportunity to achieve results equal to those of a non-handicapped person, there are no substitutes for the following essential skills. The applicant must initially meet these requirements to gain admission to the program, and must also continue to meet them throughout participation in the program.

1. Physical requirements: The applicant/student must be willing and capable of performing physical assessments (e.g. range of motion, manual muscle testing, visual observations) of patients using various evaluative and therapeutic instruments and equipment. The applicant/student must also be able to perform athletic training skills (e.g. taping, splinting, ambulatory aid, rehabilitative and treatment techniques, activities of daily living). In addition, an applicant/student must successfully complete and maintain certification in first aid and cardiopulmonary resuscitation.

2. Communication: An applicant/student must be able to elicit information, describe changes in health, mood, and activity and perceive non-verbal communication. An applicant/student must be able to communicate effectively and efficiently with patients and all members of the health care team.

3. Intellectual abilities: Problem solving, a critical skill of athletic trainers, requires abilities in measurement, calculation, reasoning and analysis.

4. Behavioral and social attributes: The applicant/student must be able to tolerate physically active taxing workloads and to function effectively under stress, must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in athletic training care provided to people. The applicant/student must possess the qualities of integrity, concern for others, compassion, skills in interpersonal relationships and motivation for a career in health care.

The athletic training program can require that an applicant/student undergo a physical examination. A handicapped applicant/student shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied benefits of, nor be subjected to discrimination in the athletic training program. Policies for students with disabilities can be found in the Student Life section of the academic catalog.

- Caregiver Background and Criminal History Check

Health Screening, Immunizations and Criminal Background Investigation

Athletic training professional phase students are required to have completed a health screening, updated immunizations and tuberculosis screening according to current Centers of Disease Control and Prevention (CDC) recommendations for health professionals, criminal background investigation and drug screening as required by internship placement sites. Exceptions to the immunization requirements will be considered on a case-by-case basis where, for example, a student has an allergy to a vaccine or one of its components. If an exception to the immunization requirements is approved, the University cannot guarantee that its affiliated hospitals and clinics will allow the student to participate in patient care, which is a fundamental requirement of the clinical education component of the program.

- Insurance

Health: Athletic Training Education Program students are required to have medical insurance. Those who are covered by a family or personal policy must provide the insuring company’s name and the policy number on a waiver form that is sent to the student by the university business office. For students without their own coverage, a group insurance policy is available through the university. Athletic Training students are also required to have a personal health history and physical form completed and on file in the administrative area of the Health Sciences.

Professional Liability: Students are required to purchase on an annual basis professional liability insurance through a university-endorsed company.

- Fees

Students enrolled in the professional phase of the Athletic Training Education Program are assessed a program fee for course related supplies and equipment, assistance with membership dues in the National Athletic Trainer Association, and liability insurance. Select athletic training course in the preprofessional phase that require use of equipment and disposable supplies are assigned a course fee.

- Curriculum

Throughout the curriculum, subject matter progresses from the basic sciences to clinical sciences to professional content.

In coordination with academic coursework, learning over time occurs by interaction with clinical instructors through field experiences in traditional athletic training settings, other health care settings, and practice and athletic event coverage. Students can expect to travel to offsite clinical rotations/laboratory sessions or field experiences in the professional phase of the program. Throughout the program, students are evaluated on the attainment of knowledge to include psychomotor, cognitive, and affective competencies as outlined by the National Athletic Trainers’ Association Education Council. Outcomes are measured through ongoing self, peer, and clinical instructor assessments.

Ongoing program assessments include student evaluations and feedback, curriculum evaluations, institutional self study assessment and site visits by the Commission on Accreditation of Athletic Training Education (CAATE).

- Athletic Training Major
  - ATH101: Athletic Training Seminar I (2 hours)
  - ATH102: Athletic Training Seminar II (2 hours)
  - ATH111: Athletic Training Seminar I Lab
  - ATH112: Athletic Training Seminar II Laboratory
  - ATH201: Assessment and Evaluation I (4 hours)
  - ATH203: Assessment and Evaluation I Laboratory
  - ATH204: Therapeutic Modalities (4 hours)
  - ATH205: Therapeutic Modalities Lab
  - ATH301: Assessment and Evaluation II (4 hours)
  - ATH302: Assessment and Evaluation II Laboratory
  - ATH303: Applied Exercise for Musculoskeletal Injuries (4 hours)
  - ATH304: Applied Exercise for Musculoskeletal Injuries Laboratory
  - ATH305: Admin of Athletic Training (2 hours)
  - ATH401: Athletic Training Seminar III (2 hours)
  - ATH402: Athletic Training Seminar III (2 hours)
  - ATH403: Athletic Training Practicum I (1 hour)
  - ATH404: Athletic Training Practicum II (1 hour)
  - ATH405: Athletic Training Practicum III (1 hour)
  - ATH406: Athletic Training Practicum IV (1 hour)
  - ATH407: Athletic Training Seminar III (2 hours)
  - ATH408: Athletic Training Seminar III (2 hours)
  - ATH409: Athletic Training Practicum III (1 hour)
  - ATH410: Athletic Training Practicum IV (1 hour)
  - ATH411: Athletic Training Practicum IV (1 hour)
  - ATH412: Athletic Training Practicum IV (1 hour)
ATH499: Capstone-Internship in Athletic Training (14 hours)
HSC300: Pharmacology (3 hours)
ESC320: Exercise Testing and Prescription (4 hours)
AND -ESC320L: Exercise Testing & Prescription Lab

Required Support Courses (42 credits)

- ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  AND -ANP130L: Intro to Human Anat and Phys I Lab
- ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  AND -ANP140L: Intro to Human Anat and Phys II Lab
- CHE101: General Chemistry (4 hours)
  AND -CHE101L: General Chemistry Laboratory
- CHE102: Biological Chemistry (4 hours)
  AND -CHE102L: Biological Chemistry Laboratory
- HED101: Intro to Health Care Skills (1 hours)
  OR - Equivalent CPR
- PED110: Basic Weight Training Instruction (1 hours)
  AND -PED110L: Basic Weight Training Instruction Laboratory
- ESC280: Exercise Physiology (4 hours)
- ESC300: Nutrition and Health (4 hours)
- ESC322: Kinesiology (4 hours)
- PHY101: Introductory Physics I (4 hours)
  AND -PHY101L: Introductory Physics Laboratory
- PHY102: Introductory Physics II (4 hours)
  AND -PHY102L: Introductory Physics Laboratory
- PSY101: Introductory Psychology (4 hours)

Degree Support Courses (8 credits)

- CMP112: Computational Thinking I (4 hours)
  CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Athletic Training Education Program Four-Year Curriculum Model

Pre-Physical Therapy 4 year plan

Click here for a four year plan with a major in Athletic Training.

Major Courses

The list below displays all the courses offered by the program:

- ATH101: Athletic Training Seminar I (2 hours)
- ATH101L: Athletic Training Seminar I Lab
- ATH102: Athletic Training Seminar II (2 hours)
- ATH102L: Athletic Training Seminar II Laboratory
- ATH301: Assessment and Evaluation I (4 hours)
- ATH301L: Assessment and Evaluation I Laboratory
- ATH302: Assessment and Evaluation II (4 hours)
- ATH302L: Assessment and Evaluation II Laboratory
- ATH304: Therapeutic Modalities (4 hours)
- ATH304L: Therapeutic Modalities Lab
- ATH311: Athletic Training Practicum I (1 hours)
- ATH312: Athletic Training Practicum II (1 hours)
- ATH403: Applied Exercise for Musculoskeletal Injuries (4 hours)
- ATH403L: Applied Exercise for Musculoskeletal Injuries Laboratory
- ATH405: Admin of Athletic Training (2 hours)
- ATH407: Athletic Training Seminar III (2 hours)
- ATH411: Athletic Training Practicum III (1 hours)
- ATH499: Capstone-Internship in Athletic Training (14 hours)

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# Athletic Training Education Program Four-Year Curriculum Model

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>Fall Semester</th>
<th>Fall Semester Credits</th>
<th>Spring Semester</th>
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<td><strong>13/15</strong></td>
<td><strong>Total</strong></td>
<td><strong>14/16</strong></td>
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</table>

**Total Credits 130 credits**

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**Note:**

- **ATH101:** Athletic Training Seminar I
- **ATH102:** Athletic Training Seminar II
- **ATH301:** Assessment and Evaluation I
- **ATH302:** Assessment and Evaluation II
- **ATH304:** Therapeutic Modalities
- **ATH311:** Athletic Training Practicum I
- **ATH312:** Athletic Training Practicum II
- **ATH403:** Applied Exercise for Musculoskeletal Injuries
- **ATH405:** Admin of Athletic Training
- **ATH407:** Athletic Training Seminar III
- **ATH411:** Athletic Training Practicum III
- **ATH499:** Capstone-Internship in Athletic Training
- **HSC300:** Pharmacology
- **ESC320:** Exercise Testing and Prescription
- **Required Support Courses (42 credits)**
- **Degree Support Courses (8 credits)**
- **Bachelor of Science Requirement**
- **The Pioneer Core Program**
- **Athletic Training Education Program**
- **Four-Year Curriculum Model**
- **Pre-Physical Therapy 4 year plan**

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**Course Catalog**

**ATHLETIC TRAINING MAJOR**

- **ATH101:** Athletic Training Seminar I
- **ATH102:** Athletic Training Seminar II
- **ATH301:** Assessment and Evaluation I
- **ATH302:** Assessment and Evaluation II
- **ATH304:** Therapeutic Modalities
- **ATH311:** Athletic Training Practicum I
- **ATH312:** Athletic Training Practicum II
- **ATH403:** Applied Exercise for Musculoskeletal Injuries
- **ATH405:** Admin of Athletic Training
- **ATH407:** Athletic Training Seminar III
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- **Bachelor of Science Requirement**
- **The Pioneer Core Program**
- **Athletic Training Education Program**
- **Four-Year Curriculum Model**
- **Pre-Physical Therapy 4 year plan**

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The Biology program is committed to transforming students into Biologists with enhanced skills in critical thinking and scientific reasoning. Students will learn in an environment that fosters creativity, independent thinking, and the application of knowledge in the biological sciences. When Biology students graduate from Carroll University they will have the confidence and skills necessary to be successful professionals in a dynamic global work force.

The biology major is designed to give students excellent preparation for graduate study or professional careers in life science areas such as molecular biology, physiology, field biology, research, teaching, dentistry, medicine, physical therapy, physician assistant, or veterinary medicine. All students have opportunities to develop excellent research skills throughout the core courses and upper-level biology electives, and many students collaborate with biology faculty on their current scholarly research.

**Learning Outcomes for Biology**

After completing the Biology major, students will:

- Understand foundational principles across ecological, organismal, and cellular/molecular fields in biology
- Be able to apply foundational knowledge to solve biological problems
- Interpret and generate scientific data (graphical or other formats)
- Develop hypotheses, design controlled experiments, and perform data analyses
- Understand the theoretical basis of fundamental laboratory techniques
- Communicate scientific information through written or oral formats
- Develop informational research skills by reading scientific textbooks, articles, and searching peer-reviewed databases

Students in the Biology program may be considered for graduation with program honors if they complete the following requirements:

- GPA, Biology courses: 3.6 or higher
- GPA, Overall: 3.4 or higher
- Presentation of research project results at a regional or national meeting (e.g., BBB or a disciplinary society) or submission of a manuscript to a peer-reviewed journal
- Demonstrated commitment to the biology profession, broadly defined, above and beyond that of the average student. Evidence of such commitment will come from one or more of the following:
  - Active membership in Beta Beta Beta, the Biological Honor Society.
  - Active membership in a professional/scholarly organization related to biology (e.g., Ecological Society of America, American Society for Microbiology, etc.).
  - Significant educational activity/outreach (e.g., tutoring, mentoring) at the university or other level.
  - Consistent and sustained volunteer activity in an organization working on environmental, health, or other issues relevant to biology.
  - Significant research activity separate from or above and beyond the capstone.
  - Sustained activity in science-related policy/consulting in communication, journalism, government, public policy, business, industry or education.

The Biology faculty will review these requirements for all graduating seniors in the spring semester of each year.

**Fees**

Specific courses that require use of transportation, equipment or disposable supplies are assigned a course fee.

- **Biology Major**
  - Core Courses
    - BIO120: General Biology I (4 hours)
    - BIO120L: General Biology I Laboratory
    - BIO125: General Biology II (4 hours)
    - BIO125L: General Biology II Laboratory
    - BIO220: Genetics (4 hours)
    - BIO220L: Genetics Laboratory
    - BIO225: Organismal Physiology (4 hours)
    - BIO225L: Organismal Physiology Laboratory
    - BIO399: Capstone in Biological Sciences (4 hours)
  - Four Elective Courses
    - Including at least one course from each area listed below:
      - Ecological, Organismal, and Cellular/Molecular.
Ecological
- BIO333: Ecology (4 hours)
- BIO360: Aquatic Ecology (4 hours)
- BIO417: Behavioral Ecology (4 hours)
- BIO462: Conservation Biology (4 hours)

Organismal
- BIO322: Comparative Vertebrate Zoology (4 hours)
- BIO350: Endocrinology (4 hours)
- ANP402: Human Anatomy (4 hours)
- ANP403: Human Physiology (4 hours)

Cellular/Molecular
- BIO312: Microbiology (4 hours)
- BIO332: Gene Manipulation and Genomics (4 hours)
- BIO452: Cell Biology (4 hours)

Required Support Courses (*Required for primary majors only)
- CHE109: Principles of Chemistry I (4 hours)
- CHE110: Principles of Chemistry II (4 hours)
- CHE203: Organic Chemistry I (4 hours)
- CHE204: Organic Chemistry II (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Pre-Dental, Pre-Medical, Pre-Physician Assistant, Pre-Physical Therapy, and Pre-Veterinary

Pre-Dental, Pre-Medical, Pre-Physician Assistant, Pre-Physical Therapy, and Pre-Veterinary

Students preparing for pre-professional programs must complete the requirements in the Biology major as well as some of the following courses as appropriate for the specific professional program.

It is the responsibility of each pre-professional student to compile a list of schools and their admittance requirements related to the courses below as these differ from school to school.

Pre-professional students should then consult with the appropriate pre-professional advisor to ensure that the requirements will be met prior to graduation.

- CHE204: Organic Chemistry II (4 hours)
- CHE308: Biochemistry I (4 hours)
- PHY101: Introductory Physics I (4 hours)
- PHY102: Introductory Physics II (4 hours)

Social Sciences, such as:
- PSY101: Introductory Psychology (4 hours)
- SOC101: Introduction to Sociology (4 hours)

Writing Course, such as:
- ENG190: Intro to Creative Writing - Imagination and Rhetoric (4 hours)
- ENG206: Fiction Writing (4 hours)
- ENG207: Poetry Writing (4 hours)
- ENG208: Creative Nonfiction Writing - The Documentary Impulse (4 hours)
- ENG308: Advanced Creative Nonfiction (4 hours)
- WRI199: Reading and Writing in the Sciences (4 hours)

Bachelor of Science Requirement
Biology

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- General Education Requirement

For more information on General Education Requirement, click here.

- Distribution Component

For more information on the Distribution Component, click here.

- GE1 and GE2 Courses

Students must complete four GE1 courses: one from each of the four Distribution Areas outside of their major area of study.

Students must take one GE2 course. The GE2 course chosen, must build upon a discipline taken at the GE1 level (e.g. PSY101 (S1) and PSY 221 (S2)).

- Fine Arts (F1, F2)

- Humanities (H1, H2)

- Philosophy/Ethics/Religion (P1, P2)

- Social Sciences (S1, S2)

- Cross-Cultural Component

The Cross-Cultural Component is a five-course series through which students explore the study of culture:

Transfer students will register for CCS101 for one credit.

- Cultural Seminar (CCS100)

  The Cultural Seminar, which is taken in the first semester, begins the exploration of culture through the study of one's own culture and a different culture. This course develops oral communication skills through critical reading and discussion.

- Writing Seminar (ENG 170)

  The Writing Seminar is taken during the first or second semester, includes cross-cultural readings, and develops foundational writing skills.

- Cross-Cultural Development (CCD)

  The Cross-Cultural Designation course is taken after the Cultural and Writing Seminars. This course satisfies a Distribution requirement, continues development of writing skills, and includes significant cross-cultural themes as preparation for the Cross-Cultural Experience.

- Cross-Cultural Experience (CCE)

  The Cross-Cultural Experience course is taken concurrently or after the Cross-Cultural Development course. In an off-campus setting, students apply knowledge learned in the previous three courses through interactions with cultures other than their own. (CCS300 for 2 credits, NCEP courses for 4 credits, or study abroad for 12+ credits)

For more information and course listings, click here

- Global Perspectives Colloquium (CCS400)

  In the Global Perspectives Colloquium, advanced students (usually seniors) from multiple disciplines engage in critical reading and discussion. Students reflect on their distribution courses and cross-cultural experiences while also refining their writing skills.

- Secondary Education

**Secondary Education**

Students should be prepared to demonstrate mastery of biological concepts on the ETS Praxis II exam, which is required for licensure.

To meet DPI requirements, Biology majors with a secondary education minor must complete the following courses:

- Core Courses, plus
  - BIO312: Microbiology (4 hours)
  - BIO312L: Microbiology Laboratory
  - BIO322: Comparative Vertebrate Zoology (4 hours)
  - BIO322L: Comparative Vertebrate Zoology Laboratory
  - BIO333: Ecology (4 hours)
  - BIO333L: Ecology Laboratory

One elective course in Biology (see Electives under Biology Major)

Students should be prepared to demonstrate mastery of biological concepts on the ETS Praxis II exam, which is required for licensure.
Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

General Education Requirement

For more information on General Education Requirement, click here.

Distribution Component

For more information on the Distribution Component, click here.

- GE1 and GE2 Courses
  
  Students must complete four GE1 courses: one from each of the four Distribution Areas outside of their major area of study. Students must take one GE2 course. The GE2 course chosen, must build upon a discipline taken at the GE1 level (e.g. PSY101 (S1) and PSY 221 (S2)).

  - Fine Arts (F1, F2)
  - Humanities (H1, H2)
  - Philosophy/Ethics/Religion (P1, P2)
  - Social Sciences (S1, S2)

Cross-Cultural Component

The Cross-Cultural Component is a five-course series through which students explore the study of culture:

Transfer students will register for CCS101 for one credit.

- Cultural Seminar (CCS100)

  The Cultural Seminar, which is taken in the first semester, begins the exploration of culture through the study of one's own culture and a different culture. This course develops oral communication skills through critical reading and discussion.

- Writing Seminar (ENG 170)

  The Writing Seminar is taken during the first or second semester, includes cross-cultural readings, and develops foundational writing skills.

- Cross-Cultural Development (CCD)

  The Cross-Cultural Designation course is taken after the Cultural and Writing Seminars. This course satisfies a Distribution requirement, continues development of writing skills, and includes significant cross-cultural themes as preparation for the Cross-Cultural Experience.

- Cross-Cultural Experience (CCE)

  The Cross-Cultural Experience course is taken concurrently or after the Cross-Cultural Development course. In an off-campus setting, students apply knowledge learned in the previous three courses through interactions with cultures other than their own. (CCS300 for 2 credits, NCEP courses for 4 credits, or study abroad for 12+ credits)

  For more information and course listings, click here

Global Perspectives Colloquium (CCS400)

In the Global Perspectives Colloquium, advanced students (usually seniors) from multiple disciplines engage in critical reading and discussion. Students reflect on their distribution courses and cross-cultural experiences while also refining their writing skills.

Biology Minor

- BIO120: General Biology I (4 hours)
  AND -BIO120L: General Biology I Laboratory
- BIO125: General Biology II (4 hours)
  AND -BIO125L: General Biology II Laboratory
- BIO220: Genetics (4 hours)
  AND -BIO220L: Genetics Laboratory
- BIO225: Organismal Physiology (4 hours)
  AND -BIO225L: Organismal Physiology Laboratory

Two elective courses in Biology (see Electives under Biology Major above)

Major Courses

The list below displays all the courses offered by the program:

- BIO120: General Biology I (4 hours)
- BIO120L: General Biology I Laboratory
- BIO125: General Biology II (4 hours)
BIO125L: General Biology II Laboratory
BIO131: Genetics in Family and Society (4 hours)
BIO131L: Genetics in Family and Society Lab
BIO212: Microbiology (4 hours)
BIO212L: Microbiology Laboratory
BIO220: Genetics (4 hours)
BIO220L: Genetics Laboratory
BIO225: Organismal Physiology (4 hours)
BIO225L: Organismal Physiology Laboratory
BIO271: Clinical Immunology (4 hours)
BIO271L: Clinical Immunology Laboratory
BIO312: Microbiology (4 hours)
BIO312L: Microbiology Laboratory
BIO322: Comparative Vertebrate Zoology (4 hours)
BIO322L: Comparative Vertebrate Zoology Laboratory
BIO332: Gene Manipulation and Genomics (4 hours)
BIO332L: Gene Manipulation and Genomics Lab
BIO333: Ecology (4 hours)
BIO333L: Ecology Laboratory
BIO350: Endocrinology (4 hours)
BIO360: Aquatic Ecology (4 hours)
BIO360L: Aquatic Ecology Laboratory
BIO399: Capstone in Biological Sciences (4 hours)
BIO417: Behavioral Ecology (4 hours)
BIO417L: Behavioral Ecology Laboratory
BIO452: Cell Biology (4 hours)
BIO452L: Cell Biology Laboratory
BIO462: Conservation Biology (4 hours)
BIO480: Internship in Biology (1 TO 4 hours)
BIO485: Research in Biology (1 TO 4 hours)
BIO491: Special Topics in Biology (1 TO 4 hours)
BIO498: Independent Study (1 TO 4 hours)

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A Carroll University Business Administration degree facilitates integration of knowledge, development of lifelong skills, career preparation, and formulation of enduring personal values. Students who major in Business Administration are prepared for a variety of fulfilling and challenging careers with domestic and international organizations. These organizations need articulate, well-reasoning, effective leaders to manage business environments that are dynamic and increasingly complex.

**Learning Outcomes for Business Administration**

1. Define and describe business-related terminology and concepts.
2. Evaluate and formulate effective business policies and strategies.
3. Solve complex business problems using appropriate tools and techniques.
4. Demonstrate multiple effective communication skills.
5. Work effectively in a team environment.
6. Demonstrate appropriate habits, behaviors and attitudes in professional situations.

**Required Courses (44 credits)**

- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- ACC205: Financial Accounting (4 hours)
- ACC206: Managerial Accounting (2 hours)
- BUS290: Principles of Business Law (2 hours)
- BUS301: Principles of Marketing (4 hours)
- BUS302: Principles of Management (4 hours)
- BUS304: Principles of Finance (4 hours)
- BUS305: Principles of Operations Management (4 hours)
- BUS496: Business Policies (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

**Pre-Physical Therapy 4 year plan**

Click here for a four year plan with a major in Business Administration.

**Bachelor of Science Requirement**

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** Each major may have specific course sequencing requirements. For specific requirements, see "required support courses" within each major.

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.
Communication

The Communication program offers a major in communication, as well as minors in liberal arts communication and secondary education speech communication. The goal of the program is to develop graduates who possess communication competence, in both theory and practice.

Communication Major

The communication major prepares students for careers in journalism, public relations, advertising, teaching, management, human resources and for advanced education in graduate school. The curriculum follows a sequence for student development. As freshmen, students learn the principles of, and have experiences in, various contexts of communication. They also become familiar with the methods of communication research (100-level courses). As sophomores, students become acquainted with specialized subject matters and hone skills in research, writing and critical thinking (200-level courses). As juniors, students engage in deeper exploration of theoretical and ethical perspectives (300-level courses). As seniors, students participate in advanced research and work-oriented experiences.

Learning Outcomes for Communication

Upon successful completion of major requirements, students are expected to demonstrate:

1. An understanding of the theories and principles of human communication that will facilitate their professional and personal effectiveness.
2. Skill in responsible and sensitive communication with diverse others.
3. The ability to conduct systematic inquiry skillfully.
4. The ability to develop and convey oral and written messages effectively.

Suggested Tracks in the Communication Major

- Journalism: COM 137, COM 237, COM 250, COM 255, COM 275, COM 278, COM 350
- Public Relations: COM 137, COM 203, COM 208, COM 227, COM 317, COM 350
- Relational: COM 200, COM 202, COM 230, COM 250, COM 290, COM 319

Communication Major

- Core Courses
  - COM101: Principles of Communication (4 hours)
  - COM150: Research Methodology (4 hours)
  - COM207: Intercultural Communication (4 hours)
  - COM499: Senior Capstone Seminar (4 hours)
- Communication Major (B.A.) (40 credit hours)
  - Core courses plus four additional 4-credit 100- or 200-level courses in Communication
  - Completion of a Modern Language through 202

For primary majors, this Modern Language requirement is in addition to the minimal Bachelor of Arts language requirement.

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.**

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development
For a complete list of CCD courses, click here.

- **Communication Major (B.S.) (40 credit hours)**
  - Core courses plus four additional 4-credit 100- or 200-level courses in Communication
  - Two 4 credit 300-level courses in Communication
  - CMP112: Computational Thinking I (4 hours)
  - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
  - Bachelor of Science Requirement

**Bachelor of Science Requirement**

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.

- Pre-Physical Therapy 4 year plan
  - [Click here](#) for a four year plan with a major in Communication.

- Liberal Arts Communication Minor
  - COM101: Principles of Communication (4 hours)
  - One of the following:
    - COM317: Communication Criticism (4 hours)
    - COM319: Communication Theory (4 hours)
    - COM350: Communication Law (4 hours)
    - COM370: Communication Technology and Society (4 hours)
  - Three elective four-credit courses in Communication.

- Secondary Education Speech Communication Minor
  - One elective four-credit course in communication.
    - COM101: Principles of Communication (4 hours)
    - COM111: Debate and Forensic Activities (1 hours)
    - COM200: Interpersonal Communication (4 hours)
    - OR: COM202: Small Group Communication (4 hours)
    - COM250: Society and Mass Media (4 hours)
    - COM317: Communication Criticism (4 hours)
    - COM319: Communication Theory (4 hours)

- Major Courses

  **The list below displays all the courses offered by the program:**

  - COM101: Principles of Communication (4 hours)
  - COM111: Debate and Forensic Activities (1 hours)
  - COM137: Introduction to Newswriting and Reporting (4 hours)
  - COM150: Research Methodology (4 hours)
  - COM200: Interpersonal Communication (4 hours)
  - COM202: Small Group Communication (4 hours)
  - COM203: Advertising (4 hours)
  - COM207: Intercultural Communication (4 hours)
  - COM208: Introduction to Public Relations (4 hours)
  - COM227: Technical Writing in Organizations (4 hours)
  - COM230: Organizational Communication (4 hours)
  - COM237: Advanced Newswriting and Reporting (4 hours)
  - COM241: Communication and Conflict (4 hours)
  - COM250: Society and Mass Media (4 hours)
  - COM255: Digital Journalism (4 hours)
  - COM275: Feature Writing (4 hours)
  - COM278: Broadcast News Reporting (4 hours)
  - COM290: Intro to Health Communication (4 hours)
  - COM290H: Intro to Health Communication (4 hours)
  - COM291: Topics in Communication (1 TO 4 hours)
  - COM296: Research in Communication (1 TO 4 hours)
  - COM298: Indep Study in Communication (1 TO 4 hours)
  - COM317: Communication Criticism (4 hours)
  - COM319: Communication Theory (4 hours)
  - COM350: Communication Law (4 hours)
  - COM370: Communication Technology and Society (4 hours)
  - COM380: Internship in Communication (1 TO 4 hours)
  - COM383: Prior Work Experience in Comm (1 TO 4 hours)
  - COM391: Topics in Communication (4 hours)
  - COM396: Research in Communication (1 TO 4 hours)
  - COM398: Indep Study in Communication (1 TO 4 hours)
  - COM480: Internship in Communication (1 TO 4 hours)
  - COM483: Prior Work Experience in Comm (1 TO 4 hours)
  - COM499: Senior Capstone Seminar (4 hours)
The mission of the Exercise Science Program at Carroll University is to develop entry-level professionals who can perform a range of health/fitness assessments and prescribe evidence-based interventions across various populations and abilities. Students will possess strong critical thinking, communication, and interpersonal skills appropriate for multiple settings. The program will prepare students for professional certification exams (ACSM, NSCA) and postgraduate study in exercise science or other related disciplines.

The exercise science program emphasizes the area's body of knowledge, research, and practice. Constant reinforcement of content through practical experiences occurs through observations, exposure to clients in academic courses, practicum experiences, and full-time internships. Graduates are qualified professionals who are liberally educated and possess the foundations for lifelong learning.

Individuals interested in health/fitness management are prepared to provide exercise and general wellness programs to apparently healthy individuals across the life span in safe and effective environments. Those interested in strength and conditioning are prepared to provide training programs to improve athletic performance across the life span. Students are also well prepared for advanced study in either graduate school or a clinical health field.

### Learning Outcomes for Exercise Science

Upon completion of the Exercise Science Program, the individual:

1. Will demonstrate fundamental and applied scientific knowledge of human movement and performance in preparation for certification, entry-level employment, or advanced degrees in health-related graduate programs.
2. Will demonstrate competency in appropriately screening and assessing the health status of individuals across various populations and abilities.
3. Will be able to appropriately select, design, implement, and modify individualized health and fitness interventions for clients across various populations and abilities.
4. Will be able to educate, instruct, and motivate individuals in lifestyle modification in diverse settings across various populations and abilities.
5. Will be able to appropriately select, implement, and interpret health and fitness assessments across various populations and abilities.
6. Will possess strong communication and interpersonal skills to interact and collaborate effectively with professionals and peers.
7. Will be able to read and interpret scientific research and utilize the scientific inquiry process to collect appropriate data, analyze data, interpret results, and present conclusions in suitable oral, written, and technology formats.
8. Will display a strong sense of responsibility/accountability, initiative, and professional engagement.

### Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.
Exercise Science

- Undergraduate Exercise Science (UG-ESC) Option
  - ESC460: Exercise Science Capstone (4 hours)
  - ESC480: Internship (12 hours)

  Electives, 20 credits (may include 2 courses in the graduate ESC program).

- Exercise Science-Doctor of Physical Therapy (ESC-DPT) Option
  - PHY102: Introductory Physics II (4 hours)
  - AND -PHY102L: Introductory Physics Laboratory
  - ANP402: Human Anatomy (4 hours)
  - AND -ANP402L: Human Anatomy Laboratory
  - ANP403: Human Physiology (4 hours)
  - AND -ANP403L: Human Physiology Laboratory

  Transfer 24 credits from Phase 1 of DPT program.

- Exercise Science-Master of Science in Exercise Physiology (ESC-MS EXP) Option
  - Electives (12 credits).
  - Transfer 23 credits from grad program.

- Supporting Courses
  - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  - AND -ANP130L: Intro to Human Anat and Phys I Lab
  - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  - AND -ANP140L: Intro to Human Anat and Phys II Lab
  - CHE101: General Chemistry (4 hours)
  - AND -CHE101L: General Chemistry Laboratory
  - CHE102: Biological Chemistry (4 hours)
  - AND -CHE102L: Biological Chemistry Laboratory
  - PHY101: Introductory Physics I (4 hours)
  - AND -PHY101L: Introductory Physics Laboratory
  - CMP112: Computational Thinking I (4 hours)
  - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
  - PSY101: Introductory Psychology (4 hours)

- Pre-Physical Therapy 4 year plan
  - Click here for a four year plan with a major in Exercise Science, Cohort A.
  - Click here for a four year plan with a major in Exercise Science, Cohort B.

- Bachelor of Science Requirement

  Bachelor of Science Requirement

  The requirements for a Bachelor of Science degree are:
  - CMP112 and either CMP113 or CMP114 or
  - MAT140 or higher and CSC110 or higher;

  **NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
  FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- Major Courses

  The list below displays all the courses offered by the program:
  - ESC100: Introduction to Exercise Science (2 hours)
  - ESC201: Sports Nutrition (4 hours)
  - ESC202: Advanced Sports Nutrition (4 hours)
  - ESC215: Group Exercise Workshop (2 hours)
  - ESC215L: Group Exercise Workshop Lab
  - ESC280: Exercise Physiology (4 hours)
  - ESC280L: Exercise Physiology Lab
  - ESC300: Nutrition and Health (4 hours)
  - ESC302: Exercise in Health & Disease (3 hours)
  - ESC303: Nutrition Assessment and Prescription (3 hours)
  - ESC304: Nutrition and Fitness for Special Populations (3 hours)
  - ESC305: Supplements for Sports Performance (2 hours)
  - ESC315: Exercise Science Practicum I (1 hour)
  - ESC320: Exercise Testing and Prescription (4 hours)
  - ESC320L: Exercise Testing & Prescription Lab
  - ESC322: Kinesiology (4 hours)
  - ESC322L: Kinesiology Lab
  - ESC390: Strength & Conditioning Theory Across the Lifespan (4 hours)
  - ESC390L: Strength and Conditioning Theory Across the Lifespan Lab
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<td>Exercise Prescription for Special Populations (4 hours)</td>
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<td>ESC421</td>
<td>Exercise and Sport Psychology (4 hours)</td>
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<td>ESC435</td>
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<td>ESC440</td>
<td>Lifetime Weight Management and Behavior Change (4 hours)</td>
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<td>ESC460</td>
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<td>ESC480</td>
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Health Care Administration Major (46 credits)

PROGRAM ADVISOR:
Sarah Esveldt, Senior Lecturer (sesveldt@carrollu.edu)

Carroll University’s Health Care Administration major will prepare students to lead and manage in the contemporary health care market. The HCA program will prepare graduates for entry-level positions in the health care industry. Graduates will have an understanding of the health care delivery system, the factors that influence the health care system, the knowledge to apply health care management concepts, and the skills and abilities that are necessary to be successful in health care management and leadership roles.

Learning Outcomes for Health Care Administration

1. Demonstrate an understanding of management, leadership, and economic theories and practices as they relate to complex, formal health care organizations.

2. Using problem solving skills, demonstrate an understanding and application of financial and reimbursement strategies needed to resolve financial issues unique to health care organizations.

3. Display an understanding and application of various health care administration practices, including organizational management, marketing, human resources, and information management.

4. Demonstrate an understanding and ability to analyze and interpret legal theories, ethical principles and regulatory structures in health care necessary for organizations and governments to serve health care consumers.

5. Develop and enhance, through practical experiences, the ability to collaborate with others to examine, analyze and make recommendations concerning health care organizational issues.

- Required Courses (46 credits)
  - ACC205: Financial Accounting (4 hours)
  - BUS101: Introduction to Business (4 hours)
  - CMP112: Computational Thinking I (4 hours)
  - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
  - COM290: Intro to Health Communication (4 hours)
  - HCA100: Health Care Terminology (2 hours)
  - HCA150: Introduction to Health Care (4 hours)
  - HCA200: Health Care Economics and Policy (4 hours)
  - HCA300: Health Care Management (4 hours)
  - HCA350: Health Care Law and Ethics (4 hours)
  - HCA400: Health Care Financial Management (4 hours)
  - HCA450: Health Care Information Management (4 hours)

CMP112 and CMP114 satisfy the Bachelor of Science requirement.

- Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.
The History Program offers a major in history and a minor in history.

History Major (36 credits)
Bachelor of Arts

The nine-course history major serves students who not only seek an education in the liberal arts, but who also realize the value of history for understanding themselves and their world. Because the study of history enhances analytical, communicative and critical thinking skills, and because our courses often encourage an interdisciplinary approach, a history major prepares students for careers in research, public service, education and/or the private sector, while also offering a strong foundation for advanced study.

Learning Outcomes for History

Upon successful completion of major requirements students will be able to:

1. Employ tools of historical analysis such as cause and effect, sequence and change over time to explain past experiences and developments.
2. Define a historical question and use appropriate methodologies to develop and evaluate possible answers.
3. Find evidence and evaluate primary and secondary sources to form sustainable conclusions in a well-argued paper.
4. Articulate and/or resolve conflicting interpretations and explain the changing nature of historical inquiry.
5. Communicate original, convincing ideas in well-organized oral and written formats.
6. Identify and explain central themes and problems of the Western World.
7. Identify and explain central themes and problems of a non-western culture.

Core Courses

I. Three courses, with one course in each area, from the following:
   A
   - HIS103: Roots of the Western World (4 hours)
   - HIS104: Europe and the Modern World (4 hours)
   B
   - HIS105: America to 1877 (4 hours)
   - HIS106: America since 1877 (4 hours)
   C
   - HIS107: Understanding the Premodern World (4 hours)
   - HIS108: Understanding Our Contemporary World (4 hours)
   - HIS110: History of Modern China (4 hours)
   - HIS112: Intro to Latin America History (4 hours)

II. History 200, Workshop for Historians
   - HIS200: Workshop for Historians (4 hours)

III. Two courses at the 200 level from the following:
   - HIS200: Workshop for Historians (4 hours)
   - HIS203: The American Civil War (4 hours)
   - HIS210: Hist-American Foreign Relations (4 hours)
   - HIS213: Women in American History (4 hours)
   - HIS215: American Encounters: Natives, Africans, and Europeans in the Americas, 1350-1750 (4 hours)
   - HIS216: Philosophy and History of Science (4 hours)
   - HIS225H: Medieval Europe, China, and the Islamic Crescent (4 hours)
   - HIS254: Topics in Medieval European History (4 hours)
   - HIS280: Internship in History (2 TO 4 hours)
   - HIS291: Topics in History (2 TO 4 hours)
   - HIS298: Independent Study in History (2 TO 4 hours)
   - Other pre-approved courses

IV. Two courses at the 300 level from the following:
   - HIS301: The Forging of a Nation - The Colonial and Revolutionary Experience in North America (4 hours)
   - HIS305: Recent America (4 hours)
   - HIS316: Renaissance and Reformation Europe (4 hours)
   - HIS318: American Indian History (4 hours)
   - HIS329: The German Experience (4 hours)
   - HIS391: Topics in History (4 hours)
   - HIS398: Independent Study in History (2 TO 4 hours)
   - Other pre-approved courses
Note:
- All 300-level classes are conceived as research courses in which the major focus will be on research methodology and utilization of primary sources to produce a work of serious scholarship.
- At least one of the 4 courses chosen to fulfil III and IV above must be a 200 or 300-level course in Political Science, Philosophy, or Religious Studies.

V. History 499, Capstone: Senior Seminar for Historians
Note: HIS 499 requires students to submit a portfolio of written work. History majors should keep copies of papers and projects from their other classes for this purpose.

Required Support Courses (Required for primary majors only)
Completion of a Modern Language through 202.

Teacher Certification
The department recommends that students majoring in history who seek certification to teach at the early adolescence through adolescence (formerly 6 - 12) level complete the requirements for the Broad Field Social Studies license. Please contact a history faculty member regarding these requirements.

The State of Wisconsin requires content area examinations (Praxis II) in order to receive certification to teach at the early adolescence through adolescence level and to adequately demonstrate competence. For this reason, students seeking to teach history at this level are urged to take History 103, 104, 105, 106 and 108.

Pre-Physical Therapy 4 year plan
Click here for a four year plan with a major in History.

Bachelor of Arts Requirement

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:
- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

History Minor (24 credits)
I. Three courses, with one course in each area, from the following:
   A
   - HIS103: Roots of the Western World (4 hours)
   - HIS104: Europe and the Modern World (4 hours)
   B
   - HIS105: America to 1877 (4 hours)
   - HIS106: America since 1877 (4 hours)
   C
   - HIS107: Understanding the Premodern World (4 hours)
   - HIS108: Understanding Our Contemporary World (4 hours)
   - HIS110: History of Modern China (4 hours)
   - HIS112: Intro to Latin America History (4 hours)
   II. Three additional courses;

Three additional courses at the 200- and 300-course levels. One of these three courses must be a 300-level research course and not all of them may be taken in United States History.

Major Courses

The list below displays all the courses offered by the program:

- HIS103: Roots of the Western World (4 hours)
- HIS104: Europe and the Modern World (4 hours)
- HIS105: America to 1877 (4 hours)
- HIS106: America since 1877 (4 hours)
- HIS106H: America Since 1877 (4 hours)
- HIS107: Understanding the Premodern World (4 hours)
- HIS108: Understanding Our Contemporary World (4 hours)
- HIS110: History of Modern China (4 hours)
- HIS112: Intro to Latin America History (4 hours)
- HIS200: Workshop for Historians (4 hours)
- HIS203: The American Civil War (4 hours)
- HIS210: Hist-American Foreign Relations (4 hours)
- HIS213: Women in American History (4 hours)
- HIS215: American Encounters: Natives, Africans, and Europeans in the Americans, 1350-1750 (4 hours)
- HIS216: Philosophy and History of Science (4 hours)
- HIS224H: The World Since 1945 (4 hours)
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<tr>
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<th>Course Title</th>
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<td>Recent America</td>
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<td>Renaissance and Reformation Europe</td>
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<td>HIS495</td>
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Psychology

Psychology is a life science that focuses upon the physical and mental processes that underlie individual behavior. This definition provides a focus for the objectives of the psychology program at Carroll University. The program numbers among its liberal learning objectives those of enriching students’ understanding of scientific methods and giving students a thorough knowledge of the subject matter central to their better comprehending people.

In addition to its emphasis upon liberal learning, the program strives to offer a major that provides an excellent foundation for those who wish to pursue graduate studies. The program takes great pride in its strong track record of launching psychology majors into academic and professional careers. Academic careers include teaching and research in biological, cognitive, or social psychology; professional careers include serving people in clinical, counseling, or industrial/organizational settings.

Program Goals for Psychology

1. Majors will understand psychology as a scientific discipline with regard to its content and research methods.
2. Majors will demonstrate intellectual skills in thinking, communication, information gathering and synthesis, as well as in quantitative and scientific methodology.
3. Demonstrate effective written skills.
4. Demonstrate effective interpersonal communication skills.

Learning Outcomes

Upon successful completion of the Psychology major, students will be able to:

1. Define and describe psychology-related terminology and concepts
2. Evaluate and generate psychological research
3. Demonstrate multiple effective communication skills
4. Work effectively in a team environment

A minimum of 40 graded psychology credits are required for the major. In addition to Psychology 101, 205, 307, and 403, students complete additional requirements by selecting 24 credits from remaining psychology courses (excluding 398 and 480).

Suggested groupings:
Clinical/Counseling (201, 206, 240, 306, 321, 314)
Industrial/Organizational (211, 228, 303, 306, 316, 321)
Research (240, 303, 314, 316, 414, 492, plus at least two additional PSY credits)
Pre-PT (201, 221 or 206, 260, 303 or 321, CMP112 and CMP114, plus eight additional PSY credits excluding 240 and 314) (PTH 405 and 407 do not count for psychology major or minor.)
(Any student interested in graduate school in the field of psychology is also encouraged to take PSY492.)

Fees

Specific courses that require use of equipment and disposable supplies including certain types of psychological tests are assigned a course fee.

Psychology Major

Core Courses

- PSY101: Introductory Psychology (4 hours)
- PSY205: Statistics and Experimental Design (4 hours)
  AND -PSY205L: Statistics and Experimental Design Lab
- PSY307: Experimental Psychology (4 hours)
  AND -PSY307L: Experimental Psychology Lab
- PSY403: Capstone-Historical and Modern Viewpoints of Psychology (4 hours)

Forty credits in Psychology. These credits can (but are not required to) complete an area grouping. (Cannot include both 206 and 221.) Forty credits are required as a minimum.
Only courses listed as psychology (PSY) courses may be used as core courses for a psychology major or count toward a psychology minor.

- Pre-Physical Therapy 4 year plan
  Click here for a four year plan with a major in Psychology.

- Bachelor of Science Requirement

**Bachelor of Science Requirement**

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.

FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development
  For a complete list of CCD courses, click here.

- Psychology Minor
  - PSY101: Introductory Psychology (4 hours)
  - Additional coursework
    A minimum of 16 additional Psychology (PSY) credits, excluding PSY 398 and PSY 480. (Cannot include both PSY 206 and PSY 221.)
    At least one elective must be 300-level or higher. Twenty credits are required as a minimum.

- Major Courses

**The list below displays all the courses offered by the program:**

- PSY101: Introductory Psychology (4 hours)
- PSY201: Abnormal Psychology (4 hours)
- PSY205: Statistics and Experimental Design (4 hours)
- PSY205L: Statistics and Experimental Design Lab
- PSY206: Developmental Psychology (4 hours)
- PSY211: Industrial and Organizational Psychology (4 hours)
- PSY221: Life-Span Psychology (4 hours)
- PSY228: Consumer Behavior (4 hours)
- PSY240: Biopsychology (4 hours)
- PSY260: Health Psychology (4 hours)
- PSY303: Experimental Social Psychology (4 hours)
- PSY306: Psychological Testing and Assessment (4 hours)
- PSY307: Experimental Psychology (4 hours)
- PSY307L: Experimental Psychology Lab
- PSY314: Learning and Animal Behavior (4 hours)
- PSY316: Thinking, Problem Solving, and Cognition (4 hours)
- PSY317: Adult Development & Aging (2 hours)
- PSY321: Personality - Theory and Assessment (4 hours)
- PSY391: Special Studies in Psychology (2 hours)
- PSY398: Independent Study in Psychology (1 TO 4 hours)
- PSY401: Behavioral Neuroscience (4 hours)
- PSY401L: Behavioral Neuroscience Laboratory
- PSY403: Capstone-Historical and Modern Viewpoints of Psychology (4 hours)
- PSY414: Research Methods in Behavior Analysis (2 hours)
- PSY480: Internship in Psychology (2 TO 4 hours)
- PSY492: Research Seminar (4 hours)

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Spanish Major (38 credits)

Within the framework of a liberal arts education, the Spanish major provides students with direct linguistic contact with a culture different from their own. A culture expresses itself primarily through its language and its literature, and to comprehend another’s, one must be able to communicate with the peoples of that culture.

As a general rule, courses are conducted in the target language. All majors should spend a summer, semester or year abroad. Students may choose to study abroad during a summer, semester, or full academic year by applying to the Office of International Education. Recent graduates have studied in Costa Rica, Ecuador, Guatemala, Mexico, and Spain.

Learning Outcomes for Spanish

A student successfully completing a Spanish major at Carroll University:

1. Can understand with ease virtually everything heard or read.
2. Can summarize information from spoken and written sources and reconstruct arguments in a coherent presentation.
3. Can express oneself spontaneously, fluently and precisely, differentiating meaning in complex situations.
4. Can summarize cultural texts (literary and sociopolitical) intended for native speakers to support analysis, reflection, and research related to global issues while integrating cross-cultural perspectives.
5. Can utilize a wide range of sources on cultural themes, including international and domestic sources in the target language (e.g., heritage/immigrant community newspapers, radio and TV broadcasts, or websites.
6. Can utilize information from a variety of sources in the target language, including sources produced by writers in the target culture for target culture readers and listeners as well as sources produced by writers in the base culture (e.g., émigré community, for émigré readers and listeners) in order to create one’s own argument, drawing appropriately on research for evidence of cultural significance.
7. Can balance perspectives across cultures and evaluate sources of target culture information.

Core Courses

- SPA201: Intermediate Spanish I (4 hours)
- SPA202: Intermediate Spanish II (4 hours)
- SPA300: Introduction to Spanish Phonetics and Phonology (4 hours)
- SPA301: Conversation and Composition I (4 hours)
- SPA302: Conversation & Composition II (4 hours)
- SPA305: Spanish for the Professions (4 hours)
  OR - SPA325: Spanish for the Professions (4 hours)
- SPA307: Latin American Civilization (4 hours)
- SPA308: Hispanic Civilization (4 hours)
- SPA401: Advanced Conversation (2 hours)

One elective course in Spanish (Usually satisfied with Spanish 480 or Spanish 498).

Capstone Experience

- SPA480: Internship/Capstone Internship in Spanish (2 TO 4 hours)
  OR - SPA498: Indep Directed/Capstone Study (2 TO 4 hours)

Required Support Courses (Required for primary majors only)

- ENG255: Postcolonial Literature and Theory (4 hours)
- HIS103: Roots of the Western World (4 hours)
  OR - HIS104: Europe and the Modern World (4 hours)
- OR - HIS102: Intro to Latin America History (4 hours)
- REL106: Understanding Religion (4 hours)

NOTE: Successful completion of the Spanish major fulfills both the B.A. and department modern language requirements.

Pre-Physical Therapy 4 year plan

Click here for a four year plan with a major in Spanish beginning with SPA102.

Click here for a four year plan with a major in Spanish beginning with SPA201.

Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher
NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.

- B.A. Spanish - Pre-Physical Therapy

- B.S. Spanish - Pre-Physical Therapy

Click here for an example of an academic plan for Spanish - Pre-Physical Therapy with a SPA102 placement.

Click here for an example of an academic plan for Spanish - Pre-Physical Therapy with a SPA201 placement.

- Spanish Minor (22 credits)
  - Core Courses
    - SPA201: Intermediate Spanish I (4 hours)
    - SPA202: Intermediate Spanish II (4 hours)
    - SPA301: Conversation and Composition I (4 hours)
    - SPA302: Conversation & Composition II (4 hours)
    - SPA305: Spanish for the Professions (4 hours)
    - OR - SPA307: Latin American Civilization (4 hours)
    - OR - SPA308: Hispanic Civilization (4 hours)
    - OR - SPA325: Spanish for the Professions (4 hours)
    - SPA401: Advanced Conversation (2 hours)

The Education Department requires students seeking MC-EA (Middle Childhood through Early Adolescence) or EA-A (Early Adolescence through Adolescence) licensure in Spanish to complete Education 355, Special Methods in Teaching Modern Languages.
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(*SPA307 is only offered in odd years & SPA 308 in even; see summer 2 for SPA398 Independent study course in Spanish or SPA307 or 308 to fulfill Spanish major requirement.)*
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Department: Computational and Physical Sciences

Chairperson: Kevin McMahon
Room: Lowry 215
Email: kmcmahon@carrollu.edu
Telephone: 262-524-7157
Fax: 262-524-7112

Programs

Undergraduate

- Actuarial Sciences
- Applied Physics/Engineering Dual Degree Program
- Aviation Science Minor
- Chemistry and Biochemistry
- Computational Science
- Computer Science and Information Technology
- Computer Science Dual Degree Program
- Mathematics
- Applied Physics
Actuarial Sciences

John Symms  Associate Professor of Mathematics

Broadly speaking, actuaries are professionals who analyze financial risks of future events. Trained in mathematics, statistics, economics and finance, actuaries quantify these risks by building and evaluating mathematical models. Such analyses are essential for the success of businesses in areas such as insurance, investment, and employee benefits. The Carroll University Actuarial Sciences Major gives students a broad and in-depth background in these core disciplines in preparation for entry into the actuarial sciences profession.

Carroll University has actuarial science internship programs with Northwestern Mutual, Assurant, Milliman, and Oliver-Wyman. Each year, representatives select interns from among Carroll University Actuarial Science majors for full-time (or part-time) paid internships. Selected student interns receive an authentic experience in the actuary profession while earning Carroll University credit. The full-time internships also include 100 hours of paid study time for the intern's next actuarial sciences exam.

Learning Outcomes for Actuarial Science

Students majoring in actuarial science are expected to:

1. Develop an understanding of the actuarial profession, what actuaries do, and how they do it.
2. Develop a knowledge base and proficiency in the core subjects needed for entry into the profession.
3. Develop an appreciation for the linkages between these core subjects.
4. Develop the critical and analytical thinking skills necessary for success in the profession.
5. Develop the communication skills that are essential in the business environment.
6. Develop the learning skills necessary for continued success in the profession.

Actuarial Sciences Major (72 credits) Bachelor of Science

- ACC205: Financial Accounting (4 hours)
- ACC206: Managerial Accounting (2 hours)
- ASC301: Financial Mathematics (4 hours)
- ASC302: Probability (4 hours)
- ASC401: Financial Economics (4 hours)
- ASC402: Life Contingencies (4 hours)
- BUS304: Principles of Finance (4 hours)
- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- MAT160: Calculus I (4 hours)
- MAT161: Calculus II (4 hours)
- MAT207: Calculus III (4 hours)
- MAT208: Linear Algebra (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.

- Actuarial Science Minor
Students minoring in Actuarial Science are expected to:

1. Develop an understanding of the actuarial profession, what actuaries do, and how they do it.
2. Develop a knowledge base and proficiency in the core subjects needed for entry into the profession.
3. Develop an appreciation for the linkages between these core subjects.
4. Develop the critical and analytical thinking skills necessary for success in the profession.
5. Develop the communication skills that are essential in the business environment.
6. Develop the learning skills necessary for continued success in the profession.

- **ASC301: Financial Mathematics (4 hours)**
- **ASC302: Probability (4 hours)**
- **ECO124: Principles of Economics I - Microeconomics (4 hours)**
- **ECO225: Principles of Economics II - Macroeconomics (4 hours)**
- **MAT160: Calculus I (4 hours)** AND **MAT160L: Calculus I - Laboratory**
- **MAT161: Calculus II (4 hours)** AND **MAT161L: Calculus II - Laboratory**
- **MAT207: Calculus III (4 hours)**

### Major Courses

The list below displays all the courses offered by the program:

- **ASC301: Financial Mathematics (4 hours)**
- **ASC302: Probability (4 hours)**
- **ASC313: Time Series and Forecasting (2 hours)**
- **ASC380: Internship in Actuarial Science (4 TO 16 hours)**
- **ASC401: Financial Economics (4 hours)**
- **ASC402: Life Contingencies (4 hours)**
- **ASC480: Internship in Actuarial Science (4 TO 16 hours)**

### Applied Physics/Engineering Dual Degree Program

- **Greg Gabrielsen** Lecturer
- **Tate Wilson** Lecturer

Carroll University, the University of Wisconsin Platteville and the University of Wisconsin Milwaukee offer an inter-university program that allows students to earn two degrees: a B.S. in Applied Physics from Carroll University, and a B.S. in Engineering from the UW-Platteville or UW-Milwaukee. There is also an option to earn a B.S. in Applied Physics from Carroll University and an M.S. in Engineering from UW-Milwaukee. The Carroll University portion of these 3+2 programs consists of an intensive integrated experience in general engineering, physical science, applied mathematics, computation, and liberal studies. Upon completing the 3 year program at Carroll University, students transfer to the UW-Platteville or UW-Milwaukee for 2 years to complete an engineering degree in any one of the following disciplines: Civil Engineering, Electrical Engineering, Engineering Physics, Industrial Engineering, Mechanical Engineering, or Materials Science. Students receive an Applied Physics degree from Carroll University after the successful completion of their first year at UWP or UWM.

### Learning Outcomes for Applied Physics/Engineering

1. Prepare students to successfully complete an intensive 2-year engineering curriculum at UW-Platteville or UW-Milwaukee.
2. Introduce students to the engineering profession, including engineering problem solving, judgment and practice.
3. Begin development of student awareness of the impact of their work on society, locally, nationally and globally.

### Core Courses

- **CHE109: Principles of Chemistry I (4 hours)** AND **-CHE109L: Principles of Chemistry I Laboratory**
- **CHE110: Principles of Chemistry II (4 hours)** AND **-CHE110L: Principles of Chemistry II - Laboratory**
- **CSC110: Problem Solving through Programming (4 hours)**
- **GEN100: Engineering Seminar I (1 hours)** AND **-GEN101: Engineering Seminar II (1 hours)**
- **GEN105: Engineering Graphics (4 hours)**
- **GEN210: Statics and Dynamics (4 hours)**
- **GEN310: Strengths of Materials (4 hours)**
- **GEN320: Advanced Circuits and Electronics (2 hours)** AND **-GEN320L: Advanced Circuits and Electronics Laboratory**
- **MAT215: Engineering Mathematics I (4 hours)**
- **MAT216: Engineering Mathematics II (4 hours)**
- **MAT160: Calculus I (4 hours)**
- **MAT161: Calculus II (4 hours)**
- **MAT207: Calculus III (4 hours)**
- **PHY203: General Physics I (4 hours)** AND **-PHY203L: General Physics I Laboratory**
- **PHY204: General Physics II (4 hours)** AND **-PHY204L: General Physics II Laboratory**
- **PHY303: Modern Physics (4 hours)** AND **-PHY303L: Modern Physics Laboratory**
- **PHY304: Classical Mechanics (4 hours)** AND **-PHY304L: Classical Mechanics Laboratory**
- **PHY320: Thermodynamics (4 hours)**

### Bachelor of Science Requirement
The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- Major Courses

  The list below displays all the courses offered by the program:
  - GEN100: Engineering Seminar I (1 hours)
  - GEN101: Engineering Seminar II (1 hours)
  - GEN105: Engineering Graphics (4 hours)
  - GEN210: Statics and Dynamics (4 hours)
  - GEN310: Strengths of Materials (4 hours)
  - GEN320: Advanced Circuits and Electronics (2 hours)
  - GEN330L: Advanced Circuits and Electronics Laboratory
  - GEN380: Engineering Internship (4 hours)

- Aviation Science Minor

  Program Mission

  The aviation minor is designed to offer opportunities for our students to:
  - Understand the historical development of aviation, current trends, economic importance, and career opportunities.
  - Gain an in-depth understanding of aviation principles, advanced flight systems, and navigational concepts.
  - Gain an understanding of meteorology, performance factors, and decision-making as they relate to aviation.
  - Have the option to:
    - Complete the required "ground school" component necessary for endorsement to sit the FAA Knowledge and Flight tests.
    - Gain practical experience to test for a private pilot certificate (VFR), and/or become instrument rated (IFR).

  Program Goals

  - Define aviation concepts.
  - To be aware of the historical roots and development of aviation.
  - Make students aware of regulatory and safety issues in aviation.
  - Define professional and ethical standards required in aviation careers.
  - For the optional flight training laboratories:
    - Train students to operate single and/or multi-engine aircraft.
    - Help students develop cognitive reasoning skills to solve technical issues, and resolve issues prior to, and during, flight.
    - Make students aware of the need to continually upgrade technical and regulatory knowledge to remain "current" in the profession.
    - To learn the operational limits of the pilot's certificate.

  Program Learning Outcomes

  - Understand basic definitions, concepts and applications of aeronautical knowledge.
  - Know the historical landmarks in the development of manned flight.
  - Be able to describe the basic elements of meteorology including insolation, temperature, winds, and moisture.
  - Under the processes that result in natural phenomena like weather, climate, climate change, earthquakes, and landforms.
  - Understand and be able to explain how the relationship between the earth and the sun directly affects seasonal and geographic temperature patterns and global energy balance
  - Understand and be able to explain how air masses, fronts, and upper level flow drive current weather conditions
  - Be able to analyze atmospheric and other geographic data to forecast weather and identify climate types
  - Understand advanced concepts of flight and regulations peculiar to both IFR and Commercial aircraft operations.

  In addition, students completing the optional flight training laboratories will:
  - Have acquired basic skills in pre-flight operations.
  - Be able to demonstrate competency in aeronautical knowledge across the FAA private pilot knowledge content areas as delineated in FAR/AIM 61.105, a-b
  - Be able to use and interpret flight navigational systems.
  - Be competent to perform cross country flight.
  - Be able to apply visual flight rules to a proficient level to carry out an FAA check ride.
  - Be able to perform pre- and in-flight calculations with an E6B (problem solving).
  - Become proficient as a student pilot to be endorsed to pass the FAA knowledge exam.
  - Carry out advanced flight maneuvers.
  - Have acquired advanced lab (practical) skills in aircraft operations and flight proficiencies allowing safe operations in the IFR and Commercial environment.
  - Be able to demonstrate competency in aeronautical knowledge across the FAA IFR and commercial content areas as delineated in FAR/AIM 61.65 and 61.125.

- Courses required for the minor

  - AVS101: Aviation Science I (4 hours)
  - AVS102: Aviation Science II (4 hours)
  - AVS201: Advanced Aviation Science I (4 hours)
  - AVS202: Advanced Aviation Science II (4 hours)
• ENV105: Earth Science (4 hours)
AND -ENV105L: Earth Science Laboratory

Minor Courses

The list below displays all the courses offered by the minor:
• AVS101: Aviation Science I (4 hours)
• AVS101L: Aviation Science I Lab
• AVS102: Aviation Science II (4 hours)
• AVS102L: Aviation Science II Lab
• AVS201: Advanced Aviation Science I (4 hours)
• AVS201L: Advanced Aviation Science I Lab
• AVS202: Advanced Aviation Science II (4 hours)
• AVS202L: Advanced Aviation Science II Lab

Chemistry and Biochemistry

Timothy C. Flewelen  Visiting Lecturer
Christopher Kadrich  Laboratory Coordinator
Kevin McMahon  Associate Professor
Kent E. Molter  Senior Lecturer
Joseph J. Piatt  Associate Professor
Jamie B. Scaglione  Assistant Professor
Michael D. Schuder  Associate Professor
Gail M. Vojta  Distinguished Lecturer

The Chemistry and Biochemistry Program is approved by the Committee on Professional Training of the American Chemical Society. This approval means that the program has the faculty, curriculum and instrumentation necessary to provide a quality education for undergraduate students.

Learning Outcomes for Chemistry and Biochemistry

Upon successful completion of the chemistry or biochemistry major, students will:

1. Understand the basic definitions, concepts and relationships of chemistry.
2. Develop advanced skills in evaluating library searches for primary literature.
3. Understand fundamental laboratory analyses and safety protocols.
4. Perform quantitative and qualitative scientific analyses.
5. Understand the basic theory and use of modern instrumentation.
6. Use computers for chemical applications including technical writing, modeling, data collecting and processing, and database searching.
7. Prepare effective written scientific reports and oral presentations for professional audiences.
8. Work cooperatively in problem solving situations.
9. Understand the benefits and problems of modern chemistry for our society.

Recognizing the individuality of students and that chemistry can be a strong preparation for a variety of careers, the program offers two majors, chemistry and biochemistry, each with multiple emphases. Each of these majors offers courses in the basic areas of inorganic, organic, analytical, physical, and biochemistry, and can be supplemented by special opportunities such as industrial internships and independent research. Modern scientific instrumentation is available and incorporated into all courses of the curriculum. Students are encouraged to consult with chemistry and biochemistry faculty about the various emphases and opportunities associated with each. Students must complete core courses, required support courses and the requirements for the emphasis.

• Chemistry Major

Chemistry Major

1. ACS-Approved Emphasis is especially suited for students planning on graduate work or desiring the best preparation for employment in the chemical sciences.
Upon completion of this emphasis, students will:
• Develop an advanced understanding in multiple fields of chemistry.
• Develop an independent research project, acquire and analyze data, and present the results at an off-campus professional meeting.

2. Forensic Science Emphases are multidisciplinary programs designed to train students in the analysis of physical and chemical case evidence and the associated legal implications.
Upon completion of one of these emphases, students will:
• Understand the basic definitions, concepts and relationships of criminalistics.
• Understand intake, transport and biochemical processes of toxins in the human body.
• Gain expertise in the collection and analysis of evidence specific to forensic science.
• Develop an independent research project, acquire and analyze data, and present the results at Celebrate Carroll.

3. Pre-Health Science/Professional Emphasis is for those students who plan to pursue professional work in an allied health field such as medicine, dentistry, optometry, or veterinary science or pursue an industrial career.
Upon completion of this emphasis, students will:
• Develop an advanced understanding in a particular field of chemistry.
• Obtain work-related career experience in an industrial, corporate or medical setting.

FEES
Specific Courses that require use of equipment and disposable supplies are assigned a fee.

- Chemistry Major Core Courses
  - CHE109: Principles of Chemistry I (4 hours)
    AND -CHE109L: Principles of Chemistry I Laboratory
  - CHE110: Principles of Chemistry II (4 hours)
    AND -CHE110L: Principles of Chemistry II - Laboratory
  - CHE201: Analytical Chemistry (4 hours)
    AND -CHE201L: Analytical Chemistry Laboratory
  - CHE203: Organic Chemistry I (4 hours)
    AND -CHE203L: Organic Chemistry I Laboratory
  - CHE204: Organic Chemistry II (4 hours)
    AND -CHE204L: Organic Chemistry II Laboratory
  - CHE303: Quantum Mechanics and Spectroscopy (4 hours)
    AND -CHE303L: Quantum Mechanics and Spectroscopy Laboratory
  - CHE308: Biochemistry I (4 hours)
    AND -CHE308L: Biochemistry I Laboratory
  - CHE401: Advanced Chemical Analysis and Instrumentation (4 hours)
    AND -CHE401L: Advanced Chemical Analysis and Instrumentation Laboratory
  - CHE402: Capstone - Modern Chemistry (4 hours)
    AND -CHE402L: Capstone - Modern Chemistry Laboratory

- Required Support Courses:
  - MAT160: Calculus I (4 hours)
  - MAT161: Calculus II (4 hours)
  - CSC110: Problem Solving through Programming (4 hours)
  - PHY203: General Physics I (4 hours)
    AND -PHY203L: General Physics I Laboratory
  - PHY204: General Physics II (4 hours)
    AND -PHY204L: General Physics II Laboratory

Students must select an emphasis.

- Bachelor of Science Requirement

  Bachelor of Science Requirement

  The requirements for a Bachelor of Science degree are:
  - CMP112 and either CMP113 or CMP114 or
  - MAT140 or higher and CSC110 or higher;

  **NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.**
  **FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- ACS-Approved Emphasis
  - Chemistry Major Core Courses plus
    - CHE302: Advanced Inorganic Chemistry (4 hours)
      AND -CHE302L: Advanced Inorganic Chemistry Laboratory
    - CHE304: Thermodynamics and Kinetics (4 hours)
      AND -CHE304L: Thermodynamics and Kinetics Laboratory

  To receive recognition of completion of this emphasis, students must earn a C or better in all chemistry major core courses and emphasis specific courses, and present results of a research project at a national chemistry meeting.

- Pre-Health Science / Professional Emphasis

  One chemistry course numbered 300 or greater (4 credits).

- Forensic Science Emphasis
  - Core Courses plus
    - BIO100: Introductory Human Biology (4 hours)
      AND -BIO100L: Introductory Human Biology Laboratory
    OR: Higher level Biology Course
    - CHE104: Forensic Science (4 hours)
      AND -CHE104L: Forensic Science Laboratory
    - SOC103: Introduction to Criminal Justice (4 hours)
    - SOC303: Criminal Procedure, Evidence and Investigation (4 hours)

- Forensic Science Professional Emphasis
  - Core Courses plus
    - BIO120: General Biology I (4 hours)
      AND -BIO120L: General Biology I Laboratory
    - BIO131: Genetics in Family and Society (4 hours)
      AND -BIO131L: Genetics in Family and Society Lab
    - CHE104: Forensic Science (4 hours)
      AND -CHE104L: Forensic Science Laboratory
    - CHE310: Advanced Forensic Science (4 hours)
    - SOC103: Introduction to Criminal Justice (4 hours)
    - SOC303: Criminal Procedure, Evidence and Investigation (4 hours)

    Choose three from the following:
Chemistry Minor

- CHE109: Principles of Chemistry I (4 hours)
- CHE110: Principles of Chemistry II (4 hours)
- CHE201: Analytical Chemistry (4 hours)
- CHE203: Organic Chemistry I (4 hours)
- CHE308: Biochemistry I (4 hours)
- CHE308L: Biochemistry I Laboratory

Major Courses

The list below displays all the courses offered by the program:

- CHE101: General Chemistry (4 hours)
- CHE101L: General Chemistry Laboratory
- CHE102: Biological Chemistry (4 hours)
- CHE102L: Biological Chemistry Laboratory
- CHE104: Forensic Science (4 hours)
- CHE104L: Forensic Science Laboratory
- CHE106: Drug Discovery (4 hours)
- CHE106L: Drug Discovery Laboratory
- CHE109: Principles of Chemistry I (4 hours)
- CHE110: Principles of Chemistry II (4 hours)
- CHE201: Analytical Chemistry (4 hours)
- CHE203: Organic Chemistry I (4 hours)
- CHE203L: Organic Chemistry I Laboratory
- CHE204: Organic Chemistry II (4 hours)
- CHE204L: Organic Chemistry II Laboratory
- CHE302: Advanced Inorganic Chemistry (4 hours)
- CHE302L: Advanced Inorganic Chemistry Laboratory
- CHE303: Quantum Mechanics and Spectroscopy (4 hours)
- CHE303L: Quantum Mechanics and Spectroscopy Laboratory
- CHE304: Thermodynamics and Kinetics (4 hours)
- CHE304L: Thermodynamics and Kinetics Laboratory
- CHE306: Synthesis and Structure (4 hours)
- CHE308: Biochemistry I (4 hours)
- CHE308L: Biochemistry I Laboratory
- CHE310: Advanced Forensic Science (4 hours)
- CHE310L: Advanced Forensic Science Laboratory
- CHE390: Projects in Chemistry (1 TO 4 hours)
- CHE391: Special Topics in Chemistry (1 TO 4 hours)
- CHE391L: Special Topics Laboratory
- CHE401: Advanced Chemical Analysis and Instrumentation (4 hours)
- CHE401L: Advanced Chemical Analysis and Instrumentation Laboratory
- CHE402: Capstone - Modern Chemistry (4 hours)
- CHE402L: Capstone - Modern Chemistry Laboratory
- CHE480: Internship in Chemistry (1 TO 4 hours)

Biochemistry Major

1. ACS-Approved Emphasis is designed to prepare students for graduate school in chemistry or biochemistry, medical school, or employment in biomedical sciences.

Upon completion of this emphasis, students will:
- Develop an advanced understanding in multiple fields of chemistry and biological chemistry.
- Develop an independent research project, acquire and analyze data, and present the results at an off-campus professional meeting.

2. Pre-Health Science / Professional Emphasis provides a mixture of chemistry and biology courses and is designed for students who are interested in biology but want to solidify their understanding of the molecular view of it. Graduates will be prepared for professional school, graduate school, medical school or employment in biological and biomedical sciences.

Upon completion of this emphasis, students will:
- Develop an advanced understanding in a particular field of biological chemistry.
- Develop an advanced understanding of medical biology.
- Develop an independent research project, acquire and analyze data, and present the results at Celebrate Carroll.
3. **Pre-Pharmacy Emphasis** is a 3+1 program designed to prepare students for direct admission to a pharmacy program. While this emphasis contains courses required for admission to most pharmacy programs in the US during the student's first three years, a matriculation agreement with Rosalind Franklin University of Medicine and Science (RFUMS) allows students who are admitted to RFUMS to transfer first year coursework completed at RFUMS back to Carroll and receive a Bachelor of Science in biochemistry with Pre-Pharmacy Emphasis from Carroll University. Students not attending RFUMS may add a fourth year at Carroll to complete a biochemistry degree with Pre-Health Science/Professional Emphasis.

- **Biochemistry Major Core Courses**
  - BIO120: General Biology I (4 hours)
  - BIO120L: General Biology I Laboratory
  - BIO125: General Biology II (4 hours)
  - BIO125L: General Biology II Laboratory
  - CHE109: Principles of Chemistry I (4 hours)
  - CHE109L: Principles of Chemistry I Laboratory
  - CHE110: Principles of Chemistry II (4 hours)
  - CHE110L: Principles of Chemistry II - Laboratory
  - CHE203: Organic Chemistry I (4 hours)
  - CHE203L: Organic Chemistry I Laboratory
  - CHE204: Organic Chemistry II (4 hours)
  - CHE204L: Organic Chemistry II Laboratory
  - CHE308: Biochemistry I (4 hours)
  - CHE308L: Biochemistry I Laboratory
  - CHE309: Biochemistry II (4 hours)

- **Required Support Courses**
  - CSC110: Problem Solving through Programming (4 hours)
  - MAT160: Calculus I (4 hours)
  - MAT161: Calculus II (4 hours)
  - PHY203: General Physics I (4 hours)
  - PHY203L: General Physics I Laboratory
  - PHY204: General Physics II (4 hours)
  - PHY204L: General Physics II Laboratory

- **Bachelor of Science Requirement**

  The requirements for a Bachelor of Science degree are:
  - CMP112 and either CMP113 or CMP114 or
  - MAT140 or higher and CSC110 or higher;

  **NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
  FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- **The Pioneer Core Program**
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- **ACS-Approved Emphasis**

  Chemistry Major Core Courses plus

  - Core Courses plus
    - BIO220: Genetics (4 hours)
    - BIO220L: Genetics Laboratory
    - BIO332: Gene Manipulation and Genomics (4 hours)
    - BIO332L: Gene Manipulation and Genomics Laboratory
    - OR - BIO452: Cell Biology (4 hours)
    - BIO452L: Cell Biology Laboratory
    - CHE201: Analytical Chemistry (4 hours)
    - CHE201L: Analytical Chemistry Laboratory
    - CHE302: Advanced Inorganic Chemistry (4 hours)
    - CHE302L: Advanced Inorganic Chemistry Laboratory
    - CHE303: Quantum Mechanics and Spectroscopy (4 hours)
    - CHE303L: Quantum Mechanics and Spectroscopy Laboratory
    - CHE304: Thermodynamics and Kinetics (4 hours)
    - CHE304L: Thermodynamics and Kinetics Laboratory
    - CHE401: Advanced Chemical Analysis and Instrumentation (4 hours)
    - CHE401L: Advanced Chemical Analysis and Instrumentation Laboratory
    - CHE402: Capstone - Modern Chemistry (4 hours)
    - CHE402L: Capstone - Modern Chemistry Laboratory

  To receive recognition of completion of this emphasis, students must earn a C or better in all chemistry major core courses and emphasis specific courses, and present results of a research project at a national chemistry meeting.

- **Pre-Health Science/Professional Emphasis**

  - Major Core Courses Plus
    - BIO220: Genetics (4 hours)
    - BIO220L: Genetics Laboratory
    - BIO452: Cell Biology (4 hours)
    - BIO452L: Cell Biology Laboratory
    - CHE201: Analytical Chemistry (4 hours)
    - CHE201L: Analytical Chemistry Laboratory
CHE401: Advanced Chemical Analysis and Instrumentation (4 hours)
AND -CHE401L: Advanced Chemical Analysis and Instrumentation Laboratory
CHE402: Capstone - Modern Chemistry (4 hours)
AND -CHE402L: Capstone - Modern Chemistry Laboratory
OR -CHE480: Internship in Chemistry (1 TO 4 hours)

Choose one course from the following:
- BIO225: Organismal Physiology (4 hours)
  AND -BIO225L: Organismal Physiology Laboratory
- BIO271: Clinical Immunology (4 hours)
  AND -BIO271L: Clinical Immunology Laboratory
- BIO312: Microbiology (4 hours)
  AND -BIO312L: Microbiology Laboratory
- BIO332: Gene Manipulation and Genomics (4 hours)
  AND -BIO332L: Gene Manipulation and Genomics Lab
- BIO350: Endocrinology (4 hours)

NOTE: Students in this professional emphasis who choose to complete an internship must complete 4 hours.

Pre-Pharmacy Emphasis

Major Core Courses plus
- ANP402: Human Anatomy (4 hours)
  AND -ANP402L: Human Anatomy Laboratory
OR -ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  AND -ANP130L: Intro to Human Anat and Phys I Lab
  AND -ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  AND -ANP140L: Intro to Human Anat and Phys II Lab
- ECO124: Principles of Economics I - Microeconomics (4 hours)
- HIS103: Roots of the Western World (4 hours)
- HIS104: Europe and the Modern World (4 hours)
- PSY101: Introductory Psychology (4 hours)
- RFUMS YPHS504: Biochemical Principles for Pharmacy
- RFUMS PBB5 505A: Microbiology and Immunology

Biochemistry Minor
- ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  AND -ANP130L: Intro to Human Anat and Phys I Lab
  AND -ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  AND -ANP140L: Intro to Human Anat and Phys II Lab
OR -BIO120: General Biology I (4 hours)
  AND -BIO120L: General Biology I Laboratory
  AND -BIO125: General Biology II (4 hours)
  AND -BIO125L: General Biology II Laboratory
- CHE109: Principles of Chemistry I (4 hours)
  AND -CHE109L: Principles of Chemistry I Laboratory
- CHE110: Principles of Chemistry II (4 hours)
  AND -CHE110L: Principles of Chemistry II - Laboratory
- CHE203: Organic Chemistry I (4 hours)
  AND -CHE203L: Organic Chemistry I Laboratory
- CHE308: Biochemistry I (4 hours)
  AND -CHE308L: Biochemistry I Laboratory

Computational Science

Chenglie Hu
Professor of Computer Science

Darrel Johnson
Senior Lecturer of Mathematics

Michael G. Konemann
Associate Professor of Computer Science

Christopher May
Associate Professor of Psychology

Marie S. Schwerm
Lecturer

John Symms
Associate Professor of Mathematics

Computational Science is the third branch of science. It is a marriage of the experimental and theoretical, combining modeling and programming to test scientific hypotheses. Techniques and skills in data analysis, algorithmic design and implementation, and mathematical modeling are fundamental in the discipline. Increasingly in modern scientific research, doing exploratory computational work prior to actual laboratory experimentation is common, both as a time and money-saver. In health-related areas, dealing successfully with massive amounts of data in different formats is a critical hurdle toward effective and efficient care.

Learning Outcomes for Computational Science

Upon completion of the major and degree requirements the successful graduate will have:

1. a robust understanding of the three broad areas that comprise computational science:
   a. Data processing and analysis
   b. Algorithmic design, analysis, and implementation
   c. Mathematical modeling and analysis;
2. the ability to work independently to effectively describe a problem within a computational science framework, and create and implement a plan to solve that problem;
3. an understanding of the interdisciplinary nature of computational science, and being able to solve, computationally problems in a chosen related major/minor discipline;
4. an understanding and appreciation of the historical development of computation and the role of computational science in modern applications within data-dependent disciplines.

Computational Science Major

NOTE: Students must minor or major in another discipline in which a Bachelor of Science can be earned.

CMP112: Computational Thinking I (4 hours)
Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.

**FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR**

**The Pioneer Core Program**
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

**Computational Science Minor**

- CMP112: Computational Thinking I (4 hours)
- CMP113: Computational Thinking II (4 hours)
  OR - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
  OR - CSC110: Problem Solving through Programming (4 hours)
- CMP330: Computational Techniques for Life and Behavioral Sciences (4 hours)
  OR - CMP340: Computational Techniques for Physical Sciences (4 hours)
- CSC111: Introduction to JAVA (4 hours)
  OR - CSC112: Advanced Programming with C# (4 hours)
- MAT140: Calculus and Its Applications (4 hours)
  OR - MAT160: Calculus I (4 hours)

**Major Courses**

The list below displays all the courses offered by the program:

- CMP112: Computational Thinking I (4 hours)
- CMP12H: Honors Computational Thinking I (4 hours)
- CMP113: Computational Thinking II (4 hours)
- CMP14: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- CMP14H: Honors Computational Thinking II- Statistical Analysis Emphasis (4 hours)
- CMP330: Computational Techniques for Life and Behavioral Sciences (4 hours)
- CMP340: Computational Techniques for Physical Sciences (4 hours)

**Computer Science and Information Technology**

Chenglie Hu, Professor
Michael G. Konemann, Associate Professor
Marie S. Schwerm, Lecturer

**Mission Statement**

In accordance with the mission of Carroll University, the Computing and IT Programs provide an excellent and state-of-the-art educational opportunity for students based on their individual skill sets, interests and career goals in the areas of modern software development, business problem solving, and IT problem solving and support. Both programs enable students to combine their theoretical and technical understanding with their broad-based liberal-arts education to think analytically and critically when designing and implementing software or IT solutions.

**Learning Outcomes for Computer Science Major**

Graduates of the Computer Science Program are able to:

1. Problem-solve (for business, scientific, Web, and recreational problems) through programming using multiple programming paradigms, enterprise resources, different software development frameworks, sound software design techniques and software engineering practices.
2. Successfully work in or be adapted to an organization in any business setting to meet technology challenges.
3. Further their academic pursuits and meet challenges in graduate schools by having the necessary body of theory that underpins the discipline of computer science.
4. Demonstrate an understanding of ethics as it applies to the discipline of computer science.
5. Work effectively as part of a team.

**Learning Outcomes for Information Technology Major**

Graduates of the Information Technology Program are able to:
1. Think creatively and analytically in technological problem-solving.
2. Problem-solve using productivity software and through computer programming.
3. Demonstrate an understanding of information system and technology evaluation and management.
4. Demonstrate an understanding of the application of new and developing technologies with sensitivity for security and ethical issues at global, societal, organizational, and personal levels.
5. Work effectively as part of a team.

In addition, graduates of the CSC major with Computer-Game Development emphasis are able to:

1. Design game stories, implement them in code, and test working games against various game-playing platforms,
2. Apply knowledge of data structures, software analysis and design to implement efficient game programs,
3. Apply knowledge of artificial intelligence and computer graphics to develop interactive and aesthetic games of good quality and reasonable size.

The Computer Science and IT programs are grounded in the liberal arts tradition, balance theory and practice, and focus on the problem-solving skills necessary for life-long learning in a field characterized by rapid change in technology. We succeed in our mission by preparing our students through classroom work and appropriate external internships to secure fulfilling careers in the field of their choosing.

The world has been in an era of rapid technological advancement. The Internet, World Wide Web, and Mobile Computing have increasingly become critically important in corporate strategies, people's social lives and personal development. We recognize this by incorporating the latest technologies into the curricula. The curricula are designed to emphasize problem solving, multiple programming paradigms, and higher order thought processes that will always be needed by corporate America under any business models.

Several emphases and minors are available within the computer science program. Each allows students to begin taking required major courses during the fall semester of the freshman year.

Computer Science majors may select the:
* Software Engineering emphasis if interested in developing the skills necessary to design and build large and reliable software systems.
* Information Systems emphasis if they desire to work as system analysts in business.
* Internet & Mobile Software Development emphasis if interested in software development for smartphones, tablets, etc.
* Computer-Game Development emphasis if they wish to work as video game developers. These skills also carry over to developing a wide range of other types of software.

Note that the CSC major emphases are defined by additional courses taken beyond the core.

Computer Science or Information Technology minors complete the same core minor courses and select an additional set of courses based on personal interests.

Our programs have close ties with local industry and offer students the opportunity to participate in paid internships or cooperative programs with various companies for university credit.

Computer science and information technology students at Carroll work on state-of-the-art computing facilities with the latest software application packages. They have access to Microsoft, Macintosh, and Unix/Linux computing platforms, and Oracle or Microsoft SQL Server Database Management Systems via the campus-wide network. There is equipment exclusively available for the use of computer science and information technology majors.

- **Computer Science Major (48 to 92 credits)**

  Students with any major emphasis must complete 16 credit hours of core courses for the Computer Science major along with the emphasis support and required support courses of their chosen emphasis in addition to all other university requirements.

  **Note:** The upper limit is achieved via the joint Carroll-MATC game development program, a credit-heavy professional experience.

- **Core Courses for the Computer Science Major (40 credits)**
  - CSC110: Problem Solving through Programming (4 hours)
  - CSC111: Introduction to JAVA (4 hours)
  - CSC211: Database Web Creation and Networks (4 hours)
  - CSC226: Data Structures using JAVA (4 hours)
  - CSC271: Computer Organization (2 hours)
  - CSC272: Computer Architecture (2 hours)
  - CSC303: Network Protocols (4 hours)
  - CSC341: Software Design and Development (4 hours)
  - CSC351: Database Design and Implementation (4 hours)
  - CSC450: Projects-Computer Science Majors (4 hours)
  - CSC480: Internship in Computer Science (1 TO 12 hours)

- **Required Support Courses for the Computer Science Major (8 credits)**
  - COM101: Principles of Communication (4 hours)
  - MAT140: Calculus and Its Applications (4 hours)
  - OR -MAT160: Calculus I (4 hours)

- **Bachelor of Science Requirement**

  The requirements for a Bachelor of Science degree are:
  - CMP112 and either CMP113 or CMP114 or
  - MAT140 or higher and CSC110 or higher;
NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- Software Engineering Emphasis (28 additional credits)
  - CMP112: Computational Thinking I (4 hours)
  - OR: MAT161: Calculus II (4 hours)
  - CSC319: World Wide Web Programming (4 hours)
  - CSC323: Programming Languages (4 hours)
  - CSC431: Artificial Intelligence (4 hours)
  - OR: CSC437: Computer Graphics (4 hours)
  - CSC440: Software Engineering (4 hours)
  - MAT205: Discrete Mathematics (4 hours)
  - PHY203: General Physics I (4 hours)
    - AND: PHY203L: General Physics I Laboratory

- Information Systems Emphasis (32 additional credits)
  - ACC205: Financial Accounting (4 hours)
  - BUS101: Introduction to Business (4 hours)
  - BUS301: Principles of Marketing (4 hours)
  - CMP112: Computational Thinking I (4 hours)
  - CSC220: Information Systems (4 hours)
  - CSC409: Information Technology Mgmt in an E-Commerce World (4 hours)
  - ECO124: Principles of Economics I - Microeconomics (4 hours)
  - MAT205: Discrete Mathematics (4 hours)

- Internet & Mobile Software Development Emphasis (24 additional credits)
  - CMP112: Computational Thinking I (4 hours)
  - CSC220: Information Systems (4 hours)
  - CSC319: World Wide Web Programming (4 hours)
  - CSC352: Advanced Business Web Applications (4 hours)
  - CSC353: Mobile Application Development (4 hours)
  - GRC320: Intro to Multimedia Production (4 hours)

- Computer-Game Development Emphasis (44 additional credits)
  - BUS101: Introduction to Business (4 hours)
  - CSC431: Artificial Intelligence (4 hours)
  - CSC437: Computer Graphics (4 hours)
  - GRC360: Interactive Media (4 hours)
  - PHY101: Introductory Physics I (4 hours)
    - AND: PHY101L: Introductory Physics Laboratory
  - PHY102: Introductory Physics II (4 hours)
    - AND: PHY102L: Introductory Physics Laboratory

  Courses taken at MATC:
  - CGS110: Introduction to Computer Simulation and gaming (3 hours)
  - CGS115/CSC115: Csg Production (3 hours)
  - CGS129/CSC129: Csg Architecture (2 hours)
  - CGS130/CSC130: Csg Design (3 hours)
  - CGS140/CSC140: Visual Communication Practices (2 hours)
  - CGS180/CSC180: Multimedia Collaborative Lab (3 hours)
  - CGS182/CSC182: Csg Collaborative Lab (4 hours)

- Computer Science Minor (24 credits)
  - Required Core Courses
    - CSC111: Introduction to JAVA (4 hours)
    - CSC226: Data Structures using JAVA (4 hours)
    - CSC271: Computer Organization (2 hours)
    - CSC272: Computer Architecture (2 hours)
    - CSC341: Software Design and Development (4 hours)
  
  Choose two courses from the following list
  - CSC220: Information Systems (4 hours)
  - CSC303: Network Protocols (4 hours)
  - CSC307: Operating Systems and Web Master Fundamentals-Unix/Linux Apache (4 hours)
  - CSC319: World Wide Web Programming (4 hours)
  - CSC323: Programming Languages (4 hours)
  - CSC351: Database Design and Implementation (4 hours)
  - CSC401: Advanced Network Protocols and Programming (4 hours)
  - CSC402: Fundamentals of Network Security Design and Implementation (4 hours)
  - CSC409: Information Technology Mgmt in an E-Commerce World (4 hours)
  - CSC421: Algorithms (4 hours)
  - CSC431: Artificial Intelligence (4 hours)
  - CSC437: Computer Graphics (4 hours)
  - CSC440: Software Engineering (4 hours)

  It is recommended that student refer to the following list to choose two courses based on an area of interest:

  - Web Development: Computer Science 319 and Computer Science 351
  - Computer Networking: Computer Science 303 and Computer Science 401
  - Software Engineering: Computer Science 409 and Computer Science 440
  - Computer Science Core: Computer Science 323 and Computer Science 421
  - Information Systems: Computer Science 220 and Computer Science 409
• Information Technology: Computer Science 309 and Computer Science 351
• Computer Game Development: Computer Science 431 and Computer Science 437

Information Technology Major (60 credits)

Core for Information Technology Major (44 credits)
- CMP112: Computational Thinking I (4 hours)
- CSC112: Advanced Programming with C# (4 hours)
- CSC211: Database Web Creation and Networks (4 hours)
- CSC220: Information Systems (4 hours)
- CSC271: Computer Organization (2 hours)
- CSC272: Computer Architecture (2 hours)
- CSC303: Network Protocols (4 hours)
- CSC307: Operating Systems and Web Master Fundamentals-Unix/Linux Apache (4 hours)
- CSC319: World Wide Web Programming (4 hours)
- CSC351: Database Design and Implementation (4 hours)
- CSC401: Advanced Network Protocols and Programming (4 hours)
- CSC409: Information Technology Mgmt in an E-Commerce World (4 hours)
- CSC480: Internship in Computer Science (1 TO 12 hours)

Required Support Courses for Information Technology Major (12 additional credits)
- BUS101: Introduction to Business (4 hours)
- BUS302: Principles of Management (4 hours)
- COM101: Principles of Communication (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

Information Technology Minor (26 credits)

Required Core Courses
- CSC110: Problem Solving through Programming (4 hours)
- CSC211: Database Web Creation and Networks (4 hours)
- CSC271: Computer Organization (2 hours)
- CSC409: Information Technology Mgmt in an E-Commerce World (4 hours)

Choose three courses from the following list:
- CSC111: Introduction to JAVA (4 hours)
  OR -CSC112: Advanced Programming with C# (4 hours)
- CSC220: Information Systems (4 hours)
- CSC303: Network Protocols (4 hours)
- CSC307: Operating Systems and Web Master Fundamentals-Unix/Linux Apache (4 hours)
- CSC319: World Wide Web Programming (4 hours)
- CSC351: Database Design and Implementation (4 hours)
- CSC352: Advanced Business Web Applications (4 hours)
- CSC401: Advanced Network Protocols and Programming (4 hours)
- CSC402: Fundamentals of Network Security Design and Implementation (4 hours)
- GRC295: 3-D Digital Design (4 hours)
- GRC320: Intro to Multimedia Production (4 hours)
- GRC360: Interactive Media (4 hours)

It is recommended that students refer to the following list to choose three courses based on an area of interest:

• Web Development: Computer Science 112, Computer Science 319 and Computer Science 351
• Computer Networking: Computer Science 303, Computer Science 304 and Computer Science 401
• Server and Database Administrator: Computer Science 111 or Computer Science 112, Computer Science 309 and Computer Science 351,
• Digital Production: Graphic Communication 295, Graphic Communication 320 and Graphic Communication 360
• Network Security: Computer Science 303, Computer Science 304, and Computer Science 402

Because of rapid advancement of computing technology, some computer science courses taken by students with one or more semester gaps between registrations (summer not included) and outside of a four year period may be subject to approval by computer science faculty before meeting graduation requirements.

Major Courses

The list below displays all the courses offered by the program:
- CSC109: Technological Productivity (2 hours)
- CSC110: Problem Solving through Programming (4 hours)
- CSC111: Introduction to JAVA (4 hours)
- CSC112: Advanced Programming with C# (4 hours)
- CSC211: Database Web Creation and Networks (4 hours)
- CSC220: Information Systems (4 hours)
- CSC226: Data Structures using JAVA (4 hours)
- CSC271: Computer Organization (2 hours)
- CSC272: Computer Architecture (2 hours)
- CSC303: Network Protocols (4 hours)
- CSC307: Operating Systems and Web Master Fundamentals-Unix/Linux Apache (4 hours)
- CSC319: World Wide Web Programming (4 hours)
- CSC320: Programming Using C++ (4 hours)
- CSC323: Programming Languages (4 hours)
- CSC341: Software Design and Development (4 hours)
- CSC351: Database Design and Implementation (4 hours)
- CSC352: Advanced Business Web Applications (4 hours)
- CSC353: Mobile Application Development (4 hours)
- CSC390: Workshop in Computer Science (4 hours)
- CSC391: Special Studies/Topics (1 TO 4 hours)
- CSC392: Seminar (4 hours)
- CSC396: Research in Computer Science (4 hours)
- CSC398: Independent Study (1 TO 4 hours)
- CSC401: Advanced Network Protocols and Programming (4 hours)
- CSC402: Fundamentals of Network Security Design and Implementation (4 hours)
- CSC409: Information Technology Mgmt in an E-Commerce World (4 hours)
- CSC431: Artificial Intelligence (4 hours)
- CSC436: Theory of Computation (4 hours)
- CSC437: Computer Graphics (4 hours)
- CSC440: Software Engineering (4 hours)
- CSC450: Projects-Computer Science Majors (4 hours)
- CSC451: Projects for Information Technology Majors (4 hours)
- CSC455: Projects-Computer Science Minors (4 hours)
- CSC480: Internship in Computer Science (1 TO 12 hours)
- CSC490: Workshop in Computer Science (4 hours)
- CSC491: Special Studies/Topics (1 TO 4 hours)
- CSC492: Seminar (4 hours)
- CSC496: Research in Computer Science (4 hours)
- CSC498: Independent Study (1 TO 4 hours)

- Computer Science Dual Degree Program

This program allows students to gain a solid computer science background and advanced professional software development skills on an accelerated pace and be ready for the challenges of the information technology industry upon graduation. The program allows students to be able to still finish a Bachelor of Science degree in four years or fewer should they choose not to continue with the five-year program.

**Admission Requirement**

Current Carroll University students pursuing the computer science major may be considered for the dual degree CSC/MSE program. To be considered for the dual degree program, students must comply with the following as appropriate:

a. Freshman students must complete a major minor declaration to the Registrar Office indicating the pursuit of the dual degree program by listing major 1 as Computer Science, major 2 as Master of Software Engineering and the emphasis as dual degree seeking. (Students must however maintain an overall GPA of 2.75 or higher and a major GPA of 3.0 or higher to remain in the dual degree program.)

b. Current Carroll students must apply for admission to the MSE Program no later than the end of spring semester of the junior year. Student must submit a letter of intent to the Office of Graduate Admission. Upon verification of the GPA requirements, Office of Graduate Admission will ask the computer science faculty to evaluate the student’s candidacy. The Office of Graduate Admission will then notify the candidate of MSE admission decisions. If admitted, student must also complete a major minor declaration form (with the same content indicated above).

c. The transcript of a dual degree student will list the dual degree emphasis.

d. Dual degree students will generally commence MSE course work during the senior year at the University.

- Sample Course Completion Schedule for CS/SE Emphasis
- Sample Course Completion Schedule for CS/ABET-Suggested Curriculum Emphasis

- Mathematics

- Heather Evans  Senior Instructor
- David A. Feil  Associate Professor
- Darrel Johnson  Senior Lecturer
- Kristen A. Lampe  Professor
- Thomas St. George  Assistant Professor
- John C. Symms  Associate Professor

The major in mathematics includes courses in pure and applied mathematics, offering a broad and in-depth foundation for students with diverse interests and backgrounds. All courses in the curriculum develop logical thinking, quantitative reasoning, and deductive analysis, making majors and minors highly attractive to graduate schools and employers in industry.

Combined with complementary course work, a mathematics major gives strong preparation for graduate study in an increasingly wide variety of disciplines. These include biostatistics, computer science, economics, forestry, genetics, meteorology, operations research, physics, psychology, pure and applied mathematics, sociology, and most engineering fields.
Career opportunities for those with a mathematics major are equally varied. These include positions in the fields of actuarial science, banking and financial services, communications, computer science, consulting, government, health services, management, public policy, research organizations, utilities, and transportation.

The major in mathematics is approved by the Wisconsin Department of Public Instruction for certification in mathematics.1

Please see Academic Program and Policies in this catalog for information about how retroactive credits in calculus may be earned.

### Learning Outcomes for Mathematics

Students majoring in mathematics are expected to:

1. Learn to read, write, speak and do mathematics.
2. Demonstrate competence in the use of appropriate technology in support of mathematical calculation, symbolic manipulation and graphical analysis.
3. Demonstrate their understanding of the nature of mathematical proof.
4. Apply mathematics to a variety of problems in the natural, computational and social sciences.
5. Learn the contributions of mathematics and mathematicians to the growth of knowledge.
6. Prepare for advanced studies in mathematics or for a profession.
7. Develop an appreciation for mathematics as an art.

---

1 Students must normally maintain a 2.75 grade point average in the major to remain in good standing in the Teacher Education Program.

### Mathematics Major (B.A.)

- **Courses in the Major**
  - MAT160: Calculus I (4 hours)
  - MAT161: Calculus II (4 hours)
  - MAT206: Transition to Adv Mathematics (4 hours)
  - MAT207: Calculus III (4 hours)
  - MAT208: Linear Algebra (4 hours)
  - MAT320: Abstract Algebra (4 hours)
  - MAT409: Mathematical Analysis (4 hours)
  - MAT450: Mathematics Senior Capstone (2 TO 4 hours)

- Two of the following six courses:
  - MAT250: Mathematics Seminar (4 hours)
  - MAT305: Modern Geometry (4 hours)
  - MAT309: Differential Equations (4 hours)
  - MAT312: Theory of Probability & Statistics (4 hours)
  - MAT324: Numerical Analysis (4 hours)
  - MAT350: Mathematics Seminar (4 hours)

- **Required Support Courses (Required for primary majors only)**
  - Completion of a Modern Language through 202
  - *To be certified by the DPI, students must take Mathematics 305 and 312.

### Bachelor of Arts Requirement

The requirements for a Bachelor of Arts are:

- Students must take 8 credits in a single modern language (MLL) other than English, this does not include American Sign Language. Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.
- MAT106 or higher

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR.

### The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

### Mathematics Major (B.S.)

- **Courses in the Major**
  - MAT160: Calculus I (4 hours)
  - MAT161: Calculus II (4 hours)
  - MAT207: Calculus III (4 hours)
  - MAT206: Transition to Adv Mathematics (4 hours)
  - MAT208: Linear Algebra (4 hours)
  - MAT320: Abstract Algebra (4 hours)
  - MAT409: Mathematical Analysis (4 hours)

- Three of the following four courses:
  - MAT305: Modern Geometry (4 hours)
MAT309: Differential Equations (4 hours)
MAT312: Theory of Probability & Statistics (4 hours)
MAT324: Numerical Analysis (4 hours)

Required Support Courses (Required for primary majors only)
CSC110: Problem Solving through Programming (4 hours)

*To be certified by the DPI, students must take Mathematics 305 and 312, and a biological science. Students not minoring in secondary education must take Physics 204.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
Cardinal Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Mathematics Minor
Three additional courses in Mathematics at the 200-level or higher excluding Mathematics 201, 205.

- CMP112: Computational Thinking I (4 hours)
- MAT160: Calculus I (4 hours)
- MAT161: Calculus II (4 hours)

Other requirements
Three additional courses in Mathematics at the 200-level or higher excluding:
Mathematics 201, 205

Secondary Education Mathematics Minor
- MAT160: Calculus I (4 hours)
- MAT161: Calculus II (4 hours)
- MAT206: Transition to Adv Mathematics (4 hours)
- MAT207: Calculus III (4 hours)
- MAT305: Modern Geometry (4 hours)
- MAT312: Theory of Probability & Statistics (4 hours)

Elementary Education Mathematics Minor
- MAT104: Foundations of Elementary Mathematics I (4 hours)
- MAT140: Calculus and Its Applications (4 hours)
  OR -MAT160: Calculus I (4 hours)
- MAT201: Foundations of Elementary Mathematics II (4 hours)
- MAT206: Transition to Adv Mathematics (4 hours)
- MAT305: Modern Geometry (4 hours)
- CMP112: Computational Thinking I (4 hours)

Major Courses
The list below displays all the courses offered by the program:
- MAT101: Intermediate Algebra (4 hours)
- MAT104: Foundations of Elementary Mathematics I (4 hours)
- MAT106: Mathematics for the Liberal Arts (4 hours)
- MAT130: Elementary Functions (4 hours)
- MAT140: Calculus and Its Applications (4 hours)
- MAT160: Calculus I (4 hours)
- MAT160L: Calculus I - Laboratory
- MAT161: Calculus II (4 hours)
- MAT161L: Calculus II - Laboratory
- MAT201: Foundations of Elementary Mathematics II (4 hours)
- MAT205: Discrete Mathematics (4 hours)
- MAT206: Transition to Adv Mathematics (4 hours)
- MAT207: Calculus III (4 hours)
- MAT208: Linear Algebra (4 hours)
- MAT215: Engineering Mathematics I (4 hours)
- MAT216: Engineering Mathematics II (4 hours)
- MAT250: Mathematics Seminar (4 hours)
- MAT305: Modern Geometry (4 hours)
- MAT309: Differential Equations (4 hours)
- MAT312: Theory of Probability & Statistics (4 hours)
- MAT320: Abstract Algebra (4 hours)
- MAT324: Numerical Analysis (4 hours)
- MAT350: Mathematics Seminar (4 hours)
- MAT391: Adv Topics in Mathematics (2 TO 4 hours)
- MAT409: Mathematical Analysis (4 hours)
- MAT450: Mathematics Senior Capstone (2 TO 4 hours)
- MAT491: Adv Topics in Mathematics (2 TO 4 hours)

Applied Physics
Applied Physics majors may complete their degree at Carroll University, the University of Wisconsin–Platteville, or the University of Wisconsin–Milwaukee in accordance with the pre-engineering program. For details on this program see a member of the Physics faculty or Department Chair. In either case, the Applied Physics major provides a strong foundation for further studies in physics, engineering, computers, law and medicine. Applied Physics majors can find jobs after graduation in a variety of technologically demanding careers, including engineering positions with local and national firms. Other graduates have chosen to work towards an advanced degree in Engineering.

Physics minors are encouraged to select additional supporting courses in the other sciences. The minor provides excellent preparation for a career in many fields including mathematics, chemistry, biology, medicine and physical therapy.

A certification program to teach physics at the secondary level, with a minor in physics, is available. Details of this program can be obtained from either the physics or the education faculty.

### Learning Outcomes for the Applied Physics

Upon completion of the major and degree requirements the successful graduate will have:

1. a robust understanding of classical physics theories, including Newtonian mechanics, classical electrodynamics, thermodynamics, and 20th century physics, as well as some current topics in physics and engineering;
2. the ability to work independently to describe a problem within a physical system and create a plan to solve that problem;
3. the ability to apply physical theories to practical problems using both analytical and numerical techniques;
4. an understanding and appreciation of the interdisciplinary nature of physics, particularly in relation to chemistry and mathematics;
5. an understanding and appreciation of the historical development of physics and the role of physics in modern technology.
6. an understanding and appreciation of the basic physical principles underlying the universe.

### Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

- **Applied Physics Major**
  - **Core**
    - PHY203: General Physics I (4 hours)
    - AND-PHY203L: General Physics I Laboratory
    - AND-PHY204: General Physics II (4 hours)
    - AND-PHY204L: General Physics II Laboratory
    - OR-PHY101: Introductory Physics I (4 hours)
    - AND-PHY101L: Introductory Physics Laboratory
    - AND-PHY102: Introductory Physics II (4 hours)
    - AND-PHY102L: Introductory Physics Laboratory
  - PHY301: Electricity and Magnetism (4 hours)
  - AND-PHY301L: Electricity and Magnetism Laboratory
  - PHY303: Modern Physics (4 hours)
    - AND-PHY303L: Modern Physics Laboratory
  - PHY304: Classical Mechanics (4 hours)
  - PHY320: Thermodynamics (4 hours)
  - PHY450: Advanced Experimental Physics (4 hours)
  - MAT160: Calculus I (4 hours)
  - MAT161: Calculus II (4 hours)
  - MAT207: Calculus III (4 hours)
  - GEN100: Engineering Seminar I (1 hours)
  - GEN101: Engineering Seminar II (1 hours)
- **Required Support Courses**
  - CHE109: Principles of Chemistry I (4 hours)
    - AND-CHE109L: Principles of Chemistry I Laboratory
  - CHE110: Principles of Chemistry II (4 hours)
    - AND-CHE110L: Principles of Chemistry II - Laboratory
  - CSC110: Problem Solving through Programming (4 hours)
  - MAT216: Engineering Mathematics II (4 hours)
    - OR-MAT309: Differential Equations (4 hours)

12 hours of electives in the Mathematics and Physics programs.

- **Bachelor of Science Requirement**

  The requirements for a Bachelor of Science degree are:
  - CMP112 and either CMP113 or CMP114 or
  - MAT140 or higher and CSC110 or higher;

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

- **The Pioneer Core Program**
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development
For a complete list of CCD courses, click here.

- **Physics Minor**
  - **Core**
    - PHY203: General Physics I (4 hours)
      AND -PHY203L: General Physics I Laboratory
    - PHY204: General Physics II (4 hours)
      AND -PHY204L: General Physics II Laboratory
    - OR -PHY101: Introductory Physics I (4 hours)
      AND -PHY101L: Introductory Physics Laboratory
      AND -PHY102: Introductory Physics II (4 hours)
      AND -PHY102L: Introductory Physics Laboratory
  - Two of the following
    - PHY301: Electricity and Magnetism (4 hours)
      AND -PHY301L: Electricity and Magnetism Laboratory
    - PHY303: Modern Physics (4 hours)
      AND -PHY303L: Modern Physics Laboratory
    - PHY304: Classical Mechanics (4 hours)
    - PHY320: Thermodynamics (4 hours)

- **Major Courses**
  - The list below displays all the courses offered by the program:
    - PHY101: Introductory Physics I (4 hours)
    - PHY101L: Introductory Physics Laboratory
    - PHY102: Introductory Physics II (4 hours)
    - PHY102L: Introductory Physics Laboratory
    - PHY105: Astronomy (4 hours)
    - PHY105L: Astronomy Laboratory
    - PHY203: General Physics I (4 hours)
    - PHY203L: General Physics I Laboratory
    - PHY204: General Physics II (4 hours)
    - PHY204L: General Physics II Laboratory
    - PHY301: Electricity and Magnetism (4 hours)
    - PHY301L: Electricity and Magnetism Laboratory
    - PHY303: Modern Physics (4 hours)
    - PHY303L: Modern Physics Laboratory
    - PHY304: Classical Mechanics (4 hours)
    - PHY320: Thermodynamics (4 hours)
    - PHY380: Engineering Internship (4 hours)
    - PHY396: Special Problems and Research (4 hours)
    - PHY398: Independent Study in Physics (1 TO 4 hours)
    - PHY450: Advanced Experimental Physics (4 hours)
    - PHY450L: Advanced Experimental Physics Laboratory
    - PHY480: Work-Oriented Experience (4 hours)
    - PHY496: Special Problems and Research (4 hours)
## Sample Course Completion Schedule for CS/ABET-Suggested Curriculum Emphasis

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<tr>
<th>Year</th>
<th>Fall Semester</th>
<th>Credit Hours</th>
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<th>Credit Hours</th>
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# Sample Course Completion Schedule for CS/SE Emphasis

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= 159 CREDITS

Note: Courses with an astrisk may be taken during winter and/or summer sessions.

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Department: Health and Medicine
Chairperson: Monika Baldridge
Room: Rankin Hall Room 304A  
Email: mbaldrid@carrollu.edu
Telephone: 262-524-7627  
Fax: 262-524-7112

Programs

Undergraduate
- Anatomy and Physiology
- Coaching Minor
- Health Sciences
- Health Sciences - Diagnostic Medical Sonography Emphasis
- Health Sciences - Radiologic Technology Emphasis
- Hispanic Health and Human Service
- Pre-Medical Laboratory Sciences
- Physical and Health Education
- Pre-Occupational Therapy
- Public Health
- Sport and Recreation Administration
- Therapeutic Recreation Emphasis
Anatomy and Physiology

Monika G. Baldridge  
Associate Professor

Susan M. Hanson  
Senior Lecturer

Natalya S. Zinkevich  
Senior Lecturer

The Anatomy and Physiology courses serve several disciplines including athletic training, biology, exercise science, nursing, physical and health education, pre-physical therapy, public health, sports and recreation management, and therapeutic recreation management. The curriculum is designed to provide students an introductory and/or advanced knowledge of anatomy and physiology. The courses provide a foundation for those who wish to pursue graduate studies or professional health careers.

Learning Outcomes

Students will:

1. Demonstrate a basic knowledge of the human body that can be applied in future coursework and clinical practice
2. Demonstrate effective communication skills
3. Apply critical thinking and problem solving skills to clinical scenarios
4. Demonstrate professional behaviors required by health professionals

Anatomy and Physiology Courses

- ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
- ANP130L: Intro to Human Anat and Phys I Lab
- ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
- ANP140L: Intro to Human Anat and Phys II Lab
- ANP402: Human Anatomy (4 hours)
- ANP402L: Human Anatomy Laboratory
- ANP403: Human Physiology (4 hours)
- ANP403L: Human Physiology Laboratory

Coaching Minor

The Coaching Minor is a 23 credit hour program that emphasizes five essential elements for future coaches. These key elements include:

- Human growth and developmental aspects of coaching
- Medical-legal aspects of coaching
- Social and psychological aspects of coaching
- Biomechanical aspects of coaching
- Strategies and technical aspects of coaching
- Professional preparation and practicum in coaching

Mission and Program Goals

The mission of the coaching minor is to respond to the critical need in today’s society for quality coaches. The Science of Coaching minor is designed to professionally prepare the student to become an effective coach on and off the field of play. The coursework provides students opportunities to learn and apply the principles and practices of coaching in any athletic or sport setting. The practicum allows the students to actively participate in a coaching experience under the guidance and supervision of a qualified coach.

Program Learning Outcomes

With a strong background in the science and physiology of movement, athletic training, care and prevention of athletic injuries and psychology of coaching, students will possess the knowledge, skills and experience required for services as an athletic coach.

1. Human growth and developmental aspects of coaching
   The program will emphasize practices, issues and theories in human growth and development with special attention placed on training, conditioning and nutrition.

2. Medical-legal aspects of coaching
   The program will emphasize practices, issues and theories in first aid, care, prevention and recovery from athletic injuries.
3. Social/Psychological aspects of coaching
   The program will emphasize practices, issues, and theories involving behavioral aspects of an athlete's relationship with society. Special attention will be focused on the societal role of coaches and the influences they have with their athletes.

4. Biomechanical aspects of coaching
   The program will emphasize practices, issues, and theories involving the scientific aspects of athletic performance including anatomy, kinesiology and physiology.

5. Strategies and technical aspects of coaching
   The program will emphasize practices, issues, and theories involved in the organization and strategies of sport and the techniques of coaching basic skills of sport.

6. Professional preparation and practicum of coaching
   The program will emphasize practices, issues, and theories regarding professional development in the coaching area and will culminate with a semester long practical field experience in their coaching area.

- Student Learning Outcomes

Student Learning Outcomes

1. Formulate a personal coaching philosophy and objectives.
2. Explain the different coaching styles.
3. Adhere to the code of ethics that guides coaches in the profession.
4. Demonstrate an understanding of the communication process involving the coach and players.
5. Plan a season practice and competition program involving an individual or team sport.
6. Demonstrate an understanding of technical and tactical skills in team sports.
7. Explain the nature of physical fitness and nutrition in relationship to enhanced performance.
8. Discuss the physiological, psychological and sociological values of sports participation.
9. Discuss the cultural aspects of sports including leisure purpose and recreation, classification of recreation, sports and education, co-recreation, sports and discrimination, and sportsmanship.
10. Discuss the risk management and legal aspects surrounding coaching.

- Required Courses

 ATH101: Athletic Training Seminar I (2 hours)
  AND -ATH101L: Athletic Training Seminar I Lab
  HED101: Intro to Health Care Skills (1 hours)
  PED110: Basic Weight Training Instruction (1 hours)
  AND -PED110L: Basic Weight Training Instruction Laboratory
  PED120: Fundamental Motor Development (4 hours)
  PED208: Organization and Administration of Physical Activities/Athletics (2 hours)
  PED311: Team Sports and Officiating (3 hours)
  AND -PED311L: Team Sports and Officiating Laboratory
  OR -PED312: Individual/Dual and Lifetime Activities (3 hours)
  AND -PED312L: Individual/Dual and Lifetime Activities Laboratory
  PED320: Coaching Theory (2 hours)
  PED321: Coaching Practicum (4 hours)
  PED421: Psycho-Social Aspects of Physical Activity (4 hours)

- Health Sciences

  Lucinda Glaser
  Health Sciences Articulation and Post Baccalaureate Programs Advisor

The aim of the health science major is to:
1) facilitate professional advancement for health care providers who currently hold a technical (associate) degree in a health-related profession
2) provide a program of study for those Carroll University students interested in obtaining coursework leading to professional licensure in one of the imaging modalities (Radiologic Technology or Diagnostic Medical Sonography).
This program is designed to lead to various 2+2 degree completion or professional programs only. The health science major is not to be used as a stand-alone major.

This major provides depth and breadth within the basic and behavioral sciences to prepare students for the balanced integration of critical thinking, basic science knowledge application, and interpersonal skills necessary to provide the best care in a variety of health science disciplines. To meet the educational missions of the university and of the health science major, students study in a variety of academic and professional disciplines including anatomy and physiology, psychology, chemistry, physics and computational thinking.

- Health Science Major

  Major Core Courses (49 credits)
  - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  AND -ANP130L: Intro to Human Anat and Phys I Lab
  - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  AND -ANP140L: Intro to Human Anat and Phys II Lab
  - CHE101: General Chemistry (4 hours)
  AND -CHE101L: General Chemistry Laboratory
  - CHE102: Biological Chemistry (4 hours)
  AND -CHE102L: Biological Chemistry Laboratory
  - PHY101: Introductory Physics I (4 hours)
  AND -PHY101L: Introductory Physics Laboratory
  - PHY102: Introductory Physics II (4 hours)
  AND -PHY102L: Introductory Physics Laboratory
  - PSY101: Introductory Psychology (4 hours)
  - PSY221: Life-Span Psychology (4 hours)
  - PSY260: Health Psychology (4 hours)
Bachelor of Science Degree Completion Emphasis

For students who have earned, or might be currently earning an Associate Degree in a health related profession such as surgical technician, radiography, etc., the Health Science major provides an avenue for professional growth and advancement. Students are awarded thirty credits by Carroll University for course work taken at either Waukesha County Technical College (WCTC) or Milwaukee Area Technical College (MATC) in conjunction with their respective degree.

The remaining required courses will vary depending on the degree program. For example, students with a surgical technician degree from MATC would be required to complete 36 of the above 48 core credits while a student with a radiography degree from WCTC would be required to complete 44 of the 48 core credits above. Students with a degree from either WCTC or MATC who wish to pursue the Health Science major would have an opportunity to take between ten and twenty-six elective credits. Additional course work focuses on preparing the individual for enhanced personal and professional development. Recommended options include a minor in a desired area of interest such as Hispanic Health and Human Services or Organizational Leadership, or a broad course of study within the liberal arts and sciences.

Fees

Specific courses that require use of disposable supplies are assigned a course fee as noted in the course description.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Interdisciplinary Health Sciences Courses

- HED101: Intro to Health Care Skills (1 hours)
- HED103: Personal and Community Health (4 hours)
- ESC105: Group Exercise Instruction (1 hours)
  AND -ESC105L: Group Exercise Instruction Lab
- PED110: Basic Weight Training Instruction (1 hours)
  AND -PED110L: Basic Weight Training Instruction Laboratory
- PED120: Fundamental Motor Development (4 hours)
- HSC130: Health Careers Exploration (2 hours)
- HSC290: Cultural Influences in Hispanic Health Care (2 hours)
- HSC300: Pharmacology (3 hours)
- ESC280: Exercise Physiology (4 hours)
- ESC322: Kinesiology (4 hours)

Major Courses

The list below displays all the courses offered by the program:

- HED101: Intro to Health Care Skills (1 hours)
- HED103: Personal and Community Health (4 hours)
- ESC105: Group Exercise Instruction (1 hours)
- ESC105L: Group Exercise Instruction Lab
- ESC280: Exercise Physiology (4 hours)
- ESC322: Kinesiology (4 hours)
- HSC130: Health Careers Exploration (2 hours)
- HSC290: Cultural Influences in Hispanic Health Care (2 hours)
- HSC300: Pharmacology (3 hours)
- HSC375: Clinical Education III (3 hours)
- HSC499: Health and Human Experience Capstone (1 hours)
- PED110: Basic Weight Training Instruction (1 hours)
- PED110L: Basic Weight Training Instruction Laboratory
- PED120: Fundamental Motor Development (4 hours)

Health Sciences - Diagnostic Medical Sonography Emphasis

Lucinda Glaser
Health Sciences Articulation and Post Baccalaureate Programs Advisor
Carroll University

Laura Sorenson
Education Coordinator, School of Diagnostic Medical Sonography, Aurora Health Care

Bridgett Willey
Program Director, School of Diagnostic Medical Sonography, University of Wisconsin Hospital and Clinics

Carroll University offers an opportunity to major in Health Sciences with an Emphasis in Diagnostic Medical Sonography (DMS) through Aurora Health Care in Milwaukee or through the University of Wisconsin Hospital and Clinics in Madison. The partnership allows students the benefits of close, personal attention during the first two years at Carroll followed by two years at Aurora's
School of Diagnostic Medical Sonography and its associated clinical sites or the University of Wisconsin Hospital and Clinics School of Diagnostic Medical Sonography and its associated clinical sites. Clinical placements for the DMS program can be geographically diverse. The student will be placed with a small class of other students pursuing diagnostic medical sonography.

Diagnostic medical sonographers most often are employed in hospitals, but can also find employment with physicians, medical and diagnostic laboratories, diagnostic imaging centers and outpatient care centers. Some diagnostic medical sonographers find employment with manufacturers of equipment used in the field. Long-term employment prospects in this area are forecast to be excellent.

Two tracks within the emphasis are available:
(1) General and Vascular or
(2) Cardiac and Vascular.

Entry into the Aurora Health Care or the University of Wisconsin Hospital and Clinics professional phase of the program is highly competitive and dependent upon completion of Carroll University general education and Health Science requirements, a minimum cumulative and required science course GPA of 3.0, a grade of 'BC' or better in all science courses, with the possible exception of one 'C' in Physics (the Physics 101 and Physics 102 averaged GPA must be at 2.5 or higher), CNA training (at the student's own expense), and the accumulation of at least 100 hours of direct patient care prior to application. The acceptance of students into the professional phase of the curriculum lies with the Aurora Health Care or UW Hospital and Clinics School of Diagnostic Medical Sonography Admissions Committee. There is a requirement that the student obtain CPR certification, preferably from the American Heart Association, prior to application. This program requires year round classes. See Admissions section of the catalog for details on applying.

- Required Carroll University Courses
  - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
    AND ANP130L: Intro to Human Anat and Phys I Lab
  - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
    AND ANP140L: Intro to Human Anat and Phys II Lab
  - BIO324: Bioethics (4 hours)
  - CCS100: Cultural Seminar (4 hours)
  - CHE101: General Chemistry (4 hours)
    AND CHE101L: General Chemistry Laboratory
  - CHE102: Biological Chemistry (4 hours)
    AND CHE102L: Biological Chemistry Laboratory
  - CMP112: Computational Thinking I (4 hours)
  - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
  - COM207: Intercultural Communication (4 hours)
  - ENG170: Writing Seminar (4 hours)
  - NRS100: Health Care and Nursing (4 hours)
    AND NRS100L: Health Care and Nursing Laboratory
  - NRS230: Health Assessment (4 hours)
    AND NRS230L: Health Assessment Laboratory
  - NRS236: Human Pathophysiologic Responses (4 hours)
  - PHY101: Introductory Physics I (4 hours)
    AND PHY101L: Introductory Physics Laboratory
  - PHY102: Introductory Physics II (4 hours)
    AND PHY102L: Introductory Physics Laboratory
  - PSY101: Introductory Psychology (4 hours)
  - PSY221: Life-Span Psychology (4 hours)

- Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

For a complete list of CCD courses, click here.

- Sonography Program sample program and Carroll University
- Sample program at Aurora Health Care DMS: General and Vascular track
- Health Sciences - Radiologic Technology Emphasis

Jamie Beaudry Director of Imaging Services
Froedtert Memorial Lutheran Hospital School of Radiologic Technology

Cindy Bradley Program Supervisor
Aurora Health Care School of Radiologic Technology

Lucinda Glaser Health Sciences Articulation and Post Baccalaureate Programs Advisor
Wheaton Franciscan Healthcare St. Joseph School of Radiologic Technology

Diane Wingenter Program Director
Wheaton Franciscan Healthcare St. Joseph School of Radiologic Technology
Carroll University offers an opportunity to major in Health Sciences with an Emphasis in Radiologic Technology with the Radiology Alliance (Froedtert Hospital and Wheaton Franciscan–St. Joseph) as well as with Aurora Health Care and each program’s associated clinical sites. The partnership allows students the benefits of close, personal attention during the first two years at Carroll followed by two years at one of these area hospital programs with a small class of other students pursuing Radiologic Technology.

Radiologic technologists are most often employed in hospitals, but can also find employment with physicians, medical and diagnostic laboratories, diagnostic imaging centers and outpatient care centers. Some radiologic technologists find employment with manufacturers of equipment used in the field. Long-term employment prospects in this area are forecast to be favorable.

Entry into the professional training phase at the hospitals is highly competitive and dependent upon completion of general education requirements, a minimum overall and science GPA of 2.75, a grade of 'C' or better in all science courses and completion of all required and elective courses within the first two years. A Certified Nursing Assistant license (CNA) is highly recommended. Lack of patient care experience may prevent acceptance into a hospital School of Radiologic Technology. CPR certification, preferably through the American Heart Association is required for some of the programs. A college level 2 credit Medical Terminology course is required for most programs prior to application. Taking a Medical Terminology class prior to application will remove the requirement for HSC 353 during the hospital portion of the program. The Radiologic Technology program requires year round classes. See Admissions section of this catalog for requirements.

### Carroll University Courses

- ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  - ANP130L: Intro to Human Anat and Phys I Lab
- ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  - ANP140L: Intro to Human Anat and Phys II Lab
- BIO324: Bioethics (4 hours)
- CCS100: Cultural Seminar (4 hours)
- CHE101: General Chemistry (4 hours)
  - CHE101L: General Chemistry Laboratory
- CHE102: Biological Chemistry (4 hours)
  - CHE102L: Biological Chemistry Laboratory
- COM207: Intercultural Communication (4 hours)
- ENG170: Writing Seminar (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- PHY101: Introductory Physics I (4 hours)
  - PHY101L: Introductory Physics Laboratory
- PHY102: Introductory Physics II (4 hours)
  - PHY102L: Introductory Physics Laboratory
- PSY101: Introductory Psychology (4 hours)
- PSY221: Life-Span Psychology (4 hours)
- PSY260: Health Psychology (4 hours)

### Bachelor of Science Requirement

**Bachelor of Science Requirement**

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

### The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

### Radiologic Technology Emphasis Sample Program

### Hispanic Health and Human Service

**Lucinda Glaser Health Sciences Articulation and Post Baccalaureate Programs Advisor**

The Hispanic Health and Human Service (HHHS) minor is open to all students in any major who are interested in combining knowledge and skills related to health and human services with an emphasis on serving Hispanic communities.

The interdisciplinary HHHS minor is an excellent companion minor for students who are pursuing careers in health (nursing, pre-med, physical therapy, public health, biology, chemistry or biochemistry) or human services (criminal justice, psychology, sociology, communication). It is also relevant to Spanish majors and minors who wish to acquire skills to work in health and human service fields.

The goals of the HHHS minor are to educate students who will:

1. Function competently in a professional capacity within a Hispanic/Latino health and human service delivery setting.
2. Recognize and respond to cultural characteristics that affect health and human service delivery in the Hispanic/Latino community.
3. Demonstrate the ability to communicate effectively using Spanish terminology in reading, writing and speaking.
Hispanic Health and Human Service Minor

Note: The research project that is a part of COM 207 must focus on a specific Hispanic cultural group for this course to be accepted in this minor.

There are 2 choices of NCEP trips that will satisfy the requirements for the HHHS minor:

NCEP 326, Culture and Health Care in Central America, or

NCEP 318, Mexico: Culture, Health and Human Services

(An alternative experience may satisfy this NCEP requirement with approval from HHHS advisor and associated faculty and staff.)

- Courses required for the Minor
  - COM207: Intercultural Communication (4 hours)
  - HSC290: Cultural Influences in Hispanic Health Care (2 hours)
  - HIS112: Intro to Latin America History (4 hours)
  - SPA201: Intermediate Spanish I (4 hours)
  - SPA202: Intermediate Spanish II (4 hours)
  - SPA290: Spanish for Health and Human Services (2 hours)

### HHHS Minor Sample Four-Year Curriculum Model

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>COM 207</td>
<td>HIS 112</td>
</tr>
<tr>
<td></td>
<td>(SPA 101)</td>
<td>(SPA 102)</td>
</tr>
<tr>
<td>Sophomore</td>
<td>SPA 201</td>
<td>SPA 202</td>
</tr>
<tr>
<td>Junior</td>
<td>HSC 290</td>
<td>SPA 290</td>
</tr>
<tr>
<td>Senior</td>
<td>NCEP 318 (fall of even years). Travel in January term.</td>
<td>NCEP 326. Travel in May term.</td>
</tr>
</tbody>
</table>

### Pre-Medical Laboratory Sciences

- Cindy Brown  Clinical Associate Professor and Education Coordinator
  - University of Wisconsin - Milwaukee

- Bill Mueller  Academic Advisor
  - Office of Student Affairs
  - University of Wisconsin - Milwaukee

- Lucinda Glaser  Health Sciences and 2 + 2 Program Advisor
  - Carroll University

Carroll University offers an opportunity to major in Medical Laboratory Sciences (formerly Clinical Laboratory Sciences) through a partnership with the University of Wisconsin-Milwaukee (UWM). The partnership allows students the benefits of close, personal attention during the first two and one-half years at Carroll while still providing access to the advanced clinical training facilities at UWM in the final stages of the program.

Medical Laboratory Science students can select one of several emphases at UWM:

- Medical Technology
- Cytotechnology
- Public Health Microbiology

These emphases provide a range of career opportunities in settings including hospitals, independent laboratories, public health facilities, industries, research laboratories, or sales and marketing centers. Long-term employment prospects in these areas are forecasted to be excellent.

Entry into the professional training phase of the program is competitive and dependent upon completion of general education requirements, a minimum GPA of 2.50 (overall and in required science courses), a grade of ‘C’ or better in courses transferring from Carroll and in all junior-level courses, and completion of all required and elective courses (90 credits) by second semester of the junior year.

### Medical Laboratory Sciences Major

- Science and mathematics courses taken at Carroll University
  - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
    - ANP130L: Intro to Human Anat and Phys I Lab
  - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
    - ANP140L: Intro to Human Anat and Phys II Lab
  - BIO212: Microbiology (4 hours)
    - BIO212L: Microbiology Laboratory
  - BIO220: Genetics (4 hours)
    - BIO220L: Genetics Laboratory
  - BIO271: Clinical Immunology (4 hours)
    - AND-BIO271L: Clinical Immunology Laboratory
  - CHE109: Principles of Chemistry I (4 hours)
    - AND-CHE109L: Principles of Chemistry I Laboratory
  - CHE110: Principles of Chemistry II (4 hours)
    - AND-CHE110L: Principles of Chemistry II - Laboratory
CHE201: Analytical Chemistry (4 hours) AND -CHE201L: Analytical Chemistry Laboratory
CHE203: Organic Chemistry I (4 hours) AND -CHE203L: Organic Chemistry I Laboratory
CHE204: Organic Chemistry II (4 hours) AND -CHE204L: Organic Chemistry II Laboratory
CHE308: Biochemistry I (4 hours) AND -CHE308L: Biochemistry I Laboratory
NRS236: Human Pathophysiologic Responses (4 hours)
CMP112: Computational Thinking I (4 hours)
CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Other Carroll University courses required in this transfer program
- CCS100: Cultural Seminar (4 hours)
- ENG170: Writing Seminar (4 hours)

GE 1 (F,H,S)
GE 2 (F,H,S or P)
One social science elective must satisfy UWM's Diversity requirement prior to graduation. ENG 164, American Indian Literature and Cultures will satisfy this diversity requirement as well as a GE 1 (P1, CCD).

Students must also demonstrate completion of UWM's language requirement by achieving one of the following:
- complete with passing grades (prior to entering university) at least two years of high school level instruction in a single foreign language, or
- complete with passing grades at least two semesters (minimum of 6 credits) of university level instruction in a single foreign language, or
- demonstrate foreign language ability at least equivalent to the above by means of a satisfactory score on an approved placement, proficiency, program or other appropriate examination.

Because of the specialized requirements of this program, students should work closely with the MLS Advisor.

It is also important to be in contact with the University of Wisconsin-Milwaukee advisor early in the junior year. There is a mandatory meeting for all MLS students each fall at UW-M.

Sample Medical Laboratory Program at Carroll University
Sample Program for Medical Lab Sciences at UWM

Physical and Health Education

Stephen J. Dannhoff Director and Assistant Clinical Professor
Pamela Pinahs-Schultz Professor

The physical education with health major and adapted physical education licensure are designed for students who wish to acquire the diverse competencies needed to teach physical education, health education, and adapted physical education at the Pre-K-12 level. This program provides students with competencies necessary to meet Wisconsin Department of Public Instruction (DPI) requirements.

Physical and Health Education (K-12) Major

Descriptions of Health Science courses in the Physical and Health Education major and the major's academic progression standards are in the Health Sciences section of this Catalog. Descriptions of Education Program courses in the Physical and Health Education program are in the Education Program section of this Catalog.

All physical education majors must be proficient to the intermediate level in swimming; a Water Safety Instructor and/or Lifeguarding certificate is strongly recommended.

Learning Outcomes for Physical Education

Upon graduation and entry into the profession of Physical and Health Education, the individual will:

1. Articulate basic physical education knowledge, central physical education concepts, and pedagogical practices within the field of physical education. Articulate basic health knowledge, central health concepts, health tools of inquiry, and pedagogical practices within the field of health education.
2. Develop a professional philosophy consistent with current National Association for Sport and Physical Education (NASPE) and state physical education standards, developmentally appropriate curriculum and instructional design, assessment, and professional development. Develop a professional philosophy consistent with current research findings and best practices in health education, curriculum and instructional design, assessment and professional development.
3. Identify the role, function, and responsibility of a physical education teacher and physical education program coordinator as part of the K-12 physical education program. Identify the role, function, and responsibility of a health education teacher and health education program coordinator as part of the comprehensive school health program.
4. Assess informally student physical education and health education needs based on a student's prior physical education experiences, physical fitness level, interests and needs in order to implement quality physical education instruction. Assess
informally student health needs based on a student's prior knowledge, interests and needs in order to implement quality health instruction.  
5. Identify and articulate the concepts and skills contained in the current state and NASPE physical education standards in the development of curriculum and instruction. Identify and articulate current state and national health standards.  
6. Design and deliver developmentally appropriate instructional programs based on stated goals and objectives contained in the current state and NASPE standards. Design and deliver developmentally appropriate instructional programs based on stated goals and objectives contained in the current state and national health standards, assessment data, utilizing the CDC guidelines for effective school health programs as the major health content organizer.  
7. Analyze and articulate the social, cultural, economic and political factors that affect physical education engagement, home-school relations, and classroom strategies in physical and health education.  
8. Evaluate commercial physical education programs as well as state, national, and international resources utilizing research-based principles in physical education curriculum, instruction and assessment. Critically evaluate developmentally appropriate commercial health education programs as well as state, national, and international resources utilizing research-based and best practices principles in health education curriculum, instruction, and assessment.  
9. Implement effective developmentally appropriate instructional approaches including the use of media and technology, multiple intelligences, differentiated instruction and brain based learning that will create learning experiences that will meet the diverse needs of pupils, the community and curricular goals.  
10. Apply formal and informal assessment strategies to evaluate and ensure continuous intellectual, social, and physical development of the pupil.  
11. Reflect and evaluate the impact of his or her instructional capacity on others (e.g. learners, parents/guardians, and other professionals) as well as his/her class room management skills and seek opportunities to grow professionally (i.e. Wisconsin Family and Consumer Educators, and Wisconsin Association for Health, Physical Education, Recreation, and Dance).

**Fees**

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

**Academic Progression Standards**

The academic progression standards for the physical and health education major are presented in the Academic Policies and Procedures section of this catalog.

- **Courses in the Physical and Health Education Major (67 credits)**
  - HED101: Intro to Health Care Skills (1 hours)
  - HED103: Personal and Community Health (4 hours)
  - ESC105: Group Exercise Instruction (1 hours)
  - PED110: Basic Weight Training Instruction (1 hours)
  - AND -PED110L: Basic Weight Training Instruction Laboratory
  - PED120: Fundamental Motor Development (4 hours)
  - ESC280: Exercise Physiology (4 hours)
  - ESC322: Kinesiology (4 hours)
  - ATH101: Athletic Training Seminar I (2 hours)
  - AND -ATH101L: Athletic Training Seminar I Lab
  - PED101: Dance (1 hours)
  - PED102: Basic and Intermediate Swim (2 hours)
  - PED103: Philosophy, Principles & History of Physical Education/Athletics (3 hours)
  - PED208: Organization and Administration of Physical Activities/Athletics (2 hours)
  - PED214: Teaching Outdoor Activities in Physical Education (2 hours)
  - PED310: Elementary Physical Education Activities (3 hours)
  - PED311: Team Sports and Officiating (3 hours)
  - AND -PED311L: Team Sports and Officiating Laboratory
  - PED312: Individual/Dual and Lifetime Activities (3 hours)
  - AND -PED312L: Individual/Dual and Lifetime Activities Laboratory
  - PED324: Physical Education Laboratory (2 hours)
  - PED353: Capstone: Special Methods in Teaching Physical Education (4 hours)
  - PED411: Adapted Physical Education (4 hours)
  - PED421: Psycho-Social Aspects of Physical Activity (4 hours)
  - HED201: Nutrition (2 hours)
  - HED202: Drugs, Society and Human Behavior (2 hours)
  - HED203: Consumerism in Health (2 hours)
  - HED204: Human Sexuality (2 hours)
  - HED323: School Health Programs (4 hours)
  - HED353: Special Methods in Teaching Health Education (4 hours)

- **Courses toward the Adapted Physical Education License**

  Note: Physical Education (PED) 311 and 312 must be taken concurrently.

  - EDU264: Collaboration for Academic, Social and Career Development (4 hours)
  - PED120: Fundamental Motor Development (4 hours)
  - PED411: Adapted Physical Education (4 hours)
  - EDU336: Collaborating with Families of Students with Disabilities (3 hours)
  - PED412: Assessment/Program Evaluation in Adapted Physical Education (2 hours)
  - PED414: Field Experience in Adapted PE. (1 hours)

  *Refer to the Education Program-Secondary Education Minor for additional course requirements necessary for Wisconsin Department of Public Instruction licensure.

- **Required Support Courses (14 credits)**
Undergraduate

- ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  AND -ANP130L: Intro to Human Anat and Phys I Lab
- ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  AND -ANP140L: Intro to Human Anat and Phys II Lab
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

Coaching Emphasis
- ATH101: Athletic Training Seminar I (2 hours)
  AND -ATH101L: Athletic Training Seminar I Lab
- HED101: Intro to Health Care Skills (1 hours)
  AND -HED101L: Health Care Skills Lab
- PED110: Basic Weight Training Instruction (1 hours)
  AND -PED110L: Basic Weight Training Instruction Laboratory
- PED120: Fundamental Motor Development (4 hours)
- PED208: Organization and Administration of Physical Activities/Athletics (2 hours)
- PED311: Team Sports and Officiating (3 hours)
  AND -PED311L: Team Sports and Officiating Laboratory
- OR -PED312: Individual/Dual and Lifetime Activities (3 hours)
  AND -PED312L: Individual/Dual and Lifetime Activities Laboratory
- PED320: Coaching Theory (2 hours)
- PED321: Coaching Practicum (4 hours)
- PED421: Psycho-Social Aspects of Physical Activity (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Physical Education/Health Education/Adapted Physical Education Four- One-Half-Year Curriculum Model

- Major Courses

The list below displays all the courses offered by the program:
- HED201: Nutrition (2 hours)
- HED202: Drugs, Society and Human Behavior (2 hours)
- HED203: Consumerism in Health (2 hours)
- HED204: Human Sexuality (2 hours)
- HED323: School Health Programs (4 hours)
- HED335: Special Methods in Teaching Health Education (4 hours)
- PED102: Basic and Intermediate Swim (2 hours)
- PED103: Philosophy, Principles & History of Physical Education/Athletics (3 hours)
- PED208: Organization and Administration of Physical Activities/Athletics (2 hours)
- PED214: Teaching Outdoor Activities in Physical Education (2 hours)
- PED310: Elementary Physical Education Activities (3 hours)
- PED311: Team Sports and Officiating (3 hours)
- PED311L: Team Sports and Officiating Laboratory
- PED312: Individual/Dual and Lifetime Activities (3 hours)
- PED312L: Individual/Dual and Lifetime Activities Laboratory
- PED320: Coaching Theory (2 hours)
- PED328: Elem Phy Ed Activities and Health Education (3 hours)
- PED353: Capstone: Special Methods in Teaching Physical Education (4 hours)
- PED391: Special Problems and Research (4 hours)
- PED398: Special Studies in Physical Educ (1 TO 3 hours)
- PED410: Adapted Physical Education (4 hours)
- PED412: Assessment/Program Evaluation in Adapted Physical Education (2 hours)
- PED414: Field Experience in Adapted P.E. (1 hours)
- PED421: Psycho-Social Aspects of Physical Activity (4 hours)

- Pre-Occupational Therapy

Monika Baldridge  Chair, Department of Health and Medicine

Carroll University offers an opportunity to pursue an emphasis in Pre Occupational Therapy for those students wishing to pursue future graduate education in Occupational Therapy. Occupational therapy is a health care profession that focuses on helping people of all ages regain, develop, or master everyday skills in order to live independent, productive, and satisfying lives. Students interested in pursuing occupational therapy as a career must complete an undergraduate degree (with required prerequisites), graduate from an entry level occupational therapy education program (Master's or Doctoral level) accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) and sit for the National Occupational Therapy Certification Examination.

Students are prepared for graduate occupational therapy education through the completion of an undergraduate degree and the specific required prerequisite courses of the occupational therapy educational program. Suggested undergraduate majors may include Psychology, Communications, Spanish, Biology, Public Health, or Exercise Science. Students may also choose undergraduate studies in other Humanities and Social Science programs based on student interests.

- Admission/Progression Requirements
Acceptance into a graduate occupational therapy education program is competitive and dependent upon multiple requirements. If you are interested in applying to an occupational therapy program, you must obtain specific requirements, prerequisites, and program content from the schools to which you are applying. Most programs also require volunteer or paid work experience with persons with disabilities, satisfactory performance on the Graduate Record Examination (GRE), letters of recommendation, Caregiver Background Check and a minimum undergraduate and professional grade point of 3.0 on a 4.0 scale. Many schools minimum GPA exceeds the 3.0 minimum. Courses required in Carroll Pre Occupational Therapy emphasis include:

- ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  AND -ANP130L: Intro to Human Anat and Phys I Lab
- ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  AND -ANP140L: Intro to Human Anat and Phys II Lab
- PSY101: Introductory Psychology (4 hours)
- PSY201: Abnormal Psychology (4 hours)
- PSY221: Life-Span Psychology (4 hours)
- SOC101: Introduction to Sociology (4 hours)
- OR -SOC110: Cultural Anthropology (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

Completion of the above Pre Occupational Therapy emphasis does not ensure future admittance to an occupational therapy program. Some educational programs may require additional prerequisite courses. Students are encouraged to identify the occupational therapy education program they intend to apply to by the completion of their senior year.

- Bachelor of Science Requirement

  The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

  **NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.**
  **FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

- The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

- Public Health

  **Pamela Pinahs-Schultz**  Professor  
  **Barbra J. Beck**  Associate Professor

The mission of public health is to fulfill society's interest in assuring conditions in which people can be healthy. Public health carries out its mission through organized, interdisciplinary efforts that address the physical, mental, and environmental health concerns of communities and populations at risk for disease and injury. Its mission is achieved through the application of health promotion and disease prevention technologies and interventions designed to improve and enhance quality of life. The core areas of public health include health services administration, biostatistics, epidemiology, behavioral sciences/health education and environmental health sciences.

Students in the Public Health major will also become eligible to sit for the Certified Health Education Specialist exam offered by the National Commission for Health Education Credentialing (NCHEC). NCHEC's voluntary professional certification program establishes a national standard for individual health education practitioners. Health educators are professionals who design, conduct and evaluate activities that help improve the health of all people. These activities can take place in a variety of settings that include schools, communities, health care facilities, businesses, colleges and government agencies. Certified Health Education Specialists (CHES) are those who have met the standards of competence established by NCHEC and have successfully passed the CHES examination. The CHES designation after a health educator's name is an indication of professional competency and commitment to continued professional development.

**Learning Outcomes for the Public Health Program**

Graduates of the Public Health Program:

1. Are able to use existing sources of health data, name the major causes of morbidity and mortality in the United States based on age and gender, and the important modifiable risk factors for each; important guidelines.
2. Can identify recommended clinical preventive services based on patient's age, sex, and risk factor status using appropriate guidelines.
3. Demonstrate the communication and psychomotor skills required to provide appropriate, recommended preventive services.
4. Understand features of health systems that promote the integration and utilization of disease prevention-health promotion services.
5. Describe the clinical, ethical, and legal issues associated with case finding and screening programs.
6. Identify the roles of various health care providers, interdisciplinary health care teams, consultation/referral sources, and community resources in providing clinical preventive services and complementary clinical care.
7. Understand the transmission of disease in clinical settings and demonstrate knowledge and skills necessary to take universal precautions.

These learning outcomes are delivered through a focused curriculum in disease prevention, quantitative skills, health service organization and delivery, and community dimensions of practice.

**Admission and Progression Standards**
Students will be subject to Carroll University admission and progression standards.

**Caregiver Background and Criminal History Check**

The student must complete a Background Information Disclosure Form prior to community placements. Certain convictions may prevent or significantly limit the ability of the university to place a student in the field experience and internship courses resulting in the student being unable to meet the university’s graduation requirements.

- **Public Health Major**
  - Core Courses (34-40 credits)
    - PBH101: Introduction to Public Health (4 hours)
    - PBH102: Global Health (4 hours)
    - PBH210: Public Health for Communities (4 hours)
    - PBH211: Public Health Field Experience (2 hours)
    - PBH302: Environmental and Occupational Health (2 hours)
    - PBH312: Public Health Policy and Administration (4 hours)
    - PBH324: Program Development, Assessment, and Evaluation in Public Health (4 hours)
    - PBH421: Epidemiology (4 hours)
    - PBH480: Public Health Internship (6-12 hours)
  - Required Supporting Courses (15 credits)
    - COM290: Intro to Health Communication (4 hours)
    - HED101: Intro to Health Care Skills (1 hours)
    - OR: Equivalent CPR
    - PSY101: Introductory Psychology (4 hours)
    - PSY260: Health Psychology (4 hours)
    - GRC106: Intro-Communication Technology (2 hours)

- **Bachelor of Science Requirement**

  The requirements for a Bachelor of Science degree are:

  - CMP112 and either CMP113 or CMP114 or
  - MAT140 or higher and CSC110 or higher;

  **NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

- **The Pioneer Core Program**
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- **Public Health Minor**
  - Core Courses

  The Public Health minor will utilize core public health courses while potentially fulfilling some General Education requirements. This minor helps the undergraduate gain an understanding of important local, national, and global public health issues giving additional diversity to their current course of study.

  - PBH101: Introduction to Public Health (4 hours)
  - PBH102: Global Health (4 hours)
  - PBH210: Public Health for Communities (4 hours)
  - PBH324: Program Development, Assessment, and Evaluation in Public Health (4 hours)
  - PBH421: Epidemiology (4 hours)

- **Major Courses**

  The list below displays all the courses offered by the program:

  - PBH101: Introduction to Public Health (4 hours)
  - PBH102: Global Health (4 hours)
  - PBH210: Public Health for Communities (4 hours)
  - PBH211: Public Health Field Experience (2 hours)
  - PBH302: Environmental and Occupational Health (2 hours)
  - PBH312: Public Health Policy and Administration (4 hours)
  - PBH324: Program Development, Assessment, and Evaluation in Public Health (4 hours)
  - PBH421: Epidemiology (4 hours)
  - PBH480: Public Health Internship (6-12 hours)

- **Sport and Recreation Administration**

  **Stephen Dannhoff  Assistant Clinical Professor**
  **Director of Physical and Health Education/Sport Recreation Administration**

  The curriculum in sports administration is designed to prepare students for careers of leadership in the field of sports administration. During the course of study, sports administration students gain expertise for multi-faceted sports careers in the fields of facilities management, information technology, front office administration and community recreation. The program provides students the opportunity to garner knowledge and develop skills through coursework and mentorship experience within the sport industry.
The Carroll University Sport and Recreation Administration Major will provide students with a knowledge, understanding, and appreciation of the sport industry that will provide career advancement opportunities. The tools and resources provided to the students will occur in a positive learning environment combining both theory and practice. In pursuit of our mission we will: Prepare students to critically analyze issues and problems related to the sport administration field, Ensure students are proficient in the outcome areas of personal and professional decision making, ethical and legal practices, practical and theoretical competence, and professional development, and require students to acquire significant contact hours in practical and internship settings to enhance authentic learning.

Program Level Student Learning Outcomes

1) Display an understanding of the managerial considerations involved in sport management practice within a variety of professional settings
2) Display an understanding of how marketing principles may be effectively applied in a variety of sport management settings, particularly as they pertain to ticket and sponsorship sales and customer service
3) Display an understanding of how public relations tactics such as news releases and community relations may be effectively employed in a variety of sport management settings,
4) Display an understanding of the financial dimensions of sport management practice, including resource acquisition and budget considerations,
5) Display an understanding of the economic dimensions of sport management practice, particularly as it relates to public finance of sport and economic impact evaluations,
6) Display an understanding of the ethical dimensions of sport management practice and be able to make ethical decisions based on sound professional judgment,
7) Display an understanding of the legal dimensions of sport management practice and be able to apply legal theory such as contract law and tort law in various sport management settings,
8) Display an understanding of the key considerations involved in successful sport event and sport facility management,
9) Display sound critical thinking skills that can be employed in sport management settings,
10) Display effective oral, written and interpersonal communication skills as required for successful sport management practice,
11) Display proficiency in employing technologies commonly utilized by sport managers,
12) Display proficiency in applying sport management knowledge and related skills in an in-depth experiential learning assignment (i.e., internship).

Student Learning Goals

1) Secure an understanding of how relevant managerial, marketing, public relations, economic, and financial theory are applicable to the various facets of sport management practice
2) Develop an understanding of and an appreciation for the psycho-social dimensions of sport and sport management practice
3) Gain an understanding of the ethical and legal dimensions of successful sport management practice
4) Develop critical thinking skills, particularly as they are relevant to successful sport management practice
5) Advance oral, written and interpersonal communication skills as necessary for successful sport management practice
6) Develop skills pertaining to the use of technology in sport management
7) Acquire relevant professional experience in which knowledge secured in sport management classes is successfully applied in a sport management setting

Internship Requirements

- A minimum grade point average of 2.0 at the time of application for the internship.
- A minimum of 480 hours of actual work-related experience, preferably for an entire semester.
- The intern works under the guidance of experienced individuals/supervisors in the area of interest that has been pre-approved by the Director of Internships.
- Periodic and final written reports about the work experiences, by both the intern and his/her supervisors, are submitted to the Director of Internships.

Fees

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

- Core courses (35)
  - ACC205: Financial Accounting (4 hours)
  - BUS301: Principles of Marketing (4 hours)
  - BUS302: Principles of Management (4 hours)
  - PED103: Philosophy, Principles & History of Physical Education/Athletics (3 hours)
  - PED208: Organization and Administration of Physical Activities/Athletics (2 hours)
  - PED421: Psycho-Social Aspects of Physical Activity (4 hours)
  - SRM315: Sport Management Practicum I (1 hours)
Undergraduate

- SRM405: Recreational Programming (4 hours)
- SRM407: Facility Operation (2 hours)
- SRM409: Sports Promotion and Event Planning (2 hours)
- SRM410: Recreation Administration and Supervision (4 hours)
- SRM435: Sport Management Practicum II (1 hours)

Capstone Course (12 Credits)
- SRM480: Capstone: Internship in Sport Management (12 hours)

Minors Available
- Business Marketing Minor (20 Credits)
  - BUS101: Introduction to Business (4 hours)
  - BUS301: Principles of Marketing (4 hours)
  - Additional courses needed to complete this minor:
    - Choose 12 or more credit hours from the following:
      - BUS320: Promotion Management (4 hours)
      - BUS327: Business to Business Marketing (4 hours)
      - BUS435: Marketing Research (4 hours)
- Business Management and Leadership Minor (20 Credits)
  - BUS101: Introduction to Business (4 hours)
  - BUS302: Principles of Management (4 hours)
  - Additional courses needed to complete this minor:
    - Choose 12 or more credit hours from the following:
      - BUS265: Human Resource Management (4 hours)
      - BUS479: Consulting Management (4 hours)
      - LEA190: Leadership and Personal Effectiveness (4 hours)
      - LEA302: Leadership Theory and Practice (4 hours)
      - LEA499: Leading Change (4 hours)

Other minors that would complement the Sports and Recreation Administration major are:
- Communications Minor
- Graphic Design Minor
- Web Design Minor
- History Minor
- Progessional Writing Minor
- Sports Nutrition Minor
- Therapeutic Recreation Minor

Bachelor of Science Requirement

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Sport and Recreation Administration 4 Year Plan

Major Courses

The list below displays all the courses offered by the program:
- SRM315: Sport Management Practicum I (1 hours)
- SRM405: Recreational Programming (4 hours)
- SRM407: Facility Operation (2 hours)
- SRM409: Sports Promotion and Event Planning (2 hours)
- SRM410: Recreation Administration and Supervision (4 hours)
- SRM435: Sport Management Practicum II (1 hours)
- SRM480: Capstone: Internship in Sport Management (12 hours)

Therapeutic Recreation Emphasis

Lucinda Glaser  Health Sciences Articulation and Post Baccalaureate Programs Advisor
Carroll University

Patty Thomas  Clinical Assistant Professor
Therapeutic Recreation Certificate Coordinator
University of Wisconsin - Milwaukee
Carroll University offers an opportunity to receive an emphasis in Therapeutic Recreation in collaboration with the University of Wisconsin-Milwaukee via online course work. Students majoring in Recreation Management, Psychology, Public Health, or Exercise Science are thought to be the primary users of this certification route; however other students may opt to use this course sequence. Courses done in collaboration with the University of Wisconsin-Milwaukee are in an online format which requires regular coursework with assignments due every week throughout a typical academic semester. Please note that Carroll University and the University of Wisconsin-Milwaukee start and stop dates for any given semester will not be identical. Due to the need to be admitted and registered as a student at UW-M, it is important for the student to plan ahead. A lead time of at least 2 weeks prior to the start of the class through UW-M is necessary. Contact Lynn Peterson in order to register for the Therapeutic Recreation courses.

Therapeutic Recreation, also known as recreation therapy, is a unique profession that utilizes recreation and activity based interventions to help improve an individual's physical, emotional, cognitive, social, spiritual and leisure functioning for optimal participation in life. The Therapeutic Recreation Specialist, also known as a Recreation Therapist, assists clients to develop skills, knowledge and behaviors for daily living and community involvement. The therapist works with the client and his/her family to incorporate specific leisure interests and community resources into therapy to achieve optimal outcomes that transfer to his/her real life situation.

This emphasis is designed for a broad audience of individuals who work with people with disabilities. The program focuses on the development of knowledge and acquisition of skills and abilities in the areas of Health and Therapeutic Recreation. In preparation for the nationally recognized certification examination, coursework covers topic areas included in the National Council for Therapeutic Recreation Certification Job Analysis categories. Courses present the concepts of health, wellness, disease and illness in relation to quality of life for individuals with disabilities. Specific skill development in the areas of assessment and facilitation techniques is also taught and complemented with an ongoing focus on emerging issues in the field of therapeutic recreation.

Completion of this emphasis allows the individual to meet one portion of the academic coursework required for the credential as a Certified Therapeutic Recreation Specialist (CTRS) with the National Council for Therapeutic Recreation Certification. Additional requirements are needed to fully qualify for the credential. The individual must take responsibility to meet the additional requirements to be eligible to sit for the CTRS certification exam. The additional requirements include supportive coursework, a minimum of a bachelor's degree, and one year of direct care experience under the direction of a Certified Therapeutic Recreation Specialist (a 14 week internship option may exist for students studying Sport and Recreation Management). Completion of these requirements will meet Equivalency Path B of the National Council for Therapeutic Recreation Certification requirements for exam eligibility. Please refer to the National Council for Therapeutic Recreation Certification Standards for additional information.

Students are responsible for the procurement of their internship site however a faculty advisor may offer some assistance.

**Emphasis Certification Coursework**

18 credits of supported courses are required in Therapeutic Recreation or Recreation Management. 12 of those 18 credits must be Therapeutic Recreation specific. REC 203, 300, 308, 310, 400 are offered online only, in collaboration with UW-Milwaukee. Sport and Recreation Management (SRM) 405 and 410 are currently offered on the Carroll University campus and are required in the Sport and Recreation Management major. Specific course descriptions are located in the Sport and Recreation Management section of the catalog.

- **Emphasis Certification Coursework**

  18 credits of supported courses are required in Therapeutic Recreation. 12 of those 18 credits must be Therapeutic Recreation specific. All courses with an asterisk are offered online only, in collaboration with UW-Milwaukee. Sport and Recreation Administration 405 and 410 are currently offered on campus and required in the Sport and Recreation Administration major. Specific course descriptions are located in the Sport and Recreation Administration section of the catalog.

- **UW-M Online courses:**
  - REC203: Therapeutic Recreation Process* (3 hours)
  - REC300: Therapeutic Recreation Assessment and Documentation* (4 hours)
  - REC308: Therapeutic Recreation in Physical Rehabilitation and Behavioral Health* (4 hours)
  - REC310: Facilitation Techniques in Therapeutic Recreation* (4 hours)
  - REC400: Issues and Trends in Therapeutic Recreation* (3 hours)

  Must earn a grade of “B” or higher in all Therapeutic Recreation courses to sit for certification examination.

- **Carroll University courses:**
  - REC405: Recreational Programming (4 hours)
  - REC410: Recreation Administration and Supervision (4 hours)

- **Required Emphasis Support Courses**

  (Required supportive coursework for CTRS Exam)
  - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  - ANP130L: Intro to Human Anat and Phys I Lab
  - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  - ANP140L: Intro to Human Anat and Phys II Lab
  - PED120: Fundamental Motor Development (4 hours)
  - PSY101: Introductory Psychology (4 hours)
  - PSY201: Abnormal Psychology (4 hours)

- **Bachelor of Science Requirement**

  The requirements for a Bachelor of Science degree are:
  - CMP112 and either CMP113 or CMP114 or
  - MAT140 or higher and CSC110 or higher;
  - **NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR

- **The Pioneer Core Program**
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
Cross Cultural Development

For a complete list of CCD courses, click here.

Therapeutic Recreation Emphasis
Recreation Management Four-Year Plan Therapeutic Recreation Emphasis

Major Courses

The list below displays all the courses offered by the program:

- UW-M Online courses:
  - REC203: Therapeutic Recreation Process* (3 hours)
  - REC300: Therapeutic Recreation Assessment and Documentation* (4 hours)
  - REC308: Therapeutic Recreation in Physical Rehabilitation and Behavioral Health* (4 hours)
  - REC310: Facilitation Techniques in Therapeutic Recreation* (4 hours)
  - REC400: Issues and Trends in Therapeutic Recreation* (3 hours)

Must earn a grade of "B" or higher in all Therapeutic Recreation courses to sit for certification examination.

Carroll University Courses

- REC480: Internship-Recreation Management (12 hours)

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### Physical Education/Health Education/Adapted Physical Education Four-One-Half-Year Curriculum Model

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*PPST must be successfully completed during sophomore year
**PRAXIS Physical Education and Health Education Content Standards Test must be successfully completed during spring semester of or summer term following junior
Recreation Management Four-Year Plan Therapeutic Recreation Emphasis

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= 139 credits
### Sample Medical Laboratory Program at Carroll University

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<td>CCS 100 - Cross Cultural Seminar GE 1 (F,P,S) - General Education Course**</td>
<td>ENG 164 (GE1 - H1, CCD) - American Indian Literature and Spirituality**</td>
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<td>CHE 203 - Organic Chemistry I*</td>
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<td>CMP 114 - Computational Thinking II</td>
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<td>BIO 220 - Genetics</td>
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*Organic Chemistry courses (CHE 203 and 204) are also offered in the summer.

**Work with the University of Wisconsin - Milwaukee Academic Advisor regarding appropriate coursework that will transfer and/or use this course equivalencies link: https://www4.uwm.edu/des/apps/RTCE/ or search online for "Transfer Equivalency Database UWM". As the degree comes from UW-M, it is important to take General Education courses that will work at UW-M, not necessarily what is required for Carroll's Gen Ed program.

***A Clinical Immunology course is required prior to going to UWM. It would be possible to transfer to UW-M after 2 years in order to finish up prerequisite courses there, including Immunology.

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### Sample program at Aurora Health Care DMS: General and Vascular track

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<td>HSC 373 - Clinical Education I</td>
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* See Health Science advisor for information regarding other DMS tracks and programs.
## Sample Program for Medical Lab Sciences at UWM

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### Sonography Program sample program and Carroll University

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### Quick Links
- [Catalog Home](catalog.carrollu.edu/contentm/blueprints/blueprint_display.php?bp_listing_id=162&blueprint_id=138&sid=18&menu_id=1741)
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Therapeutic Recreation Emphasis

Possible Four Year Plan

The Therapeutic Recreation emphasis may be combined with a major in Sport and Recreation Administration. Additional 4 year plans may be possible. Consult with Therapeutic Recreation Advisor.

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<th>YEAR</th>
<th>FALL</th>
<th>WINTER</th>
<th>SPRING</th>
<th>SUMMER</th>
</tr>
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<tbody>
<tr>
<td>Freshman</td>
<td>ANP 130 - Intro to Anatomy and Physiology I</td>
<td>ANP 140 - Intro to Anatomy and Physiology II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td>REC 203 - Therapeutic Recreation Process*</td>
<td>PED 120 - Fundamental Motor Development</td>
<td></td>
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</tr>
<tr>
<td>Junior</td>
<td>REC 308 - Therapeutic Recreation in Physical Rehabilitation and Behavioral Health</td>
<td>REC 300 - Therapeutic Recreation Assessment and Documentation</td>
<td>REC 400 - Issues and Trends in Therapeutic Recreation</td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>PSY 201 - Abnormal Psychology</td>
<td></td>
<td>REC 310 - Facilitation Techniques in Therapeutic Recreation</td>
<td></td>
</tr>
</tbody>
</table>

*REC 203 - Therapeutic Recreation Process - is also available in the summer.

Contact Lynn Peterson in order to be cleared to register for any Therapeutic Recreation course through UWM. A minimum 2 week lead time prior to the start of the semester is necessary. The online courses available through UWM are: REC 203, REC 300, REC 308, REC 310 and REC 400.

Following graduation, students will need to work for 1 year with a Certified Therapeutic Recreation Specialist (CTRS) to be eligible for the Certified Therapeutic Recreation Specialist Exam. [A 14 week internship option may exist for Sport and Recreation Management majors.] Student must pass Therapeutic Recreation courses with a B or better in order to get certified.
<table>
<thead>
<tr>
<th>Department:</th>
<th>Human Movement Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairperson:</td>
<td>Thomas Pahnke</td>
</tr>
<tr>
<td>Room:</td>
<td>Physical Therapy 113</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:tpahnke@carrollu.edu">tpahnke@carrollu.edu</a></td>
</tr>
<tr>
<td>Telephone:</td>
<td>262-951-3158</td>
</tr>
<tr>
<td>Fax:</td>
<td>262-524-7690</td>
</tr>
</tbody>
</table>

### Programs

#### Undergraduate
- Athletic Training Education
- Exercise Science
- Sports Nutrition
The Athletic Training Education Program at Carroll University is accredited by the Commission on Accreditation of Athletic Training Education (CAATE).

The aim of the athletic training program is to train qualified health care professionals at the baccalaureate level who are educated and experienced in the management of health care problems associated with physical activity across the life span as defined by the National Athletic Trainers’ Association. Students are educated to work with athletic and physically active populations in a variety of settings including, but not limited to, secondary schools, universities, professional sports programs, sports medicine clinics, prevention and wellness settings, and industrial settings.

The graduate athletic trainer is competent in the delivery of athletic training. The graduate possesses the knowledge and skills needed for risk management and prevention of injuries associated with physical activity, the pathology of injuries and illnesses, assessment and evaluation, and acute care of injury and illnesses for the physically active. The graduate applies knowledge and skills concerning pharmacology, therapeutic modalities, therapeutic exercise, general medical conditions and disabilities, and nutritional aspects of injury and illness for the physically active population. The athletic trainer demonstrates the ability to carry out psychosocial intervention and referral, perform health care administration, and uphold professional development and Institutional, and professional assessments occur regularly.

To meet the education mission for service and scholarly activity, the program utilizes a variety of individuals including, but not limited to, academic and clinical athletic trainers; basic, behavioral, and social scientists; other health care professionals; athletes and coaches; and community members. The athletic training academic faculty is responsible for design, implementation, and evaluation of the professional curriculum. In addition to the academic training of future athletic trainers, the program is committed to intra-and interdisciplinary service and scholarly activity in the delivery of athletic training.

Learning Outcomes for Athletic Training Education Program

Learning Outcomes for Athletic Training Education Program

Upon graduation and entry into the field of athletic training, the individual:

1. Will possess the knowledge and skills of an entry-level athletic trainer in the six practice domains of athletic training set forth by the National Athletic Trainers’ Association Board of Certification: Prevention of Injuries; Recognition, Evaluation & Assessment of Injuries; Immediate Care of Injuries; Treatment, Rehabilitation & Reconditioning of Injuries; Organization & Administration; and Professional Development & Responsibility.
2. Will have experience with multiple athletic training and health care settings including interactions with health care providers from various disciplines.
3. Will be able to think critically to effectively solve problems in a variety of dynamic athletic training environments.
4. Will understand the importance and process of becoming life-long learners in order to contribute to the field of athletic training.
5. Will be an effective communicator among health care providers, administrators, coaches, athletes, family, and community in their delivery of athletic training.
6. Will practice with professionalism and integrity and adhere to the professional code of ethics outlined by the National Athletic Trainers’ Association.

Academic Progression Standards

The academic progression standards for the athletic training education program are presented in the Academic and Program Policies section of this catalog.

Admission Requirements

The admission requirements for the athletic training education program are presented in the Admission section of the catalog.
Successful participation in the Athletic Training Education Program requires that a student possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide a handicapped person (handicapped is defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973) with an equivalent opportunity to achieve results equal to those of a non-handicapped person, there are no substitutes for the following essential skills. The applicant must initially meet these requirements to gain admission to the program, and must also continue to meet them throughout participation in the program.

1. **Physical requirements**: The applicant/student must be willing and capable of performing physical assessments (e.g. range of motion, manual muscle testing, visual observations) of patients using various evaluative and therapeutic instruments and equipment. The applicant/student must also be able to perform athletic training skills (e.g. taping, splinting, ambulatory aid, rehabilitative and treatment techniques, activities of daily living). In addition, an applicant/student must successfully complete and maintain certification in first aid and cardiopulmonary resuscitation.

2. **Communication**: An applicant/student must be able to elicit information, describe changes in health, mood, and activity and perceive non-verbal communication. An applicant/student must be able to communicate effectively and efficiently with patients and all members of the health care team.

3. **Intellectual abilities**: Problem solving, a critical skill of athletic trainers, requires abilities in measurement, calculation, reasoning and analysis.

4. **Behavioral and social attributes**: The applicant/student must be able to tolerate physically active taxing workloads and to function effectively under stress, must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in athletic training care provided to people. The applicant/student must possess the qualities of integrity, concern for others, compassion, skills in interpersonal relationships and motivation for a career in health care.

The athletic training program can require that an applicant/student undergo a physical examination. A handicapped applicant/student shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied benefits of, nor be subjected to discrimination in the athletic training program. Policies for students with disabilities can be found in the Student Life section of the academic catalog.

**Caregiver Background and Criminal History Check**

**Health, Immunizations and Criminal Background Investigation**

Athletic training professional phase students are required to have completed a health screening, updated immunizations and tuberculosis screening according to current Centers of Disease control and Prevention (CDC) recommendations for health professionals, criminal background investigation and drug screening as required by internship placement sites. Exceptions to the immunization requirements will be considered on a case-by-case basis where, for example, a student has an allergy to a vaccine or one of its components. If an exception to the immunization requirements is approved, the University cannot guarantee that its affiliated hospitals and clinics will allow the student to participate in patient care, which is a fundamental requirement of the clinical education component of the program.

**Insurance**

**Professional Liability**: Students are required to purchase on an annual basis professional liability insurance through a university-endorsed company.

**Fees**

Students enrolled in the professional phase of the Athletic Training Education Program are assessed a program fee for course related supplies and equipment, assistance with membership dues in the National Athletic Trainer Association, and liability insurance. Select athletic training course in the preprofessional phase that require use of equipment and disposable supplies are assigned a course fee.

**Curriculum**

Throughout the curriculum, subject matter progresses from the basic sciences to clinical sciences to professional content. In coordination with academic coursework, learning over time occurs by interaction with clinical instructors through field experiences in traditional athletic training settings, other health care settings, and practice and athletic event coverage. Students can expect to travel to offsite clinical rotations/laboratory sessions or field experiences in the professional phase of the program. Throughout the program, students are evaluated on the attainment of knowledge to include psychomotor, cognitive, and affective competencies as outlined by the National Athletic Trainers' Association Education Council. Outcomes are measured through ongoing self, peer, and clinical instructor assessments.

Ongoing program assessments include student evaluations and feedback, curriculum evaluations, institutional self study assessment and site visits by the Commission on Accreditation of Athletic Training Education (CAATE).

**Athletic Training Major**

- **ATH101**: Athletic Training Seminar I (2 hours)
  - AND **ATH101L**: Athletic Training Seminar I Lab
- **ATH102**: Athletic Training Seminar II (2 hours)
  - AND **ATH102L**: Athletic Training Seminar II Laboratory
- **ATH301**: Assessment and Evaluation I (4 hours)
  - AND **ATH301L**: Assessment and Evaluation I Laboratory
- **ATH302**: Assessment and Evaluation II (4 hours)
  - AND **ATH302L**: Assessment and Evaluation II Laboratory
ATH304: Therapeutic Modalities (4 hours)
AND  -ATH304L: Therapeutic Modalities Lab
ATH311: Athletic Training Practicum I (1 hours)
ATH312: Athletic Training Practicum II (1 hours)
ATH403: Applied Exercise for Musculoskeletal Injuries (4 hours)
AND  -ATH403L: Applied Exercise for Musculoskeletal Injuries Laboratory
ATH405: Admin of Athletic Training (2 hours)
ATH407: Athletic Training Seminar III (2 hours)
ATH411: Athletic Training Practicum III (1 hours)
ATH499: Capstone-Internship in Athletic Training (14 hours)
HSC300: Pharmacology (3 hours)
ESC320: Exercise Testing and Prescription (4 hours)
AND  -ESC320L: Exercise Testing & Prescription Lab
Required Support Courses (42 credits)

- ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
  AND  -ANP130L: Intro to Human Anat and Phys I Lab
- ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
  AND  -ANP140L: Intro to Human Anat and Phys II Lab
- CHE101: General Chemistry (4 hours)
  AND  -CHE101L: General Chemistry Laboratory
- CHE102: Biological Chemistry (4 hours)
  AND  -CHE102L: Biological Chemistry Laboratory
- HED101: Intro to Health Care Skills (1 hours)
  OR  - Equivalent CPR
- PED110: Basic Weight Training Instruction (1 hours)
  AND  -PED110L: Basic Weight Training Instruction Laboratory
- ESC280: Exercise Physiology (4 hours)
- ESC300: Nutrition and Health (4 hours)
- ESC322: Kinesiology (4 hours)
- PHY101: Introductory Physics I (4 hours)
  AND  -PHY101L: Introductory Physics Laboratory
- PHY102: Introductory Physics II (4 hours)
  AND  -PHY102L: Introductory Physics Laboratory
- PSY101: Introductory Psychology (4 hours)
Degree Support Courses (8 credits)

- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
Bachelor of Science Requirement
Bachelor of Science Requirement
The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Athletic Training Education Program Four-Year Curriculum Model
Pre-Physical Therapy 4 year plan
Click here for a four year plan with a major in Athletic Training.

Major Courses

The list below displays all the courses offered by the program:

- ATH101: Athletic Training Seminar I (2 hours)
- ATH101L: Athletic Training Seminar I Lab
- ATH102: Athletic Training Seminar II (2 hours)
- ATH102L: Athletic Training Seminar II Laboratory
- ATH301: Assessment and Evaluation I (4 hours)
- ATH301L: Assessment and Evaluation I Laboratory
- ATH302: Assessment and Evaluation II (4 hours)
- ATH302L: Assessment and Evaluation II Laboratory
- ATH304: Therapeutic Modalities (4 hours)
- ATH304L: Therapeutic Modalities Lab
- ATH311: Athletic Training Practicum I (1 hours)
- ATH312: Athletic Training Practicum II (1 hours)
- ATH403: Applied Exercise for Musculoskeletal Injuries (4 hours)
- ATH403L: Applied Exercise for Musculoskeletal Injuries Laboratory
- ATH405: Admin of Athletic Training (2 hours)
- ATH407: Athletic Training Seminar III (2 hours)
- ATH411: Athletic Training Practicum III (1 hours)
- ATH499: Capstone-Internship in Athletic Training (14 hours)

Exercise Science

Amanda R. Bonikowske  Assistant Professor
Brian P. Edlbeck  Clinical Assistant Professor
Jamie L. Krzykowski  Clinical Assistant Professor
David B. MacIntyre  Clinical Associate Professor
Brenda D. Reeves  Clinical Assistant Professor
Jason T. Roe  Senior Lecturer

The mission of the Exercise Science Program at Carroll University is to develop entry-level professionals who can perform a range of health/fitness assessments and prescribe evidence-based interventions across various populations and abilities. Students will possess strong critical thinking, communication, and interpersonal skills appropriate for multiple settings. The program will prepare students for professional certification exams (ACSM, NSCA) and postgraduate study in exercise science or other related disciplines.
The exercise science program emphasizes the area's body of knowledge, research, and practice. Constant reinforcement of content through practical experiences occurs through observations, exposure to clients in academic courses, practicum experiences, and full-time internships. Graduates are qualified professionals who are liberally educated and possess the foundations for lifelong learning.

Individuals interested in health/fitness management are prepared to provide exercise and general wellness programs to apparently healthy individuals across the life span in safe and effective environments. Those interested in strength and conditioning are prepared to provide training programs to improve athletic performance across the life span. Students are also well prepared for advanced study in either graduate school or a clinical health field.

**Learning Outcomes for Exercise Science**

Upon completion of the Exercise Science Program, the individual:

1. Will demonstrate fundamental and applied scientific knowledge of human movement and performance in preparation for certification, entry-level employment, or advanced degrees in health-related graduate programs.
2. Will demonstrate competency in appropriately screening and assessing the health status of individuals across various populations and abilities.
3. Will be able to appropriately select, design, implement, and modify individualized health and fitness interventions for clients across various populations and abilities.
4. Will be able to educate, instruct, and motivate individuals in lifestyle modification in diverse settings across various populations and abilities.
5. Will be able to appropriately select, implement, and interpret health and fitness assessments across various populations and abilities.
6. Will possess strong communication and interpersonal skills to interact and collaborate effectively with professionals and peers.
7. Will be able to read and interpret scientific research and utilize the scientific inquiry process to collect appropriate data, analyze results, and present conclusions in suitable oral, written, and technology formats.
8. Will display a strong sense of responsibility/accountability, initiative, and professional engagement.

**Fees**

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

- **Exercise Science Major**
  - Core Courses
    - ESC100: Introduction to Exercise Science (2 hours)
    - ESC215: Group Exercise Workshop (2 hours)
    - ESC280: Exercise Physiology (4 hours)
    - ESC300: Nutrition and Health (4 hours)
    - ESC320: Exercise Testing and Prescription (4 hours)
    - ESC322: Kinesiology (4 hours)
    - ESC390: Strength & Conditioning Theory Across the Lifespan (4 hours)
    - ESC420: Exercise Prescription for Special Populations (4 hours)
    - ESC440: Lifetime Weight Management and Behavior Change (4 hours)
  - Tracks
    - Undergraduate Exercise Science (UG-ESC) Option
      - ESC460: Exercise Science Capstone (4 hours)
      - ESC480: Internship (12 hours)
    - Exercise Science-Doctor of Physical Therapy (ESC-DPT) Option
      - PHY102: Introductory Physics II (4 hours)
      - ANP402: Human Anatomy (4 hours)
      - ANP403: Human Physiology (4 hours)
    - Exercise Science-Master of Science in Exercise Physiology (ESC-MS EXP) Option
      - Electives (12 credits)
      - Transfer 23 credits from grad program.
  - Supporting Courses
    - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)
    - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)
    - CHE101: General Chemistry (4 hours)
    - CHE102: Biological Chemistry (4 hours)
    - PHY101: Introductory Physics I (4 hours)
    - PHY102: Introductory Physics II (4 hours)

**TRACKS**

- Undergraduate Exercise Science (UG-ESC) Option
  - ESC460: Exercise Science Capstone (4 hours)
  - ESC480: Internship (12 hours)
- Electives, 20 credits (may include 2 courses in the graduate ESC program).
- Exercise Science-Doctor of Physical Therapy (ESC-DPT) Option
  - PHY102: Introductory Physics II (4 hours)
  - ANP402: Human Anatomy (4 hours)
  - ANP403: Human Physiology (4 hours)
- Transfer 24 credits from Phase I of DPT program.
- Exercise Science-Master of Science in Exercise Physiology (ESC-MS EXP) Option
- Electives (12 credits)
- Transfer 23 credits from grad program.
CMP112: Computational Thinking I (4 hours)
CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
PSY101: Introductory Psychology (4 hours)

Pre-Physical Therapy 4 year plan

Click here for a four year plan with a major in Exercise Science, Cohort A.
Click here for a four year plan with a major in Exercise Science, Cohort B.

Bachelor of Science Requirement

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. 
FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Major Courses

The list below displays all the courses offered by the program:
- ESC100: Introduction to Exercise Science (2 hours)
- ESC201: Sports Nutrition (4 hours)
- ESC202: Advanced Sports Nutrition (4 hours)
- ESC215: Group Exercise Workshop (2 hours)
- ESC215L: Group Exercise Workshop Lab
- ESC280: Exercise Physiology (4 hours)
- ESC280L: Exercise Physiology Lab
- ESC300: Nutrition and Health (4 hours)
- ESC302: Exercise Science Practicum I (1 hours)
- ESC320: Exercise Testing and Prescription (4 hours)
- ESC320L: Exercise Testing & Prescription Lab
- ESC322: Kinesiology (4 hours)
- ESC322L: Kinesiology Lab
- ESC390: Strength & Conditioning Theory Across the Lifespan (4 hours)
- ESC390L: Strength and Conditioning Theory Across the Lifespan Lab
- ESC391: Strength & Conditioning for Sport (2 hours)
- ESC420: Exercise Prescription for Special Populations (4 hours)
- ESC421: Exercise and Sport Psychology (4 hours)
- ESC435: Exercise Science Practicum II (1 hours)
- ESC440: Lifetime Weight Management and Behavior Change (4 hours)
- ESC460: Exercise Science Capstone (4 hours)
- ESC480: Internship (12 hours)

Sports Nutrition

Brian P. Edlbeck
Clinical Assistant Professor

Jamie L. Krzykowski
Clinical Assistant Professor

Program Goals: The overall goal of the Sports Nutrition minor is to provide the student with information on the combination of sound nutrition and exercise principles to improve both sports performance and health. A further goal is to give the student tools to make decisions on sports nutrition information presented in the popular media and effectively work with a client on unique sports related needs. Additionally, the minor has been recognized by the International Society of Sports Nutrition (ISSN) and is designed to prepare students for CISSN sports nutrition certification.

Learning Outcomes for Sports Nutrition

Upon completion of the sports nutrition minor program, the individual:
1. Will be able to effectively evaluate popular nutrition claims.
2. Will be able to identify and evaluate related research.
3. Will be able to effectively assess a client’s needs and prescribe appropriate nutrition and exercise programs.
4. Will be able to communicate effectively to the client.
5. Will possess the knowledge and skills needed to sit for the CISSN certification exam.

Sports Nutrition Minor

Courses required for the Minor
- ESC300: Nutrition (3 hours)
- ESC201: Sports Nutrition (4 hours)
- ESC202: Advanced Sports Nutrition (4 hours)
- ESC302: Nutrition Assessment and Prescription (3 hours)
- ESC303: Nutrition and Fitness for Special Populations (3 hours)
- ESC305: Supplements for Sports Performance (2 hours)
Department: Life Sciences

Chairperson: Matthew Scheel
Room: Rankin 308
Email: mscheel@carrollu.edu
Telephone: 262-524-7253
Fax: 262-524-7112

Programs

Undergraduate

- Animal Behavior
- Biology
- Environmental Science
- Marine Sciences
- Psychology

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The interdisciplinary major in Animal Behavior supports the mission of Carroll University and the College of Natural Sciences, Health Sciences and Business. The program is designed to give students a thorough knowledge of Animal Behavior within the domains of comparative psychology, behavioral ecology, and behavioral neuroscience. It will also enrich students' ability to apply scientific methods to understand the behavior of animals. The major will provide a foundation for those who wish to pursue graduate studies or professional careers in animal behavior or a related field, including veterinary medicine.

**Learning Outcomes for Animal Behavior**

As students progress through the animal behavior major, they will strengthen their abilities to:

1. Define and describe animal behavior-related terminology and concepts.
2. Understand experimental design.
3. Execute empirical procedures.
4. Demonstrate multiple effective communication skills.

### Animal Behavior Major Bachelor of Science

- **BIO120**: General Biology I (4 hours)
  - **BIO120L**: General Biology I Laboratory
- **BIO125**: General Biology II (4 hours)
  - **BIO125L**: General Biology II Laboratory
- **BIO220**: Genetics (4 hours)
  - **BIO220L**: Genetics Laboratory
- **BIO417**: Behavioral Ecology (4 hours)
  - **BIO417L**: Behavioral Ecology Laboratory
- **PSY101**: Introductory Psychology (4 hours)
- **PSY205**: Statistics and Experimental Design (4 hours)
  - **PSY205L**: Statistics and Experimental Design Lab
- **PSY240**: Biopsychology (4 hours)
- **PSY314**: Learning and Animal Behavior (4 hours)
- **PSY414**: Research Methods in Behavior Analysis (2 hours)
- **PSY401**: Behavioral Neuroscience (4 hours)
- **ANB380**: Internship in Animal Behavior (2-4 hours)

### Required Support Courses (14 credits)

- **CHE109**: Principles of Chemistry I (4 hours)
  - **CHE109L**: Principles of Chemistry I Laboratory
- **CHE110**: Principles of Chemistry II (4 hours)
  - **CHE110L**: Principles of Chemistry II - Laboratory
- **CMP112**: Computational Thinking I (4 hours)
- **CMP114**: Computational Thinking II - Statistical Analysis Emphasis (4 hours)

### Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- **CMP112** and either **CMP113** or **CMP114** or
- **MAT140** or higher and **CSC110** or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

### The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

### Major Courses
The list below displays all the courses offered by the program:

- ANB301: Theory and Practice of Animal Training (3 hours)
- ANB302: Winter Ecology of Wolf and Lynx (3 hours)
- ANB380: Internship in Animal Behavior (2-4 hours)

### Biology

- **Roberto Brenes**  
  Assistant Professor

- **Cynthia J. Horst**  
  Associate Professor

- **Todd D. Levine**  
  Lecturer

- **Susan E. Lewis**  
  Professor

- **Susan Roskopf**  
  Laboratory Coordinator

- **Christine Schneider**  
  Assistant Professor

The Biology program is committed to transforming students into Biologists with enhanced skills in critical thinking and scientific reasoning. Students will learn in an environment that fosters creativity, independent thinking, and the application of knowledge in the biological sciences. When Biology students graduate from Carroll University they will have the confidence and skills necessary to be successful professionals in a dynamic global work force.

The biology major is designed to give students excellent preparation for graduate study or professional careers in life science areas such as molecular biology, physiology, field biology, research, teaching, dentistry, medicine, physical therapy, physician assistant, or veterinary medicine. All students have opportunities to develop excellent research skills throughout the core courses and upper-level biology electives, and many students collaborate with biology faculty on their current scholarly research.

### Learning Outcomes for Biology

After completing the Biology major, students will:

- Understand foundational principles across ecological, organismal, and cellular/molecular fields in biology
- Be able to apply foundational knowledge to solve biological problems
- Interpret and generate scientific data (graphical or other formats)
- Develop hypotheses, design controlled experiments, and perform data analyses
- Understand the theoretical basis of fundamental laboratory techniques
- Communicate scientific information through written or oral formats
- Develop informational research skills by reading scientific textbooks, articles, and searching peer-reviewed databases

Students in the Biology program may be considered for graduation with program honors if they complete the following requirements:

- GPA, Biology courses: 3.6 or higher
- GPA, Overall: 3.4 or higher

Presentation of research project results at a regional or national meeting (e.g., BBB or a disciplinary society) or submission of a manuscript to a peer-reviewed journal

Demonstrated commitment to the biology profession, broadly defined, above and beyond that of the average student. Evidence of such commitment will come from one or more of the following:

- Active membership in Beta Beta Beta, the Biological Honor Society.
- Active membership in a professional/scholarly organization related to biology (e.g., Ecological Society of America, American Society for Microbiology, etc.).
- Significant educational activity/outreach (e.g., tutoring, mentoring) at the university or other level.
- Consistent and sustained volunteer activity in an organization working on environmental, health, or other issues relevant to biology.
- Significant research activity separate from or above and beyond the capstone.
- Sustained activity in science-related policy/consulting in communication, journalism, government, public policy, business, industry or education.

The Biology faculty will review these requirements for all graduating seniors in the spring semester of each year.

### Fees

Specific courses that require use of transportation, equipment or disposable supplies are assigned a course fee.

#### Biology Major

- **Core Courses**
  - BIO120: General Biology I (4 hours)  
    AND -BIO120L: General Biology I Laboratory
  - BIO125: General Biology II (4 hours)  
    AND -BIO125L: General Biology II Laboratory
  - BIO220: Genetics (4 hours)  
    AND -BIO220L: Genetics Laboratory
  - BIO225: Organismal Physiology (4 hours)  
    AND -BIO225L: Organismal Physiology Laboratory

- **Four Elective Courses**
  - Including at least one course from each area listed below:
    - Ecological
      - BIO333: Ecology (4 hours)  
        AND -BIO333L: Ecology Laboratory
      - BIO360: Aquatic Ecology (4 hours)  
        AND -BIO360L: Aquatic Ecology Laboratory
    - Ecological
      - BIO417: Behavioral Ecology (4 hours)  
        AND -BIO417L: Behavioral Ecology Laboratory
BIO462: Conservation Biology (4 hours)

Organismal
- BIO332: Comparative Vertebrate Zoology (4 hours)
  AND -BIO332L: Comparative Vertebrate Zoology Laboratory
- BIO350: Endocrinology (4 hours)
- ANP402: Human Anatomy (4 hours)
  AND -ANP402L: Human Anatomy Laboratory
- ANP403: Human Physiology (4 hours)
  AND -ANP403L: Human Physiology Laboratory

Cellular/Molecular
- BIO312: Microbiology (4 hours)
  AND -BIO312L: Microbiology Laboratory
- BIO332: Gene Manipulation and Genomics (4 hours)
  AND -BIO332L: Gene Manipulation and Genomics Lab
- BIO452: Cell Biology (4 hours)
  AND -BIO452L: Cell Biology Laboratory

Required Support Courses (*Required for primary majors only)
- CHE109: Principles of Chemistry I (4 hours)
  AND -CHE109L: Principles of Chemistry I Laboratory
- CHE110: Principles of Chemistry II (4 hours)
  AND -CHE110L: Principles of Chemistry II - Laboratory
- CHE203: Organic Chemistry I (4 hours)
  AND -CHE203L: Organic Chemistry I Laboratory

Pre-Physical Therapy 4 year plan
Click here for a four year plan with a major in Biology.

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program
- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Pre-Dental, Pre-Medical, Pre-Physician Assistant, Pre-Physical Therapy, and Pre-Veterinary

Pre-Dental, Pre-Medical, Pre-Physician Assistant, Pre-Physical Therapy, and Pre-Veterinary

Students preparing for pre-professional programs must complete the requirements in the Biology major as well as some of the following courses as appropriate for the specific professional program.

It is the responsibility of each pre-professional student to compile a list of schools and their admittance requirements related to the courses below as these differ from school to school.

Pre-professional students should then consult with the appropriate pre-professional advisor to ensure that the requirements will be met prior to graduation.

- CHE204: Organic Chemistry II (4 hours)
  AND -CHE204L: Organic Chemistry II Laboratory
- CHE308: Biochemistry I (4 hours)
  AND -CHE308L: Biochemistry I Laboratory
- MAT160: Calculus I (4 hours)
- PHY101: Introductory Physics I (4 hours)
  AND -PHY101L: Introductory Physics Laboratory
- PHY102: Introductory Physics II (4 hours)
  AND -PHY102L: Introductory Physics Laboratory
- Social Sciences, such as:
  - PSY101: Introductory Psychology (4 hours)
  - SOC101: Introduction to Sociology (4 hours)
- Writing Course, such as:
  - ENG190: Intro to Creative Writing - Imagination and Rhetoric (4 hours)
    OR -ENG206: Fiction Writing (4 hours)
    OR -ENG207: Poetry Writing (4 hours)
    OR -ENG208: Creative Nonfiction Writing - The Documentary Impulse (4 hours)
    OR -ENG308: Advanced Creative Nonfiction (4 hours)
    OR -WR1199: Reading and Writing in the Sciences (4 hours)

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;
NOTE: EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- General Education Requirement
  For more information on General Education Requirement, click here.

- Distribution Component
  For more information on the Distribution Component, click here.
  - GE1 and GE2 Courses
    Students must complete four GE1 courses: one from each of the four Distribution Areas outside of their major area of study.
    Students must take one GE2 course. The GE2 course chosen, must build upon a discipline taken at the GE1 level (e.g. PSY101 (S1) and PSY 221 (S2)).
    - Fine Arts (F1, F2)
    - Humanities (H1, H2)
    - Philosophy/Ethics/Religion (P1, P2)
    - Social Sciences (S1, S2)

- Cross-Cultural Component
  The Cross-Cultural Component is a five-course series through which students explore the study of culture:
  Transfer students will register for CCS101 for one credit.
  - Cultural Seminar (CCS100)
    The Cultural Seminar, which is taken in the first semester, begins the exploration of culture through the study of one’s own culture and a different culture. This course develops oral communication skills through critical reading and discussion.
  - Writing Seminar (ENG 170)
    The Writing Seminar is taken during the first or second semester, includes cross-cultural readings, and develops foundational writing skills.
  - Cross-Cultural Development (CCD)
    The Cross-Cultural Designation course is taken after the Cultural and Writing Seminars. This course satisfies a Distribution requirement, continues development of writing skills, and includes significant cross-cultural themes as preparation for the Cross-Cultural Experience.
  - Cross-Cultural Experience (CCE)
    The Cross-Cultural Experience course is taken concurrently or after the Cross-Cultural Development course. In an off-campus setting, students apply knowledge learned in the previous three courses through interactions with cultures other than their own. (CCS300 for 2 credits, NCEP courses for 4 credits, or study abroad for 12+ credits)
    For more information and course listings, click here
  - Global Perspectives Colloquium (CCS400)
    In the Global Perspectives Colloquium, advanced students (usually seniors) from multiple disciplines engage in critical reading and discussion. Students reflect on their distribution courses and cross-cultural experiences while also refining their writing skills.

- Secondary Education
  - Secondary Education
    Students should be prepared to demonstrate mastery of biological concepts on the ETS Praxis II exam, which is required for licensure.
    To meet DPI requirements, Biology majors with a secondary education minor must complete the following courses:
    - Core Courses, plus
      - BIO312: Microbiology (4 hours)
      - AND -BIO312L: Microbiology Laboratory
      - BIO322: Comparative Vertebrate Zoology (4 hours)
      - AND -BIO322L: Comparative Vertebrate Zoology Laboratory
      - BIO333: Ecology (4 hours)
      - AND -BIO333L: Ecology Laboratory
      One elective course in Biology (see Electives under Biology Major)
    - Students should be prepared to demonstrate mastery of biological concepts on the ETS Praxis II exam, which is required for licensure.

- Bachelor of Science Requirement
  - Bachelor of Science Requirement
    The requirements for a Bachelor of Science degree are:
    - CMP112 and either CMP113 or CMP114 or
MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- **General Education Requirement**
  
  For more information on General Education Requirement, click here.

- **Distribution Component**

  For more information on the Distribution Component, click here.

  - **GE1 and GE2 Courses**
    
    Students must complete four GE1 courses: one from each of the four Distribution Areas outside of their major area of study.
    
    Students must take one GE2 course. The GE2 course chosen, must build upon a discipline taken at the GE1 level (e.g. PSY101 (S1) and PSY 221 (S2)).

    - Fine Arts (F1, F2)
    
    - Humanities (H1, H2)
    
    - Philosophy/Ethics/Religion (P1, P2)
    
    - Social Sciences (S1, S2)

- **Cross-Cultural Component**

  The Cross-Cultural Component is a five-course series through which students explore the study of culture:

  Transfer students will register for CCS101 for one credit.

  - **Cultural Seminar (CCS100)**
    
    The Cultural Seminar, which is taken in the first semester, begins the exploration of culture through the study of one's own culture and a different culture. This course develops oral communication skills through critical reading and discussion.

  - **Writing Seminar (ENG 170)**
    
    The Writing Seminar is taken during the first or second semester, includes cross-cultural readings, and develops foundational writing skills.

  - **Cross-Cultural Development (CCD)**
    
    The Cross-Cultural Designation course is taken after the Cultural and Writing Seminars. This course satisfies a Distribution requirement, continues development of writing skills, and includes significant cross-cultural themes as preparation for the Cross-Cultural Experience.

  - **Cross-Cultural Experience (CCE)**
    
    The Cross-Cultural Experience course is taken concurrently or after the Cross-Cultural Development course. In an off-campus setting, students apply knowledge learned in the previous three courses through interactions with cultures other than their own. (CCS300 for 2 credits, NCEP courses for 4 credits, or study abroad for 12+ credits)

    For more information and course listings, click here

  - **Global Perspectives Colloquium (CCS400)**
    
    In the Global Perspectives Colloquium, advanced students (usually seniors) from multiple disciplines engage in critical reading and discussion. Students reflect on their distribution courses and cross-cultural experiences while also refining their writing skills.

- **Biology Minor**

  - BIO120: General Biology I (4 hours)
    
    AND -BIO120L: General Biology I Laboratory

  - BIO125: General Biology II (4 hours)
    
    AND -BIO125L: General Biology II Laboratory

  - BIO220: Genetics (4 hours)
    
    AND -BIO220L: Genetics Laboratory

  - BIO225: Organismal Physiology (4 hours)
    
    AND -BIO225L: Organismal Physiology Laboratory

  Two elective courses in Biology (see Electives under Biology Major above)

- **Major Courses**

  The list below displays all the courses offered by the program:

  - BIO120: General Biology I (4 hours)

  - BIO120L: General Biology I Laboratory

  - BIO125: General Biology II (4 hours)

  - BIO125L: General Biology II Laboratory

  - BIO131: Genetics in Family and Society (4 hours)

  - BIO131L: Genetics in Family and Society Lab

  - BIO212: Microbiology (4 hours)

  - BIO212L: Microbiology Laboratory

  - BIO220: Genetics (4 hours)

  - BIO220L: Genetics Laboratory
- BIO225: Organismal Physiology (4 hours)
- BIO225L: Organismal Physiology Laboratory
- BIO271: Clinical Immunology (4 hours)
- BIO271L: Clinical Immunology Laboratory
- BIO312: Microbiology (4 hours)
- BIO312L: Microbiology Laboratory
- BIO322: Comparative Vertebrate Zoology (4 hours)
- BIO322L: Comparative Vertebrate Zoology Laboratory
- BIO332: Gene Manipulation and Genomics (4 hours)
- BIO332L: Gene Manipulation and Genomics Lab
- BIO333: Ecology (4 hours)
- BIO333L: Ecology Laboratory
- BIO350: Endocrinology (4 hours)
- BIO360: Aquatic Ecology (4 hours)
- BIO360L: Aquatic Ecology Laboratory
- BIO399: Capstone in Biological Sciences (4 hours)
- BIO417: Behavioral Ecology (4 hours)
- BIO417L: Behavioral Ecology Laboratory
- BIO452: Cell Biology (4 hours)
- BIO452L: Cell Biology Laboratory
- BIO462: Conservation Biology (4 hours)
- BIO480: Internship in Biology (1 TO 4 hours)
- BIO485: Research in Biology (1 TO 4 hours)
- BIO491: Special Topics in Biology (1 TO 4 hours)
- BIO498: Independent Study (1 TO 4 hours)

**Environmental Science**

**Jason G. Freund**  
Assistant Professor of Environmental Science

**Kelly J. LaBlanc**  
Instructor of Environmental Science

**Joseph J. Piatt**  
Associate Professor of Chemistry and Environmental Science

The Environmental Science program offers a major and 3 related minors: Earth Science, Environmental Studies, and Natural Resource Management.

The environmental science major is an interdisciplinary science program which explores the interactions and relationships between human and natural systems. Through core classes, students integrate geologic, atmospheric, chemical and biological knowledge to address natural resource management and environmental issues. The environmental science program allows the student to tailor the curriculum to his or her professional goals.

Environmental science is a growing field which requires only a bachelor’s degree in most job sectors. The environmental science major prepares students for careers in natural resource management, environmental protection, conservation, environmental consulting, government, and air, water, and soil quality.

The Environmental Science program helps manage a 63-acre field station. Located in the beautiful Kettle Moraine region just west of campus, the Greene Field Station features a trout stream, cold-water springs, extensive wetlands, and an on-site teaching and research facility. This site provides students with many opportunities for outdoor laboratory and research activities.

In addition, students in the program can earn a master’s degree in environmental science via our 3+2 partnerships with Alaska Pacific University (APU) in Anchorage or with the School of Freshwater Sciences (SFS) at the University of Wisconsin-Milwaukee. Students who enroll at Carroll for three years and then transfer to APU or UW-Milwaukee earn both a bachelor’s degree from Carroll University and a master’s degree from APU or UW-Milwaukee.

**Core Learning Outcomes**

The Bachelors of Science degree in Environmental Science is designed so that students...

- Develop a scientific understanding of the biological, chemical, and physical aspects of environmental systems.
- Understand the interrelationships between human and environmental systems.
- Acquire laboratory and field skills for measuring environmental systems.
- Analyze environmental data and issues using quantitative and qualitative methods.
- Develop skills necessary to communicate scientific and resource management information.

**Fees**

Specific courses that require use of equipment and disposable supplies are assigned a course fee.

- **Environmental Science Major**
  - **Core Requirements:**
    - ENV105: Earth Science (4 hours)
    - ENV105L: Earth Science Laboratory
    - ENV150: Climate Science (4 hours)
    - ENV150L: Climate Science Laboratory
    - ENV201: Problem Solving in Environmental Systems (4 hours)
    - ENV277: Natural Resource Management (4 hours)
    - ENV325: Soils and Hydrology (4 hours)
    - ENV325L: Soils and Hydrology Laboratory
    - ENV367: Geographic Information Systems (4 hours)
    - ENV367L: Geographic Information Systems Laboratory
    - ENV370: Earth Surface Processes (4 hours)
    - ENV455: Watershed Management (4 hours)
  - **Required Supporting Courses**
    - BIO120: General Biology I (4 hours)
    - BIO120L: General Biology I Laboratory
CHE109: Principles of Chemistry I (4 hours) AND -CHE109L: Principles of Chemistry I Laboratory
CHE110: Principles of Chemistry II (4 hours) AND -CHE110L: Principles of Chemistry II - Laboratory

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

The Pioneer Core Program

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, click here.

Environmental Science Minors

Earth Science

- ENV105: Earth Science (4 hours) AND -ENV105L: Earth Science Laboratory
- ENV150: Climate Science (4 hours) AND -ENV150L: Climate Science Laboratory
- ENV325: Soils and Hydrology (4 hours) AND -ENV325L: Soils and Hydrology Laboratory
- ENV370: Earth Surface Processes (4 hours) AND -ENV370L: Earth Surface Processes Laboratory
- PHY105: Astronomy (4 hours)

Environmental Studies

- ENV120: Conservation and Environmental Improvement (4 hours) AND -ENV120L: Conservation and Environmental Improvement Laboratory
- ENV252: Contemporary Issues in Environmental Science (2 hours)
- ENV222: Environmental Sustainability (4 hours)
- PHI192: Environmental Ethics (4 hours)

In addition complete one of the following paired course sequences:

- POL155: Contemporary Global Politics (4 hours) AND -POL332: Public Policy (4 hours)
- SOC103: Introduction to Criminal Justice (4 hours) AND -SOC202: Society and Ecology (4 hours)

Natural Resource Management

- BIO120: General Biology I (4 hours) AND -BIO120L: General Biology I Laboratory
- ENV120: Conservation and Environmental Improvement (4 hours) AND -ENV120L: Conservation and Environmental Improvement Laboratory
- ENV201: Problem Solving in Environmental Systems (4 hours)
- ENV277: Natural Resource Management (4 hours)

In addition complete two of the following courses:

- ENV367: Geographic Information Systems (4 hours) AND -ENV367L: Geographic Information Systems Laboratory
- ENV455: Watershed Management (4 hours)
- BIO333: Ecology (4 hours) AND -BIO333L: Ecology Laboratory
- BIO360: Aquatic Ecology (4 hours) AND -BIO360L: Aquatic Ecology Laboratory
- BIO371: Wolf and Lynx Ecology in Northern Minnesota (3 hours)
- BIO460: Restoration Ecology (4 hours)

Graduate Degree in Environmental Science in Alaska

After completing three years of coursework at Carroll University, students transfer to Alaska Pacific University (APU) for two years of graduate study. The first year of APU courses transfer back to Carroll University to complete the Bachelor of Science degree in Environmental Science with a minor in biology or chemistry. The agreement with APU specifies that students should be able to complete the Master of Science degree after two years of study in Alaska.

In preparation for this graduate program, students must have a minimum GPA of 3.0 in major courses and complete a minimum of 110 credits at Carroll University including the required core and support courses for the Environmental Science major, the Pioneer Core Program, and the following additional courses:

- BIO125: General Biology II (4 hours) AND -BIO125L: General Biology II Laboratory
- MAT140: Calculus and Its Applications (4 hours)
- PHI192: Environmental Ethics (4 hours)

Graduate Degree in Freshwater Science

After completing three years of coursework at Carroll University, students transfer to the University of Wisconsin-Milwaukee and enter either the professional or thesis track of the Master of Science program at the School of Freshwater Sciences (SFS). Coursework from UW-Milwaukee then transfers back to Carroll University to complete the Bachelor of Science degree in Environmental Science.

In preparation for this graduate program, students must have a minimum GPA of 3.30 and meet all of UW-Milwaukee and the SFS graduate admission requirements. Before transferring to SFS, students must complete a minimum of 110 credits for the
Professional Track and 115 credits for the Thesis Track at Carroll University including the required core and support courses for the Environmental Science major, the Pioneer Core Program, and the following additional course requirements:

- **Professional Track**
  - PHI192: Environmental Ethics (4 hours)
  - BIO125: General Biology II (4 hours)
  - AND -BIO125L: General Biology II Laboratory

- **Thesis Track**
  - PHI192: Environmental Ethics (4 hours)
  - BIO125: General Biology II (4 hours)
  - AND -BIO125L: General Biology II Laboratory
  - MAT160: Calculus I (4 hours)
  - AND -MAT160L: Calculus I - Laboratory
  - MAT161: Calculus II (4 hours)
  - AND -MAT161L: Calculus II - Laboratory
  - PHY203: General Physics I (4 hours)
  - AND -PHY203L: General Physics I Laboratory
  - PHY204: General Physics II (4 hours)
  - AND -PHY204L: General Physics II Laboratory

- **Major Courses**

  The list below displays all the courses offered by the program:

  - ENV105: Earth Science (4 hours)
  - ENV105L: Earth Science Laboratory
  - ENV120: Conservation and Environmental Improvement (4 hours)
  - ENV120L: Conservation and Environmental Improvement Laboratory
  - ENV120H: Conservation and Environmental Improvement
  - ENV120HL: Conservation and Environmental Improvement Laboratory
  - ENV150: Climate Science (4 hours)
  - ENV150L: Climate Science Laboratory
  - ENV201: Problem Solving in Environmental Systems (4 hours)
  - ENV222: Environmental Sustainability (4 hours)
  - ENV222L: Environmental Sustainability Laboratory
  - ENV225: Contemporary Issues in Environmental Science (2 hours)
  - ENV227: Natural Resource Management (4 hours)
  - ENV290: Workshop-Environmental Science (2 TO 4 hours)
  - ENV292: Environmental Ethics (4 hours)
  - ENV325: Soils and Hydrology (4 hours)
  - ENV367: Geographic Information Systems (4 hours)
  - ENV370: Earth Surface Processes (4 hours)
  - ENV370L: Earth Surface Processes Laboratory
  - ENV380: Internship in Environmental Sci (2 TO 4 hours)
  - ENV391: Topics in Environmental Science (1 TO 4 hours)
  - ENV396: Research-Environmental Science (2 TO 4 hours)
  - ENV398: Independent Study-Environmental Sci (1 TO 4 hours)
  - ENV455: Watershed Management (4 hours)
  - ENV480: Work-Oriented Internship (2 TO 4 hours)
  - ENV491: Topics in Environmental Science (1 TO 4 hours)
  - ENV496: Research in Environmental Sci (2 TO 4 hours)
  - ENV498: Independent Study in Envir Sci (1 TO 4 hours)
  - ENV455: Watershed Management (4 hours)
  - ENV480: Work-Oriented Internship (2 TO 4 hours)
  - ENV491: Topics in Environmental Science (1 TO 4 hours)
  - ENV496: Research in Environmental Sci (2 TO 4 hours)
  - ENV498: Independent Study in Envir Sci (1 TO 4 hours)

- **Marine Sciences**

  Susan E. Lewis  
  Professor of Biology

  Eric T. Thobaben  
  Assistant Professor of Biology

  Christopher D. Winn  
  Associate Dean of Marine Science Programs

  Hawaii Pacific University

Carroll University offers access to majors in marine biology and oceanography via a cooperative arrangement with Hawaii Pacific University (HPU). The objective of the Marine Science Program at HPU is to help students gain a scientific understanding of the world’s oceans and the life they contain, and a sense of appreciation for their beauty and fragility. Students are given a theoretical framework in the basic and applied sciences as well as ample opportunities to get hands-on experience conducting laboratory and field observations and experiments. Lecture and laboratory facilities are located on the Hawaii Loa Campus of Hawaii Pacific University. The campus is only a twenty-minute drive from Kaneohe Bay, a large natural embayment protected from the open ocean by the only true barrier reef in the Hawaiian Islands. This bay serves as one of the finest natural laboratories in the world for studying the marine sciences, and its protected nature allows HPU students to do field work in almost any type of weather.

Students desiring to major in marine biology or oceanography will spend two years at Carroll University taking basic science and liberal arts courses. After the two years, students transfer to Hawaii Pacific University and complete the requirements for a Marine Biology/Oceanography degree from Hawaii Pacific University.

- **Marine Biology or Oceanography Major**

  Science and mathematics courses taken at Carroll University

  - BIO120: General Biology I (4 hours)
  - AND -BIO120L: General Biology I Laboratory
  - BIO125: General Biology II (4 hours)
  - AND -BIO125L: General Biology II Laboratory
  - CHE109: Principles of Chemistry I (4 hours)
  - AND -CHE109L: Principles of Chemistry I Laboratory
  - CHE110: Principles of Chemistry II (4 hours)
  - AND -CHE110L: Principles of Chemistry II - Laboratory
  - ENV105: Earth Science (4 hours)
  - AND -ENV105L: Earth Science Laboratory
  - CMP112: Computational Thinking I (4 hours)
  - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
  - MAT160: Calculus I (4 hours)
- MAT161: Calculus II (4 hours)
- PHY101: Introductory Physics I (4 hours)
  AND -PHY101L: Introductory Physics Laboratory
- OR -PHY203: General Physics I (4 hours)
  AND -PHY203L: General Physics I Laboratory
- PHY102: Introductory Physics II (4 hours)
  AND -PHY102L: Introductory Physics Laboratory
- OR -PHY204: General Physics II (4 hours)
  AND -PHY204L: General Physics II Laboratory

**Additional Courses to fulfill HPUs General Education Curriculum**

(contact a Marine Biology advisor for a listing of all approved general education courses)

**Communication Skills:**

English 170, Writing Seminar; plus 1 additional course, e.g. Spanish 101 or Communication 101

**Global Systems:**

1 course, e.g., Economics 105 or History 104

**Research and Epistemology:**

Requirements are completed at HPU

**Values and Choices:**

3 courses, e.g. Environmental Science 292, Politics 101, or Philosophy 101

**World Cultures:**

CCS 100, Cultural Seminar; plus 2 additional courses, e.g., Art 103, Religion 102

**Bachelor of Science Requirement**

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.

**FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR**

**The Pioneer Core Program**

- Cross-Cultural Component
- Distribution Component
- GE1 and GE2 Courses
- Cross Cultural Development

For a complete list of CCD courses, [click here](#).

**Sample program at Carroll University**

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<thead>
<tr>
<th>Freshman</th>
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<th>Spring</th>
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<tbody>
<tr>
<td>CCS 100</td>
<td>ENG 170</td>
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<td>BIO 120</td>
<td>BIO 125</td>
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<th>Sophomore</th>
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<tr>
<td>CHE 109</td>
<td>CHE 110</td>
<td>CHE 110</td>
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<tr>
<td>MAT 161</td>
<td>ENV 105 (Oceanography majors only)</td>
<td>ENV 105 (Oceanography majors only)</td>
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<tr>
<td>CMP112</td>
<td>CMP114</td>
<td>CMP114</td>
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<td>HIS 104</td>
<td>SOC 110</td>
<td>SOC 110</td>
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</table>

**Sample program for Marine Biology at Hawaii Pacific University**

- Summer at CU or HPU before Junior Year
  - PHY101: Introductory Physics I (4 hours)
    AND -PHY101L: Introductory Physics Laboratory
    AND -PHY102: Introductory Physics II (4 hours)
    AND -PHY102L: Introductory Physics Laboratory
  - OR
  - HPU Physics I and HPU Physics II

**Fall and Spring Junior Year**

- Oceanographic Field Techniques
- Ecology
- General Oceanography I and II
- Argument, Research, Writing
- Marine Biology
- Cell and Molecular Biology
- plus Elective

**Senior Year**

- Marine Ecology
- Evolutionary Genetics
- Plant Biology
- Marine Invertebrate Zoology
- Seminar: Marine Biology Seminar
- The World Problematique
- Fundamental Organic Chemistry
- Comparative Animal Physiology
- Biometry
- plus Elective

**Sample program for Oceanography at Hawaii Pacific University**

- Summer at CU or HPU before Junior Year
PHY203: General Physics I (4 hours)
AND -PHY203L: General Physics I Laboratory
AND -PHY204: General Physics II (4 hours)
AND -PHY204L: General Physics II Laboratory

OR

HPU Physics I and HPU Physics II

<table>
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<tr>
<th>Fall and Spring Junior Year</th>
<th>Senior Year</th>
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<tbody>
<tr>
<td>Oceanographic Field Techniques</td>
<td>Marine Ecology</td>
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<tr>
<td>Ecology</td>
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<td>General Oceanography I and II</td>
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<td>plus Elective</td>
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</tbody>
</table>

- **Psychology**
  - Sandra K. Arntz: Senior Lecturer
  - Christopher J. May: Associate Professor
  - Matthew Scheel: Associate Professor
  - Tara J. Schmidt: Lecturer
  - David D. Simpson: Professor
  - Susan Wilson: Visiting Lecturer

Psychology is a life science that focuses upon the physical and mental processes that underlie individual behavior. This definition provides a focus for the objectives of the psychology program at Carroll University. The program numbers among its liberal learning objectives those of enriching students’ understanding of scientific methods and giving students a thorough knowledge of the subject matter central to their better comprehending people.

In addition to its emphasis upon liberal learning, the program strives to offer a major that provides an excellent foundation for those who wish to pursue graduate studies. The program takes great pride in its strong track record of launching psychology majors into academic and professional careers. Academic careers include teaching and research in biological, cognitive, or social psychology; professional careers include serving people in clinical, counseling, or industrial/organizational settings.

Program Goals for Psychology

1. Majors will understand psychology as a scientific discipline with regard to its content and research methods.
2. Majors will demonstrate intellectual skills in thinking, communication, information gathering and synthesis, as well as in quantitative and scientific methodology.
3. Demonstrate effective written skills.
4. Demonstrate effective interpersonal communication skills.

Learning Outcomes

Upon successful completion of the Psychology major, students will be able to:

1. Define and describe psychology-related terminology and concepts
2. Evaluate and generate psychological research
3. Demonstrate multiple effective communication skills
4. Work effectively in a team environment

A minimum of 40 graded psychology credits are required for the major. In addition to Psychology 101, 205, 307, and 403, students complete additional requirements by selecting 24 credits from remaining psychology courses (excluding 398 and 480).

Suggested groupings:

- Clinical/Counseling (201, 206, 240, 306, 321, 314)
- Industrial/Organizational (211, 228, 303, 306, 316, 321)
- Research (240, 303, 314, 316, 414, 492, plus at least two additional PSY credits)
- Pre-PT (201, 221 or 206, 260, 303 or 321, CMP112 and CMP114, plus eight additional PSY credits excluding 240 and 314) (PTH 405 and 407 do not count for psychology major or minor.)

(Any student interested in graduate school in the field of psychology is also encouraged to take PSY492.)

Fees

Specific courses that require use of equipment and disposable supplies including certain types of psychological tests are assigned a course fee.
PSY403: Capstone-Historical and Modern Viewpoints of Psychology (4 hours)

Forty credits in Psychology. These credits can (but are not required to) complete an area grouping. (Cannot include both 206 and 221.) Forty credits are required as a minimum. Only courses listed as psychology (PSY) courses may be used as core courses for a psychology major or count toward a psychology minor.

Pre-Physical Therapy 4 year plan

Click here for a four year plan with a major in Psychology.

Bachelor of Science Requirement

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:

- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS. FOR SPECIFIC REQUIREMENTS, SEE "REQUIRED SUPPORT COURSES" WITHIN EACH MAJOR

- The Pioneer Core Program
  - Cross-Cultural Component
  - Distribution Component
  - GE1 and GE2 Courses
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- Psychology Minor
  - PSY101: Introductory Psychology (4 hours)
  - Additional coursework
    - A minimum of 16 additional Psychology (PSY) credits, excluding PSY 398 and PSY 480. (Cannot include both PSY 206 and PSY 221.)
    - At least one elective must be 300-level or higher. Twenty credits are required as a minimum.

- Major Courses

  The list below displays all the courses offered by the program:

  - PSY101: Introductory Psychology (4 hours)
  - PSY201: Abnormal Psychology (4 hours)
  - PSY205: Statistics and Experimental Design (4 hours)
  - PSY205L: Statistics and Experimental Design Lab
  - PSY206: Developmental Psychology (4 hours)
  - PSY211: Industrial and Organizational Psychology (4 hours)
  - PSY221: Life-Span Psychology (4 hours)
  - PSY228: Consumer Behavior (4 hours)
  - PSY240: Biopsychology (4 hours)
  - PSY260: Health Psychology (4 hours)
  - PSY303: Experimental Social Psychology (4 hours)
  - PSY306: Psychological Testing and Assessment (4 hours)
  - PSY307: Experimental Psychology (4 hours)
  - PSY307L: Experimental Psychology Lab
  - PSY314: Learning and Animal Behavior (4 hours)
  - PSY316: Thinking, Problem Solving, and Cognition (4 hours)
  - PSY317: Adult Development & Aging (2 hours)
  - PSY321: Personality - Theory and Assessment (4 hours)
  - PSY391: Special Studies in Psychology (2 hours)
  - PSY398: Independent Study in Psychology (1 TO 4 hours)
  - PSY401: Behavioral Neuroscience (4 hours)
  - PSY401L: Behavioral Neuroscience Laboratory
  - PSY403: Capstone-Historical and Modern Viewpoints of Psychology (4 hours)
  - PSY414: Research Methods in Behavior Analysis (2 hours)
  - PSY480: Internship in Psychology (2 TO 4 hours)
  - PSY492: Research Seminar (4 hours)
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Department: **Nursing**

Chairperson: Angela Brindowski  
Room: Voorhees B5  
Email: abrindow@carrollu.edu  
Telephone: 262-650-4927  
Fax: 262-574-2618

**Programs**

- Undergraduate
  - Nursing
Nursing
Lisa Brandt  Clinical Assistant Professor
Angela Brindowski  Gladys McKay Richter Endowed Chair and Clinical Associate Professor
Lisa Green  Clinical Assistant Professor
Jamie Hansen  Clinical Assistant Professor
Megan Holz  Clinical Assistant Professor
Laurie Kunkel-Jordan  Clinical Assistant Professor
Karla Kwapis  Clinical Assistant Professor
Nicole Mattson  Lecturer
Allyson Rennebohm  Community Inter-professional Liaison
Michael Rodrigues  Clinical Assistant Professor
Kathy Sampson  Senior Lecturer
Jill Switalski  Laboratory Coordinator

Carroll University offers a program leading to a Bachelor of Science in Nursing degree. Established in fall of 2002, the nursing program is accredited by the Commission on Collegiate Nursing Education, has ongoing approval of the Wisconsin State Board of Nursing, is a member of the American Association of Colleges of Nursing and the National League for Nursing. Carroll University is accredited by the Higher Learning Commission and is a member of the North Central Association.

The Higher Learning Commission
North Central Association
30 North LaSalle St., Suite 2400
Chicago, IL 60602
Phone: 800.621.7440

Department of Regulation and Licensing
Wisconsin State Board of Nursing
1400 E. Washington Ave., Room 166
Madison, WI 53708

National League for Nursing (NLN)
61 Broadway, 33rd Floor
New York, New York 10006
Phone: 800.669.1656

American Association of Colleges
One Dupont Circle NW, Suite 531
Washington, DC 20036

Mission of the Nursing Program
The Carroll University Nursing Program prepares students, in diverse settings, for professional nursing practice and other global pursuits.

Philosophy of the Nursing Program
Our philosophy, in preparing professional nurses at the generalist level, is to provide grounding in the liberal arts in addition to career preparation. The educational process must allow for diversity, curiosity, and difference of opinion, but must not allow for indifference or neglect of academic rigor. We expect nursing students to focus on and connect nursing to every general education or liberal studies course. However, it is in clinical practice that the student will demonstrate patterns of professional behaviors that follow the legal and ethical codes of nursing and promote the actual or potential well being of patients. The promotion of health and wellness is a focus of all nursing practice, but nurses, more than any other health care discipline, takes care of the sick; therefore, acute care experience is a necessary background for any generalist practice setting and is a focus of generalist education. We believe nursing students are best served when they are educated in a variety of settings to provide care to diverse populations across all environments. The promotion of health and wellness, the prevention of injury and restoration of health are accomplished for a diversity of socio-economic, racial and ethnic populations in all settings.
Nursing faculty at Carroll University believe students are individuals who come with learning preferences, different experiences, varied goals, and therefore, have unique learning needs. Active learning is a teaching/learning partnership. The faculty recognizes that learning is a lifelong process and that undergraduate education is the beginning of the progression from novice to expert nurse. The baccalaureate program prepares the student to enter professional nursing practice as a beginning provider of nursing care in a variety of settings, cultivates a commitment to professional development, and provides the foundation for graduate study.

Curriculum
Our philosophy requires that the curriculum be responsive to the community of interest. To accomplish our mission, we consider it necessary to be flexible, to change quickly as society needs and technology changes. The program has been designed to be flexible in progression and sequencing, without sacrificing academic rigor. The conceptual framework, developed by nursing faculty, organizes the curriculum in a logical progression over the length of the program. The overviews in each course syllabus will illustrate how the essential components of professional nursing education are used in that course to prepare students to take on the characteristics that will allow them to function in the professional nursing role. Course objectives will demonstrate the achievement necessary for the student, at each level of the curriculum, to evidence competency as they progress.

Vision of the Carroll University Nursing Program

Be a leader of Baccalaureate nursing education.

- Program Outcomes

Program Outcomes

At the completion of the Bachelor of Science Nursing program, the graduate nurse will:

I. Value a solid base in liberal education as the cornerstone of nursing practice and education.
II. Operationalize knowledge and skills in leadership, quality improvement and patient safety to provide high quality healthcare.
III. Model professional nursing practice that is grounded in the translation of current evidence into practice.
IV. Integrate knowledge and skills in information management and patient care technology in the delivery of quality patient care.
V. Recognize and distinguish healthcare policies, including financial and regulatory, which influence the nature and functioning of the healthcare system.
VI. Effectively communicate and collaborate to deliver high quality and safe patient care.
VII. Incorporate the concepts of health promotion and disease prevention at the individual and population level.
VIII. Internalize professionalism and the inherent values of altruism, autonomy, human dignity, integrity and social justice.
IX. Practice as a baccalaureate-graduate nurse
   a. prepared to deliver care to individuals, families, groups, communities and populations across the lifespan and across the continuum of healthcare environments.
   b. understanding and respecting the variations of care, the increased complexity and the increased use of healthcare resources inherent in caring for patients.

- Academic Progression Standards

The academic progression standards for the nursing program are presented in the Academic Program and Policies section of this Catalog.
Or, click here for a direct link.

- Technical Standards

Technical Standards for Admission to and Progression in the Carroll University Bachelor of Science in Nursing Program

Successful participation in the Carroll University Bachelor of Science in Nursing Program requires that a candidate possess the ability to meet the requirements of the program. Though the program may modify certain course requirements in order to provide a handicapped1 person with an equivalent opportunity to achieve results equal to those of a non-handicapped person, there are no substitutes for the following essential skills. The applicant/candidate must initially meet these requirements to gain admission to the program and must also continue to meet them throughout participation in the program.

General Ability: The student is expected to possess functional use of the senses of vision, touch, hearing and smell so that data received by the senses is integrated, analyzed and synthesized in a consistent and accurate manner. The student is expected to possess the ability to perceive pain, pressure, temperature, position, vibration and movement in order to effectively evaluate patients. A student must be able to respond promptly to urgent situations.

Observational Ability: The student must have the ability to make accurate visual observations and interpret them in the context of clinical/laboratory activities and patient care experiences. The student must be able to document these observations accurately.

Communication Ability: The student must communicate effectively verbally and non-verbally to obtain information and explain that information to others. Each student must have the ability to read, write, comprehend and speak the English language to facilitate communication with patients, family members and other members of the health care team. The student must be able to document and maintain accurate records, presents information in a professional manner and provide patient instruction to effectively care for patients and their families.

Motor Ability: The student must be able to perform gross and fine motor movements with sufficient coordination needed to provide complete physical assessments and provide safe effective care for patients. The student is expected to have psychomotor skills necessary to perform or assist with procedures, treatments, administration of medication and emergency interventions including CPR if necessary. The student must have sufficient levels of neuromuscular control and eye-to-hand coordination as well as possess the physical and mental stamina to meet the demands associated with extended periods of sitting, standing, moving and physical exertion required for safe patient care. Students must be able to bend, squat, reach, kneel or balance. Clinical settings may require that students have the ability to carry and lift loads from the floor, from 12 inches
from the floor; to shoulder height and overhead. The student must be able to occasionally lift 50 pounds, frequently lift 25 pounds and constantly lift 10 pounds. The student is expected to be able to maintain consciousness and equilibrium and have the physical strength and stamina to perform satisfactorily in clinical settings.

**Intellectual:** Conceptual Ability: The student must have the ability to develop problem-solving skills essential to professional nursing practice. Problem solving skills include the ability to measure, calculate reason, analyze, synthesize objective and subjective data, and to make decisions in a timely manner that reflects thoughtful deliberation and sound clinical judgment. The student must demonstrate application of these skills and possess the ability to incorporate new information from peers, instructors and the nursing/healthcare literature to formulate sound judgment to establish care plans and priorities in patient care activities.

**Behavioral and Social Attributes:** The student is expected to have the emotional stability required to exercise sound judgment, complete assessment and intervention activities. Compassion, integrity, motivation and concern for others are personal attributes required of those in the nursing program. The student must fully utilize intellectual capacities that facilitate prompt completion of all responsibilities in the classroom and clinical settings; the development of mature, sensitive and effective relationship with patients and other members of the healthcare team. The ability to establish rapport and maintain interpersonal relationships with individuals, families and groups from a variety of social, emotional, cultural and intellectual backgrounds is critical for practice as a nurse. Each student must be able to adapt to changing environments; display flexibility; accept and integrate constructive criticism given in the classroom and clinical settings; and effectively collaborate in the clinical setting with other members of the healthcare team.

**Ability to Manage Stressful Situations:** The student must be able to adapt to and function effectively in relation to stressful situations encountered in both the classroom and clinical settings, including emergency situations. Students will encounter multiple stressors while in the nursing program. These stressors may be (but are not limited to) personal, patient care/family, faculty/peer and/or program related.

**Background Check:** Clinical facilities require that Carroll University perform background checks on all students before they are allowed to participate in clinical experiences. Therefore, students will be required to have a background check performed before being allowed into clinical practice.

**Evaluation:** Carroll University may require that the applicant/student undergo a physical examination and/or an occupational skills evaluation. The University will endeavor to select and administer evaluations which accurately reflect the applicant’s/candidate’s aptitude or achievement level rather than the applicant’s/candidate’s handicap. A handicapped applicant/candidate shall not, on the basis of his or her handicap (except those which would preclude the essential skills outlined above) be excluded from participation in, denied the benefits of, nor be subjected to discrimination in the program.

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1. Handicapped as defined by the federal government pursuant to SS 504 of the Rehabilitation Act of 1973.

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**Caregiver Background Check**

**Caregiver Background Check**

The applicant/candidate/student must complete a Background Information Disclosure Form prior to clinical placement in the program. The university intends to fully comply with the requirements of the Wisconsin Caregiver Background Check Law which requires hospitals and other health care and treatment entities to perform background checks on all persons who have direct, regular contact with clients. Certain convictions may prevent or significantly limit the ability of the university to place a student in a clinical program resulting in the student being unable to meet the university’s graduation requirements. The university reserves the right to reject the application of a candidate or remove a student from the program if the university determines that the results of the caregiver background check demonstrate that the applicant/student does not exhibit behavior and social attributes consistent with the program’s Technical Standards.

**Carroll University Health Policy for Nursing Students**

**Health Policy for Nursing Students**

**Policy:**

Prior to the first clinical placement each student must show evidence that they are able to meet the clinical requirements of the nursing program. These requirements include current health history, immunization and physical examination data. In addition, all students must have on file current CPR certification and a caregiver background check. The nursing student handbook lists all health and immunization clinical requirements. If an exception to the immunization requirements is approved, the University cannot guarantee that its affiliated hospitals and clinics will allow the student to participate in patient care, which is a fundamental requirement of the clinical education component of the Nursing Program.

**Procedure:**

- Evidence of the completed history and exam and immunization record must be on file before the onset of the first clinical experience. The University Health History and Physical Examination form meets the history and exam clinical experience requirement.
- Clinical partners require the History and physical exam be completed and signed by a physician or nurse practitioner. The physical exam can be completed at the Carroll University Health Center.
- It is not necessary to repeat the physical exam every year if there is no change in the student’s health status.
- Before your first clinical placement one of the following is required: Two step TB skin test (1-3 weeks apart) or QuantiFeron Gold blood test or if you have a history of a positive TB skin test, provide a negative Chest XRay report.
- Some clinical partners require a urine drug screen. The urine drug screen can be completed at the Carroll University Health Center.
• Cost of the physical exam, immunizations, and drug screen is the responsibility of the student.
• Students who have not complied with the health policy will not be allowed in any clinical site.

Time Commitment

The Nursing Program is rigorous, labor intensive, and requires more time and commitment than many other areas of study. Clinical nursing courses require a minimum of 3 hours of direct clinical experience per semester credit hour. This does not include time that is required for travel, clinical preparation at the assigned clinical agency or study prior to or after the clinical experience. Therefore, it is strongly recommended that students in the Nursing Program limit their employment and/or involvement in non-student related activities. Students are expected to be available Monday through Friday throughout the academic year. Students will be expected to participate in clinical experiences that occur on weekends and on shifts other than day shifts (0700-1530). Students in the capstone experience must understand that their clinical experience may be evenings or night shifts and/or weekend shifts.

Clinical Nursing Core Requirements

All applicants must be in good health and free from communicable diseases and be able to carry out the functions of a professional nurse as specified in the Technical Standards. Students must maintain current immunizations, CPR certification and professional liability insurance. Additional tests may be required by specific agencies in which the student has clinical experiences. The program will notify students when such tests are required. Students who fail to comply will not be allowed in clinical. All costs associated with clinical requirements is the responsibility of the student.

Nursing courses begin during the freshman year allowing early participation in clinical service learning activities. Students will have diverse service learning experiences in a variety of clinical settings.

The number of hours spent in laboratory (including clinical) experience varies from semester to semester and is based on one (1) semester credit being equal to three (3) hours of clinical per week. Approximate time commitment for clinical courses:

- 200 level – 6 hours/week for one semester
- 300 level Junior year – 15 hours/week during one semester
- 400 level Senior year – 15 hours/week during both semesters

Policy Statement on Student Attendance at Clinical

The university reserves the right to require a student to repeat all or any part of a clinical course when, in the student evaluation by the course instructor, the time that the student has been absent from clinical/practicum makes it impossible to evaluate the student’s level of achieving the course objectives. Make up time is not guaranteed and is dependent upon faculty and clinical availability. The student is responsible for any costs involved in repeating the course and/or making up time lost.

Learning and Study Resources

Learning resource centers for student learning and testing are available. The nursing laboratory provides space and resources for students to practice and test their mastery of psychomotor skills used in patient care. The Carroll Library Learning Commons has a range of resources to support the nursing curriculum. The Walter Young Center provides personal counseling and the Study Center offers students opportunities to strengthen academic skills. All students should work closely with their advisor in planning their programs.

Fees

Undergraduate tuition and other fees apply to nursing students. A program fee of $750.00 per year is also assessed for proficiency testing, disposable supplies, and equipment maintenance.

Licensure Examination

Upon completion of all program requirements, the graduate is eligible to sit for the National Council Licensure Examination for Registered Nurses (NCLEX-RN). A graduate must pass this examination to be licensed and practice as a registered nurse (RN).

Although, no nursing program can guarantee success on the NCLEX-RN examination, the Carroll nursing curriculum integrates preparation for the licensure exam throughout the nursing program.

Bachelor of Science in Nursing Major (57 credits)

Nursing courses build on the knowledge gained from liberal arts background in humanities, fine arts, social sciences, and natural sciences. The overall objective of the program is to provide students with the ability to critically apply knowledge of nursing art and science to improve the quality of health and health care in the communities they serve.

Courses in the Major

- NRS100: Health Care and Nursing (4 hours)
- AND -NRS100L: Health Care and Nursing Laboratory
- NRS230: Health Assessment (4 hours)
- AND -NRS230L: Health Assessment Laboratory
- NRS233: Foundations of Nursing Practice (4 hours)
- NRS234: Foundations - Practicum (2 hours)
- NRS236: Human Pathophysiologic Responses (4 hours)
NRS300: Critical Inquiry in Nursing Research (2 hours)  
OR - NRS300H: Critical Inquiry in Nursing Research Honors (2 hours)  
NRS310: Mental Health Nursing Care (3 hours)  
NRS312: Family Centered Obstetric Nursing Care (2 hours)  
NRS316: Introduction to Medical Surgical Nursing (4 hours)  
NRS317: Medical Surgical Nursing Practicum (3 hours)  
NRS320: Family Centered Pediatric Nursing Care (2 hours)  
NRS415: Community Health Practicum (2 hours)  
NRS416: Community Health Nursing Care (3 hours)  
NRS417: Advanced Medical Surgical Nursing (3 hours)  
NRS419: Advanced Medical Surgical Practicum (5 hours)  
NRS429: Health Policy and Administration (3 hours)  
NRS431: Capstone (4 hours)  
NRS432: Professional Practice Preparation (1 hours)  

Nursing electives in specialty clinical areas may be offered occasionally. If these courses are elected the nursing student may accomplish a nursing major of 62 or 66 credits.

- **Required Support Courses**
  
  - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)  
    - AND -ANP130L: Intro to Human Anat and Phys I Lab  
  
  - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)  
    - AND -ANP140L: Intro to Human Anat and Phys II Lab  
  
  - BIO212: Microbiology (4 hours)  
    - AND -BIO212L: Microbiology Laboratory  
  
  - CHE101: General Chemistry (4 hours)  
    - AND -CHE101L: General Chemistry Laboratory  
  
  - CHE102: Biological Chemistry (4 hours)  
    - AND -CHE102L: Biological Chemistry Laboratory  
  
  - HSC300: Pharmacology (3 hours)  
  
  - PSY101: Introductory Psychology (4 hours)  
  
  - PSY221: Life-Span Psychology (4 hours)  
  
  - CMP112: Computational Thinking I (4 hours)  
  
  - CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)  

- **Bachelor of Science Requirement**

  The requirements for a Bachelor of Science degree are:
  
  - CMP112 and either CMP113 or CMP114 or
  
  - MAT140 or higher and CSC110 or higher;

  **NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.

  FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR

- **The Pioneer Core Program**

  - Cross-Cultural Component
  
  - Distribution Component
  
  - GE1 and GE2 Courses
  
  - Cross Cultural Development

  For a complete list of CCD courses, click here.

- **Nursing Four-Year Curriculum Model**

  Nursing Honors Four Year Curriculum Model

- **Curricular Modifications for the Registered Nurse**

  Students who are registered nurses through an associate degree program will follow the same degree requirements as all of the Carroll University students with the following curricular modifications to acknowledge the scholarship and competence the Registered Nurse already possesses. Completion students may earn up to 34 nursing credits from previous nursing course work upon successful completion or challenge of NRS 230, Health Assessment and NRS 236, Human Pathophysiologic Responses.

  A registered nurse student applying for admission to Carroll University submits a writ- ten plan for completion of the BSN. The plan will comment on his/her self identified professional and academic strengths and weaknesses and further indicate his/her current professional interest area(s) and area of employment. The written statement assists the nurse advisor in helping the student create the most meaningful curricular plan. Registered nurse students are required to select course groupings that lead to some focus of career interest. They should select an appropriate emphasis in the liberal studies to enhance their chosen area of nursing practice. Students will consult with their assigned nursing advisor regarding the most appropriate course selections.

  The nursing faculty will attempt to work closely with the RN student in focusing their clinical experiences in an area of interest to the RN.

- **Major for the Registered Nurse Student (57 Credits)**

  - 34 credits earned as previously stated, plus
    
    - NRS230: Health Assessment (4 hours)  
      - AND -NRS230L: Health Assessment Laboratory  
    
    - NRS236: Human Pathophysiologic Responses (4 hours)  
    
    - NRS300: Critical Inquiry in Nursing Research (2 hours)  
    
    - NRS310: Mental Health Nursing Care (3 hours)  
    
    - NRS415: Community Health Practicum (2 hours)  
    
    - NRS416: Community Health Nursing Care (3 hours)  
    
    - NRS429: Health Policy and Administration (3 hours)  
    
    - NRS431: Capstone (4 hours)  

  - **Required Support Courses**
    
    - ANP130: Introduction to Human Anatomy and Physiology I (4 hours)  
      - AND -ANP130L: Intro to Human Anat and Phys I Lab  
    
    - ANP140: Introduction to Human Anatomy and Physiology II (4 hours)  
      - AND -ANP140L: Intro to Human Anat and Phys II Lab
Undergraduate

- BIO212: Microbiology (4 hours)
- CMP112: Computational Thinking I (4 hours)
- CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- PSY101: Introductory Psychology (4 hours)
- PSY221: Life-Span Psychology (4 hours)

Two semesters of university chemistry
One semester of university sociology

Bachelor of Science Requirement

The requirements for a Bachelor of Science degree are:
- CMP112 and either CMP113 or CMP114 or
- MAT140 or higher and CSC110 or higher;

**NOTE:** EACH MAJOR MAY HAVE SPECIFIC COURSE SEQUENCING REQUIREMENTS.
FOR SPECIFIC REQUIREMENTS, SEE “REQUIRED SUPPORT COURSES” WITHIN EACH MAJOR

General Education Requirement

For more information on General Education Requirement, click here.

Distribution Component

For more information on the Distribution Component, click here.

- GE1 and GE2 Courses
  Students must complete four GE1 courses: one from each of the four Distribution Areas outside of their major area of study.
  Students must take one GE2 course. The GE2 course chosen, must build upon a discipline taken at the GE1 level (e.g. PSY101 (S1) and PSY 221 (S2)).
  Fine Arts (F1, F2)
  Humanities (H1, H2)
  Philosophy/Ethics/Religion (P1, P2)
  Social Sciences (S1, S2)

Cross-Cultural Component

The Cross-Cultural Component is a five-course series through which students explore the study of culture:

Transfer students will register for CCS101 for one credit.

- Cultural Seminar (CCS100)
  The Cultural Seminar, which is taken in the first semester, begins the exploration of culture through the study of one’s own culture and a different culture. This course develops oral communication skills through critical reading and discussion.
- Writing Seminar (ENG 170)
  The Writing Seminar is taken during the first or second semester, includes cross-cultural readings, and develops foundational writing skills.
- Cross-Cultural Development (CCD)
  The Cross-Cultural Designation course is taken after the Cultural and Writing Seminars. This course satisfies a Distribution requirement, continues development of writing skills, and includes significant cross-cultural themes as preparation for the Cross-Cultural Experience.
- Cross-Cultural Experience (CCE)
  The Cross-Cultural Experience course is taken concurrently or after the Cross-Cultural Development course. In an off-campus setting, students apply knowledge learned in the previous three courses through interactions with cultures other than their own. (CCS300 for 2 credits, NCEP courses for 4 credits, or study abroad for 12+ credits)

For more information and course listings, click here

- Global Perspectives Colloquium (CCS400)
  In the Global Perspectives Colloquium, advanced students (usually seniors) from multiple disciplines engage in critical reading and discussion. Students reflect on their distribution courses and cross-cultural experiences while also refining their writing skills.

Major Courses

The list below displays all the courses offered by the program:

- NRS100: Health Care and Nursing (4 hours)
- NRS100L: Health Care and Nursing Laboratory
- NRS230: Health Assessment (4 hours)
- NRS230L: Health Assessment Laboratory
- NRS233: Foundations of Nursing Practice (4 hours)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRS234</td>
<td>Foundations - Practicum</td>
<td>2 hours</td>
</tr>
<tr>
<td>NRS236</td>
<td>Human Pathophysiologic Responses</td>
<td>4 hours</td>
</tr>
<tr>
<td>NRS300</td>
<td>Critical Inquiry in Nursing Research</td>
<td>2 hours</td>
</tr>
<tr>
<td>NRS300H</td>
<td>Critical Inquiry in Nursing Research Honors</td>
<td>2 hours</td>
</tr>
<tr>
<td>NRS310</td>
<td>Mental Health Nursing Care</td>
<td>3 hours</td>
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<tr>
<td>NRS312</td>
<td>Family Centered Obstetric Nursing Care</td>
<td>2 hours</td>
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<tr>
<td>NRS316</td>
<td>Introduction to Medical Surgical Nursing</td>
<td>4 hours</td>
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<tr>
<td>NRS317</td>
<td>Medical Surgical Nursing Practicum</td>
<td>5 hours</td>
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<tr>
<td>NRS320</td>
<td>Family Centered Pediatric Nursing Care</td>
<td>2 hours</td>
</tr>
<tr>
<td>NRS391</td>
<td>Special Topics in Nursing</td>
<td>2-4 hours</td>
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<tr>
<td>NRS415</td>
<td>Community Health Practicum</td>
<td>2 hours</td>
</tr>
<tr>
<td>NRS416</td>
<td>Community Health Nursing Care</td>
<td>3 hours</td>
</tr>
<tr>
<td>NRS417</td>
<td>Advanced Medical Surgical Nursing</td>
<td>3 hours</td>
</tr>
<tr>
<td>NRS419</td>
<td>Advanced Medical Surgical Practicum</td>
<td>5 hours</td>
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<tr>
<td>NRS429</td>
<td>Health Policy and Administration</td>
<td>3 hours</td>
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<tr>
<td>NRS431</td>
<td>Capstone</td>
<td>4 hours</td>
</tr>
<tr>
<td>NRS432</td>
<td>Professional Practice Preparation</td>
<td>1 hour</td>
</tr>
<tr>
<td>NRS498</td>
<td>Independent Study in Nursing</td>
<td>1 TO 4 hours</td>
</tr>
</tbody>
</table>
Accounting
Actuarial Sciences
Animal Behavior
Applied Physics/Engineering Dual Degree Program
Art and Photography
Athletic Training Education
Aviation Science Minor
Biology
Business Administration
Business Economics
Chemistry and Biochemistry
Coaching Minor
Communication
Computational Science
Computer Science and Information Technology
Computer Science Dual Degree Program
Criminal Justice
Economics minor
Education
English
Environmental Science
Exercise Science
Finance
Global Studies
Graphic Communication
Health Care Administration
Health Science
Health Science - Diagnostic Medical Sonography
Health Science - Radiologic Technology
Hispanic Health and Human Service
History
Management and Leadership
Marine Sciences (Marine Biology)
Marketing
Mathematics
Medical Laboratory Sciences
Medieval and Renaissance Studies Minor
Modern Languages and Literatures (Spanish, French, German)
Music and Music Education
Music Therapy Program
Nursing
Philosophy, Political Science and Economics
Philosophy Minor
Physical and Health Education
Applied Physics
Political Science
Pre-Occupational Therapy
Pre-Physical Therapy
Professional Writing
Psychology
Public Health
Religious Studies
Sociology
Sports Nutrition
Sport and Recreation Administration
Theatre & Arts Management
| Therapeutic Recreation |

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Enrichment Programs

Intensive English Language Programs (English as a second language - ESL)
Honors
Study Abroad and Off-Campus Study
Cross Cultural Experiences
Intensive English Language Program (English as a Second Language - ESL)

Katherine Hammett  
Director of International Education

Carroll University offers an Intensive English Program designed to help non-native English speakers increase their English language skills. The goal of the program is to prepare students with the oral and written language skills they need to be successful in an American university. The curriculum is designed for students at all levels of English language proficiency.

Learning Outcomes for ESL

Students in Carroll University's intensive English program can expect to:

1. Speak English more fluently in formal and informal settings;
2. Build listening and comprehension skills, enabling them to better understand and participate in university level lectures;
3. Write effective academic papers and essays;
4. Refine oral communication skills and pronunciation in order to be better understood;
5. Actively practice using English appropriately in various social contexts.

The Intensive English program at Carroll University is flexible in nature, assessing the needs of the international students we serve, and placing them accordingly. Students entering the program may be placed in a full time intensive English course of study (20 instructional hours per week), or placed in a combination of university level academic courses, in conjunction with some intensive English language study.

121. Listening and Speaking I (Beginning Level)
This course aims to increase the spoken fluency, conversational vocabulary and listening comprehension of emerging English language learners. Students will be given opportunities hearing English used in natural conversations in a variety of contexts. Students will also practice speaking English in structured and semi-structured situations, with an emphasis on providing students with a grammatical and communicative framework for managing everyday functions, such as asking and responding to questions and directions.

122. Reading and Writing I (Beginning Level)
This course is designed for emerging English language learners to learn strategies such as skimming, scanning, and prediction using context clues to improve their reading comprehension in English. In addition, there will be a component on grammar to improve their writing skills.

123. ESL Special Topics (Beginning Level)
This course will engage beginning English language learners on a variety of topics, which may include: pronunciation, English for special purposes, cultural diversity in the U.S., current events and media.

221. Listening and Speaking II (Intermediate Level):
This course will focus on developing students' English communication skills appropriate for an academic environment. Students will develop their skills in creating presentations and participating in class discussions, as well as engage in interactive activities that will strengthen their pronunciation skills in English.

222. Reading and Writing II (Intermediate Level):
This course is designed for intermediate English language learners to build academic vocabulary, and develop more advanced reading comprehension skills. A grammar component will also be integrated to help students develop well-articulated paragraphs with topic sentences and logical conclusions in their writing. In addition, some attention will be given to strengthen students' note taking skills.

321. Advanced Integrated Communications (Advanced Level):
In this course, students will practice communication in various settings and for a wide range of professional and academic purposes, integrating all the language skills, with a special emphasis on speaking and listening in an academic environment. The course will provide a support framework for the English language learner who is ready to be immersed in full-time university academic work. Topics include: oral presentations skills, group work, multimedia activities involving listening and speaking, and higher level pronunciation work.

322. Reading and Writing III (Advanced Level):
This course is designed for advanced English language learners to prepare them for university academic reading, writing and research. Special emphasis will be placed on writing well-formed paragraphs and longer essays with clear topic sentences, proper research citation, and higher level academic reading strategies.

223/323. Special Topics (Intermediate/Advanced Level):
This course will engage English language learners in stimulating conversation and writing practice on a variety of topics, which may include: English for professional contexts, cultural diversity in the U.S., current events and media.
Honors

Lilly Goren  Professor of Political Science, Interim Director

The Honors Program at Carroll University encourages motivated and talented students to pursue a breadth and depth of knowledge within an enriched curriculum. The program creates an environment designed to challenge students' perspectives and foster intellectual development.

Learning Outcomes for the Honors Program

1. Students will expand the breadth and depth of their knowledge through special readings, interdisciplinary approaches, and current research.
2. Students will be able to address issues and problems in an open-minded, analytical and creative way. They will learn to make connections between disparate subjects, to approach topics from a variety of perspectives, and to relate their coursework to contemporary issues.
3. Students will demonstrate the ability to do independent research, or other creative work, while working with faculty mentors and similarly motivated students.

Students admitted to the Honors Program upon matriculation to the University are expected to complete a six course curriculum. These include:

CCS 100H, Cultural Seminar
ENG 170H, Writing Seminar

Four additional honors courses, which may be:

Courses designated as honors (H) on the timetable.
One honors contract course (arranged with the instructor on an individual basis).
A Pioneer Scholar Experience.
A course completed on a semester or year study abroad program.
Honors courses completed at a previous institution.

Students who enter the Honors Program after their first year must complete a five course curriculum.

To graduate as a member of the Honors Program, a student must attain an overall grade point average of at least 3.40 with grades of B or better in each honors course. A student earning less than a B in any honors course will be removed from the program. For more information, please contact the Carroll University Scholars Center.

A List of Honors Courses

- CCS100H: Honors - Cultural Seminar (4 hours)
- CMP112H: Honors Computational Thinking I (4 hours)
- CMP114H: Honors Computational Thinking II - Statistical Analysis Emphasis (4 hours)
- COM290H: Intro to Health Communication (4 hours)
- ENG170H: Writing Seminar (4 hours)
- ENG255H: Postcolonial Literature and Theory (4 hours)
- ENV120H: Conservation and Environmental Improvement (4 hours)
- HIS106H: America Since 1877 (4 hours)
- HIS224H: The World Since 1945 (4 hours)
- HIS225H: Medieval Europe, China, and the Islamic Crescent (4 hours)
- HON291H: Topics in Honors - Fine Arts (4 hours)
- HON292H: Topics in Honors - Humanities (4 hours)
- HON293H: Topics in Honors - Natural Sciences (4 hours)
- HON294H: Topics in Honors - Philosophy, Ethics, Religion (4 hours)
- HON295H: Topics in Honors-Social Science (4 hours)
- NRS300H: Critical Inquiry in Nursing Research Honors (2 hours)
- POL210H: Origins of Democratic Thinking (4 hours)
- PH1206H: Ethics (4 hours)
- PHY105H: Astronomy (4 hours)
- PHY1055H: Astronomy lab
- SOC102H: Sociology of Social Problems (4 hours)

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Study Abroad and Domestic Study Away Programs

Students who are in good academic standing and have completed at least 16 Carroll University credits at the time of participation are eligible to apply to enroll in a study abroad or domestic study away program. Students should note that each study abroad/away program may have its own requirements for acceptance and are encouraged to review the individual program’s materials for additional expectations.

Approved study abroad/away students remain enrolled at the university during the semester or academic-year study abroad/away period. Applications for study abroad/away are due at least one semester prior to the semester in which the student intends to study; however, students are advised to apply for study abroad/away a full year ahead of their intended study. Details about the programs, eligibility, applications and costs are available on the Carroll University CCE Web site or from OIE.

International study abroad and domestic study away opportunities include three types of programs: exchange, affiliated and unaffiliated.

1. **Exchange Programs**

Exchange programs are programs in which the school abroad/away sends us their students and we, in turn, send our students for a semester or academic year. Students participating in semester and year exchange programs receive their regular financial aid package, including institutional scholarships. They pay their Carroll University tuition. In most cases, room and board are paid directly to the host institution. Students are assessed a $350 per semester or $150 per winter or summer study abroad/away fee by Carroll University. Note that the list below is subject to change. Link to the Carroll University CCE website here for the most up-to-date list.

**Austria**
Management Center Innsbruck (MCI) - MCI, in beautiful Innsbruck, Austria, has a strong international and business focus on academics and offers classes taught not only in German, but English and other languages. The special exchange program classes offered in English are available during the spring semester only.

**Belgium**
Institut des Hautes Etudes des Communications Sociales (IHECS) - IHECS has approximately 2,000 students and is located in the center of the city of Brussels, Belgium. The institution focuses on the fields of Communications and Journalism with an emphasis on practical application.

**France**
Institut d'Etudes Politiques de Bordeaux (IEP) - IEP enrolls 1,300 students who study history, political science, economics and law. Visiting international students may choose courses from any discipline. All IEP courses are taught in French; hence, the student needs to be approved by the modern languages faculty, as well as by the GCCE Committee and/or OIE.

Burgundy School of Business (BSB) - BSB, located in Dijon, France, is an international business school that attracts students from all over the world. It provides students with an opportunity to study business in a town and region known for its cultural and historical contributions to Europe. BSB courses that are taught in English include business law, economics, marketing, entrepreneurship, sociology, psychology, finance and market research.

**Germany**
Philippines-Universitat Marburg - Students may take courses in German or English at Philippes-Universitat Marburg. The university has 17 different departments offering a broad range of course opportunities for students. This 500-year old institution enrolls 20,000 students, 12 percent from countries other than Germany. The university is located in the historic city of Marburg in the state of Hessen.

**Hong Kong**
Hong Kong Baptist University (HKBU) - Located in Kowloon, the heart of Hong Kong, HKBU is a vibrant campus of more than 5000 undergraduate students. The university offers a wide-range of courses taught in English and Chinese, including Arts, Business, Communication, Science, and Social Sciences. Students may enroll for either semester or for the academic year.

Lingnan University - Known as "The Liberal Arts University of Hong Kong", Lingnan is located on a small, beautiful campus in the New Territories. Offering strong courses in the Humanities, Arts, Business and Sciences, the university has a "whole-person" approach to education and offers many co-curricular activities, including many service learning opportunities.
Study Abroad and Domestic Study Away

Mexico
Universidad De La Salle Bajío-León - Located in León, ULS is a private school that offers a wide range of coursework, including psychology, education, communication, business and information technology. Carroll students may take courses in any discipline. All ULS courses are taught in Spanish; therefore Carroll students must receive a recommendation from the Spanish faculty.

Netherlands
University of Applied Sciences Utrecht - Located in the university city of Utrecht, the University of Applied Sciences-Utrecht has over 39,000 students and focuses on innovation and professionalization in vocational practice (through high-value knowledge and research) and on the personal development of talent. Courses are available in English in the areas of Economics and Management, Communication and Journalism, Education, Health Care, Law, Social Work, and Technology.

South Korea
Ewha University - Located in Seoul, with more than 120 years of rich history, Ewha is Korea's oldest women's university. Carroll students, both men and women, can study in English at Ewha. More than 20 percent of undergraduate courses are taught in English. These include art history, Asian studies, business, ceramics, economics, international studies, Korean studies, literature, media studies, politics, psychology, religion and women's studies. Carroll students are housed on the beautiful Ewha campus in the new International House dormitory.

United Kingdom
University of Hull - Hull is located about 3 ½ hours from London. The university has 14,000 students and is noted for its excellence in teaching and research. Study abroad students can choose coursework from many disciplines, including the humanities, social sciences, sciences, business, and the arts.

Irish American Scholars Program - The Irish American Scholars program allows Carroll University students to participate in semester and academic year exchange programs at the following Northern Ireland institutions: Queens University Belfast, University of Ulster, Belfast Metropolitan College, Stranmillis University College, and St. Mary’s University College. Up to three Carroll University students are selected for this opportunity each year.

Wales
Aberystwyth University - Founded in 1872, Aberystwyth was the first university established in Wales. UWA is on the coast in central Wales and has more than 7,000 students. All courses are taught in English. Aberystwyth has excellent academic and cultural opportunities and students can take courses in any discipline. Additional scholarships are available for study in Wales.

2. Affiliated Programs
Affiliated programs are universities or study programs determined by Carroll to meet our academic standards. Students remain a Carroll University student while studying abroad/away at an affiliate program. Students participating in affiliated programs may be eligible for federal, state and outside funding as applicable. Institutional aid is generally not available for affiliated programs. Students pay program tuition to Carroll University which, in turn, remits the monies to the program provider. Room and board are paid directly to the host institution. Students are assessed a $350 per semester or $150 per winter or summer study abroad/away fee by Carroll University. Note that the list below is subject to change. Link to the Carroll University CCE Website here for the most up-to-date list of partner programs.

Australia
Macquarie University-Sydney - Macquarie has 24,000 students, including 4,000 international students, and offers a wide range of courses, including humanities, social sciences, biology, psychology and business.

La Trobe University-Melbourne - Located in the cultural capital of Australia, La Trobe hosts 17,000 students from over 90 countries. Offering a wide variety of programs, La Trobe is especially strong in business, media studies, math, science, and education.

China
American Center of Chengdu (g-MEO) - In partnership with other U.S. institutions, the American Center of Chengdu allows students to take classes in an American setting while living and studying on a Chinese campus. Located in the capital of Sichuan Province in China's Southwest, the American Center of Chengdu welcomes students from the U.S along with students from Sichuan University. Courses include Criminal Justice, International Business, Information Technology, Political Science, Humanities, Social Sciences, Trade and Economics.

Ireland
National University of Ireland-Galway - NUI Galway has 13,000 students and nearly 1,000 international students attend the university each year. Because of its dynamic and pioneering role in theater, arts and culture, Galway has earned the title Cultural Capital of Ireland.

National University of Ireland-Maynooth - NUI Maynooth is an innovative university of 5,500 students from every county in Ireland, as well as an increasing number of international students. Situated 25 km west of Dublin, it is located in Ireland’s only university town, Maynooth.

Italy
ACM - Florence: Arts, Humanities, & Culture - Associated Colleges of the Midwest offers a fall semester program in Florence, Italy. Students choose from course offerings in Renaissance art history, Italian culture, and studio art. The program begins in late August with an academic orientation comprised of a four-week intensive Italian language course, lectures on aspects of contemporary Italian, and introductory meetings with background readings for the elective classes. With the exception of the Italian language course, all courses are conducted in English.

ACM - The London & Florence: Arts in Context - This program offers students a singular opportunity to live and study in two of the world’s most important and exciting cultural capitals. This interdisciplinary program focuses on the arts that have made these two cities central to the heritage of the West: the visual arts, on the one hand, in architecture, painting, sculpture; and the literary arts, on the other, in theatre and literature. Three program lengths are offered: 18 week, 15 week and 10 week.

Florence University of the Arts (FUA) - In affiliation with SAI Programs, FUA offers students the opportunity to study in one of the leading educational and cultural centers of Europe. FUA is located in the historic center of Florence and offers English-taught courses in areas such as business, economics, liberal arts, environmental studies, human services, natural sciences, mathematics, fine and visual arts.
Study Abroad and Domestic Study Away

John Cabot University - Through program provider SAI Programs, students can study a wide variety of programs in the heart of Rome. Courses are offered in English include Arts and Humanities, French, Italian, and Latin languages, Sciences, and Social Sciences.

New Zealand
University of Canterbury - This university is located in Christchurch, New Zealand. This is a larger city on the south island, which is not as heavily populated as the north island. The school is strong in the areas of biology, chemistry, business, economics, environmental science, geology, mathematics, political science, and computer science.

United Kingdom
ACM - London & Florence: Arts in Context - This program offers students a singular opportunity to live and study in two of the world’s most important and exciting cultural capitals. This interdisciplinary program focuses on the arts that have made these two cities central to the heritage of the West: the visual arts, on the one hand, in architecture, painting, sculpture; and the literary arts, on the other, in theatre and literature. Two program lengths that include London as a study location are offered: 18 week and 15 week.

Bader International Study Centre (Queen’s University site) - Based at a castle in the English countryside south of London, students take internationally themed courses combined with field studies throughout England and Europe. The program emphasizes intercultural learning, offering a flexible choice of Queen’s accredited courses — ranging from the Humanities and International Business, to Social Sciences and Nursing.

University of Lancaster - Lancaster is in the northwest of England, 250 miles from London. It is a preferred location to study environmental and natural sciences. Other coursework for international students includes applied sciences, arts, humanities, business and social sciences.

Regents University London - Regent’s American College London (RACL) is the official London campus of Webster University, St. Louis, USA. Webster RACL offers an internationally-focused, stimulating and supportive educational experience, with a wide choice of majors. Located in Regent’s Park in the center of London students are able to explore the city through their curricular and co-curricular offerings.

University of Stirling-Scotland - The highly rated University of Stirling offers international students the chance to receive a quality Scottish education. The university is proud of its international community, which comprises 12 to 15 percent of the student population.

United States - New York City
Wisconsin Universities program, conducted during a six-week summer term, concentrates the study of the United Nations in a two-week intensive course at the University of Wisconsin-Milwaukee followed by a four-week session in New York City. Students participating in this program earn six credits which may be transferred to Carroll.

United States - Washington D.C.
Washington Center This program includes an internship of at least 30 hours per week supplemented by enrollment in a single course during the semester. International opportunities are also available in London and Sydney.

Washington Semester program at American University This program includes a four-credit internship in the public, private or nonprofit sectors of Washington D.C., and is offered during the academic year and summer terms.

Worldwide
CEA Global Education – CEA Global Education was founded in 1997 and offers programs in Argentina, Brazil, Chile, China, Costa Rica, Czech Republic, England, France, Germany, Ireland, Italy, South Africa, and Spain. The mission of CEA Global Education is to create and facilitate opportunities for academic achievement, global competence and personal growth through quality international education. Students may study at universities abroad and may participate in internship placements, depending on the location.

GlobaLinks Learning Abroad/ISA - With over 20 years of experience working within the field of international education serving both students, GlobaLinks offers a wide range of study abroad and internship opportunities throughout Australia, New Zealand, Fiji, Asia, and Europe.

ProWorld – ProWorld offers intern, volunteer and internship experiences for individuals looking to make a difference abroad while gaining the cross-cultural skills and knowledge to succeed as global citizens. Programs are offered in Belize, Peru, and Mexico.

Up With People
Recognized as one of the preeminent global educational programs in the world, Up with People achieves its mission through a unique experience for young adults that combines 22 weeks of international travel and intercultural living, community service and the universal language of music. Students are able to earn 16 credits selected from a pre-determined list of courses.

Webster University - Carroll students may study through the Webster University network of schools. Study programs are available in Austria, China, Japan, Netherlands, Switzerland, Thailand and the United Kingdom.

3. Unaffiliated Programs
Unaffiliated programs are programs that students independently identify as a preferred study abroad option. Students sometimes want a study abroad experience that is not available through our Exchange or Affiliated Programs. Students need approval for a unaffiliated program in order to remain a Carroll University student while abroad. Students participating in unaffiliated programs may be eligible for federal, state and outside funding as applicable. Institutional aid is generally not available for unaffiliated programs. Students pay all tuition and fees directly to the host institution. Students are assessed a $350 per semester or $150 per winter or summer study abroad/away fee by Carroll University. Link to the Carroll University CCE Website here.

Examples of unaffiliated programs Carroll University students have participated in the past:

Semester at Sea – Semester at Sea is a multiple country study abroad program open to students of all majors emphasizing comparative academic examination, hands-on field experiences, and meaningful engagement in the global community. A wide variety of coursework from 20-25 disciplines is integrated with relevant field studies in up to a dozen countries, allowing for a comparative study abroad experience that is truly global.
| School for Field Studies - SFS creates transformative study abroad experiences through field-based learning and research. Their educational programs explore the human and ecological dimensions of the complex environmental problems faced by local partners, contributing to sustainable solutions in the places where they live and work. The SFS community is part of a growing network of individuals and institutions committed to environmental stewardship. |
| AIFS - Founded in 1964, the American Institute For Foreign Study (AIFS) is one of the oldest, largest and most respected cultural exchange organizations in the world. With global offices in 6 countries, Programs include college study abroad, au pair placement, camp counselors and staff, gifted education, college prep, high school study/travel and insurance services. |
| SIT Study Abroad - A pioneer in experiential, field-based study abroad, SIT offers semester, summer, and academic year programs for undergraduate students in Africa, Asia and the Pacific, Europe, Latin America, and the Middle East, as well as comparative programs in multiple locations. |
The Cross-Cultural Experience is a signature component of Carroll’s Pioneer Core curriculum, which is characterized by an integrating theme of culture and a requirement for domestic or international Cross-Cultural immersion. This experience challenges students to apply classroom-based examinations of culture and to interact with cultures other than their own in an off-campus setting. For a link to the CCE site click here.

The Cross Cultural Experience has three parts: preparation, immersion and reflection. Research has shown that all three parts are required to ensure that students get the most from the Cross Cultural Experience. The immersion portion requires at least 60 hours of meaningful interaction with a culture other than the student’s own. Students may choose from a variety of choices to fulfill the CCE requirement. Options include local, domestic and international experiences:

- International study abroad, for a summer, winter, semester, or academic year program
- CCS 300 (2 credits) or NCE course (4 credits)
- Discipline-specific courses approved for CCE credit
- Internships, practicums and clinical experiences approved for CCE credit

**Study Abroad Cross-Cultural Experiences (CCEs)**

Students in good academic standing with at least 16 completed Carroll University credits at the time of participation may apply for approval to enroll in a study abroad/away program. Approved study abroad students remain enrolled at the university during the semester or academic-year study abroad/away period. Applications for study abroad are due at least one semester prior to the semester in which the student intends to study; however, students are advised to apply for study abroad a full year ahead of their intended study.

A listing of the many and varied study abroad opportunities is available on the “Study Abroad” link of this site or on the Carroll University CCE webpage. Students in good academic standing with at least 16 completed Carroll University credits at the time of participation may apply for approval to enroll in a study abroad/away program.

**CCS300**

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**Eligibility:** Students interested in the faculty-led CCS 300 must submit a CCE application through the CCE website and have a minimum of 16 completed credit hours from Carroll University at the time of participation. Enrollment is determined by the course instructor and office of General Education who review student records to ensure that the applicant is in good standing related to both academics and conduct. Students must have completed CCS 100 or CCS 101 and must have completed or be concurrently taking their GE CCD course.

**Fees** for CCS 300 courses vary according to the program. Additional information for CCE courses is available on the Carroll University CCE Webpage or from A. Paul Jones Scholars Hall.

**Course Offerings:** CCS 300 course offerings are typically announced each spring for the next academic year. CCS 300 courses may vary from those listed below depending on availability of faculty. Up to date information can be found on the CCE website.

**New Cultural Experience Programs (NCE)**

NCE courses carry four academic credits and are taught by Carroll University faculty members. Each course has a specific academic focus along with a particular emphasis on understanding new cultures. Prior to travel, the students spend a semester in academic preparation.

**Eligibility:** Students interested in the NCEP course must submit a CCE application and have a minimum of 16 completed credit hours from Carroll University at the time of participation. Enrollment is determined by the course instructor and offices of General Education and/or International Education who review student records to ensure that the applicant is in good standing related to both academics and conduct. Students must have completed CCS 100 or CCS 101 and must have completed or be concurrently taking their GE CCD course.

**Fees** for NCEP courses vary according to the program. Additional information for CCE courses is available on the Carroll University CCE Webpage or from A. Paul Jones Scholars Hall.
Pioneer Core

The Pioneer Core Program
Cross-Cultural Component
Distribution Component
GE1 and GE2 Course Offerings
Cross Cultural Experiences
CCD Courses
Organization Majors in Distribution Areas
The Pioneer Core Program

The Pioneer Core is Carroll’s general education curriculum. Pioneer Core expands student learning beyond the major area of study, providing not only depth and breadth, but also a series of cross-cultural learning opportunities. The knowledge and skills developed through Pioneer Core are essential for students to reach their full potential as educated citizens in diverse communities and in an everchanging work force. Upon completion of Carroll's Pioneer Core, students will achieve the following learning outcomes:

1. Understand world cultures and reflectively interact with cultures other than their own.
2. Critically evaluate global issues from multiple perspectives.
3. Understand and analyze multiple philosophical, ethical, and religious positions held by persons within their own and other cultures.
4. Understand the methodologies germane to the fine arts, humanities, social sciences, and natural sciences as well as their larger social context.
5. Analyze and integrate material in a field outside the major area of study.
6. Develop and defend a position that demonstrates logical reasoning both orally and in writing.
7. Demonstrate information fluency by gathering, analyzing, and synthesizing information using emerging technologies and traditional media.

Students accomplish these learning outcomes through a Cross-Cultural Component and a Distribution Component.
Cross-Cultural Component

The Cross-Cultural Component is a five-course series through which students explore the study of culture:

• Cultural Seminar
• Writing Seminar
• Cross-Cultural Development
• Cross-Cultural Experience
• Global Perspectives Colloquium

Cultural Seminar (CCS 100)
The Cultural Seminar, which is taken in the first semester, begins the exploration of culture through the study of one’s own culture and a different culture. This course develops oral and written communication skills through critical reading, discussion, and reflective writing.

Writing Seminar (ENG 170)
The Writing Seminar is taken during the first or second semester, includes cross-cultural readings, and develops foundational writing skills.

Cross-Cultural Development (CCD)
The Cross-Cultural Development course is taken after the Cultural and Writing Seminars. This course satisfies a Distribution requirement, continues development of writing skills, and includes significant cross-cultural themes as preparation for the Cross-Cultural Experience.

Cross-Cultural Experience (CCE)
The Cross-Cultural Experience course is taken concurrently or after the Cross-Cultural Development course. In an off-campus setting, students apply knowledge learned in the previous three courses through interactions with cultures other than their own.

Global Perspectives Colloquium (CCS 400)
In the Global Perspectives Colloquium, advanced students (usually seniors) from multiple disciplines engage in critical reading and discussion. Students reflect on their distribution courses and cross-cultural experiences while also refining their writing skills.
Distribution Component

Distribution Component consists of courses that are outside a student's academic major area of study. The Distribution Component includes two main features: four introductory-level General Education 1 (GE1) courses that encourage disciplinary breadth and one higher-level General Education 2 (GE2) course that fosters depth outside the major. There are five Distribution Areas, and each academic major is housed in one of these areas: Fine Arts, Humanities, Philosophy/Ethics/Religion, Social Sciences, Natural Sciences.

Please note: When a student changes major to a major in a different distribution area, it will be the responsibility of the student to ensure that all the requirements of the new distribution area are met.

**GE1 courses**

Students must complete four GE1 courses: one from each of the four Distribution Areas outside of their major area of study. Students are not required to take a course from the Distribution Area in which their major is housed (e.g., a Chemistry major need not take a GE1 course from the Natural Sciences Distribution Area).

**GE2 courses**

A student must take one GE2 course. A GE2 course must be from the same discipline as one of the GE1 courses previously taken (e.g., a GE1 English course and a GE2 English course) or in a pre-approved cognate field.

A GE2 course builds upon knowledge from a previous GE1 course and provides depth in an area of interest outside a student’s major.

**Cross-Cultural Development**

Some GE1 and GE2 Distribution courses are also designated a Cross-Cultural Development (CCD). Students must take at least one CCD course. Students may satisfy the CCD requirement and a Distribution Area requirement in a single course.

A listing of GE1 and GE2 courses by Distribution Area follows. See also those that have a CCD after the course description – they satisfy the Cross-Cultural Development requirement.

More courses, especially GE2 courses, will be added to this list.
GE1 and GE2 Courses

**General Education (GE1) Courses**
- Fine Arts General Education I (F1)
- Humanities General Education I (H1)
- Natural Sciences General Education I (N1)
- Philosophy/Ethics/Religion General Education I (P1)
- Social Sciences General Education I (S1)

**General Education (GE2) Courses**
- Fine Arts General Education II (F2)
- Humanities General Education II (H2)
- Natural Sciences General Education II (N2)
- Philosophy/Ethics/Religion General Education II (P2)
- Social Sciences General Education II (S2)
Course Catalog

GE1 AND GE2 COURSES

Fine Arts General Education I (F1)

ART103: Prehistoric to Renaissance- Art History Survey (4 hours)
ART104: Renaissance to Early Modernism- Art History Survey (4 hours)
ART106: Drawing and Composition (4 hours)
ART107: Beginning Design 2D and 3D (4 hours)
ART209: Photography I (4 hours)
ART225: Ceramics I (4 hours)
ENG206: Fiction Writing (4 hours)
ENG207: Poetry Writing (4 hours)
MUS151: History of Jazz (4 hours)
MUS156: Listening to Classical Music (4 hours)
MUS157: History of Rock Music - Roots and History (4 hours)
MUS159: Digital Music Production (4 hours)
MUS185: Concert Choir (1 hour)
MUS188: Wind Symphony (1 hour)
THE101: Introduction to Theatre Arts (4 hours)
THE102: Oral Interpretation and Presentation (4 hours)
THE111: Introduction to World Dance (4 hours)

NOTE: MUS185 and MUS188 must be taken 4 times to equal 1 GE requirement.
Humanities General Education 1 (H1)

Distribution Component

- ENG162: Science Fiction and Gender (4 hours)
- ENG164: American Indian Literature and Spirituality (4 hours)
- ENG165: Writing the Body: Cultural Explorations of Race, Gender and Class (4 hours)
- ENG210: African American Literature (4 hours)
- ENG211: Intro Literary Study I - Poetry (4 hours)
- ENG214: Global Film Theory and Criticism (4 hours)
- ENG255: Postcolonial Literature and Theory (4 hours)
- ENG255H: Postcolonial Literature and Theory (4 hours)
- ENG288: Spectacle and Text: Visual Culture 1700 - 1920 (4 hours)
- FRE301: Conversation & Composition (4 hours)
- GER301: Conversation & Composition (4 hours)
- HIS103: Roots of the Western World (4 hours)
- HIS104: Europe and the Modern World (4 hours)
- HIS105: America to 1877 (4 hours)
- HIS106: America since 1877 (4 hours)
- HIS107: Understanding the Premodern World (4 hours)
- HIS108: Understanding Our Contemporary World (4 hours)
- HIS110: History of Modern China
- HIS112: Intro to Latin America History (4 hours)
- HIS224H: The World Since 1945 (4 hours)
- SPA301: Conversation and Composition I (4 hours)
- WRI199: Reading and Writing in the Sciences (4 hours)
Natural Sciences General Education 1 (N1)

Distribution Component

- BIO120: General Biology I (4 hours)
- BIO131: Genetics in Family and Society (4 hours)
- CHE101: General Chemistry (4 hours)
- CHE104: Forensic Science (4 hours)
- CHE106: Drug Discovery (4 hours)
- ENV105: Earth Science (4 hours)
- ENV120: Conservation and Environmental Improvement (4 hours)
- ENV150: Climate Science (4 hours)
- PHY105: Astronomy
Philosophy/Ethics/Religion General Education 1 (P1)

Distribution Component

- PHI101: Introduction to Philosophy (4 hours)
- PHI105: Introduction to Logic (4 hours)
- PHI106: Ethics, Values and Judgment (4 hours)
- PHI192: Environmental Ethics (4 hours)
- PHI194: Bioethics (4 hours)
- PHI207: History and Philosophy of Science (4 hours)
- PHI213: Philosophy of Art (4 hours)
- REL100: World Religions (4 hours)
- REL102: Introduction to the Hebrew Bible (4 hours)
- REL103: Intro to the New Testament (4 hours)
- REL106: Understanding Religion (4 hours)
- REL201: Jesus of Nazareth (4 hours)
- REL202: Religious Traditions in America (4 hours)
- REL210: Suffering and Hope (4 hours)
- REL215: Women in Religion (4 hours)
- REL220: Health and Religion (4 hours)
- REL224: Religion and Literature (4 hours)
- REL230: Foundations of Christianity (4 hours)
- REL231: Christianity in the Modern World (4 hours)
Social Sciences General Education 1 (S1)

Distribution Component

- COM101: Principles of Communication (4 hours)
- COM207: Intercultural Communication (4 hours)
- COM290: Intro to Health Communication (4 hours)
- ECO124: Principles of Economics I - Microeconomics (4 hours)
- ECO225: Principles of Economics II - Macroeconomics (4 hours)
- PBH101: Introduction to Public Health (4 hours)
- PBH102: Global Health (4 hours)
- POL103: Politics of the World's Nations (4 hours)
- POL141: Intro to American Politics (4 hours)
- POL155: Contemporary Global Politics (4 hours)
- POL210H: Origins of Democratic Thinking (4 hours)
- POL275: Political Theory (4 hours)
- POL276: Democracy, Globalization, and International Governance (4 hours)
- PSY101: Introductory Psychology (4 hours)
- SOC101: Introduction to Sociology (4 hours)
- SOC102: Sociology of Social Problems (4 hours)
- SOC110: Cultural Anthropology (4 hours)
- SOC130: Culture and Crime (4 hours)
Fine Arts General Education 2 (F2)

Distribution Component

- ART201: Painting I (4 hours)
- ART212: Introduction to Book Art (4 hours)
- ART215: History of Photography (4 hours)
- ART220: Sculpture I (4 hours)
- ART230: Printmaking I (4 hours)
- ART258: Visual Communication (4 hours)
- ART309: Photography II - Fine Art (4 hours)
- ART310: Photography II - Commercial (4 hours)
- ART314: Photography II Studio Lighting (4 hours)
- ENG333: Advanced Creative Writing (4 hours)
- THE215: Theatre History and Literature I (4 hours)
- THE216: Theatre History and Literature II (4 hours)

GE2 course selection must have the same prefix as the GE1 from this Distribution Area.
Humanities General Education 2 (H2)

Distribution Component

- ENG226: Africa: Literature and Culture of Its Many Nations (4 hours)
- ENG242: American Literature: One Nation, Many Voices (4 hours)
- ENG299: Introduction to Medical Humanities (4 hours)
- ENG300: Great Authors (4 hours)
- ENG301: Chaucer (4 hours)
- ENG303: Milton and Moral Choice - His Age and Ours (4 hours)
- ENG304: Shakespeare: From Stage to Screen (4 hours)
- ENG305: Advanced Exposition and the Rhetorical Tradition (4 hours)
- ENG312: Modernism (4 hours)
- FRE307: French Civilization (4 hours)
- GER318: Topics in German Culture and Literature (4 hours)
- HIS213: Women in American History (4 hours)
- HIS215: American Encounters: Natives, Africans, and Europeans in the Americans, 1350-1750 (4 hours)
- HIS225H: Medieval Europe, China, and the Islamic Crescent (4 hours)
- HIS254: Topics in Medieval European History (4 hours)
- HIS257: Europe's Civil War: 1900-1950 (4 hours)
- HIS316: Renaissance and Reformation Europe (4 hours)
- HIS318: American Indian History (4 hours)
- HIS329: The German Experience (4 hours)
- SPA307: Latin American Civilization (4 hours)
- SPA308: Hispanic Civilization (4 hours)
- SPA318: Topics in Hispanic Cultures, Literature, History, Politics (4 hours)
Natural Sciences General Education 2 (N2)

Distribution Component

GE2 course selection must have the same prefix as the GE1 from this Distribution Area.

- ENV222: Environmental Sustainability (4 hours)
- ENV367: Geographic Information Systems (4 hours)
Philosophy/Ethics/Religion General Education 2 (P2)

Distribution Component

- PHI205: Philosophy, Politics, and Economics (4 hours)
- PHI206: Ethics (4 hours)
- PHI206H: Ethics (4 hours)
- PHI307: World Philosophy (4 hours)
- PHI308: Philosophy of Religion (4 hours)
- PHI320: Ancient and Mediaeval Philosophy (4 hours)
- PHI321: Modern and Contemporary Philosophy (4 hours)
- REL306: Asian Religions (4 hours)
- REL308: Philosophy of Religion (4 hours)
- REL310: Powers, Politics, and Pluralism in Biblical Interpretation (4 hours)
- REL316: Judaism, Christianity, and Islam (4 hours)
Social Sciences General Education 2 (S2)

Distribution Component

- COM319: Communication Theory (4 hours)
- ECO306: Microeconomic Theory (4 hours)
- ECO307: Macroeconomic Theory (4 hours)
- PBH421: Epidemiology (4 hours)
- POL285: International Conflict and Security (4 hours)
- POL301: Politics of Developed Nations (4 hours)
- POL303: Politics of Developing Nations (4 hours)
- POL321: International Law (4 hours)
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- SOC213: Race and Ethnicity Studies in Criminal Justice (4 hours)
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<tr>
<td>NCE207</td>
<td>Practicing Intercultural Communication in Thailand</td>
<td>4 hours</td>
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<td>NCE305</td>
<td>Reefs, Rainforests and Ruins of Belize</td>
<td>4 hours</td>
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<tr>
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<td>Germany, Poland and Hungary</td>
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<td>Revising Italy - Travel Writing in the Italian Tradition</td>
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<td>Australia - The Land and the People Down Under</td>
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<td>Contemporary Germany - Its Culture, Economy, and Politics</td>
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<td>NCE323</td>
<td>Travel Journals</td>
<td>4 hours</td>
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<td>NCE325</td>
<td>Politics and Theatre in the UK and USA</td>
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<td>Spain: Multicultural Faces and Footprints</td>
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<td>Japan: Exploring a Land of Contrasts</td>
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<td>NCE330</td>
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The Pioneer Core Program
Cross Cultural Experiences
Cross-Cultural Component
Distribution Component
Organization of Majors in Distribution Areas

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Organization of Majors in Distribution Areas

Fine Arts
- Art
- Book Art
- Graphic Communication
- Music
- Photography
- Theatre Arts

Social Sciences
- Accounting
- Business Administration
- Communication
- Criminal Justice
- Education
- Global Studies
- Health Care Administration
- Organizational Leadership
- Philosophy/Politics/Economics
- Physical and Health Education
- Politics
- Psychology
- Public Health
- Sociology
- Sport and Recreation Management

Humanities
- English
- European Studies
- History
- Spanish
- Writing

Philosophy/Ethics/Religion
- Religious Studies

Natural Sciences
- Actuarial Sciences
- Animal Behavior
- Applied Physics
- Athletic Training
- Biology
- Chemistry and Biochemistry
- Computational Science
- Computer Science
- Environmental Science
- Exercise Science
- Health Science: Diagnostic Medical Sonography
- Radiological Technology
- Information Technology
- Mathematics
- Medical Laboratory Sciences
- Nursing
- Occupational Therapy
- Software Engineering and Applied Mathematics

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<td>Accounting</td>
<td>DACC</td>
<td>Department of Accounting</td>
<td>DBAE</td>
<td>Department of Business, Accounting &amp; Economics</td>
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<td>ACS</td>
<td>Actuarial Sciences</td>
<td>DCPS</td>
<td>Department of Computational &amp; Physical Science</td>
<td>CNHS</td>
<td>College of Natural Science &amp; Health Sciences</td>
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<td>ANB</td>
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<td>DLFS</td>
<td>Department of Life Sciences</td>
<td>CNHS</td>
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<td>PHY/GEN</td>
<td>Applied Physics &amp; Engineering Dual Degree</td>
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<td>Department of Computational &amp; Physical Science</td>
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<td>Art &amp; Photography</td>
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Accreditation Information

Click here for information on accreditation.
Admissions

Admission to Carroll University is offered to those for whom academic and personal success seems likely. Each candidate is evaluated individually. Evidence of good character and demonstrated ability to do university level work is essential.

For more information on Admissions, click on a topic below.

Options for Attending Carroll

Procedures for Admission - Full-Time Freshmen

Application Deadline

Admission Options

Advanced Placement

Procedures for Admission - Full-Time Transfer

Procedures for Admission - Part-Time Students

Returning Students

Articulation Agreements

Athletic Training Education Program Admission

Diagnostic Medical Sonography Admission

Bachelor of Science in Nursing Degree Admission

Pre-Master of Science in Exercise Physiology Program Admission

Pre-Physical Therapy and Entry-Level Doctor of Physical Therapy Program Admission

Radiologic Technology Program Admissions

Air Force ROTC Information
Options for Attending Carroll

Students who wish to attend Carroll University may choose from two basic options.

**Full time** - students who carry 12 credits or more per semester.

**Part time** - students who carry 11 credits or fewer per semester. There are two types of part-time students.

**Degree seeking** - students working toward a Bachelor of Arts, Bachelor of Science, Bachelor of Science in Music Education or Bachelor of Science in Nursing.

**Non-degree seeking** - students taking courses for enrichment, skill-building, or preparation for graduate study purposes. Courses may be taken for credit or audited (students do not receive university credit for their work).

Note: Students may move between full-time and part-time status. However, they should be aware of implications for tuition and fees, financial aid, housing, etc. **Part-time students who wish to attend the University as full-time students must apply through the Office of Admission. Questions should be directed to the appropriate offices.**

Students come to Carroll from different environments. Some matriculate directly from secondary schools or transfer from other institutions. Other students enroll at Carroll as working adults.

Carroll offers classes during the day, in the evening, and online. Students at Carroll may choose from more than 45 areas of study or they may design their own major. Five majors can be completed through evening courses.
Procedures for Admission - Full-Time Freshmen

The following credentials must be submitted to the Office of Admission:

1. **Application for admission**, which may be submitted at any time following the successful completion of the junior year in secondary school.
2. **Transcript from an accredited secondary school** that shows progress toward, or the completion of, graduation requirements.
3. **School Report Form**, which consists of a personal evaluation by the secondary school guidance counselor.
4. **SAT or ACT scores**: these tests are administered by the College Entrance Examination Board and the American College Testing Program, respectively.
5. **Nursing students** must submit a transcript from an accredited secondary school that shows satisfactory completion of coursework in algebra II, chemistry and biology.

Decisions are made on applications when they are complete, and applicants are notified promptly through the Office of Admission. In some instances, the files of prospective students are referred to the Admission Committee for review and action. That body may grant admission to the University provided certain conditions are met or may require the student to satisfy specified criteria. Final admission to the Carroll athletic training, nursing, and physical therapy programs is contingent upon the ability of the applicant to comply with the technical standards as listed in the catalog under each area of study, as well as the health standards listed on the Carroll University health forms.

University applicants with disabilities bear no obligation to disclose their disabilities during the application process. However, an applicant may choose to disclose his/her disability to the Office of Admission if the student believes that he/she does not meet the University's regular admission requirements. The disability may be taken into consideration in relationship to the student's overall achievement, the effect of the disability on his/her academic achievement, and the likelihood of the student's success in the University's programs, courses and activities.

Following acceptance, students intending to enroll must pay a $200 **confirmation deposit**, complete the health information form and submit a statement of medical insurance coverage. All students are required to have medical insurance coverage as listed in the Catalog under Student Life, Health Insurance.

Those who apply for financial aid are not required to declare their intention to enroll until after they have been notified of their final financial aid award.
Application Deadline

Students are encouraged to file applications for admission to the first semester (fall) before March 15. Applications will be considered and qualified candidates will be accepted as long as there are openings in the entering class. Applications and all supporting documents for admission to the second semester should be filed before November 1.

To assure early notification of admission, either the ACT or SAT should be taken before March 15. Ordinarily, the SAT is administered seven times a year in October, November, December, January, April, May and June. The ACT is administered five times a year in October, December, February, April and June.

Test scores obtained in the junior year may be submitted. Students should contact their guidance counselor or write the testing agency to obtain test registration forms.
Admission Options

Carroll recognizes the varying needs of individual students with the following options:

**Early admission** may be granted following the completion of three years of secondary school, provided the secondary school indicates that it is in the applicant's best interest to do so. The applicant may or may not have completed the coursework required for secondary school graduation at the time of admission, but must show unusual promise and achievement.

**Deferred admission** may be offered to students who want to delay university study for a semester or full year after graduating from secondary school.
Advanced Placement

Applicants will be considered for advanced placement according to the policies established by Carroll University. The applicant’s advanced standing is determined individually and is based on an evaluation of all prior academic work.

Options for advanced placement are:

1. Advanced placement exams administered in high school.
2. Retroactive credit for modern languages and math.
3. CLEP exams (College Level Examination Program).
4. Program exams.
5. Challenge exams to complete requirements in specified nursing courses or portions of courses, for registered nurses.
6. Credit for prior learning application.

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Procedures for Admission - Full-Time Transfer

The following credentials must be submitted to the Office of Admission:

1. **Application for admission**, which may be submitted at any time.
2. **Transcript from an accredited secondary school**.
3. **Transcript(s) from all post-secondary institutions** attended.
4. **College Report Form** to be completed by the dean or assistant dean of students at the post-secondary institution most recently attended.

Students must normally be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

Application criteria and academic progression standards for specific academic programs are listed separately in the catalog.

Students from a two-year or four-year accredited post-secondary institution may receive transfer credits provided:

1. Transfer courses parallel Carroll University courses or are deemed eligible for elective credit.
2. All courses accepted in transfer and applied to graduation hours are graded C or better.
3. A maximum of 64 credits may transfer from a two-year institution.
4. There is no limit as to the number of credits eligible for transfer from a four-year institution.
5. Students must complete their final 32 credits at Carroll, including at least one-fourth of their major credits and at least one-fourth of the minor credits.

Transfer credit will be evaluated under the following provisions:

1. A course in which a student received a grade of D may be used to complete general education curriculum and major or minor requirements, but the credit hours will not count towards graduation. All D and F graded courses normally acceptable for transfer credit will be figured into the calculation of the cumulative grade point average.
2. A course in which a student received a D or F grade may be repeated for credit and only the last grade earned will be used in the grade point average calculation.
3. Transfer students with an Associate of Arts or an Associate of Arts & Science degree with at least 52 hours of acceptable transfer credit will have the writing seminar 1 distribution components in the general education curriculum. In addition, transfer credit may be received for the CCD, GE2 and CCE requirements.
4. Transfer students with a previous bachelor's degree from an accredited post-secondary institution will have the writing seminar waived and will meet all GE 1 distribution requirements. In addition, transfer credit may be received for the CCD, GE2 and CCE requirements.
5. Students may be eligible for retroactive credit when transferring in an upper level modern language or math course(s). Retroactive credit will be granted at Carroll University if the transferring institution did not award retroactive credit(s), Carroll University will only grant credit for a course(s).
6. All transfer coursework is evaluated on a course by course basis. General education curriculum requirements must be completed by either transfer or Carroll Unive

**Transfer credit policy after enrollment at Carroll University:** It is necessary to obtain permission in advance from the Carroll University Registrar's Office in order to transfer credits from another institution. All coursework must be graded at C or better to be accepted. Course grades less than a C will not be accepted. Students must normally be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

Transfer credits are evaluated according to the guidelines listed above. Students must normally be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.
Procedure for Admission - Part-Time Students

Degree-seeking students must submit the following credentials to the Office of Admission:

1. Application for Admission
2. Transcript from an accredited secondary school
3. Transcripts from all post-secondary institutions attended

Non-degree seeking students must submit the following credentials to the Office of Admission:

1. Application for Admission
2. Transcripts from all post-secondary institutions attended may be required to verify prerequisite coursework.

Students must normally be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

Evaluation for acceptance generally takes one to three weeks and is done on a rolling basis. Part-time students may be cleared to register for classes pending review of the application and supporting documentation, but may be administratively withdrawn once a formal admission decision has been made. Part-time students may register for no more than 16 credits before providing official transcripts and other supporting documentation requested by the Office of Admission.

Application criteria and academic progression standards for specific academic programs are listed separately in the catalog. Transfer credit provisions may be found under the full-time transfer admission information.

Part-time students who wish to apply to the University as full-time students must do so through the Office of Admission. If possible, this process should be completed one full semester prior to anticipated full-time enrollment.
After the lapse of one or more semesters, students seeking to return to Carroll on a full-time or part-time basis must reapply. Students who have been suspended from the University and have become eligible to apply for readmission must do so through the Office of Admission. The Admission Committee reviews each application and determines the current status of the student and the conditions of readmission.
Articulation Agreements

Carroll University maintains articulation agreements with a number of Wisconsin institutions of higher learning in various areas of study. More information is available from the Office of Admission.
Athletic Training Education Program Admission

The athletic training program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, marital status, national or ethnic origin or handicap that does not interfere with the performance of professional athletic training practice as provided by law.

Applications and credentials for admission to the athletic training program must be submitted for processing to the Carroll University Office of Admission. Applicants must be in good standing (be free of academic and or disciplinary probation) at all institutions previously attended. Decisions on applications are made by a selection committee comprised of the athletic training faculty/staff members. Applicants are notified of their status through the Office of Admission.

Students who meet the admission and prerequisite professional phase criteria are granted admission to the professional phase of the athletic training program. Students must also fulfill technical standards and caregiver background and criminal history check to be admitted to the professional phase of the athletic training program.

Students who fail to meet the professional phase admission criteria, who fail to meet technical standards requirements, or who do not pass the caregiver and background criminal history check can be denied admittance to the professional phase of the athletic training program.

Students can enter the athletic training program in one of two ways:

**Direct Admission**

Individuals can be admitted to the program as freshmen. Selection decisions for direct admission are based on evaluation of the following:

a. Carroll University application form
b. Transcript from an accredited secondary school that shows seven semesters of coursework. In addition, the following high school courses must be completed by graduation:
   - Required:
     1. Three or more years of mathematics
     2. One or more years of high school biology
     3. One or more years of high school chemistry
     4. One or more years of high school English
     5. One or more years of high school history
     6. Two or more years of high school foreign language
   - Recommended:
     1. One or more years of high school physics
     c. ACT composite score of 21 or SAT total score of 990

To advance into the professional phase of the program in their junior year, direct admission students must satisfy all of the following requirements during their freshman and sophomore years at the University:

a. A cumulative and semester grade point average (GPA) of 2.75 or higher
b. Pre-professional science courses (ANP 130 and 140, CHE 101 and 102, PHY 101 and 102, PSY 101) GPA of 2.5 or higher
c. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.
d. Completion of the following courses prior to the beginning of the professional phase of the program in the students' junior year:
   - 1. Cultural Seminar
   - 2. Writing Seminar
   - 3. Athletic Training 101 and 102
   - 4. Pre-professional Science courses (ANP 130 and 140, CHE 101 and 102, PHY 101 and 102, PSY 101)
   - 5. Health Sciences 101 or the equivalent of First Aid and CPR for the Professional Rescuer certification with AED certification
   - 6. Choose one of the following as a CCD option: PSY221, COM207, PPH102
f. Submission of transcripts.

Delayed Admission - Students who enroll at Carroll, not having been admitted to the program through direct admission, can be accepted by meeting the athletic training program progression standards including:

a. A cumulative and semester GPA of 2.75 or higher
b. Pre-professional Science courses (ANP 130 and 140, CHE 101 and 102, PHY 101 and 102, PSY 101) GPA of 2.5 or higher
c. A minimum course grade of "C" is required in all coursework used to calculate pre-professional GPA.
d. Completion of the following courses or equivalent prior to the beginning of the professional phase of the program:
   - 1. Cultural Seminar
   - 2. Writing Seminar
   - 3. Athletic Training 101 and 102
   - 4. Pre-professional Science courses (ANP 130 and 140, CHE 101 and 102, PHY 101 and 102, PSY 101)
   - 5. Health Sciences 101 or the equivalent of First Aid and CPR for the Professional Rescuer certification with AED certification
   - 6. Choose one of the following as a CCD option: PSY221, COM207, PPH102
e. Submission of application to include: transcripts, cover letter, résumé, and three letters of reference: one from a professor, one from an athletic trainer, and one character reference.
f. Completion and submission of technical standards form and criminal history check for athletic training.
g. Participation in university, community service, or athletic training activities.
h. May only repeat a course once and not be on academic probation.
i. Admission and progression standards are subject to change based on regulatory, licensing, and/or certification needs.

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Diagnostic Medical Sonography Admission

Entry into the professional phase of the curriculum is done in conjunction with the Aurora Health Care School of Diagnostic Medical Sonography and its associated clinical sites or University of Wisconsin Hospital and Clinics and its associated clinical sites. Admission to the Diagnostic Medical Sonography professional phase of the program is highly competitive and dependent upon completion of multiple requirements. The acceptance of students into the professional phase of the curriculum lies solely with the School of Diagnostic Medical Sonography Admissions Committee at each hospital.

Entrance into the professional program has the following minimum requirements:

1. Fulfillment of Carroll University general education requirements.
2. A minimum cumulative grade point of 3.0, a required science course grade point of 3.0, and a minimum grade of "BC" in all required science courses, other than Physics, where earning 1 'C' is possible. The average of the two grades for Physics 101 and 102 must be 2.5 or higher. Any repeated courses will have the grades averaged. Course repeat attempts beyond 2 will not be recognized.
3. Proof (photocopy of license) of current Certified Nursing Assistant (CNA) certificate (at the student's own expense). Verification of patient care experience form filled out by employer.
4. Accumulation of at least 100 hours of direct patient care as a CNA prior to application (November 15).
5. Completion of a drug-screening consent form.
6. Two reference forms and separate letters of professional reference from college professors or employers only. These must be written, dated and sent within 6 months prior to application (May 15-November 1), with late summer to early fall being ideal.
7. Original transcripts from all colleges and universities attended.
8. An autobiography covering the past four years of the applicant's life.
9. A documented minimum job shadowing experience of a maximum of 8 hours (4 hours in cardiology, 4 hours in general sonography) at Aurora St. Luke's Medical Center or University of Wisconsin Hospital and Clinics (UWHC). Shadowing performed at Aurora St. Luke's will count towards an application to UWHC.
10. Basic life support (BLS) certification (photocopy of license) completed by the time of application (November). This must include CPR for infants, children and adults as well as AED training. This is at the student's own expense.
11. Intro to Anatomy and Physiology I and II (ANP 130 and ANP 140) and Physics 101 must be completed by the time of application (November 15th).
12. Physics 102 must be completed by December 31st of the application year. NRS 236 must be completed or in progress at the time of the interviews (spring semester).
13. All applicants must submit a $50.00 non-refundable application fee by check or money order to each hospital to which they are applying.

Required Science, Math and Nursing Courses

1. ANP 130, Introduction to Human Anatomy & Physiology I
2. ANP 140, Introduction to Human Anatomy & Physiology II
3. CHE 101, General Chemistry
4. CHE 102, Biological Chemistry
5. BIO 324, Bioethics
6. CMP 112, Computational Thinking I
7. CMP 114, Computational Thinking II
8. NRS 100, Health Care and Nursing
9. NRS 230, Health Assessment
10. NRS 236, Human Pathophysiologic Responses
11. PHY 101, Introductory Physics I
12. PHY 102, Introductory Physics II

Those students who will be the strongest candidates will have a minimum 3.0 GPA in ANP 130, ANP 140, Chem 101, Chem 102, Physics 101 and Physics 102.

Students are admitted to the professional program once per year. Typically, in the fall semester of sophomore year, students will submit an application. Students must apply for a position in the DMS class nearly one year prior to beginning the professional phase of the program. A complete application file must be sent through the Carroll University Health Sciences and 2+2 Program Advisor to Aurora Health Care or University of Wisconsin Hospital and Clinics School of Diagnostic Medical Sonography. The application file is due to the Carroll University Health Sciences and 2+2 Program Advisor prior to November 15. The applications are then reviewed by the School of Diagnostic Medical Sonography Admissions Committee at each hospital. Qualified students may then be contacted for a personal interview. Interviews and potential notification of acceptance occur in the spring semester. If accepted, the student would begin the two-year professional program at Aurora Health Care or University of Wisconsin Hospital and Clinics School of Diagnostic Medical Sonography. Subsequent progression standards and grading criteria are at the discretion of the host institution. After successful completion of the professional program the student would receive a certificate in Diagnostic Medical Sonography and a Carroll University Bachelor of Science degree with a major in Health Sciences and an emphasis in Diagnostic Medical Sonography. Due to the highly specialized nature and requirements of this program the students should work closely with the Carroll University Health Sciences and 2+2 Program Advisor.
Bachelor of Science in Nursing Degree Admission

The nursing program admits qualified students regardless of race, color, creed, sex, age, sexual orientation, national or ethnic origin or handicap that does not interfere with the performance of professional nursing as provided by law. Students can enter the nursing program in one of two ways:

Direct Admission - Individuals matriculate directly from high school into the nursing major with successful completion of the following:

1. One year of high school Algebra II, biology and chemistry (grade C or better).
2. Attain an ACT of 21 or higher and high school cumulative GPA 2.75 or higher.
3. Applicants who have English as a Second Language are required to take the TOEFL and achieve a minimum score of 79, unless satisfactory SAT/ACT scores are available.
4. Submission of the Technical Standards for Admission to and Progression in the Nursing Program upon acceptance to program.
5. In some instances, applicant files are referred to a Selection Committee for review and action. That body may grant admission provided certain conditions are met or may require the student to satisfy specified criteria.
6. Admission and progression standards are subject to change based on regulatory, licensing and/or certification needs.

Delayed Admission - Students who enroll at Carroll, not having been admitted to the program through direct admission, including pre-nursing, change of major and transfer student applicants, may apply to the nursing major upon satisfaction of the following criteria.

1. Submission of a Nursing Program application, and if a transfer student, submission of a Carroll University application.
2. Submission of transcripts from an accredited secondary school and all post-secondary institutions attended. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended as documented on the college report form.
3. A cumulative GPA of 2.75 or higher in college coursework.
4. A professional GPA of 2.75 or higher in college coursework, including completion of ANP 130 and CHE 101 (grade of BC or higher)
5. A minimum course grade of BC is required in all transfer coursework used to calculate the professional GPA (ANP 130, ANP 140, BIO 212, CHE 101, CHE 102, HSC 300 and nursing electives).
6. Candidates with science coursework more than five years old, may be required to repeat coursework prior to application.
7. Written statement to include reason for seeking the BSN degree.
8. Submission of the Technical Standards for Admission to and Progression in the Nursing Program upon acceptance to program.
9. Admission and progression standards are subject to change based on regulatory, licensing and/or certification needs.

Applications and credentials for admission to the nursing program must be submitted to the Office of Admission. Decisions are made by a selection committee and applicants are notified through the Office of Admission. Students not admitted to the nursing program are encouraged to seek assistance through the Center for Academic Advising Services.

Registered Nurse Admission

Registered nurses who have graduated from accredited associate degree nursing programs may be admitted to the nursing program as transfer students. These students may receive transfer credit for applicable university courses provided they were completed at an accredited associate degree program and are accompanied by an official transcript from the institution(s).

Registered nurses who wish to enter the nursing program to earn their Bachelor of Science in Nursing degree must meet the following requirements:

1. Graduation from an accredited associate degree program.
2. Current RN license in the state of Wisconsin.
3. A cumulative GPA of 2.75 or higher.
4. Grades of C or better in all required biology, chemistry, health science and nursing courses.

The following credentials are required:

1. Submission of a Carroll University application.
2. Submission of transcripts from an accredited secondary school and all post-secondary institutions attended.
4. Written statement to include:
   a. Reason for seeking the bachelor's degree
   b. Self identified professional and academic strengths and weaknesses c. Professional interest area(s) and area of employment
5. Submission of the Technical Standards for Admission to and Progression in the Nursing Program upon acceptance to program.

Completion students may earn up to 34 block nursing credits from previous nursing coursework upon successful completion or challenge of Nursing 230, Health Assessment and Nursing 236, Human Pathophysiologic Responses. Please contact the chair of the nursing program to obtain information on the challenge examinations. The nursing program reserves the right, in special circumstances, to require the student to successfully complete an evaluation process to validate the probability of successful program completion. Special circumstances may include no recent work history as a registered nurse.

Carroll University Honors Program
We are pleased you have decided to apply for admission to the Carroll University Honors Program. You can access the application at the following link, click here.

Upon completion of Carroll University admission to the nursing program, all freshman applicants are considered for the Honors Program. Following a comprehensive review by the Honors Program Committee, the Carroll Student Scholars Committee invites selected candidates to apply to the program.
The Pre-Master of Science in Exercise Physiology Program admits qualified students regardless of race, color, creed, gender, age, sexual orientation, national or ethnic origin, or disability that does not interfere with the performance of professional practice as provided by law. Students can enter the Master of Science in Exercise Physiology Program in one of two ways:

1. **Prior Degree** – Previous degree applicants who have completed an undergraduate or graduate degree from Carroll or another institution.

2. **3 + 2 Completion** - Current Carroll University undergraduate student seeking a Bachelor of Science degree in Exercise Science who intends to follow the 3 + 2 completion plan. The applicant generally is of junior standing when applying to the program. The 3 + 2 completion plan requires the first three years of study to be completed at the undergraduate level of study with a major in exercise science (a minimum of 101 undergraduate credits is required prior to entering the graduate program with all major and general education requirements completed). The final two years consists of graduate level study in the Master of Science in Exercise Physiology Program. Upon completion of the first 27 credits in the Master of Science in Exercise Physiology Program, a Carroll University Bachelor of Science degree in Exercise Science is awarded, and upon successful completion of all graduate credits (58 total credits), the Master of Science in Exercise Physiology degree is awarded.

Applications and credentials for admission to the Master of Science in Exercise Physiology Program must be submitted for processing to the Carroll University Office of Admission. As decisions are made on applications, applicants are notified through the Office of Admission. Applicants must be eligible to return in good standing (be free of academic or disciplinary probation) to all institutions previously attended.

Please refer to the graduate catalog for admission requirements when applying to the Master of Science in Exercise Physiology Program as a prior degree or 3 + 2 completion applicant.

Admission and progression standards are subject to change based on regulatory, licensing and/or certification needs.
The entry-level Doctor of Physical Therapy Program admits qualified students regardless of race, color, creed, gender, age, sexual orientation, national or ethnic origin, or disability that does not interfere with the performance of professional physical therapy practice as provided by law. Applications and credentials for admission to the physical therapy program must be submitted for processing to the Carroll University Office of Admission. As decisions are made on applications, applicants are notified through the Office of Admission.

Students can enter the physical therapy program in one of three ways: direct admission, non-direct admission, or non-traditional admission.

**Direct Admission Option** - Individuals with direct admission status matriculate directly from high school into the pre-professional phase of the program. The pre-professional phase includes the Freshman, Sophomore, and Junior years at the University for those approved in the 3+3 cohort. If a student with direct admission status meets all progression standards after his or her junior year at the University, he or she transitions into the professional phase of the DPT Program. This option allows students to earn an undergraduate bachelor's degree as well as the entry-level DPT degree in a six-year time frame. Individuals approved with direct admission status for the pre-physical therapy athletic training major in the 4+3 cohort, and who meet progression standards after the senior year at the University, will transition into the professional phase of the DPT Program and follow a seven-year time frame.

**Direct admission selection decisions will be based on evaluation of:**

1. Carroll University general admission undergraduate application.
2. Carroll University Physical Therapy Direct Admission Application. The direct admission application deadline is February 2, 2015.
3. The Safety and Technical Standards Form.
4. Transcript from an accredited secondary school which shows six semesters of coursework. It is recommended that a senior course schedule is included with general application materials. In addition, the following high school courses are strongly recommended, with grades of "C" or better:
   - One or more years of high school biology
   - One or more years of high school chemistry
   - Two or more years of high school foreign language
   - Three or more years of mathematics
   - One year of physics

- **Pre-approved Physical Therapy Majors:**
  - Athletic Training (4+3 cohort)
  - Biology (3+3 cohort)
  - Business Administration (3 + 3 cohort)
  - Communication (3+3 cohort)
  - Exercise science (3+3 cohort)
  - Health care administration (3+3 cohort)
  - History (3+3 cohort)
  - Psychology (3+3 cohort)
  - Spanish (3+3 cohort)

During their freshman, sophomore, and junior years at the University, students with direct admission status pursue their undergraduate degrees in existing Carroll majors which have a pre-physical therapy emphasis. Approved 3+3 cohort majors are biology, business administration, communication, exercise science, health care administration, history, psychology, and Spanish. The undergraduate degree for students in the 3+3 cohort is completed the senior year while enrolled in the first year (Phase I) of the professional phase of the Physical Therapy Program. Athletic training is the only approved major in the 4+3 cohort. The undergraduate degree for students in the 4+3 cohort is completed in their senior year.

For the six-year completion (3+3 cohort), pre-physical therapy students with direct admission status must satisfy all of the following progression requirements by the end of spring semester junior year at the University to advance into the professional phase of the program in their senior year. For the seven-year completion (4+3 cohort), direct admission pre-physical therapy students with an athletic training major must complete the following progression requirements by the end of spring semester senior year:

1. A university cumulative grade point average of 3.0 or higher at the time of application, which includes fall semester grades of the junior or senior year respectively, and prior to progressing into the professional phase.
2. A pre-professional course grade point average of 3.0 or higher at the time of application, which includes fall semester grades of the junior or senior year respectively, and prior to progressing into the professional phase. Pre-professional courses include:
   - 4 semesters of Biology, either BIO120/125 or ANP130/140 and ANP402/403
   - 2 semesters of Chemistry, either CHE101/102 or CHE109/110
   - 2 semesters of Physics, either PHY101/102 or PHY203/204
   - 1 semester of Psychology, either PSY101 or higher. Up to one additional psychology course, at a 200-level or higher, will be included in the pre-professional GPA calculation if completed.
3. A minimum course grade of "C" is required in all course work used to calculate pre-professional GPA.
4. A maximum of one course within the pre-professional course work (i.e., biology, chemistry, physics, and psychology) may be a repeated and used in the pre-professional GPA calculation. Any Carroll undergraduate credit with an earned C, D, or F grade can be retaken at Carroll prior to the end of the direct admit student's spring semester junior or senior year respectively. The repeated course grade awarded will be used in the GPA calculations.
Pre-Physical Therapy and Entry-Level Doctor of Physical Therapy Program Admission

5. Successful completion of the following by the end of spring semester junior (3+3 cohort) or senior year (4+3 cohort). All items under 1, 2, and 3 below are due by mid-January junior or senior year respectively:

1. Graduate Studies On-line Application for admission to progress into the Doctor of Physical Therapy Program Professional Phase.

2. Supplemental Application Materials, which include:
   - Clinical Experience Documentation Form(s): Participation in a minimum of three clinical observation experiences from three different types of physical therapy practice settings which include inpatient acute care, inpatient rehab facility, outpatient orthopedic, outpatient neurological, skilled nursing facility, pediatric/school setting, home health, industrial/work rehab. A Clinical Experience Documentation Form must be submitted to the program. A minimum of 15 hours in three different practice settings for a total minimum of 45 hours is required.
   - One letter of reference from a university professor
   - Safety and Technical Standards form
   - Application for Graduation: Only Carroll current students must submit an application for graduation to the Registrar's Office prior to the admission deadline to receive a graduation audit.

3. Official GRE scores: Carroll's School Code is 1101 and Department Code is 0619

4. Carroll University General Education Requirements, with the exception of CCE600 Global Perspectives Colloquium, which may be completed in Phase I of the professional phase of the program for 3+3 cohort students only.

5. Pre-professional prerequisite courses (see above for specific for course details). Test credits will not satisfy the natural, health and social science prerequisite coursework requirements.

6. Two semesters of Computational Thinking (CMP112/CMP114)

6. Current CPR and First Aid certification. CPR certification must be either American Heart Association Basic Life Support for Healthcare Providers or American Red Cross CPR/AED for the Professional Rescuer. First Aid certification must be through an organization recognized as a valid issuer of certification such as the American Red Cross. Copies of First Aid/CPR certification are due by August 1st prior to the start of Phase I of the graduate program and certifications must be valid for at least one year at the time of entry into Phase I.

7. Physical Therapy professional phase students are required to have completed a health screening, updated immunizations and tuberculosis screening according to current Centers of Disease Control and Prevention (CDC) recommendations for health professionals, criminal background investigation and drug screening as required by internship placement sites. Exceptions to the immunization requirement will be considered on a case-by-case basis where, for example, a student has an allergy to a vaccine or one of its components. If an exception to the immunization requirements is approved, the University cannot guarantee that its affiliated hospitals and clinics will allow the student to participate in patient care, which is a fundamental requirement of the clinical education component of the Program.

8. Admission and progression standards are subject to change based on regulatory, licensing, and/or certification needs.

If, for any reason, a direct admit student does not advance into or withdraws from the Doctor of Physical Therapy program, career services and counseling through the Career Center and Advising Office is available. Any direct admit student who withdraws from the program during his/her freshman, sophomore or junior year must inform the program director in writing and complete a new major, minor declaration form in the Registrar Office.

Non-Direct Admission Option - Students not selected for direct admission will follow the non-direct admission process. Examples of non-direct admission candidates include: high school students not selected for direct admission, undergraduate transfer students, Carroll alumni, and direct admission students who apply outside of their approved cohort year. Applicants who complete 60 or more undergraduate degree credits and will earn a bachelor's degree from Carroll receive a calculated preference in consideration for the professional phase of the program. Non-direct admission students may apply to the professional phase of the DPT program during their junior year at Carroll and reference the below admission criteria. Non-Direct Admission applicants who apply after their junior year at Carroll must reference the current graduate catalog for admission requirements.

Non-Direct Admission applicants who apply in their junior year at Carroll must comply with and meet the following requirements for admission into the Doctor of Physical Therapy Program, which include:

1. A university cumulative grade point average of 3.0 or higher at the time of application, which includes fall semester grades of the junior year, and prior to matriculating into the professional phase.

2. A pre-professional course grade point average of 3.0 or higher at the time of application, which includes fall semester grades of the junior year, and prior to matriculating into the professional phase. Pre-professional courses include:
   - 4 semesters of Biology, either BIO120/125 or ANP130/140 and ANP402/403
   - 2 semesters of Chemistry, either CHE101/110 or CHE109/110
   - 2 semesters of Physics, either PHY101/102 or PHY203/204
   - 1 semester of Psychology, either PSY101 or higher. Up to one additional psychology course, at a 200-level or higher, will be included in the pre-professional GPA calculation if completed.

3. A minimum course grade of "C" is required in all course work used to calculate pre-professional GPA.

4. A maximum of one course within the pre-professional, prerequisite coursework (i.e., biology, chemistry, physics, and psychology) may be repeated and used in the pre-professional GPA calculation. Any Carroll undergraduate credit with an earned C, D, or F grade can be retaken at Carroll prior to the end of the direct admit student’s spring semester junior year. The repeated course grade awarded will be in the GPA calculations.

5. Successful completion of the following prior to the start of Phase I of the professional phase of the program. All items under 1, 2, and 3 below are due by mid-January junior year:


2. Supplemental Application Materials, which include:
   - Clinical Experience Documentation Form(s): Participation in a minimum of three clinical observation experiences from three different types of physical therapy practice settings which include inpatient acute care, inpatient rehab facility, outpatient orthopedic, outpatient neurological, skilled nursing facility, pediatric/school setting, home health, industrial/work rehab. A Clinical Experience Documentation Form must be submitted to the program. A minimum of 15 hours in three different practice settings for a total minimum of 45 hours is required.
   - Three Letter of Reference— Form(s): one from a physical therapist, one from a university professor, and one from a non-family member that attests to the student’s character.
   - Essay Form – must be typed.
   - Employment, Service, and Academic Honor(s) Form: Participation in university or community service activities documentation is required.
   - Health Science Statement(s) Form.

3. Official GRE scores: Carroll’s School Code is 1101 and Department Code is 0619

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2/3
4. Carroll University General Education Requirements, with the exception of CCS400 Global Perspectives Colloquium, which may be completed in Phase I of the professional phase of the program for 3+3 cohort students only.
5. Pre-professional prerequisite courses (see above for specific for course details). Test credits will not satisfy the natural, health and social science prerequisite coursework requirements.
6. Two semesters of Computational Thinking (CMP112/CMP114)
7. Evidence that the bachelor's degree will be awarded at the completion of the senior year.

6. Current CPR and First Aid certification. CPR certification must be either American Heart Association Basic Life Support for Healthcare Providers or American Red Cross CPR/AED for the Professional Rescuer. First Aid certification must be through an organization recognized as a valid issuer of certification such as the American Red Cross. Copies of First Aid/CPR certification are due by August 1st prior to the start of Phase I of the graduate program and certifications must be valid for at least one year at the time of entry into Phase I.

7. Physical Therapy professional phase students are required to have completed a health screening, updated immunizations and tuberculosis screening according to current Centers of Disease Control and Prevention (CDC) recommendations for health professionals, criminal background investigation and drug screening as required by internship placement sites. Exceptions to the immunization requirements will be considered on a case-by-case basis where, for example, a student has an allergy to a vaccine or one of its components. If an exception to the immunization requirements is approved, the University cannot guarantee that its affiliated hospitals and clinics will allow the student to participate in patient care, which is a fundamental requirement of the clinical education component of the Program.

8. Admission and progression standards are subject to change based on regulatory, licensing, and/or certification needs.

**Non-Traditional Option:** An individual who has completed an undergraduate degree at another institution may apply for admission to the professional phase of the Doctor of Physical Therapy program. Non-traditional applicants are reviewed in a competitive pool consisting of non-traditional and non-direct admission applicants. Please refer to the graduate catalog for the non-traditional student requirements for admission. Applicants completing a bachelor's degree and 60 or more undergraduate credits at Carroll University receive a calculated preference in consideration for admission to the DPT Program.

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Radiologic Technology Program Admissions

The professional phase of the Radiologic Technology Program is done in conjunction with the Radiology Alliance which includes Froedert Hospital and Wheaton Franciscan - St. Joseph as well as with Aurora Health Care. Admission to the Radiology Alliance or Aurora Health Care professional phase of the program is highly competitive and dependent upon completion of multiple requirements. The acceptance of students into the professional phase of the curriculum lies with the Radiologic Technology Admissions Committee at each hospital. Radiologic Technology students are admitted to the professional phase program once per year, typically in the fall semester of their junior year.

Application requirements include but are not limited to the following:

a. Minimum overall and science GPA of 2.75, a grade of 'C' or better in physical and biological science courses, and completion of all required and elective courses within the first two years or prior to beginning the hospital phase of the program. ANP 130, ANP 140 and Physics 101 must be completed by the time of application (November 15th). Physics 102 must be completed by December 31st of the application year. No more than 2 courses may be repeated.

b. Three written professional references from employers or college instructors only. Some programs require reference letters only and some require reference forms with letters as a positive addition. These letters must be written, dated and sent within 6 months prior to application (May 15 – November 1). September or October is the ideal time.

c. Original transcripts from all colleges and universities attended including Carroll University.

d. A personal statement describing why you would like to be a radiologic technologist.

e. A job shadowing experience at one of the Radiology Alliance hospitals or at Aurora Health Care. This varies by program, however job shadowing is highly encouraged for this major.

f. Patient care experience. Earning a Certified Nursing Assistant (CNA) license is the best way to do this. (This is at the student's own expense). An applicant who has no patient care experience may not get accepted into this program.

g. A Medical Terminology course of at least 2 college credits is required for admission to Aurora Health Care School of Radiologic Technology, and will replace a course in the professional phase for Froedert and Wheaton Franciscan - St. Joseph.

Students must apply for a position in a hospital School of Radiologic Technology nearly one year prior to transferring. This means that typically in the fall of the sophomore year an application must be sent to any of the 3 hospitals (Froedert, Wheaton Franciscan - St. Joseph or Aurora Health Care). The due date to have all of the information to the Carroll University Health Sciences and 2+2 Program Advisor is prior to November 15. The advisor will process all information and send it to the schools that the student is interested in attending. The applications will be reviewed by the Radiologic Technology Admissions Committee at each hospital and qualified students will be called for an interview. Interviews and notification of potential acceptance occur in spring. The determination of which students will be called for an interview and which students will be accepted lies solely with the Radiologic Technology Admissions Committee at each hospital. If accepted, the student would begin the two-year professional program at an affiliated hospital School of Radiologic Technology. Subsequent progression standards including grading criteria are at the discretion of the host institution. At the successful completion of the program the student would earn a certificate in Radiologic Technology and a Bachelor of Science degree with a major in Health Sciences and an emphasis in Radiologic Technology from Carroll University.

Due to the highly specialized requirements of this program, students should work closely with the Carroll University Health Sciences and 2+2 Program Advisor.
Air Force ROTC Information

Carroll University students have the opportunity to fully participate in the Air Force Reserve Officers Training Corps program. Students enrolled in the Air Force ROTC program attend AFROTC courses at Marquette University.

Through this program, Carroll University offers its students the opportunity to prepare for initial active duty assignments as Air Force Commissioned Officers. In order to receive a commission, AFROTC cadets must complete all university requirements for a degree and courses specified by the Air Force. AFROTC offers four, three, and two year programs leading to a commission as an Air Force officer. Four-year program students complete the general military course and the professional officer course, in addition to a four-week summer field training between their second and third years in the program. Two-year students complete only the professional officer course, but have a five-week summer field training before entering the professional officer course.

General qualifications:
- be a full-time student
- be a United States citizen (for scholarship appointment)
- be in good physical condition
- be of good moral character
- for pilot or navigator training, fulfill all commissioning requirements before age 26 1/2
- for scholarship recipients, fulfill commissioning requirements before age 27 on June 30 in the estimated year of commissioning
- for non-scholarship students, fulfill all commissioning requirements before age 30

General Military Course: The first-and second-year educational program in Air Force Aerospace Studies consists of a series of one-hour courses designed to give students basic information on world military systems and the role of the U.S. Air Force in the defense of the free world. All required textbooks and uniforms are provided free. The general military course is open to all students at Carroll University without advance application and does not obligate students to the Air Force in any way.

Field Training: AFROTC Field Training is offered during the summer months at selected Air Force bases throughout the U.S. and provides leadership and officer training in a structured military environment. Major areas of study include physical training, drill and ceremony, marksmanship, and survival training. The Air Force pays all expenses associated with field training.

Professional officer course: The third and fourth years of Air Force Aerospace Studies are designed to develop skills and attitudes vital to the professional officer. Students completing the professional officer course are commissioned as officers in the U.S. Air Force upon graduation. All students in the professional officer course receive a non-taxable subsistence allowance of $200 per month during the academic year. Students wanting to enter the professional officer course should apply early in the spring semester in order to begin this course of study in the following fall semester.

Leadership Laboratory: Leadership laboratory is a cadet-centered activity. It is largely cadet planned and directed, in line with the premise that it provides leadership training experience that will improve a cadet’s ability to perform as an Air Force officer. The freshman and sophomore leadership laboratory program introduces Air Force customs and courtesies, drill and ceremonies, wearing the uniform, career opportunities in the Air Force, education and training benefits, the life and work of an Air Force officer, and opportunities for field trips to Air Force installations throughout the U.S. Initial experiences include preparing the cadet for individual squadron and flight movements in drill and ceremonies and for the field training assignment prior to the junior year.

The junior and senior leadership laboratory program involves the cadets in advanced leadership experiences. Cadet responsibilities include planning and directing the activities of the cadet corps, preparing briefings and written communications, and providing interviews, guidance, information and other services which will increase the performance and motivation of other cadets.

AFROTC College Scholarship and Scholarship Actions Programs: These programs provide scholarships to selected students participating in AFROTC. While participating in AFROTC, students receive $200 per month along with paid tuition, fees, and a fixed text-book reimbursement. To be eligible for either of these programs, students must:
- be a U.S. citizen.
- be at least 17 years of age on the date of enrollment and under 27 years of age on June 30 of the estimated year of commissioning.
- Pass an Air Force physical exam.
- Be selected by a board of Air Force officers.
- Have no moral objections or personal convictions that prevent bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic. (Applicants must not be conscientious objectors.)
- Achieve a passing score on the Air Force Officer Qualifying Test.
- Maintain a quality grade point average.

High school students can apply for scholarships late in their junior year or early in their senior year; pre-applicant questionnaires are available from high school guidance counselors or any Air Force recruiting office. Completed pre-applicant questionnaires should be mailed as soon as possible (to meet the earliest selection board) but will not be accepted if mailed after December 1 of the year before entering university. For students already enrolled at Carroll, three-and two-year scholarships are available. Submit applications directly to the Department of Aerospace Studies at Marquette University. For more information, call 414.288.7682.
Academic and Program Policies

Academic Action
Academic Policies
Communication with Students
Course Information and Grading Policies
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Honors and Awards
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Transcripts and Transferring Credits
Academic Action

Health Science Progression Standards

Progression Standards for Music Therapy Program

University Academic Standards
Health Science Progression Standards

Progression Standards for the Athletic Training Education Program
Progression Standards for the Nursing Program
Progression Standards for the Physical and Health Education Program
Progression Standards for the Physical Therapy Program
Evaluation of Academic Standing and Progression in the Health Sciences
Progression Standards for Athletic Training Education Program

1. A cumulative GPA of 2.75 and preprofessional (natural, behavioral, and social sciences) GPA of 2.5 during the freshman and sophomore years is required for admission to the professional phase (junior and senior years) of the program.

2. Grades of a C or better are required in all preprofessional phase courses (natural, behavioral and social sciences). Any preprofessional phase course may only be repeated once.

3. A student must maintain a cumulative university GPA and a semester GPA of 2.75 throughout the professional phase. A student who gets below a 2.75 cumulative and/or session GPA will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.75 session GPA or higher in subsequent semesters.

4. If a student fails to attain a 2.75 session GPA, s/he will be dismissed from the program.

5. Grades of C or better are required in all athletic training, exercise science and health science professional phase courses. A satisfactory (S) is required in all completed practica. If a grade below a C is achieved or an S is not achieved, the student may not progress to subsequent courses in the program until course is successfully repeated.

6. When repeating a professional phase athletic training, health science, or exercise science course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge.

7. A course may be repeated only one time. A student receiving a D, F, or U twice in one athletic training course or in two athletic training courses is dismissed from the program.
Progression Standards for the Nursing Program

1. Grades of BC or better are required in all nursing, chemistry, biology and health science courses. A satisfactory (S) is required in all completed clinical. If a grade lower than a BC or a grade of (U) is earned, the student will be placed on probation in the nursing program. In order to have the nursing probationary status removed, the student must repeat the coursework and earn a grade of BC or higher and/or a grade of (S). In all concurrent nursing and practica courses a student is required to earn a BC or better in the didactic course and a (S) grade in the practica. Unsuccessful achievement in either course necessitates repeating the didactic and practica course. If courses are repeated, the university repeat/replace policy applies to all courses.

2. A student must maintain a cumulative GPA of 2.75. For First Time Freshman, GPA progression standards will be evaluated after the students attempt a minimum of 12 credits. A student whose cumulative GPA is below a 2.75 will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.75 cumulative GPA in the subsequent semesters.

3. A student will be dismissed from the program if;
   1) s/he fails to attain a 2.75 cumulative GPA in the subsequent semester,
      a. If a cumulative GPA is less than a 2.75 due to a course grade and that same course is not offered in the subsequent semester, probation is continued until the Fall or Spring term when the same course is offered.
   2) s/he is placed on academic probation a second time during his or her tenure in the program,
   3) s/he fails to meet the criteria for the removal from academic probation.

4. If a grade below a BC is achieved or an S is not achieved, the student may not progress to subsequent courses in the program if the course is a prerequisite of another. When repeating a nursing, biology, chemistry or, health science course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge.

5. A course may be repeated only one time. A student receiving a C, D, F, or U twice in one nursing chemistry, biology or health science course or in two nursing, chemistry, biology and health sciences courses is dismissed from the program.

6. A transfer student who takes NRS 100 and 230 concurrently and earns lower than a C in Nursing 100 must retake NRS 100 in the subsequent semester. In this case, the student may register for NRS 236 in the subsequent semester but may not register for NRS 233 or 234.

7. A student who withdraws from any nursing, chemistry, biology or health sciences course twice will be dismissed from the program. A student will be dismissed from the nursing program if they withdraw for academic reasons from a nursing, chemistry, biology or health science course that is being repeated because of a previous earned grade of C, D, F, or U.

8. If a student withdraws from a course for reasons other than director approved request for medical or personal leave, the student must successfully complete the course in the next available semester or academic term.
Progression Standards for the Physical and Health Education Program

To complete a major in Physical Education with Health, the student must be admitted to the Teacher Education Program (TEP) in the Education Program.

The TEP requires that a student

1. Maintain a minimum cumulative GPA of 2.5

2. Maintain a combined GPA of 2.75 in the physical education major, the health education minor, and Department of Public Instruction approved secondary teaching education minor

3. Demonstrate professional behavior throughout his/her university career. The physical education with health student must make application to the TEP, including submission of the TEP Portfolio and passing scores on the PPST (PRAXIS I) examination, during the fall semester of his/her sophomore year. In the spring semester of the junior year, the student must successfully complete the Praxis II Content Knowledge Exam for health and physical education. Copies of the TEP Handbook are available from the Education Office.
Progression Standards for the Physical Therapy Program

PrePhysical Therapy Program

To proceed to the professional phase of the physical therapy program in the senior year, a student must have a cumulative and preprofessional (natural, behavioral, and social sciences) GPA of 3.0 or higher. Carroll University Academic Standing policies apply to prephysical therapy students.

Professional Phase of the Physical Therapy Program

1. In the professional phase of the physical therapy program (400, 500, and 600 physical therapy courses) student must attain a grade point average of 3.0 or better each semester. If a student earns a semester grade point average between 2.0 and 2.99, s/he is placed on academic probation.

2. If a student is on academic probation during the last semester of the program, the student must earn an S in the clinical internship course and in PTH 612: Clinical Research III, to graduate.

3. A student will be dismissed from the program if 1) s/he is placed on academic probation a second time during his or her tenure in the program, 2) s/he fails to meet the criteria for the removal from academic probation, 3) if s/he earns a semester GPA of 1.99 or less or 4) if s/he receives a D, F, or U twice in one physical course or in two physical courses.

4. When repeating a physical therapy course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge.

5. If a student is unable to take further courses in the next occurring semester as a result of this policy, the student is placed on academic suspension and repeats the course during the next appropriate semester.

6. A course may be repeated only one time.
Evaluation of Academic Standing and Progression in the Health Sciences

An interdisciplinary health science committee consisting of health sciences administrators, program directors, and the Registrar will conduct evaluation of academic progression at the end of each semester. Health sciences students may appeal a probation or dismissal decision by filing an Academic Affairs Petition with the Registrar's Office. The decision of the university regarding the appeal is final. During the appeal process, a student may participate in courses.

The Academic Affairs Petition form is found on the Registrar's Office web page or click here.
Progression Standards for Music Therapy Program

1. A cumulative GPA of 2.75 and satisfactory completion of the piano, guitar, and voice proficiency exams is required for admission to the professional phase (junior and senior years) of the program.

2. A student must maintain a cumulative university GPA and a semester GPA of 2.75 throughout the professional phase. A student who gets below a 2.75 cumulative and/or session GPA will be placed on academic probation for the following semester. To have the probationary status removed, a student must attain a 2.75 session GPA or higher in subsequent semesters.

3. If a student fails to attain a 2.75 session GPA, s/he will be dismissed from the program.

4. Grades of C or better are required in all music therapy (MTY designation) courses. A satisfactory (S) is required in all completed practica. If a grade below a C is achieved or an S is not achieved, the student may not progress to subsequent courses in the program until the course is successfully repeated.

5. A course may be repeated only one time. A student receiving a D, F, or U twice in music therapy courses (including practica) will be dismissed from the program.

6. When repeating a professional phase music therapy course, a student may be required to successfully complete ancillary learning experiences or clinical competencies/practica that validate theoretical knowledge.

7. The piano, guitar, and voice proficiency exams will only be administered once per semester. They may be repeated as often as necessary.

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Academic Standing

Good Standing

All students are expected to maintain at least a C (2.00) overall grade point average in Carroll University course work. Any student who does not maintain at least a 2.00 cumulative average in Carroll course work is subject to academic action following a review by the Academic Steering Committee.

Probation

As soon as a student’s Carroll University grade point average drops below 2.00, that student is placed on academic probation. For a student on academic probation, the class load is limited to 12 credits. A student cannot be removed from probation until a 2.00 grade point average is attained.

Suspension

A student on probation for one or more semesters or a student who received no passing grades the previous semester will be suspended for one semester and the adjacent summer or be considered for dismissal. At the end of the suspension period, a student must apply for readmission. Upon suspension, a student may no longer live in on-campus housing or participate in university-related activities.

Dismissal

A student suspended a second time will be dismissed at the close of the semester because of failure to achieve an acceptable level of academic work. Students who are dismissed will be withdrawn from any registered courses at the University and will not be eligible to return to Carroll University.

Academic Appeals

The Academic Steering Committee (ASC) acts as the appeal body for questions related to academic policy, probationary questions, exemptions, etc. An academic petition form (available online or from the Registrar’s Office) must be completed and returned to the Registrar’s Office to initiate the appeal process. The petition form should carefully explain the nature of the request and include the appropriate signatures. All appeal decisions by the Academic Steering Committee are final.

Course grade appeals and appeals of sanctions for academic dishonesty are heard by the Student/Faculty Ethics Committee. Appeals should be made through the Office of the Associate Dean of Academic Affairs. The procedure for appeals is found in the Student Handbook.

Returning Students

Students returning to Carroll after the lapse of one or more semesters and students who have been suspended from the University and have become eligible to apply for readmission must do so through the Office of Admission. Each application is reviewed and applicants will be informed of the status of the application and, if applicable, the conditions of readmission.
Academic Policies

Academic Appeals
Academic Honesty
Academic Standing
Additional Undergraduate Degree
Classification of Students
Medical or Personal Leave
Policy on Reapplication to a Health Sciences Program
Policy on Student Records
Returning Students
Student's Right to Know Policy
Wait List Policy
Withdrawal Policy
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Academic Honesty

Cheating on examinations, plagiarism, improper acknowledgment of proper sources in written material, and inaccurate claims of work done are serious offenses in an academic setting. These forms of unethical behavior will be subject to severe disciplinary action.

The Carroll University Policies and Procedures on Student Academic Integrity can be found in the Student Handbook (available on the University’s Web site) under the section entitled Academic Policies and Procedures. Instructors indicate penalties for academic dishonesty in their course syllabi.
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Returning Students

Students returning to Carroll after the lapse of one or more semesters and students who have been suspended from the University and have become eligible to apply for readmission must do so through the Office of Admission. Each application is reviewed and applicants will be informed of the status of the application and, if applicable, the conditions of readmission.
Additional Undergraduate Degree

With the recommendation of the college dean, a student already holding a baccalaureate degree from Carroll University or another institution may, under certain conditions, qualify for and be awarded an additional baccalaureate degree. Those conditions are as follows:

At least 32 credits beyond those used to achieve the initial degree must be undertaken and successfully completed at Carroll.

All of the university general education requirements in effect at the time of the enrollment for a second undergraduate degree must be met, either through transfer or in subsequent study at Carroll.

All of the program requirements for an additional major field of study must be met either through transfer or in subsequent study at Carroll.
## Classification of Students

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>Credits Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomore Standing</td>
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<tr>
<td>Junior Standing</td>
<td>60</td>
</tr>
<tr>
<td>Senior Standing</td>
<td>92</td>
</tr>
</tbody>
</table>
Medical or Personal Leave

If a student must be absent from a health sciences program for an extended period of time for medical or personal reasons or jury duty, written notice must be given to the respective program director prior to the leave, if possible. Written notice must also be given to the program’s director prior to the student’s return to the program. If applicable, the student may be asked to verify that s/he has complied with the program’s technical standards with previously imposed conditions for leave. In addition, remediation or course repetition may be required of the student dependent on the length of the absence. Any course, laboratory, outside learning experience, or clinical practicum/internship makeup or remediation is dependent upon academic and clinical faculty and facility availability.
The Policy on Reapplication defines the process by which students may seek readmission to a health sciences program following dismissal of the student from the program for failing to maintain good academic standing. Readmission candidates may apply for readmission to the program no sooner than one year and no later than three years from the date of dismissal. Readmission candidates may exercise their reapplication option only once. Readmission candidates applying to the program must submit the materials required of all applicants for admission. In addition, they must provide transcripts relating to any education experiences completed since leaving the program. A letter indicating why the readmission candidate believes s/he will succeed academically and technically in the program must accompany application materials. Candidates readmitted to a health science program must comply with the progression standards in the current catalog.
Policy on Student Records

Several information sources are maintained concerning each student at Carroll University: the admission file, the permanent academic record, the student personnel file, the placement file, the alumni file, the publicity file, and the financial aid file for students applying for aid. A student may review the applicable files, except for material provided in confidence, with a professional staff member under the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA) as amended.

FERPA\(^1\) gives certain rights to parents regarding their children's educational records. These rights transfer to the student who has reached the age of 18 or is attending school beyond the high school level. Generally the school must have the student's written permission to release any educational information to anyone, including the student's parents. The law does allow for the following exceptions: school employees who have a need to know; other schools to which a student is transferring; certain government officials to carry out lawful functions; accrediting organizations; persons who need to know in cases of health and safety concerns.

Schools may disclose "directory information" or information published in the student directory unless the student signs a Right to Privacy form each time a student registers. Carroll University has adopted a policy that will only allow the disclosure of directory information if the party asking for the information can identify himself/herself in writing (this Carroll University policy is within FERPA regulations, which allow individual institutions to determine their own policies concerning directory information).

FERPA also grants the student the right to review those records, files, etc., that are maintained by the University. The student must make an appointment with the University Registrar to do so. Students may challenge any information they believe to be inaccurate. If the University official does not agree to modify the information, the student may file a written appeal and has a right to a hearing.

\(^1\) Furnished by the United States Department of Education, fact sheet.
Returning Students

After the lapse of one or more semesters, students seeking to return to Carroll on a full-time or part-time basis must reapply. Students who have been suspended from the University and have become eligible to apply for readmission must do so through the Office of Admission. The Admission Committee reviews each application and determines the current status of the student and the conditions of readmission.
Student's Right to Know

**Campus Security Act of 1990:** Requires the disclosure of data on crimes committed on campus and campus safety policies and procedures. A copy of Carroll University’s annual security report is available online.

**Equity in Athletics Disclosure Act:** Requires disclosure of data on participation rates and financing men’s and women’s sports in intercollegiate athletic programs at coeducational schools. It also requires data on revenues, total expenses and operating expenses of intercollegiate athletic programs. Data is available on request.

**Graduation Rate:** Current and prospective students have the right to request the institution’s graduation rates. These rates are available in the Office of Admission and online at: http://nces.ed.gov/collegenavigator/.
Closed Classes and Wait List Policy

1. You may now add yourself to a course waitlist through Enhanced Web Registration.

2. If a course that you wish to register for is full:
   i. You will be given a warning that indicates: 'There are no seats available in this section.'
   ii. The warning will note how many students are currently on the waitlist for the section.
   iii. You will have the opportunity to:
      a. Add yourself to the waitlist using the 'Add to Waitlist' button
      b. Cancel the action by clicking on the 'Do not Add' button

3. If a seat opens in a section you waitlisted for and if you are the first person on the waitlist you will be given a course authorization to add the course and notified via your Carroll University email address. You will have 48 hours to register for the class once this email has been sent. If you do not register for the class within the 48 hour window you will lose your spot on the waitlist.

4. To determine for which course(s) you have been granted authorization to register, access Enhanced Web Registration and check the 'Waitlisted Courses' section. The course(s) you have received authorization to add will now have a 'Move to Current' link listed to the left of the course(s).

5. To add a course:
   i. Click on the 'Move to Current' link
   ii. Click the 'Change Waitlisted to Current' button on the new page that opens up

6. **NOTE:** You will not be allowed to waitlist for different sections of a class that you are already registered to take. If you wish to take a different section of a class you will need to speak with the instructor of the section you wish to enroll into and have them provide you course authorization to do so.
Withdrawal Policy

Students who wish to withdraw from all classes must file an Official Withdrawal Form with the Office of Student Success. If a student is not able to visit the office (due to illness, emergency, etc.), he/she may contact the Office of Student Success to communicate their intent. The office is located in Voorhees 331 and the phone number is 262-524-7360.
Communication with Students

Communication

The university provides access to email and mailboxes for all students. These methods of communication are consistently used by the university in an effort to contact students. It is expected that residents will check these communications daily.
Course Information and Grading

Academic Support
Adding or Dropping Courses
Alternative Methods of Obtaining Credit
Attendance
Auditing Courses
Credits
Course/Credit Load
Curriculum
Department and Major Codes
Electives
Grade Policy on Transfer Work
Grading System and Grade Point Calculation
Incomplete Grading
Independent Study
Individually Designed Major
International and Off-Campus Study
Internships or Work-Oriented Experiences
Majors and Minors
Method of Course Delivery
Repeating Coursework Graded C, D or F at Carroll University
Repeating Transfer Coursework Graded C, D or F
Satisfactory Grading Option for Juniors and Seniors
Wait List Policy
Academic Support

Academic Resources provides academic support through the Career Center and the Learning Commons. Both departments are located on the lower level of the library. The Career Center serves Carroll University students and alumni by offering free services, including choosing a major, career exploration, resume and cover letter assistance, searching for a job or internship, networking tips, interviewing techniques and graduate school preparation. The Learning Commons provides free, peer to peer support services through academic workshops, the math center, subject tutoring, Supplemental Instruction and the writing center.
Adding or Dropping Courses

For step-by-step instructions log on to the portal, click on the Student Tab – Courses and Registration – Registration Instructions, or click on this link [https://my.carrollu.edu/ICS/Student/Courses_and_Registration.jnz](https://my.carrollu.edu/ICS/Student/Courses_and_Registration.jnz).

A student may add a course only during the first week of the fall or spring semesters. For winter session, summer sessions, and other specially timed courses, refer to the published timetables for deadline dates to add courses. With the written consent of the instructor and the advisor, a student may drop a registered course through the eighth complete week of the fall or spring semester. For winter session, summer sessions, and other specially timed courses, refer to the published timetables for deadline dates to drop courses. The course will appear on the transcript as attempted credits; however, the grade will be a W (withdrawal) and will not affect the grade point average. It is the student’s responsibility to complete the proper necessary paperwork; otherwise, the course grade will be recorded as an F.
Alternative Methods of Obtaining Credit

Carroll University recognizes that learning can occur in a variety of environments and through diverse experiences. At Carroll, there are several ways of obtaining credit for prior university-level learning in addition to satisfactory course completion. Students may earn up to 64 credits in a baccalaureate program through any combination of the following types of credit:

1. **Advanced Placement Credit** may be granted to students who are enrolled in a degree program at Carroll and obtain an appropriate score through Advanced Placement examinations. A copy of the current AP requirements is available from the Registrar or online. Qualified students may be granted credit following successful completion of a university-level course in secondary schools provided the course is submitted on a university transcript. A maximum of 48 credits may be obtained through advanced placement.

2. The **College Level Examination Program (CLEP)** grants credit to qualified students enrolled in a degree program at Carroll for up to seven courses (28 credits) on the General Examination when the qualifying level of the 75th percentile has been achieved in each test written. This credit will be divided in the following manner: English, four; mathematics, four; natural sciences, four; humanities, eight; and social sciences/history, eight. Credit for the General Examinations will count as elective credit toward graduation; some credits may meet general education requirements. Credit also may be granted for subject examinations when the scores are at the recommended qualifying level. No more than 48 credits of CLEP credit will be granted for the general and subject matter examinations combined. Additional information and registration forms are available from the Office of Part-Time Studies. This credit must be approved in advance.

3. **Credit by Examination** allows qualified students enrolled in a degree program at Carroll to take examinations for credit in selected courses. Such examinations are developed and administered by departments. In some instances, placement without credit might be recommended. Interested students may consult with department faculty about policies and procedures. Contact the Registrar's Office for the necessary form. A fee is charged for each examination. A student who does not complete the examination with satisfactory results may not repeat the examination.

4. The **International Baccalaureate Diploma** is recognized by Carroll University for purposes of admission, course credit and advanced standing or placement. Sixteen credits will be granted to holders of the International Baccalaureate diploma. Additional credit may be granted when more than four higher-level examinations have been taken and scores of four or higher have been earned. For students in the program who have not earned the diploma, four credits will be granted for each higher-level examination when a score of four or higher is earned. These credits will be declared to meet core and General Education requirements when the subjects validated by examination appear to be reasonably comparable to the subjects taught at Carroll University. Otherwise, the credits will be regarded simply as elective credit toward a Carroll degree. The student must enroll as a degree-seeking student at Carroll.

5. **Credit for Prior Learning** is possible when university-level learning, which relates to a degree program offered by the University, has occurred outside the normal educational setting. Credit for prior learning may be given when verified by employment records and the American Council on Education guidebook and transcripts or when verified by a program for credit within that program. A maximum of 24 credits may be obtained through this method. Carroll University uses the course-equivalency method with the portfolio model for assessment of prior learning that is not easily measured via standardized testing or transfer procedures. Such competency is expected to be related to the student's present degree program. The evaluation of such credit requires consideration by faculty. Students are required to demonstrate their learning, competencies and skills. Evidence will usually consist of a portfolio. However, a performance test, an essay examination, or an interview with an internal or outside expert may also be required.

6. **Correspondence Courses**, up to 12 credits from an accredited institution, may be accepted in transfer and may be applied to a Carroll University degree. The course credit must be letter graded C or better. (D graded credit will not meet any graduation requirement.) Students must obtain written approval in advance from their adviser and the Registrar prior to registering for any correspondence or extension course. Forms are available in the Registrar's Office. A copy of the course description for each course to be taken must accompany the Transfer Credit Approval form when it is filed with the Registrar's Office. A maximum of eight semester hours of correspondence or extension course credit may be applied to major or minor requirements with the written approval of the appropriate Department Chair or College Dean. It must be filed in the Registrar's Office. Any correspondence or extension work taken prior to matriculation at Carroll University will be reviewed by the appropriate Department Chair or College Dean to determine its acceptance and application to graduation, major or minor requirements.

7. **D.A.N.T.E.S. (Defense Activity for Nontraditional Education Support)** course work will be considered on an individual case basis.

8. **P.O.N.S.I.** (The National Program on Noncollegiate Sponsored Instruction) credits will be evaluated on an individual basis.

9. **Proficiency Testing in Foreign Languages**: Students who have extensive background in a language other than English may be able to earn up to 16 credits in one language by demonstrating proficiency. The proficiency exam is intended for students with a more extensive background than high school foreign language study only. Carroll University grants credit to qualified degree-seeking Carroll students through the Proficiency Testing Program in Foreign Languages sponsored by New York University.

10. **Retroactive Credit for Modern Languages** allows students who are enrolled in a degree program to earn a maximum of 16 hours of credit in a modern language upon completion of one 300-level course with a grade of B or higher, or four, eight or twelve credits upon completion of 102, 201, or 202, respectively, with a grade of B or higher. This must be the student's first enrollment in an advanced university-level modern language course. Please see the Modern Languages and Literatures section for competency and test requirements.

11. **Retroactive Credit for Mathematics**

*Students with prior Calculus experience may enroll in Math 161, Calculus II, or Math 207, Calculus III. A student who takes Math 161 and earns a grade of BC or above will receive retroactive credit of Math 160, Calculus I, if Advanced Placement (AP) credit has not been awarded for the course. A student who takes Math 207, Calculus III, and earns a grade of BC or above will receive retroactive...*
credit for Math 160 and Math 161, if Advanced Placement credit has not been awarded for those courses. Students with questions regarding the optimal Calculus course to take are encouraged to contact the mathematics faculty directly.

12. OCICU
Carroll University has approved for degree credit several online courses offered through the Online Consortium of Independent Colleges and Universities (OCICU). Credits earned in an approved OCICU course are posted to a student’s transcript as the equivalent Carroll University course. The courses offered by OCICU may carry a different number of credits from the equivalent Carroll course. OCICU courses have different add/drop policies, pricing, refund policies, and start and end dates. OCICU courses meet during six eight-week terms throughout the year. Only part-time students may take OCICU courses during the fall and spring terms. All students may enroll in OCICU courses in the summer. Information on all of Carroll University’s Web-based courses is available online.
Attendance

The University expects students to be prompt and regular in attendance at all scheduled classes. Records of attendance are maintained by each individual professor, and official attention is given any student with excessive absences. Attendance at clinical experiences is mandatory for all health sciences majors.

Faculty may cancel a class due to personal illness, or other personal reasons. The instructor must contact the Dean of the College and the Registrar. Students will be notified of the cancellation via email by the instructor or by the Registrar's Office and a note will be posted near the classroom.
Auditing Courses

With the instructor's permission, students generally may audit all courses at Carroll, except for studio art courses, applied music, music ensembles and laboratories. The minimum requirement to receive an audit (AU) grade is regular attendance, but individual instructors may have higher requirements. No credit is received for these courses. There are no restrictions for taking the same course for credit at a later date. However, students may not receive credit through “credit by examination” after auditing a course. Students taking the course for credit have priority enrollment over students who wish to audit.
The unit of credit is the semester hour. It is defined as one 50-minute class period per week (or its equivalent) for one semester. Thus a lecture-discussion course that meets four 50-minute periods a week ordinarily carries four semester credits. One credit is granted at the completion of a semester for each applied music lesson (one half-hour per week), ensemble or practicum course for which a student is registered.
The University year is divided into two semesters, a winter session and three summer sessions. The first summer session runs for three weeks and the other two for six weeks each. A student's normal class load is 16 credits of academic work each semester, with a total of 128 credits required for graduation. Any student with a Carroll cumulative grade point average of 3.00 or higher may petition to take 20 or 21 credits at an additional charge. Under no circumstances may a student take more than 21 credits each semester. A student on academic probation may not register for more than 12 credits. A student who enrolls for fewer than 12 credits is classified as a part-time student. Students must register for all course work in the semester/term in which the work is done. A student may take a maximum of four credits for the winter session and the three-week summer session and eight credits for each six-week summer session, with not more than 20 credits total for the summer.
The curriculum for all undergraduates at Carroll consists of:

1) coursework associated with the University's General Education Program
2) completion of a course of study leading to one or more majors (and often a minor) including support courses
3) elective courses that complete the undergraduate's educational experience.

Carroll students earn the baccalaureate degree appropriate to their major field of study and are required to fulfill the degree requirements specified by the various academic programs and detailed in subsequent sections of this catalog. Graduates of the University must fulfill the requirements of a major and its associated degree requirements, the general graduation requirements and a minimum of 128 credit hours.
## Department and Major Codes

<table>
<thead>
<tr>
<th>Major Code</th>
<th>Major</th>
<th>Department Code</th>
<th>Department</th>
<th>College Code</th>
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<td>DBAE</td>
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</tr>
<tr>
<td>HIS</td>
<td>History</td>
<td>CHSS College of Humanities &amp; Soc</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>MAR</td>
<td>Marine Sciences</td>
<td>CNHS College of Natural Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT</td>
<td>Mathematics</td>
<td>CNHS College of Natural Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRE/GER/SPA</td>
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<td>CHSS College of Humanities &amp; Soc</td>
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<tr>
<td>MUS</td>
<td>Music &amp; Music Education</td>
<td>CHSS College of Humanities &amp; Soc</td>
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</tr>
<tr>
<td>NRS</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LEA</td>
<td>Organizational Leadership</td>
<td>DBAE Department of Business, Acc</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHI/POL/ECO</td>
<td>Philosophy, Political Science &amp; Economics</td>
<td>CHSS College of Humanities &amp; Soc</td>
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<td></td>
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<tr>
<td>PED &amp; HED</td>
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<td>CNHS College of Natural Sciences</td>
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<tr>
<td>PHY</td>
<td>Physics</td>
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<tr>
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<td>WRL</td>
<td>Professional Writing</td>
<td>CHSS College of Humanities &amp; Soc</td>
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<tr>
<td>PSY</td>
<td>Psychology</td>
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<td>PBH</td>
<td>Public Health</td>
<td>CNHS College of Natural Sciences</td>
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<td>REL</td>
<td>Religious Studies</td>
<td>CHSS College of Humanities &amp; Soc</td>
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<tr>
<td>SOC</td>
<td>Sociology &amp; Criminal Justice</td>
<td>CHSS College of Humanities &amp; Soc</td>
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<td>SRM</td>
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<td>CNHS College of Natural Sciences</td>
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<tr>
<td>TAM</td>
<td>Theatre &amp; Arts Management</td>
<td>CHSS College of Humanities &amp; Soc</td>
<td></td>
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</tr>
</tbody>
</table>
Electives

Students also have the opportunity to complete elective courses to broaden their knowledge in areas outside the major. Electives are generally free of restrictions, other than prerequisites, and fulfill neither major nor general education requirements.
Carroll University offers letter grades of A, AB, B, BC, C, D and F upon completion of a Carroll University course. All transfer work grades will be converted into the Carroll University letter grade system. For example: a student transferring in a letter grade of B+ from another institution will receive a grade of B on the Carroll University transcript for that transfer course.

Please note that not all coursework from other institutions are transferable. Official transcripts must be sent to the Carroll University Registrar's Office for review.
Grading System and Grade Point Calculation

Grading System

A system of letter grades is used in courses for which degree credit may be earned. A 4.00 grade point system is used under which a student earns grade points for each credit completed.

<table>
<thead>
<tr>
<th>LETTER GRADE</th>
<th>GRADE POINT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.00</td>
<td>Excellent</td>
</tr>
<tr>
<td>AB</td>
<td>3.50</td>
<td>Intermediate grade</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
<td>Good</td>
</tr>
<tr>
<td>BC</td>
<td>2.50</td>
<td>Intermediate grade</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
<td>Average</td>
</tr>
<tr>
<td>D</td>
<td>1.00</td>
<td>Low, merely passing</td>
</tr>
<tr>
<td>F</td>
<td>0.00</td>
<td>Failure</td>
</tr>
<tr>
<td>AU</td>
<td></td>
<td>Audit</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td>Incomplete (See definition)</td>
</tr>
<tr>
<td>IP</td>
<td></td>
<td>In progress</td>
</tr>
<tr>
<td>NC</td>
<td></td>
<td>No credit allowed</td>
</tr>
<tr>
<td>NR</td>
<td></td>
<td>Grade not received</td>
</tr>
<tr>
<td>S</td>
<td></td>
<td>Satisfactory (A, A/B, B, B/C, C level)</td>
</tr>
<tr>
<td>U</td>
<td></td>
<td>Unsatisfactory (D or F level)</td>
</tr>
<tr>
<td>W</td>
<td></td>
<td>Withdrawal</td>
</tr>
</tbody>
</table>

Grade Point Calculation

The grade point values when multiplied by the number of course credits give the total number of grade points earned for that particular course. In a four-credit course, for example, a grade of B yields 12 grade points; a grade of A yields 16 grade points. The grade point average is the ratio between total academic grade points and total academic hours: that is, the quotient obtained by dividing the total number of academic grade points earned by the total number of academic hours attempted. For example, a program of 16 academic credits in which 48 grade points are earned will yield a grade point average of 3.00 or an average of B (48 divided by 16 = 3.00).
Incomplete Grading

A report of incomplete means that the student has been unable to complete the required work for a valid reason; it is not given for neglected work. In order to receive an incomplete, the student must initiate the request by submitting a properly completed form (available online and from the Registrar's Office) to the instructor prior to the end of the term. If the instructor agrees with the request, the completed form is signed by the student, the instructor and the department chair and is then submitted by the instructor to the Registrar. Upon receiving the form with all relevant information and appropriate signatures, the Registrar will post the incomplete grade to the student's transcript. An incomplete must be removed by the end of the eighth week of the next semester or it automatically becomes a failure. An extension of no more than one year may be granted only with written consent from the instructor and the department chair.
Independent Study

Independent study is offered by most programs and is subject to the same general university regulations that govern any course offering. Such courses are taken for academic credit (one to four credits) with the appropriate grading from an assigned instructor. The format of study may vary and is formulated in consultation with the assigned instructor. An independent study may be taken only with consent of the instructor and the college dean and must be arranged with the instructor before registering. In general, a student may count a maximum of four independent study credits toward graduation. An approved Permit for Independent Study form, available at the Registrar's Office, and a syllabus must be presented at the time of registration.
**Individually-Designed Major**

A student interested in designing such a major will, in consultation with an adviser qualified and willing to assist, work out a program of study based primarily on regularly-taught courses at Carroll. The degree requirements of either the Bachelor of Arts or Bachelor of Science will be incorporated into this plan. The entire plan must be submitted to the Academic Steering Committee for review. It will reject any plan that creates staffing problems, violates the principle of the need for balance between concentration and breadth of study, or for any other reason is judged to be academically unsound. It will not impose a general rule about the number of courses in the major, except that no student will be permitted to take more than 40 credits within a program, except in professional programs. All proposals for individually-designed majors must be submitted to the Academic Steering Committee no later than one year prior to the intended date of graduation. A planning and approval form for the Individually Designed Major is available in the Registrar's Office.
International and Domestic Off-Campus Study Opportunities

The Office of International Education (OIE) provides Carroll students with opportunities to enhance the awareness of their own cultural conditioning, assumptions and perspectives by bringing them in contact with people who have backgrounds significantly different from their own. Two types of benefits result from such an experience:

1. Students develop a more vivid consciousness of the kinds of social, political, economic and religious forces that have contributed to the formation of their own self-concepts, and to the structure of American society as a whole;
2. students develop a growing understanding of other cultures and customs.

Most international and many domestic study abroad/away activities meet the Cross-Cultural (CCE) requirement of the Pioneer Core curriculum.

Carroll offers a variety of short-term study abroad options, with a worldwide geographic scope that spans all continents but Antarctica. Carroll's NCEP (New Cultural Experiences Program) and CCS 300 courses are developed and taught by Carroll faculty. A description of approved NCEP and CCS 300 courses can be found on the CCE web page, click here.

Many semester and academic year study abroad opportunities exist for students who want longer, in-depth academic experiences in another country. Students in good academic standing who have earned 16 Carroll University credit hours at the time of participation may apply for enrollment in study abroad. Most students study abroad during their junior or senior year, although some students find that international study during their sophomore year is a better fit for their program of study. Students who are approved for study abroad must meet the requirements of their chosen program. Approved students will remain enrolled full time at Carroll University during the time they are abroad. Additional information about each of the options, including costs and the application is available on the Carroll University CCE Website.
Internships or Work-Oriented Experiences

Students are urged to participate in a work-oriented gateway experience to prepare for their work in the world. Most work-oriented experience will be related to the student's major or minor field and generally will be taken during the senior year. Internships and work-oriented experiences are under the direct supervision of a member of the Carroll University faculty. Such courses are taken for academic credit with the appropriate grading (letter grades or S/U) from an assigned instructor. Each program will determine whether an internship or work-oriented experience will be offered. These courses are subject to the general regulations that govern any course offered, including registration within the time period allowed for an on-campus course. A student must have permission for an internship or work-oriented experience and present an approved Permit for Internship upon registration.
In order to be eligible for a Bachelor of Arts, Bachelor of Science or Bachelor of Music Education degree, a student must complete one major and earn a minimum 2.00 grade point average (Carroll and transfer credit) in all courses attempted for the major. Generally majors require no more than 64 credits within a program (exclusive of credit for internships). This regulation does not prevent a student from earning more than 64 credits, which would then permit the student to earn additional course credit in the major. The requirements for satisfying a specific major may be found under each program listing in the course descriptions section of this catalog. When a student has decided on a major field, he/she should consult with a faculty member in that program and make the necessary arrangements with the Registrar's Office. A student who elects to complete a second major should have an adviser from that program also. Students declaring more than one major must declare one major as the primary major. This declaration must be specified when a student applies for graduation.

The primary major will determine which degree is earned (B.S., B.A., B.S.N., or B.M.E.). A course may count toward two majors as long as the majors are in different disciplines. If a student has more than one major, however, each major must have 32 credits unique to each major. The student also may select a minor. A student may also count the same course in the major toward a minor as long as each minor has 16 unique credits. In programs that have multiple emphases, a student may declare only one emphasis. A transfer student is expected to complete in residence at Carroll at least one-fourth of the number of credits required for the stated major field(s) of study.

Footnotes:
1. Some majors that must meet outside standards for accreditation may require a higher GPA.
2. Required supporting courses are included within the 64-credit limit. Majors within professional programs may exceed 64 credits.
3. Specific programs designate major support courses that are required for primary majors only.

Students may also decide to select one or more minors from a broad range of fields. While a minor typically requires fewer credits than a major, it provides students with a coherent course of study in the field. Descriptions and course requirements are listed in the program sections. At least one-fourth of the total credits required must be taken at Carroll with a minimum of a 2.00 grade point average. A student may not select a major and minor in the same discipline. A course in the minor may also count toward another minor as long as each minor has 16 unique credits.
Method of Course Delivery

Carroll University offers several different methods of instruction. Please see the descriptions below.

Traditional and/or Enhanced
Course instructor and students meet at specified days, times, and location. All or nearly all instruction and course content are presented in the classroom. Some technology may be used for instruction and delivery of course content. This can include posting content (related to learning goals) to MyCourses, use of discussions, blogs or wikis (either through course management system or other), or using technology in the classroom (e.g., clickers).

Hybrid
Hybrid courses are noted in the catalog using the following section letters; HY, HX, HZ, etc. Twenty-five percent (25%) to seventy-five percent (75%) of instruction takes place in an online environment. As noted, physical on-campus meeting time is generally one quarter to three quarters of a traditional course. For example, a course that typically meets 4 hours/week in a traditional course will meet for 2 hours/week in a 50% hybrid course.

Online
Online courses are noted in the catalog using the following section letters; WW. Instruction is delivered completely online, often through MyCourses. Typically, there are no face-to-face meetings, though an introductory first meeting may occur at the beginning of the semester and/or for the purpose of proctoring exams.
Repeating Coursework Graded C, D or F at Carroll University

Any Carroll University credit earned with a C, D or F grade may be retaken at Carroll one time only for any given course. Both the C, D or F grade and the repeated grade will be recorded on the Carroll University transcript, but only the last grade awarded will be used in the appropriate grade point calculations. A student may not replace a Carroll University earned C, D or F with transfer credit. A student may not replace Carroll coursework graded higher than a C unless this provision is specifically allowed in program-specific policies.
Any transfer credit with an earned C, D or F may be retaken for credit with a similar course at Carroll University or another accredited institution as approved by the Registrar. Upon matriculation at Carroll University, the student must obtain permission in advance from the Registrar to retake a transfer course graded C, D or F with a similar transfer course or with a Carroll University course. Both the C, D or F grade and the repeated grade will be recorded on the Carroll University transcript, but only the last grade awarded will be used in the appropriate grade point calculations. A student may not replace transfer coursework graded higher than a C unless this provision is specifically allowed in program-specific policies.
Juniors and seniors have the choice of taking any or all elective courses on a satisfactory/unsatisfactory (S/U) basis. A student shall not be permitted to alter the decision after the first four weeks of the semester. No student may take any course to complete a general education requirement on an S/U basis. No student may take any course within the major or minor fields, including required supporting courses, on an S/U basis, with one exception: internships or work-oriented experiences may count toward the major or minor even if taken S/U. Students are advised that graduate or professional schools often give less consideration to applicants whose records show this grade option. Satisfactory/unsatisfactory grades will not be included in computing the grade point average.
Wait List Policy

Closed Classes and Wait List Policy

1. You may now add yourself to a course waitlist through Enhanced Web Registration.

2. If a course that you wish to register for is full:
   i. You will be given a warning that indicates: 'There are no seats available in this section.'
   ii. The warning will note how many students are currently on the waitlist for the section.
   iii. You will have the opportunity to:
      a. Add yourself to the waitlist using the 'Add to Waitlist' button
      b. Cancel the action by clicking on the 'Do not Add' button

3. If a seat opens in a section you waitlisted for and if you are the first person on the waitlist you will be given a course authorization to add the course and notified via your Carroll University email address. You will have 48 hours to register for the class once this email has been sent. If you do not register for the class within the 48 hour window you will lose your spot on the waitlist.

4. To determine for which course(s) you have been granted authorization to register, access Enhanced Web Registration and check the 'Waitlisted Courses' section. The course(s) you have received authorization to add will now have a 'Move to Current' link listed to the left of the course(s).

5. To add a course:
   i. Click on the 'Move to Current' link
   ii. Click the 'Change Waitlisted to Current' button on the new page that opens up

6. **NOTE:** You will not be allowed to waitlist for different sections of a class that you are already registered to take. If you wish to take a different section of a class you will need to speak with the instructor of the section you wish to enroll into and have them provide you course authorization to do so.
Graduation Requirements

Awarding of Diplomas
Graduating with Latin Honors
General Graduation Requirements
Awarding of Diplomas

Diplomas are awarded three times a year (May, August and December) to seniors who have completed all degree requirements. Commencement ceremonies are conducted in May each year.

Seniors who have all degree requirements completed but wish to defer graduation, and those with specific academic deficiencies, will be allowed to participate in Commencement as long as the deficiencies are within the following parameters:

1. A need for one to four additional credits or completion of student teaching that is already in progress.
2. A deficiency of eight or fewer academic grade points.
3. Incomplete grades of from one to four credits.

Students may participate in only one Commencement. Notice of intent to participate in the May Commencement ceremony without the degree being awarded should be filed with the registrar’s office at the time the application for graduation is submitted or by April 15. All students who choose not to receive their degree and those with academic deficiencies will receive their diplomas at the next issuance following completion of all required work.
Graduating with Latin Honors

Carroll University offers students the opportunity to graduate with honors. For more information regarding one of these honors or to view the criteria for each one, click below.

Phi Kappa Phi
Delta Sigma Nu
Graduation Honors
Phi Kappa Phi

Phi Kappa Phi: Carroll University invites students in the top 7.5% of the junior class and the top 10% of the senior class and graduate programs to join Phi Kappa Phi, the nation's oldest, largest, and most selective all-discipline honor society. Phi Kappa Phi gives its members a lifelong connection to a global network of academic and professional activities, including opportunities to apply for national scholarships.
Delta Sigma Nu

Delta Sigma Nu is the university's honorary scholastic society. Students in the upper 10 percent of the senior class who have completed by graduation 64 letter-graded credits at Carroll and a total of 100 letter-graded credits are elected to membership. The only exception is students on approved off-campus programs where letter grades are not given. Members of the junior class with an overall grade point average of 3.9 or higher who have completed 64 letter-graded credits at Carroll and have been enrolled at Carroll University for at least four semesters are elected to membership.
Graduation Honors

Graduation honors based on the cumulative grade point average (GPA)* are awarded to those students who have completed all requirements for the degree: summa cum laude requires a GPA starting at 3.9 on a 4.0 scale; magna cum laude requires a GPA starting at 3.6; cum laude requires a GPA starting at 3.4. The complete record is considered, and there must be a minimum of 64 credits of letter grades. In order to be eligible for honors, a student must complete at Carroll, in letter-graded courses, one-half of the hours (currently 64) required for graduation. Students with transfer work must meet two criteria:

1. The student must have 64 letter-graded credits earned at Carroll.
2. Since a student with transfer work has a Carroll and an overall GPA, the lower of the two GPAs determines eligibility for honors and placement into one of the above three honors categories.

*The GPA is not rounded up.

Second degree graduation honors will be awarded to students who have completed all requirements for the degree. There must be a minimum of 32 letter-graded credits completed at Carroll University. The entire undergraduate record is considered and, if there is transfer work, the lower of the Carroll or overall grade point average (GPA)* determines eligibility for honors and placement into one of the three following categories: summa cum laude requires a GPA starting at 3.9 on a 4.0 scale; magna cum laude requires a GPA starting at 3.6; cum laude requires a GPA starting at 3.4.

Note: Graduating with honors, or as part of an honors society such as Phi Kappa Phi or Delta Sigma Nu, is distinct from the Honors Program. For information on the Honors Program, see the Honors Program page.
General Graduation Requirements

1. Students must earn a minimum of 128 credits, with the last 32 credits completed while enrolled at Carroll.

2. To graduate, students must earn a minimum 2.0 cumulative grade point average and a minimum 2.0 Carroll University grade point average.

3. An Application for Graduation form must be filed with the registrar's office one year before the expected date of graduation. Forms are available online and at the Registrar's Office. After the application is filed, a degree audit is sent to the student indicating remaining requirements to be completed.

4. Because mathematical literacy is relevant to both liberal learning and the practical demands of contemporary society, all students must demonstrate a knowledge of and proficiency in mathematics. Mathematics 106 or higher and 8 credits in a modern language (MLL) other than English is required for all students pursuing a Bachelor of Arts degree or a Bachelor of Music Education degree. Computational Science 112 and 114 is required for all students pursuing a Bachelor of Science in Nursing degree. Students pursuing the Bachelor of Science degree are required to complete Computational Science 112 plus 113 or 114. This requirement can also be met by Advanced Placement credit in statistics or calculus. For a complete guide, refer to the chart below.

5. Each year the academic community gathers to consider contemporary issues and enduring questions, to honor individual and collective achievement, and to celebrate shared vision and values. Attendance at two of the University's Convocations is required of all full-time students each year.

**DEGREE REQUIREMENTS**

<table>
<thead>
<tr>
<th>Bachelor of Arts</th>
<th>Students must take 8 credits in a modern language (MML) other than English, this does not include American Sign Language.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Carroll University will accept a total of 8 transferred credits from another college/university as long as all 8 credits are completed in the same language.</td>
</tr>
<tr>
<td></td>
<td>MAT106 or higher</td>
</tr>
<tr>
<td>Bachelor of Music Education</td>
<td>Students must take 8 credits in a modern language (MML) other than English</td>
</tr>
<tr>
<td></td>
<td>MAT106 or higher</td>
</tr>
<tr>
<td>Bachelor of Science*</td>
<td>Students must take CMP112 and either CMP113 or CMP114, or</td>
</tr>
<tr>
<td></td>
<td>MAT140 or higher and CCS110 or higher</td>
</tr>
<tr>
<td></td>
<td>*Each major may have specific program requirements.</td>
</tr>
</tbody>
</table>

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Honors and Awards

Dean's List
Honors
Honors Program
Graduation Honors
Dean's List

The Dean's List is determined twice each year at the end of the fall and spring semesters. It includes the names of all full-time degree candidates who earned at least a 3.5 grade point average the previous semester in a minimum of 12 credits with letter grades with the exception of junior-and senior-level nursing students who need seven of the 12 credits with letter grades. The names of students on the dean's list are sent to the student's local newspaper if all of the student's grades are available at the time of the list's release and if the student has authorized the release of this information. Achievement of the dean's list is noted on the student's transcript. Dean's list for part-time students will be determined after a student has earned 12 Carroll credits and has a Carroll cumulative GPA of 3.50. Thereafter, a student who completes fewer than 12 credits per semester and earns at least a 3.500 GPA is designated as being on the dean's list for that semester.
Honors

The Dean’s List is determined twice each year at the end of the fall and spring semesters. It includes the names of all full-time degree candidates who earned at least a 3.5 grade point average the previous semester in a minimum of 12 credits with letter grades with the exception of junior-and senior-level nursing students who need seven of the 12 credits with letter grades. The names of students on the dean’s list are sent to the student’s local newspaper if all of the student’s grades are available at the time of the list’s release and if the student has authorized the release of this information. Achievement of the dean’s list is noted on the student’s transcript. Dean’s list for part-time students will be determined after a student has earned 12 Carroll credits and has a Carroll cumulative GPA of 3.50. Thereafter, a student who completes fewer than 12 credits per semester and earns at least a 3.500 GPA is designated as being on the dean’s list for that semester.

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Graduation honors based on the cumulative grade point average (GPA)* are awarded to those students who have completed all requirements for the degree: summa cum laude requires a GPA starting at 3.9 on a 4.0 scale; magna cum laude requires a GPA starting at 3.6; cum laude requires a GPA starting at 3.4. The complete record is considered, and there must be a minimum of 64 credits of letter grades. In order to be eligible for honors, a student must complete at Carroll, in letter-graded courses, one-half of the hours (currently 64) required for graduation. Students with transfer work must meet two criteria:

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Note: Graduating with honors, or as part of an honors society such as Phi Kappa Phi or Delta Sigma Nu, is distinct from the Honors Program. For information on the Honors Program, see the Honors Program page.
The mission of the Carroll University Honors Program is to encourage motivated and talented students to pursue a breadth and depth of knowledge within an enriched curriculum. The program creates an environment designed to challenge students’ perspectives and to foster intellectual development. This interdisciplinary program offers intensive sections of courses distributed over the arts and sciences. The Honors Program also provides special cultural and social activities on and off campus for all honors scholars.

Upon completion of normal Carroll University admission, all freshman applicants are considered for the Honors Program. Following a comprehensive review, the Carroll Student Scholars Committee invites selected candidates to apply to the program. Late applicants, as well as transfer students and students currently enrolled at Carroll, are considered for the program on the basis of available openings.

For more details, see the Honors Program page.
Graduation honors based on the cumulative grade point average (GPA)* are awarded to those students who have completed all requirements for the degree: summa cum laude requires a GPA starting at 3.9 on a 4.0 scale; magna cum laude requires a GPA starting at 3.6; cum laude requires a GPA starting at 3.4. The complete record is considered, and there must be a minimum of 64 credits of letter grades. In order to be eligible for honors, a student must complete at Carroll, in letter-graded courses, one-half of the hours (currently 64) required for graduation. Students with transfer work must meet two criteria:

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2. Since a student with transfer work has a Carroll and an overall GPA, the lower of the two GPAs determines eligibility for honors and placement into one of the above three honors categories.

*The GPA is not rounded up.

Second degree graduation honors will be awarded to students who have completed all requirements for the degree. There must be a minimum of 32 letter-graded credits completed at Carroll University. The entire undergraduate record is considered and, if there is transfer work, the lower of the Carroll or overall grade point average (GPA)* determines eligibility for honors and placement into one of the three following categories: summa cum laude requires a GPA starting at 3.9 on a 4.0 scale; magna cum laude requires a GPA starting at 3.6; cum laude requires a GPA starting at 3.4.

Note: Graduating with honors, or as part of an honors society such as Phi Kappa Phi or Delta Sigma Nu, is distinct from the Honors Program. For information on the Honors Program, see the Honors Program page.
Transcripts and Transferring Credits

Ordering Transcripts

Transfer Credit Policy After Enrollment
The Registrar’s Office supplies official transcripts of records of those students who have no outstanding obligations to the university. In accordance with the Family Educational Rights and Privacy Act (1974), transcripts cannot be released without the express written consent of the student.

All transcript requests are completed online. To begin your order, click here.
Transfer Credit Policy after Enrollment

It is necessary to obtain permission in advance from the Carroll University Registrar's Office in order to have coursework from another institution accepted in transfer. Click here for the Transfer of Credit Approval form.

All coursework must be graded C or better to be accepted as credit earned toward graduation. However, core distribution courses, major and minor requirements may be fulfilled with a D. Grade point deficiencies at Carroll University cannot be made up with transfer course credit. NOTE: Students are required to complete their final 32 hours at Carroll University.

Official transcripts of all coursework from every post-secondary institution attended must be sent immediately following completion of the course to:

Carroll University Registrar's Office
100 N. East Ave.
Waukesha, WI 53186

Failure to have transcripts sent, even if the course cannot be accepted for credit, may result in the student being dismissed or the degree being rescinded.

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Note to Students

This catalog provides general information about Carroll University, and it summarizes important information about the University's policies, requirements for graduation, regulations and procedures. It is not intended to establish, nor does it establish, a contractual relationship with students. Rather, the Catalog is published to acquaint students with information that will be helpful to them during their university careers.

It is necessary in the general administration of the University to establish requirements and regulations governing the granting of degrees. Academic advisers, other faculty and academic staff members are available to aid students in understanding the requirements and regulations. It is the students' responsibility, however, to meet them. Students are encouraged to keep this Catalog as a reference, should questions arise.

Changes in curricular requirements may occur between catalog publications. Students will be informed of such changes. When this occurs, students may follow the requirements in effect at the time they entered or they may follow the changed requirements. However, the courses that students take to meet General Education and Distribution requirements must conform to the Catalog year in which the courses are taken. For other degree requirements, students must choose to follow one Catalog or the other; they may not pick and choose from the various requirements outlined in two or more Catalogs. Students must follow the curriculum requirements of any one Catalog in effect during their enrollment. Programs with additional accreditation standards may have different course requirements from the student's original Catalog. Progression standards are subject to change based on regulatory, licensing, and/or certification needs. Students returning to the University after an absence of one academic year or more must meet the degree requirements of the Catalog in effect upon their return or of a subsequent Catalog. Reasonable substitutions will be made for discontinued and changed courses.

The University reserves the right to make other necessary changes without further notice.
Fees

Full-Time (12-19 Credits) Tuition
Residence Hall Room Fees
Resident Meal Plans and Rates
Commuter Meal Plans and Rates
Summer Meal Plans and Rates
BookCHARGE
Other Fees and Deposits
Athletic Training Program Fees
Applied Music Fees
Additional Expenses - Nursing Program
Payment of Student Accounts
Late Fees
How payments are applied to student accounts
Veterans' Benefits
Part-time (Less than 12 Credits) Tuition
Payment Options for Part-time Students
Internships
Refund Policies
Veteran's Benefits
Full-Time Tuition Fee

Full-Time (12-19 credits)

The charges listed begin with the Summer I 2015 session and continue through the Spring 2016 semester. Full-time status is determined at the end of the first week of classes on the date indicated in the calendar as the last day to add classes.

Tuition
Tuition per year ................................................................. $28,825.00
Residence Hall Room Fees

Carroll University Room Plans Semester/Term

<table>
<thead>
<tr>
<th>Residence Hall</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple Room - Traditional Halls</td>
<td>$1,770.00</td>
</tr>
<tr>
<td>Double Room - Traditional Halls</td>
<td>$2,383.00</td>
</tr>
<tr>
<td>Single Room - Traditional Halls</td>
<td>$2,893.00</td>
</tr>
<tr>
<td>Double Room in Suite - New Hall</td>
<td>$2,979.00</td>
</tr>
<tr>
<td>Single Room in Suite - New Hall, Pioneer, Frontier and Prairie</td>
<td>$3,340.00</td>
</tr>
<tr>
<td>Single Apartment - Hartwell Apartments</td>
<td>$3,247.00</td>
</tr>
<tr>
<td>Double Apartment - Carroll, College and Hartwell Apartments</td>
<td>$3,019.00</td>
</tr>
<tr>
<td>Single room in Triple Apartment - Carroll St., College Ave., and Hartwell</td>
<td>$3,133.00</td>
</tr>
<tr>
<td>Double room in Triple Apartment - Carroll St., College Ave., and Hartwell</td>
<td>$2,905.00</td>
</tr>
<tr>
<td>Summer Housing (non-Carroll student, monthly)</td>
<td>$810.00</td>
</tr>
<tr>
<td>May Term (Carroll student, non-academic)</td>
<td>$470.00</td>
</tr>
<tr>
<td>Summer II (Carroll student)</td>
<td>$940.00</td>
</tr>
<tr>
<td>Summer III (Carroll student)</td>
<td>$940.00</td>
</tr>
<tr>
<td>January Housing (Carroll student, non-academic)</td>
<td>$470.00</td>
</tr>
</tbody>
</table>
Meal Plan Fees

Resident Meal Plans and Rates (FA15 and SP16)

<table>
<thead>
<tr>
<th>Plan</th>
<th>Cost/Semester</th>
<th>My Meal Plan</th>
<th>Meals/Semester</th>
<th>Dining Dollars/Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>$1,786.00</td>
<td>140 My Meals Block Plan</td>
<td>140 meals/semester</td>
<td>$250.00</td>
</tr>
<tr>
<td>E</td>
<td>$1,978.00</td>
<td>160 My Meals Block Plan</td>
<td>160 meals/semester</td>
<td>$350.00</td>
</tr>
<tr>
<td>G</td>
<td>$2,125.00</td>
<td>180 My Meals Block Plan</td>
<td>180 meals/semester</td>
<td>$375.00</td>
</tr>
<tr>
<td>H</td>
<td>$2,396.00</td>
<td>220 My Meals Block Plan</td>
<td>220 meals/semester</td>
<td>$425.00</td>
</tr>
</tbody>
</table>

Commuter Meal Plans and Rates (FA15 and SP16)

<table>
<thead>
<tr>
<th>Plan</th>
<th>Cost/Semester</th>
<th>My Meal Plan</th>
<th>Meals/Semester</th>
<th>Dining Dollars/Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>$465.00</td>
<td>30 My Meals Block Plan</td>
<td>30 meals/semester</td>
<td>$100.00</td>
</tr>
<tr>
<td>S</td>
<td>$861.00</td>
<td>60 My Meals Block Plan</td>
<td>60 meals/semester</td>
<td>$150.00</td>
</tr>
<tr>
<td>T</td>
<td>$1,251.00</td>
<td>90 My Meals Block Plan</td>
<td>90 meals/semester</td>
<td>$200.00</td>
</tr>
<tr>
<td>U*</td>
<td>$1,251.00</td>
<td>45 My Meals Block Plan</td>
<td>45 meals/semester</td>
<td>$650.00</td>
</tr>
<tr>
<td>V*</td>
<td>$1,251.00</td>
<td>60 My Meals Block Plan</td>
<td>60 meals/semester</td>
<td>$550.00</td>
</tr>
<tr>
<td>W*</td>
<td>$1,251.00</td>
<td>75 My Meals Block Plan</td>
<td>75 meals/semester</td>
<td>$350.00</td>
</tr>
</tbody>
</table>

*Grand Avenue Plans - also available for juniors and seniors in Frontier, Pioneer, and Prairie Halls.

Summer Meal Plans and Rates (Summer 15)

<table>
<thead>
<tr>
<th>Plan</th>
<th>Cost/Summer</th>
<th>my meal Plan</th>
<th>Meals/Summer</th>
<th>Dining Dollars/Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>$445.00</td>
<td>30 My Meals Block Plan</td>
<td>30 meals for the summer</td>
<td>$150.00</td>
</tr>
<tr>
<td>7</td>
<td>$655.00</td>
<td>45 My Meals Block Plan</td>
<td>45 meals for the summer</td>
<td>$225.00</td>
</tr>
<tr>
<td>8</td>
<td>$795.00</td>
<td>60 My Meals Block Plan</td>
<td>60 meals for the summer</td>
<td>$275.00</td>
</tr>
</tbody>
</table>
BookCHARGE Fee

Charge Textbooks and Supplies to your Student Account

Students who wish to use BookCHARGE are required to sign the BookCHARGE Authorization Form.

BookCHARGE allows students to charge textbooks and supplies, up to $750.00 each semester, directly to their student account on the following conditions. BookCHARGE is available, 10 business days prior to the start of the semester and ends 10 business days after the semester begins, to currently enrolled students who have a PiONEer Card and have no holds on their student account. BookCHARGE is available for rental textbooks, but not for the purchase of textbooks online. Any fees you incur for not returning a rental textbook will be charged to the credit card on file with Follett, and not your student account. You are allowed to charge books, and supplies to your student account up to $750 per semester. Please be responsible about your purchases. Remember, your charges will be reflected on your student account and will be billed to you.

BookCHARGE purchases at the bookstore will be reflected on your student account on the next billing statement. As with other charges to your student account, unpaid bookstore charges might result in late fees, registration and transcript holds.

The cost of textbooks varies. It is estimated that a student spends an average of $1236 per year for books.
Other Fees and Deposits

Housing deposit (credited to student's account) $100.00
This sum is required to be submitted with the housing contract. When this deposit is paid, residence hall reservations are confirmed.

Housing cancellation penalty $500.00

A $500 cancellation fee will be assessed if a student cancels a housing license agreement, withdraws, or is dismissed from the university.

A prorated fee will be implemented for cancellations occurring during the summer of 2015 based upon the following schedule:

Deposit post date – April 15, 2015
- loss of $100.00 housing deposit

April 16 – June 30, 2015
- loss of $100.00 housing deposit and $250 cancellation fee

July 1, 2015 and after
- loss of $100.00 housing deposit and $500 cancellation fee

Housing activity fee $20.00 per semester non-refundable

Housing room change fee $100.00
This fee will be assessed if a student changes his/her room assignment after the academic year begins.

Confirmation Deposit - Physical Therapy Direct Admit (NON-REFUNDABLE) $200.00

Confirmation Deposit (credited to student's account) $200.00
This sum is due and payable within 30 days after the date the applicant is notified of admission to the University or after financial aid is determined for those who are aid applicants. This deposit is collected only from new full-time students or from part-time students moving to full time status. It is generally not refundable.

Registration and Orientation fee $270.00
New full-time students will be assessed this fee on their first billing. It is generally not refundable.

Comprehensive fee $560.00
This fee is collected from full-time undergraduate students and is used directly by the University to address needs common to the student body.

Activity fee $150.00
This fee is collected by the University at the request of the Student Senate and is distributed by the Senate to eligible student organizations.

Nursing program fee $775.00
This fee is assessed to all full-and part-time nursing students with a Nursing major.

Professional liability insurance $20.00
This fee is assessed to Health Sciences Majors who are required to carry professional liability insurance when enrolled in any clinical course.

Completion fee $135.00
This fee is assessed to Education Majors enrolled in EDU409, EDU419 or EDU423.

The fee will be charged whether a student participates in the graduation ceremony or not, to cover diplomas, diploma covers, degree audits and other associated costs.

Parking permit for resident Carroll students $107.00-$309.00
Parking Fines-(Lower Offense) $24.00/$48.00
Parking Fines-(Upper Offense) $41.00/$82.00
Resident students may apply for parking permits for residence hall lots. Because parking spaces are limited, they are assigned by the safety office according to established criteria.

Stop Payment Fee (subject to change based on bank fees) $33.50

NSF Fee (subject to change based on bank fees) $25.00

Late Fees:
Non-Payment Plan Late Fees:

Late fees in the amount of $35.00 will be assessed monthly on any overdue balance (overdue balance: unpaid balance that is over 30 days old) of $20.00 or greater.

Monthly Payment Plan (myPAYPLAN):

Enrollment Fee: $50.00 due upon enrollment - per semester (Non Refundable)

A Late Fee of $35.00 per month will be assessed only if the scheduled monthly installment payment is not received by the due date.

Past due accounts occur when the payment terms on your account have not been met. The University has the right to take steps to collect the past due amounts including, but not limited to, the following: prohibiting the student from scheduling classes for the following semester; withholding course credits; academic transcripts, and diploma until the balance is paid; turning over the student's account to a collection agency; and taking legal action. By enrolling in a payment plan, the student authorizes the University to release financial information about his/her account to those concerned with collecting the balance owing. If the University incurs any expenses in collecting the student's account, the student shall pay all the University's cost of collection. This includes, but is not limited to, a collection agency fee which may be based on a percentage at a maximum of 30% of the debt, and/or reasonable attorney's fees. A collection agency acting on behalf of the University may contact students regarding any outstanding balance by means of an automated calling system or a pre-recorded message at any telephone number associated with the student's account including wireless telephone numbers.

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-refundable registration fee for International and Off-Campus Programs</td>
<td>$250.00</td>
</tr>
<tr>
<td>Study Abroad Programs Exchange and Affiliated Programs</td>
<td>$350.00</td>
</tr>
<tr>
<td>Unaffiliated Programs</td>
<td>$350.00</td>
</tr>
<tr>
<td>Summer/J-term Study Abroad Fee</td>
<td>$150.00</td>
</tr>
<tr>
<td>Auditing (per credit)</td>
<td>$110.00</td>
</tr>
<tr>
<td>Auditing (Nursing-per credit)</td>
<td>$117.00</td>
</tr>
<tr>
<td>Aviation Science Course Fee for courses with AVS designation</td>
<td>$3500.00</td>
</tr>
<tr>
<td>Credit for work experience (per credit)</td>
<td>$195.00</td>
</tr>
<tr>
<td>Credit for work experience (Nursing-per credit)</td>
<td>$228.00</td>
</tr>
<tr>
<td>ESL Listening and Speaking (ESL 121/221/321) per course</td>
<td>$1379.00</td>
</tr>
<tr>
<td>ESL Reading and Writing (ESL 122/222/322) per course</td>
<td>$2297.00</td>
</tr>
<tr>
<td>ESL Special Topics (ESL 123/223/323) per course</td>
<td>$917.00</td>
</tr>
<tr>
<td>FFE Program Fee</td>
<td>$316.00</td>
</tr>
<tr>
<td>Housing Early Arrival/Late Departure Fee</td>
<td>$75.00</td>
</tr>
<tr>
<td>International Student Orientation Fee</td>
<td>$115.00</td>
</tr>
<tr>
<td>Internship (per credit)</td>
<td>$370.00</td>
</tr>
<tr>
<td>Internship (Nursing-per credit)</td>
<td>$469.00</td>
</tr>
<tr>
<td>Internship: Written Project (per credit)</td>
<td>$195.00</td>
</tr>
<tr>
<td>Internship: Written Project (Nursing-per credit)</td>
<td>$228.00</td>
</tr>
<tr>
<td>Credit by examination (per credit)</td>
<td>$192.00</td>
</tr>
<tr>
<td>Credit by examination – Nursing courses (per credit)</td>
<td>$228.00</td>
</tr>
<tr>
<td>Prior Learning Assessment (per credit)</td>
<td>$195.00</td>
</tr>
<tr>
<td>Prior Learning Assessment (Nursing-per credit)</td>
<td>$228.00</td>
</tr>
<tr>
<td>Tuition per credit for additional credits – non-nursing (greater than 19 credits)</td>
<td>$370.00</td>
</tr>
<tr>
<td>Tuition per credit for additional credits – nursing (greater than 19 credits)</td>
<td>$469.00</td>
</tr>
<tr>
<td>Undergraduate tuition for OCICU online courses</td>
<td>$475.00</td>
</tr>
</tbody>
</table>

Course fees (per course) $72.00 - 150.00

These fees are required for classes with expendable material costs, as well as other costs unique to the course, and include, but are not limited to, lab courses.

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Athletic Training Program Fees

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Program Fee</td>
<td>$670.00</td>
</tr>
<tr>
<td>Senior Program Fee</td>
<td>$560.00</td>
</tr>
</tbody>
</table>
Applied Music Fees

The academic year charges for individual instruction in voice, piano, organ, strings, winds and percussion and some music capstone courses are:

- One-half hour lesson per week $572.00
- One hour lesson per week $1144.00

No refunds of applied music fees will be made after the second week of classes.
Additional Expenses - Nursing Program

Nursing is a practice discipline and students enrolled in the nursing program must plan for additional costs that are directly related to the program. These include uniforms, nursing textbooks, health requirements, CPR certification, liability insurance, and transportation costs associated with clinical experiences.

- Uniform cost will vary depending on vendor used. Uniform patch is available through the bookstore. Also required for clinical nursing courses: watch with a second hand, white nurses shoes (or all white athletic shoes), bandage scissors and stethoscope.
- Students are required to carry professional liability insurance when enrolled in any clinical course. Cost varies according to plan selected and agency used.
- Nursing pin. Cost varies.
- For graduating seniors desiring registration and licensure in Wisconsin:
  - Registration fee for NCLEX exam
  - Application for State Board
  - Work permit for graduates working in Wisconsin
  - State Board registration photograph
  - Class composite photograph (optional)
Payment of Student Accounts

Payments can be made online through ePAY at my.carrollu.edu.

Visa, MasterCard, American Express, and eCheck are accepted. Full and partial payments can be made any time before the due dates. Payments will also be accepted through the mail and in person. For security reasons, credit card payments will no longer be accepted via telephone.

Charges for tuition, fees, room and board are the obligation of the student upon registration and are to be paid no later than the first day of the semester. A student may attend classes, take examinations, and be entitled to the benefits of a fully registered student only when all charges have been paid or satisfactory financial arrangements have been approved by the Business Office.

Course and Fee statements will be available online at my.carrollu.edu. Sign in with your user name and password, click on Student>Billing and Payment>View Bill. Full payment of the balance must be made by the first day of the semester unless payment plan arrangements have been approved by the Business Office.

Due Dates are:

<table>
<thead>
<tr>
<th>Session</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Session I, 2014</td>
<td>May 8, 2014</td>
</tr>
<tr>
<td>Summer Session II, 2014</td>
<td>June 2, 2014</td>
</tr>
<tr>
<td>Summer Session III, 2014</td>
<td>July 15, 2014</td>
</tr>
<tr>
<td>Fall 2014</td>
<td>September 4, 2014</td>
</tr>
<tr>
<td>Winter 2015</td>
<td>January 2, 2015</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>January 20, 2015</td>
</tr>
<tr>
<td>Summer Session I, 2015</td>
<td>May 7, 2015</td>
</tr>
<tr>
<td>Summer Session II, 2015</td>
<td>June 1, 2015</td>
</tr>
<tr>
<td>Summer Session III, 2015</td>
<td>July 14, 2015</td>
</tr>
</tbody>
</table>

Late Fees:

Non-payment Plan Late Fees:

Late Fees will be assessed monthly, at a flat rate of $35.00, on overdue balances of $20.00 or greater.

Monthly Payment Plan (myPAYPLAN):

Enrollment Fee: $50.00 due upon enrollment - per semester

A Late Fee of $35.00 per month will be assessed only if the scheduled monthly installment payment is not received by the due date.

Delinquent accounts occur when the payment terms on a student's account have not been met. The University has the right to take steps to collect the balance, including, but not limited to, the following: prohibiting the student from scheduling classes for the following semester; withholding course credits; academic transcripts, and diploma until the balance is paid; turning over the student's account to a collection agency; and taking legal action to collect the balance due. The student authorizes the University to release financial information about his/her account to those concerned with collecting the balance owing. If the University incurs any expenses in collecting the student's account, the student shall pay all the University's cost of collection. This includes, but is not limited to, a collection agency fee and/or reasonable attorney's fees. I understand that Carroll University, and/or a collection agency acting on behalf of the University, may contact me regarding any outstanding balance by means of an automated calling system and a pre-recorded message. I agree to be contacted by telephone at any telephone number associated with my account, including wireless telephone numbers.
Late Fees

Non-Payment Plan Late Fees:
Late Fees in the amount of $35.00 will be assessed monthly on any overdue balance (overdue balance: unpaid balance that is over 30 days old) of $20.00 or greater.

Monthly Payment Plan (myPAYPLAN):

Enrollment Fee- $50.00 due upon enrollment - per semester (non-refundable)

A Late Fee of $35.00 per month will be assessed only if the scheduled monthly installment payment is not received by the due date.

Past due accounts occur when the payment terms on your account have not been met. The University has the right to take steps to collect the past due amounts including, but not limited to, the following: prohibiting the student from scheduling classes for the following semester; withholding course credits; academic transcripts, and diploma until the balance is paid; turning over the student's account to a collection agency; and taking legal action. By enrolling in a payment plan, the student authorizes the University to release financial information about his/her account to those concerned with collecting the balance owing. If the University incurs any expenses in collecting the student's account, the student shall pay all the University's cost of collection. This includes, but is not limited to, a collection agency fee which may be based on a percentage at a maximum of 30% of the debt, and/or reasonable attorney's fees. A collection agency acting on behalf of the University may contact students regarding any outstanding balance by means of an automated calling system or a pre-recorded message at any telephone number associated with the student's account including wireless telephone numbers.
How payments are applied to student accounts

Credits to student's accounts are applied in the following manner:

Financial aid, in the form of grants and scholarships, is the first item credited to the student's account and will be applied in the following order:

- Tuition, program fees, other fees, board charges, room charges.
- Cash payments (other than student loans) will be applied to fines and incidental charges.

The remaining cash and/or loan proceeds made to student accounts are applied against charges not covered by grants and scholarships in the following order:

- Tuition, program fees, other fees, board charges, room charges.

Information regarding payment plan options may be obtained from the Business Office of the University. Students are invited to contact the Business Office if they have any questions concerning payments due to the University.
Veteran's Benefits

Veterans eligible for education benefits should apply with the appropriate agency prior to registering for classes. After applying for benefits, veterans should contact the institution's Veterans Certifying Official to notify them of their intent to collect benefits. Federal benefits paid under chapters 30, 35, 1606, or 1607 will be paid directly to the student. Recipients of such payments are advised to anticipate a delay of about two months before receiving the first payment. Students receiving benefits under these chapters should be prepared to pay all expenses since payments are made directly to the veteran. Chapter 33 (Post 9-11 GI Bill) and the Yellow Ribbon Benefits will be paid directly to the higher education institution.
Part-time (less than 12 credits) Tuition

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate course per credit (Non-Nursing)</td>
<td>$370.00</td>
</tr>
<tr>
<td>Nursing course per credit</td>
<td>$469.00</td>
</tr>
<tr>
<td>*Undergraduate OCICU course per credit</td>
<td>$475.00</td>
</tr>
<tr>
<td>Auditing per credit (Non-Nursing)</td>
<td>$110.00</td>
</tr>
<tr>
<td>Auditing Nursing per credit</td>
<td>$117.00</td>
</tr>
<tr>
<td>Credit by examination-per credit (Non-Nursing)</td>
<td>$192.00</td>
</tr>
<tr>
<td>Credit by examination – Nursing courses-per credit</td>
<td>$228.00</td>
</tr>
</tbody>
</table>

These charges do not apply to full-time students who drop a course after the first week of a semester.

*Please refer to the University's Web site for information pertaining to Carroll's online consortium (OCICU) courses.

To verify the refund date for a particular OCICU course you have registered for, check the section comments of that course for refund details. Each course will follow its own refund schedule.

Students contemplating dropping and substituting courses involving online programs may substitute another section of the same course as long as it is in the same term ("term" applies to the period during which the course is offered, beginning to ending date). Traditional courses and courses offered through the Online Consortium of Independent Colleges and Universities (OCICU) have different start and end dates and drop policies even though they may be equivalent courses. Students contemplating dropping or substituting an OCICU course with a traditional course or an OCICU course must contact the registrar at 262.524.7208 or e-mail ahandfor@carrollu.edu for policy and cost information.

**Late Fees:**

**Non-payment Plan Late Fees:**

Late Fees in the amount of $35.00 will be assessed monthly, on any overdue balance (overdue balance: unpaid balance that is over 30 days old) of $20.00 or greater.

**Monthly Payment Plan (myPAYPLAN):**

Enrollment Fee: $50.00 due upon enrollment - per semester (Non Refundable)

A Late Fee of $35.00 per month will be assessed only if the scheduled monthly installment payment is not received by the due date.

Past due accounts occur when the payment terms on your account have not been met. The University has the right to take steps to collect the past due amounts including, but not limited to, the following: prohibiting the student from scheduling classes for the following semester; withholding course credits; academic transcripts, and diploma until the balance is paid; turning over the student's account to a collection agency; and taking legal action. By enrolling in a payment plan, the student authorizes the University to release financial information about his/her account to those concerned with collecting the balance owing. If the University incurs any expenses in collecting the student's account, the student shall pay all the University’s cost of collection. This includes, but is not limited to, a collection agency fee which may be based on a percentage at a maximum of 30% of the debt, and/or reasonable attorney’s fees. A collection agency acting on behalf of the University may contact students regarding any outstanding balance by means of an automated calling system or a pre-recorded message at any telephone number associated with the student's account including wireless telephone numbers.
DUE DATES: for payment in full of tuition/fees, room and board each semester/session:

Summer I, 2015  May 7, 2015  
Summer II, 2015  June 1, 2015  
Summer III, 2015  July 14, 2015  
Fall 2015  September 3, 2015  
Spring 2016  January 19, 2016  
Summer I, 2016  May 5, 2016  
Summer II, 2016  May 27, 2016  
Summer III, 2016  July 12, 2016  

PAYMENT OPTIONS:

Summer 2015, Winter 2016 and Summer 2016
There are no payment plans available for the summer sessions or the winter session. Payment is due in full the first day of the session as noted above.

Fall 2015
1. Pay in full on or before the first day of the semester.
2. Enroll (online) in a 4, 5 or 6 month payment plan agreement for Fall 2015. Signup begins June 15, 2015. A $50.00 enrollment fee is due upon enrollment-per semester. (Non-Refundable)
   * 6 month plan: July through December-*last day to enroll 7/5/2015.*
   * 5 month plan: August through December-*last day to enroll 8/5/2015.*
   * 4 month plan: September through December-*last day to enroll 9/5/2015.*
myPAYPLAN will automatically adjust for recalculations of tuition, fees, and other expenses and financial aid. Plans will run per semester.
3. Provide a letter of company sponsorship and/or third party billing to the Carroll University Business Office on or before the first day of the semester. This letter must confirm payment in full regardless of the student's performance in the course.
4. Provide a letter to the Carroll University Business Office, on or before the first day of the semester, from your employer verifying reimbursement. Student will be required to sign a payment agreement. Payment will be due in full by January 4, 2016. A monthly Late Fee of $35.00 will be assessed if payment is not received by the due date. Please contact Judy for information regarding this option at 262-524-7698 or at jedl@carrollu.edu.

Spring 2016
1. Pay in full on or before the first day of the semester.
2. Enroll (online) in a 4, 5 or 6 month payment plan agreement for Spring 2016. Signup begins December 15, 2015. A $50.00 enrollment fee is due upon enrollment-per semester. (Non-Refundable)
   * 6 month plan: January through June-*last day to enroll 1/5/2016.*
   * 5 month plan: February through June-*last day to enroll 2/5/2016.*
   * 4 month plan: February through May-*last day to enroll 2/5/2016.*
myPAYPLAN will automatically adjust for recalculations of tuition, fees, and other expenses and financial aid. Plans will run per semester.
3. Provide a letter of company sponsorship and/or third party billing to the Carroll University Business Office on or before the first day of the semester. This letter must confirm payment in full regardless of the student's performance in the course.
4. Provide a letter to the Carroll University Business Office, on or before the first day of the semester, from your employer verifying reimbursement. Student will be required to sign a payment agreement. Payment will be due in full by May 24, 2016. A monthly Late Fee of $35.00 will be assessed if payment is not received by the due date. Please contact Judy for information regarding this option at 262-524-7698 or at jedl@carrollu.edu.

Refer to the Graduate Catalog for information regarding the graduate programs.
The University offers three types of internships. It is the students' responsibility to register for the appropriate internship course.

1. Internship with approval and placement by the program instructor (Course 480 or 380) .................................................. $370 per credit
   $469 per credit - Nursing

2. Credit for work experience approved by the program instructor (Course 483) ................................................................. $195 per credit
   $228 per credit - Nursing

3. Written project completed at work site and approved by the program instructor . . . $195 per credit
   $228 per credit - Nursing
Refund Policies

Full-time status is determined at the end of the first week of classes on the date indicated in the calendar as the last date to add classes. A full-time student who drops below 12 credits after this date will continue to be billed at full-time rates unless the student withdraws from the University.

To begin the withdrawal process the student must fill out the withdrawal form. This form may be obtained from the Office of Student Success, located in Voorhees. This form must be returned to the Office of Student Success so that the University can calculate the refund, if any, of institutional charges and determine the amount of aid that may need to be refunded to the various sources.

Refunds may be available for students with Title IV federal aid who withdraw from the University.

Students with federal aid who withdraw from the University will have their Title IV aid recalculated in accordance with guidelines established by the U.S. Department of Education derived from the October 7, 1998, Reauthorization of the Higher Education Act.

The federal formula provides a return of the Title IV aid if the student received federal financial assistance in the form of a Pell Grant, Supplemental Educational Opportunity Grant, TEACH Grant, Iraq Afghanistan Service Grant, Perkins Loan, Subsidized and Unsubsidized Stafford Loans or PLUS Loans and withdraws on or before completing 60% of the semester. The percentage of Title IV aid earned is equal to the number of calendar days completed in the semester divided by the number of calendar days in the semester. Scheduled breaks of five or more days are excluded.

Pro-rated Title IV federal aid is returned to the respective federal programs in the following order:

1. Federal Unsubsidized Stafford Loan Program
2. Federal Subsidized Stafford Loan Program
3. Federal Perkins Loan Program
4. Federal PLUS Loan Program
5. Federal Pell Grant Program
6. Federal SEOG Program
7. TEACH Grant Program
8. Iraq Afghanistan Service Grant
9. Any other assistance awarded to the student under programs authorized by Title IV HEA

For purposes of repayment, if funds are released to a student because of a credit balance on the student’s account, then the student may be required to repay some of the federal grants released to the student. Until the repayment is resolved, the student is ineligible for further Title IV assistance. These refund policies are based upon the rules and regulations of the U.S. Department of Education and are subject to change. Worksheets used to determine the amount of refund or return of Title IV aid are available upon request at the Carroll University Business Office.

Students who withdraw and have Carroll aid and/or aid other than Title IV will earn this aid according to the following schedule:

<table>
<thead>
<tr>
<th>FALL 2015</th>
<th>SPRING 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdraw on or before:</td>
<td>Withdraw on or before:</td>
</tr>
<tr>
<td>Wednesday, September 2</td>
<td>Monday, January 18</td>
</tr>
<tr>
<td>Monday, September 14</td>
<td>Monday, February 1</td>
</tr>
<tr>
<td>Monday, September 21</td>
<td>Monday, February 8</td>
</tr>
<tr>
<td>Monday, September 28</td>
<td>Monday, February 15</td>
</tr>
<tr>
<td>Monday, October 5</td>
<td>Monday, February 22</td>
</tr>
<tr>
<td>Tuesday, October 6 (on or after)</td>
<td>Tuesday, February 23 (on or after)</td>
</tr>
</tbody>
</table>

Financial aid for part-time students will be adjusted to reflect the final number of credits for which the student is enrolled on Thursday, September 10, 2015 for the fall semester or on Tuesday, January 26, 2016, for the spring semester. If enrollment on either one of these dates is for fewer than six credits, no financial aid will be available for the term unless the student is eligible for a Federal Pell Grant.

Although the Financial Aid Census date (adjustment date for financial aid) is one week after the semester begins, we are required by federal law to review any students who received the Federal Pell Grant. Under federal regulations, students can only receive Federal Pell Grants for the classes they attended. The regulation states the following: If a student begins attending some but not all of his or her classes, the Financial Aid Office will have to recalculate the student’s Pell Grant award based on the student’s actual enrollment status. Therefore, if you receive a Federal Pell Grant, we will review your enrollment status throughout the semester.

Tuition refunds:
- Full or part-time students who withdraw from the University may be eligible for a tuition refund.
- Part-time students who drop courses may be eligible for a tuition refund.

<table>
<thead>
<tr>
<th>Percentage Summer I, 2015 - Withdrawal on or before</th>
<th>Summer II, 2015 - Withdrawal on or before</th>
<th>Summer III, 2015 - Withdrawal on or before</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Wednesday 5/6/2015</td>
<td>Sunday 5/31/2015</td>
<td>Monday 7/13/2015</td>
</tr>
<tr>
<td>75% Friday 5/8/2015</td>
<td>Monday 6/8/2015</td>
<td>Tuesday 7/21/2015</td>
</tr>
</tbody>
</table>
Refund Policies

Summer 15 Specially Timed Courses -Refund schedule

100% Before the first day of class
75% During the first 25% of the class
25% Between 25% and 50% of the class

<table>
<thead>
<tr>
<th>Date</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, September 2</td>
<td>100%</td>
</tr>
<tr>
<td>Monday, September 14</td>
<td>80%</td>
</tr>
<tr>
<td>Monday, September 21</td>
<td>60%</td>
</tr>
<tr>
<td>Monday, September 28</td>
<td>40%</td>
</tr>
<tr>
<td>Monday, October 5</td>
<td>20%</td>
</tr>
<tr>
<td>Tuesday, October 6 (on or after)</td>
<td>0%</td>
</tr>
</tbody>
</table>

Refunds of room and board fees are available if a resident student officially withdraws from the University. The amount is determined by the refund calculations listed above or, in the case of board fees, actual use, whichever is greater.

Specially timed courses for the Fall 15 and Spring 16 have the following refund schedule:

100% Before the first day of class
75% Before the second day of class
25% Before the third day of class
0% Before the fourth day of class

Tuition Refunds for Winter 2016

<table>
<thead>
<tr>
<th>Percent of Refund</th>
<th>Withdrawal Date on or before</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three or four credit courses:</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>January 3, 2016</td>
</tr>
<tr>
<td>75%</td>
<td>January 5, 2016</td>
</tr>
<tr>
<td>50%</td>
<td>January 7, 2016</td>
</tr>
<tr>
<td>Two credit courses:</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>January 3, 2016</td>
</tr>
<tr>
<td>75%</td>
<td>January 5, 2016</td>
</tr>
<tr>
<td>One credit course and specially timed courses:</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>Before the first day of class</td>
</tr>
<tr>
<td>50%</td>
<td>Before the second day of class</td>
</tr>
</tbody>
</table>

**All refunds will be reduced by a 5% administrative fee (not to exceed $100).**

Courses in the Carroll Online Consortium (OCICU) have a separate refund schedule. To verify the refund date for a particular OCICU course you have registered for, check the section comments of that course for refund details. Each course will follow its own refund schedule.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Summer I, 2016 - Withdrawal on or before</th>
<th>Summer II, 2016 - Withdrawal on or before</th>
<th>Summer III, 2016 - Withdrawal on or before</th>
</tr>
</thead>
<tbody>
<tr>
<td>75%</td>
<td>Friday 5/6/2016</td>
<td>Friday 6/3/2016</td>
<td>Tuesday 7/19/2016</td>
</tr>
<tr>
<td>* by 4:30 p.m.</td>
<td></td>
<td>* by 4:30 p.m.</td>
<td>* by 4:30 p.m.</td>
</tr>
</tbody>
</table>

Summer 16 Specially Timed Courses -Refund schedule

100% Before the first day of class
75% During the first 25% of the class
25% Between 25% and 50% of the class

All scholarships, grants, and loans must be credited to a student account before a refund check will be issued.

No refund of tuition, fees, room or board will be made to students dismissed or suspended from the University for disciplinary or academic reasons. Refunds of study abroad program registration fees are subject to regulations available in the Office of International Education.

Refund policy for military reservists called to active duty: The University recognizes the sacrifices that those in the armed services make while serving our country. We are proud to have these individuals as a part of our campus community and therefore maintain the following policy:
Refund Policies

- The student must provide the Registrar's Office copies of official military orders. The student will then be automatically withdrawn from all of his/her courses for the given semester. The academic record will reflect the non-punitive "W."
- The student will be eligible for a full refund for tuition and course fees for any courses that are not completed during that semester/session.
- Any room and board charges will be prorated based on the date in the semester the student is required to leave and the remaining amount will be refunded.

All students adding or dropping a course must do so in writing through the Registrar's Office. Refunds are based on the date of the postmark of withdrawals sent by mail or on date of delivery of those brought in personally to the Registrar's office. If a student drops from a credit class to an audit, the refund will be based on the credit course fee according to the refund policy. If a class is cancelled due to lack of enrollment, students registered for that class will be given a full refund.

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Financial Aid

The U.S. Department of Education has stated that Carroll University may participate in those student financial assistance programs authorized by Title IV of the Higher Education Act of 1965, as amended. You may contact the Director of Financial Aid at the telephone number or address listed below, if you would like to review a copy of the most current Program Participation Agreement.

Financial aid is available to students who are enrolled at least on a half-time basis per semester (some students may qualify for a Federal Pell Grant if enrolled less than half time), are degree seeking, and meet all other guidelines established by the University and the U.S. Department of Education. For financial aid purposes, half-time status is 6-8 credit hours per semester, three-quarter-time is 9-11 credit hours per semester and full-time status is a minimum of 12 credit hours per semester. The University participates in four types of financial aid programs: scholarships, grants, loans, and employment. The following titles provide more information about the various financial aid programs and how to apply. More detailed information is available on the University's Web site and upon request by contacting the Office of Financial Aid at 262.524.7296 locally, or at 1-800-Carroll. You may also write to us at the following address:

Carroll University Office of Financial Aid,
100 N. East Ave.,
Waukesha, WI
53186.

Note: Students may be eligible for student financial assistance program funds for attending a study abroad program that is approved for credit by the Carroll University Registrar. For more information, contact the Financial Aid Office as described above.

Application for Aid

The University uses the results of the Free Application for Federal Student Aid (FAFSA) as the basis for determining a student’s eligibility for federal, state, and institutional funds. The FAFSA must be entirely completed and sent to the federal processor. Carroll University’s name and Title IV code (003838) must be listed on the FAFSA in order for the University to receive a copy of the results. Students are encouraged to complete the FAFSA by April 1 for September enrollment, and by November 1 for January enrollment.

In order to receive financial aid, students must have their financial aid paperwork (including the FAFSA and any additional information required by the Financial Aid Office) completed by the following dates for the applicable term:

- Summer: June 15
- Fall: November 15
- Spring: April 15

The information reported on the FAFSA is used to determine a student’s expected family contribution (EFC), an amount the student and parent(s) or spouse are expected to contribute toward their education. The EFC is subtracted from a student's cost of attendance to determine his/her financial need. A financial aid counselor will attempt to put together a financial aid package that comes as close as possible to meeting a student's demonstrated financial need. However, due to limited funds, the amount awarded to a student may fall short of the amount for which s/he needs. The University attempts to distribute financial aid to students in a fair and equitable manner among the various student populations.

The Department of Education (or Carroll) may select students for a process known as verification. When selected for verification, the student and parent(s) or spouse must complete a verification document and submit additional documents which may include either the IRS Data Retrieval when submitting the FAFSA or submit signed tax return transcripts to the Carroll University Financial Aid Office, along with additional documentation. The Financial Aid Office will contact the student to request information needed to complete this process. The University is required by the U.S. Department of Education to review the documents to ensure the information reported on the FAFSA is correct.

Scholarships

Carroll University offers a variety of merit scholarships to recognize outstanding student accomplishments. There are two categories of scholarships: academic and additional. For scholarship information, please see the University’s Web site.

Grants

Grants are awarded based upon a student’s demonstrated financial need as determined by the Free Application for Federal Student Aid (FAFSA). A student can receive a grant from the Federal Government, the State of Wisconsin (if a Wisconsin resident), and Carroll University. Like scholarships, grants are considered gift aid that do not need to be repaid. For additional grant information, please see the University’s Web site.

Loans

Loan options available to eligible students and parents include the Federal Direct Student Loan, the Federal Perkins Loan and the Federal PLUS parent loan, as well as from private lenders. Students who obtain a loan must adhere to the terms of the loan. These
Financial Aid

terms include repayment, entrance and exit counseling, and conditions under which students may obtain deferral or partial loan repayment for volunteer service. For additional loan information, please see the University's Web site.

Student Employment

University employment opportunities allow students to work part-time on campus, earn an hourly wage and receive a monthly paycheck while attending Carroll. Students may work from approximately five to fourteen hours each week. The number of hours a student may work depends upon the student's financial aid award. Students eligible for federal work-study are given first preference for employment positions. Students eligible for federal work study are encouraged to participate in off-campus community service positions. For additional student employment information, please see the University’s Web site.
Student Affairs

- Counseling Services
- Disability Policy for Students
- Diversity
- Student Health Center
- Insurance
- Intercollegiate Athletics
- Residence Life & Housing
- Dining Services
- Spiritual Life Program
- Student Activities
- Student Handbook

For more information regarding Student Affairs, click here.
Counseling Services

Personal confidential counseling is available to all full-time students at the Walter Young Center on the Carroll campus. Experienced, master’s level therapists assist students with concerns regarding family, relationships, self-esteem, academic difficulties and other issues. The counseling center offers solution focused short term counseling. Students needing long-term treatment may be referred to a community resource.
Disability Policy for Students

Carroll University is committed to making otherwise qualified students with disabilities full participants in its programs, courses, services and activities. We are guided by the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act of 2008. Individuals will receive reasonable accommodations according to their needs and the documentation of their disability.

Accommodation Request Process

Accommodation requests should be made through the Walter Young Center. In order to be eligible for reasonable accommodation(s) from the University, the student must provide recent, relevant and comprehensive documentation of the disability, and the disability’s impact on the student’s participation in a course, program or activity. Should documentation from the student be inadequate or incomplete, the University reserves the right to require additional documentation. The cost of providing additional documentation will be borne by the student. However, if documentation is complete, but the University seeks a second professional opinion, the University will pay for the cost of that second opinion. The University also reserves the right to deny accommodation until necessary documentation is received. Requested accommodations will be approved or disapproved by the Disabilities Services Office at the Walter Young Center following a Reasonable Accommodation Conference. Any accommodation decision may be appealed in writing to the Vice President of Student Affairs within five (5) days of the decision. Any request for additional or modified accommodations must be made in writing to the Disabilities Services Office.
At Carroll University, diversity is a critical part of the campus culture. International and multicultural students, faculty, and staff are a vital component of the campus' richness. The university's goal is to create an environment that is open and welcoming for all people.

Carroll University is committed to supporting a diverse student body by providing comprehensive student support services and programs that allow students to explore diversity on campus, in the surrounding communities, and across the globe.

The Office of Cultural Diversity offers services and programs that support diversity such as cultural programming and activities, ally and mentor programs, diversity training, classroom presentations and more. These programs and services directly benefit the Carroll student body, faculty, and staff, as well as the Waukesha community. In turn, they provide the whole community with opportunities to gain a greater appreciation for the diversity represented on and off campus.
Student Health Center

The Health Center at Carroll is staffed by board certified nurse practitioners who treat students for a variety of minor illnesses and injuries. The nurse practitioners can prescribe medications if needed, and do stock some medications in the Student Health Center. The nurse practitioners can also perform well physicals and pap smears, tuberculosis (TB) skin tests, complete travel forms, administer vaccines, perform drug screens, and order blood tests. There are charges to see the nurse practitioners, receive medications, have lab tests, vaccines, etc. All charges are billed to the student account or can be paid using Carroll Cash, unless the student has enrolled in the student insurance plan offered through the University. Students enrolled under a parent’s insurance plan can request a receipt that can be submitted to their insurance to request reimbursement. Students needing further treatment are referred to local clinics, Waukesha Memorial Hospital, or their primary M.D. and are responsible for any associated costs.
Carroll University is committed to promoting good health to help ensure students’ academic success. With this in mind, Carroll requires all full-time undergraduate and international students to have health insurance coverage.

• All full-time undergraduate students are charged the health insurance fee upon registration.
• If a student has comparable coverage under another insurance policy, he or she may request a waiver from the University-sponsored health insurance plan.
• The deadline to waive the University-sponsored health insurance is one month after classes begin. Students who do not complete the online waiver before the deadline will be charged the health insurance fee.

The waiver form, plan and coverage information, and enrollment form can be found at http://www.carrollu.edu/campuslife/hsinsurance.asp?nav=5763

Many HMOs do not provide coverage outside of a particular area, so students and their parents should review their coverage carefully before waiving the University’s plan.

Student-Athletes: The University carries an insurance policy that provides secondary coverage for the student athlete who may be injured during practice for, or while participating in, an intercollegiate athletic event. The student athlete is responsible for any deductible.

Vehicles: The University carries insurance on all of its vehicles. Any student receiving permission to drive a university vehicle must be approved by the University’s insurance company before he or she drives any of its vehicles.

Property: Carroll University’s property insurance policy covers damage to, or theft of, University owned property only. The University’s policy does not cover personal property belonging to students.

Liability: Certain students are required to carry professional liability insurance when enrolled in clinical courses. These students include, but are not limited to, students enrolled in physical therapy, nursing and other health science programs.
Carroll University is a member of the Midwest Conference and Division III of the NCAA (National Collegiate Athletic Association), and offers 22 intercollegiate sports. For men Carroll sponsors: baseball, basketball, cross country, football, golf, indoor and outdoor track & field, lacrosse, soccer, swimming & diving, and tennis. For women Carroll sponsors: basketball, cross country, golf, indoor and outdoor track & field, lacrosse, soccer, swimming & diving, tennis, softball, and volleyball. Student-athletes are required to maintain good academic and social standing as defined in the student handbook in order to participate in the intercollegiate athletic program.

Carroll also offers Club Sport opportunities in wrestling, men's volleyball and women's volleyball with additional clubs currently under consideration.
Living on campus is an important part of the University educational experience. Campus housing is staffed with live in professionals and student resident assistants trained to engage students in the community and to act as resources.

### Housing Policies

A. All full time students who enroll at Carroll are subject to a junior residency requirement. This requirement remains in effect until a student has achieved senior standing (92 credits) by the beginning of the academic year. Exceptions to this policy include those students who are married or in a partnership legally recognized by a state, 23 years of age or older, are the primary caregiver to a child and those students who are living within fifty (50) miles from campus with parents or legal guardians during the academic year for which they are enrolled.

B. Each year, full time students who wish to live off-campus must submit an application requesting to be released from the residency requirement and must receive approval from the Office of Residence Life and Housing. If the application is denied, the student will be subject to the residency requirement and will need to complete the appropriate application and license agreement for campus housing.

C. Students who have not been approved for release from the requirement and/or fail to submit an application and license agreement for campus housing will be charged for a standard double room and 140 Block meal plan until the terms of the residency requirement have been satisfied.

### Living Options

Carroll University offers many on campus housing options including apartments, houses, and both traditional and suite style housing facilities to suit the needs of residential students. All campus housing includes basic cable TV service, high speed internet access, basic room furniture, mail delivery, and on site laundry facilities.
Welcome to the my meals Campus Dining program at Carroll University. All my meals plans feature:

- A guaranteed block of meals for the semester – you decide how many!
- The flexibility to use your meal plan at all dining locations in the Campus Center and at Au Bon Pain during regularly scheduled and posted transfer hours.
- Dining Dollars that can be used anytime and anywhere, including Second Cup, Au Bon Pain and the Campus Center.

The my meals program offers students a multitude of options and maximum flexibility. Simply choose the plan that best fits your schedule and dining habits. We hope you’ll agree that there is something for every appetite!

**Meal Plan Policies**

A. All Carroll students who are subject to the residency requirement are also required to participate in a Resident Meal Plan (Plans C, E, G or H). Students who have achieved junior standing (60 credits) by the beginning of the academic year and live in Frontier, Pioneer or Prairie halls may also select a Grand Avenue Block Plan (Plans T, U, V or W). Only students living in the Carroll Street, College Avenue and Hartwell Avenue Apartments are exempt from this policy.

B. Students may increase their meal plan at any time. The deadline to decrease or cancel a meal plan is one day prior to the first day of classes each semester as published in the University catalog and academic calendar.

C. Students who select a meal plan for fall semester will automatically be billed for the same plan for spring semester unless they make a change prior to the deadline.

D. Block meal plans offer a guaranteed number of meals per semester and may be used for guest meals. All meal plans include Dining Dollars and allow meal transfers during posted hours.

E. Each semester is 15 weeks in length and 18 meals will be served each week in the Pulse on Dining Main Dining Room.

F. Unused meals are not transferable from fall to spring semester. Fall semester meals may be used during Winter Session; spring semester meals may be used during Summer Session 1. Unused Dining Dollars will be transferred from fall to spring semester. Dining Dollars must be used by the end of Summer Session 1. Unused meal plans and dining dollars are not refundable.

G. Only currently enrolled Carroll students may participate in a meal plan. Students who withdraw or leave the University are no longer eligible to use their selected meal plan and will be held responsible for outstanding charges as published in the University catalog.
Spiritual Life Program

The Office of the Chaplain provides opportunities for spiritual growth primarily for students through worship services, campus newspaper articles, student organizations, and personal contact by appointment, drop-in, or e-mail correspondence. The Fellowship of Christian Athletes and Intervarsity Christian Fellowship are among the recognized student organizations on campus; students are welcome to form new organizations; and several other existing student organizations coordinate service projects that may be religious in nature (Habitat for Humanity, Circle K, Greek organizations). One large (seats 180) and one small (seats 18) chapel are regularly available on campus for individual or group gatherings. The Chaplain's Office also provides local contact information for area congregations and community service agencies.

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Student Activities

The Office of Student Activities enhances life on campus by providing students with social opportunities and numerous ways to get involved both on campus and in the community. There are many opportunities to get involved, including Student Senate, Greek life, orientation staff, and the campus radio station. Student Activities provides programs and services ranging from orientation to community service projects to camping equipment rentals, sponsorship of CU@Nite, the weekend programming series, and much more.

Carroll Outdoor Recreation Education (CORE)
CORE can help students backpack, paddle, or climb their way to adventure. CORE promotes safe, affordable, environmentally conscious outdoor recreation through trips, instruction, and equipment rental. This program brings to the Carroll community numerous opportunities to explore and develop as individuals, leaders, and citizens through involvement in the outdoors. In addition to offering trips, lectures, and clinics, CORE manages the “CORE store” where students, faculty, and staff can rent tents, coolers, snowshoes, and more.

Recreation
Carroll University is a member institution of the National Intramural Recreational Sports Association (NIRSA). The recreation program includes intramural sports, open recreation, group exercise classes, outdoor recreation activities, and cheerleading. Ganfield Gymnasium and Fitness Center and the Pioneer Hall Fitness Center host the cardio equipment, resistance machines and free weight areas. The intramural sport program consists of several different activities including flag football, softball, men’s and women’s basketball, indoor soccer, and sand volleyball.

Student Organizations
Student organizations play an active role in the life of the campus. There are over 50 recognized organizations on campus, including social fraternities and sororities, Student Senate, activities board, cultural diversity organizations, a Habitat for Humanity chapter, religiously affiliated groups, academically focused clubs, and many other groups. Student publications include a newspaper and literary magazine. WCCX is the campus radio station. A wide range of arts organizations is open to students, including some by audition.

Volunteer Center
Carroll’s Volunteer Center is dedicated to connecting Carroll to the larger community through service and volunteering by working with existing service learning programs at Carroll and creating new partnerships for Carroll within the surrounding communities. Students can participate in one-time volunteer events or ongoing weekly volunteer placements at sites throughout the area.

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The specific rules and regulations of Carroll University, published in the current Carroll Student Handbook and available to all students on the University's Web site, inform students of their responsibilities as well as their rights. The additional expectations associated with enrollment in specific academic programs are published separately.
The mission of the Library is to serve students by providing access to information, by maintaining an environment that promotes a culture of academic excellence, and by offering instruction that fosters scholarship, integrity, independent intellectual growth, and the sophisticated information skills necessary for lifelong learning.

Carroll’s Library

Libraries today are service institutions. Therefore, the Carroll Library provides not only access to appropriate print, video, sound and electronic resources, but also to a range of services geared toward student success. In addition to the materials held in or accessible through the Carroll Library, the Library also provides access to materials held across the state, the nation and the world through a variety of online services, nearly all of which are available from off campus. Strong consortia relationships and InterLibrary Loan ensure the availability of supplemental materials to enrich study and research for Carroll students.

The Library’s instruction program teaches subject-specific research methods, including how to evaluate web sites and other information resources. Library instruction begins in the Cultural Seminar (CCS) program and continues as students work on assignments that require them to deal with a world of rapidly proliferating information and delivery systems. Librarians also assist students with course assignments and provide research assistance in the Information Commons or by appointments with their liaison. The Library’s liaison program pairs librarians with faculty in specific subject areas for the purposes of acquiring the best resources for Carroll students, keeping the collections current, and teaching research skills specific to that subject. Liaisons also provide students with specialized assistance for in-depth research projects.

The Library provides a safe, clean and comfortable environment with state-of-the-art technology and study spaces to accommodate a variety of study styles: quiet spaces, individual carrels, large tables, group rooms, hard chairs, soft chairs and a coffee shop. The Library is open 101 hours per week when class is in session during the fall and spring semesters. Hours are reduced during the summer, winter, or when classes are not in session.

The Library also provides access to a variety of online services, nearly all of which are available from off campus. Strong consortia relationships and InterLibrary Loan ensure the availability of supplemental materials to enrich study and research for Carroll students.

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Curriculum Materials Center (CMC)
The CMC, located on the main level of the Library, is dedicated to the needs of education students on campus. The CMC collection is comprised of children’s literature and curriculum materials appropriate for education levels K-12.

University Archives
The University Archives contains official records and publications of the institution, private papers, student and faculty publications, academic and curricula works, photographs, books, audio and video recordings and Carroll memorabilia that record and illustrate the history and life of the university. These materials provide historical information about the Trustees, the faculty, staff and student body over time. Items that are highly accessed, such as the student yearbooks and the Theatre Collection, have been digitized and are available online through the digital collections link on the Web site. New items are continually added to the digital collections site.

Special Collections
The Library’s holdings include some unique, rare, out of print, and historic books which are all grouped as part of Special Collections. The materials in Special Collections include; Welsh Collection, Barclay Collection, Mother Goose Collection, Rufus and Charles King Collection, and Rare Books Collection. The subjects cover religious works, historical works on Scotland and Wales, classic literature, theatre, children's literature, and artistic works that date back as far as 1604. All materials are accessible to the Carroll Community and may be used in the Library. For assistance please contact the Archives Manager.

Please click here to see the Library’s home page on the university’s web site for more information regarding the Library’s services and policies.
Public Safety

Our mission is to assist the Carroll community in creating a safe and secure environment for learning, living, and working. The Department of Public Safety maintains staffing 24 hours a day including personnel in the dispatch office, Public Safety Officers, and off duty Waukesha County Sheriff Deputies. Public Safety both produces and co-sponsors various events during the year to help enhance the knowledge of the community related to personal safety both on campus and off.

Carroll University provides an annual security report that includes statistics for the previous three calendar years concerning reported crimes that occurred on campus; in certain off campus buildings or property owned or controlled by Carroll University; and on public property within or immediately adjacent to, and accessible from, the campus. The report includes institutional policies concerning campus security, such as policies concerning alcohol and other drug use, crime prevention, the reporting of crimes, sexual assault, and other matters. The report also includes fire safety policies and statistics, emergency notification procedures, and protocols for missing persons.

The report is available in an electronic version by accessing the following website:
http://www.carrollu.edu/campus/safety/pdfs/clearyact.pdf

You can obtain a paper copy of this report by contacting the Public Safety Center located at 208 Wright Street, which is a half block east of Campus Center or by calling 262.524.7300.
Academic Resources, located on the lower level of the Carroll library, provides free academic support services for Carroll students through Career Services and the Learning Commons.

Career Services

Learning Commons
Career Services

Career Services offers resume and cover letter assistance, help choosing a major, career assessment, career exploration, career focused workshops, interviewing strategies and searching for a job/internship.

Online services include:

- Pioneer Career Net: Students have access to internship and job postings, informational videos, career exploration resources, and event announcements.
- Career Connect: Students connect with alumni to build their professional network.
- Social Media: LinkedIn, Facebook, and Twitter

Career Events:

- Career Networking Fair
- WorkForce Career Fair
- Etiquette Dinner

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Learning Commons

Math Center
Math assistants hold weekly hours and help students as they prepare for quizzes and tests, complete assignments, and learn new concepts in their classes.

Subject Tutors
Subject tutors are available for many courses. Students can connect with a tutor during weekly drop-in hours or by completing a tutor request form.

Supplemental Instruction (SI)
Supplemental Instruction (SI) is a peer education program that targets historically difficult courses. By employing a variety of collaborative learning strategies and group work, SI offers multiple options for learning challenging material. SI sessions are held in the Learning Commons or in designated classrooms around campus.

Workshops
The Learning Commons offers numerous academic workshops throughout the year focusing on study skills, test taking strategies, and other requested topics.

Writing Center
Writing assistants support students during any stage of the writing process including brainstorming, developing and organizing ideas, and revising final drafts.

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Academic Organization

Office of Academic Affairs
Joanne Passaro, Provost

College of Humanities and Social Sciences
Charles Byler, Dean

Department of Communication and Sociology
Rebecca Imes, chair
- Majors: Communication, Criminal Justice, Sociology

Department of English and Modern Languages
Deirdre Keenan, chair
- Majors: English, Professional Writing, Spanish
- Minors only: French, German

Department of History, Political Science, and Religious Studies
James Grimshaw, chair
- Majors: Global Studies, History, Philosophy/Political Science/Economics (PPE), Political Science, Religious Studies
- Minor only: Medieval and Renaissance Studies, Philosophy

Department of Visual and Performing Arts
Amy Cropper, chair
- Majors: Art, Graphic Communication, Music, Music Education, Music Therapy, Photography, Theatre and Arts Management
- Minor only: Arts Management, Web Design
- Graduate degree: Master of Science Graphic Communication

Department of Education
Kimberly White, chair
- Majors: Elementary Education, Educational Studies
- Minor only: Secondary Education
- Graduate degree: Master of Education, Master of Science in Educational Leadership

College of Natural Sciences, Health Sciences
Jane Hopp, Dean

Department of Computational and Physical Sciences
Kevin McMahon, chair
- Minor: Aviation Science
- Articulation Programs: 3+2 Engineering Program
- Graduate degree: Master of Software Engineering

Department of Health and Medicine
Monika Baldridge, chair
- Majors: Health Sciences, Health Sciences-Diagnostic Medical Sonography, Health Sciences-Radiologic Technology, Pre-Clinical Laboratory Sciences, Pre-Occupational Therapy, Physical and Health Education, Public Health, Sport and Recreation Management, Therapeutic Recreation Emphasis.
- Minor: Health and Human Experience, Hispanic Health and Human Services, pre-Occupational Therapy
- Articulation Programs: 3+4 Doctor of Podiatry Program, 3+4 Doctor of Pharmacy Program.
- Graduate degree: Master of Science in Physician Assistant Studies, Master of Occupational Therapy

Department of Human Movement Sciences
Thomas Pahnke, chair
- Majors: Athletic Training, Exercise Science
- Minor: Sports Nutrition
- Graduate degrees: Master of Science in Exercise Physiology

Department of Life Sciences
Matthew Scheel, chair
- Majors: Animal Behavior, Biology, Environmental Science, Marine Sciences, Psychology
- Articulation Programs: 3 + 2 Master of Environmental Science, 3+2 Master in Freshwater Sciences, 2+2 Marine Sciences.

**Department of Nursing**

Angela Brindowski, chair
- Major: Nursing

**Department of Physical Therapy**

Sara Deprey, chair
- Emphasis: Pre-Physical Therapy

**Department of Business, Accounting and Economics**

Carol Tallarico, Executive Director
- Majors: Accounting, Business Administration, Business Economics, Finance, Health Care Administration, Management and Leadership, Marketing
- Minors: Accounting, Economics, Finance, Health Care Administration, Management and Leadership, Marketing
- Graduate degree: Master of Business Administration

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Reynolds R. Challoner ’64, President, NEW Paradigm Advisors LLC, Sanibel, Florida/Green Bay, Wisconsin
Jefferson V. DeAngelis ’80, CIO, Northwestern Mutual; President/CIO, NorthWest Passage Capital Investors, LLC., Milwaukee, Wisconsin
James G. DeJong ’73, Attorney at Law/Chairman, O’Neil, Cannon, Hollman, DeJong, & Laing, S.C., Milwaukee, Wisconsin
Guy J. Di Spigno ’69, President, Executive Synergies, Inc., Northbrook, Illinois
Timothy J. Hando ’86, Senior Vice President-Investments, The Hando Feldman Adams Group, UBS Financial Services, Inc., Bethesda, Maryland
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Douglas N. Hastad, President, Carroll University, Waukesha, Wisconsin
Lynda M. Johnson ’80, Assistant Treasurer, Harley-Davidson, Milwaukee, Wisconsin
Pershing E. MacAllister ’40, Chairman of the Board, MacAllister Machinery Company, Indianapolis, Indiana
Cindy L. Mayors ’09, Teacher, Windward Child Development Center, Alpharetta, Georgia
Alice Crofts Morava ’52, Vice President and CEO, Stuart W. Johnson & Co., Inc. Lake Geneva, Wisconsin
Terry M. Murphy, Executive Vice President and Chief Financial Officer (retired), A. O. Smith Corporation, Milwaukee, Wisconsin
Jose A. Olivieri ’78, Partner, Michael Best & Friedrich LLP, Milwaukee, Wisconsin
Charmaine L. Ponkratz ’77, Vice President Marketing (retired), Marshall & Isley Corporation, Green Bay, Wisconsin
Dennis G. Punches ’58, President, Payback, L.P., Waukesha, Wisconsin
Renee H. Ramirez, Executive Director, Waukesha County Community Dental Clinic, Waukesha, Wisconsin
James M. Schneider ’74, Executive Chairman, Horizon Bank, Austin, Texas
Timothy W. Sullivan ’72, Chief Executive Officer, Allied Specialty Vehicles, Orlando, Florida
Ty R. Taylor, President and CEO, Waukesha State Bank, Waukesha, Wisconsin
Joseph P. Zvesper ’76, Chairman, President & CEO, American Appraisal Associates, Inc., Milwaukee, Wisconsin

Alumni Representative

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B.A., St. Mary's University
BSN, Creighton University

Roberto Brenes, 2013
Assistant Professor of Biology
B.S., Universidad de Costa Rica
M.S., University of Texas, Tyler
Ph.D., University of Tennessee

Angela Brindowski, 2006
Chair of Nursing Department
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Clinical Associate Professor of Nursing
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Charles A. Byler, 1990
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Professor of History
B.A., Whitman College
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Amy A. Cropper, 1995
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DEF
Stephen J. Dannhoff, 2006
Program Director and Clinical Assistant Professor of Physical Education
B.S., M.S., University of Wisconsin-La Crosse

Dennis M. Debrecht, 1984
Associate Professor of Economics
B.A., Benedictine College
Ph.D., Iowa State University

Elena M. De Costa, 1995
Associate Professor of Spanish
B.A., Boston State College
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Sara Deprey, 2000
Chair of Physical Therapy Department
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B.S.P.T., M.S.P.T., Finch University of Health Sciences, The Chicago Medical School
D.P.T., MGH Institute of Health Professionals

Patrick W. Dill, 2015
Director of Choral Activities
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M.M., Westminster Choir College
D.M.A., University of North Texas

Jennifer L. Dobby, 2012
Lecturer in Theatre Arts
B.A., University of Illinois at Urbana-Champaign
M.F.A., Northwestern University

Rose Ann Donovan, 2002
Assistant Professor of Education
B.S., University of Wisconsin-Madison
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Clinical Assistant Professor of Exercise Science and Exercise Physiology
B.S., University of Wisconsin-Stevens Point
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Assistant Professor of Religious Studies
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M.A., Ph.D., University of Bristol

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Ph.D., University of Toledo

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Clinical Associate Professor of Exercise Science
B.S., Hope College
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Lecturer in Music
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D.M.A., University of Cincinnati

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Clinical Assistant Professor of Nursing
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M.S.N., University of Wisconsin-La Crosse

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B.S., Tulane University
M.A., Ph.D., University of California, Davis

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The Edna M and Edgar Thronson Chair of Computational and Physical Sciences Department
Associate Professor of Chemistry
B.Sc., University of Edinburgh
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Ph.D., Medical College of Wisconsin

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Assistant Professor of Photography and Digital Media
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M.F.A., Rochester Institute of Technology

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B.S., Iowa State University
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Kelly O'Reilly, 2011
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Associate Professor of Accounting
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Carroll Faculty 2015-2016

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Instructional Faculty-Laboratory Coordinator of Physical Therapy
B.S., Northwestern University

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Ph.D., University of Arizona

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M.A., Ph.D., University of Bristol

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Lecturer of Sociology
B.S., Houghton College
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Ph.D., University of Tennessee - Knoxville

Pacia Sallomi, 1997
Professor of Art
B.S., University of California, Davis
M.A., University of New Mexico
M.F.A., Texas Tech University

RST
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevin S. Guilloy, 2004</td>
<td>Associate Professor of Philosophy and Religious Studies</td>
<td>B.A., University of Vermont, M.A., Ph.D., University of Washington</td>
</tr>
<tr>
<td>Jamie L. Hansen, 2010</td>
<td>Clinical Assistant Professor of Nursing</td>
<td>B.S., Cardinal Stritch University, M.S., University of Phoenix</td>
</tr>
<tr>
<td>Susan Hanson, 2009</td>
<td>Senior Lecturer in Health and Medicine</td>
<td>B.A., Luther College, Ph.D., Vanderbilt University</td>
</tr>
<tr>
<td>Jamie Hardenbrook</td>
<td>Reference and Instruction Librarian</td>
<td>B.A., Ball State University</td>
</tr>
<tr>
<td>Larry D. Harper, 1986</td>
<td>Professor of Music</td>
<td>B.A., California State University- Northridge, M.S., University of Illinois</td>
</tr>
<tr>
<td>Susan K. Heffron, 2005</td>
<td>Life Sciences, Health and Movement Sciences and Nursing Librarian</td>
<td>B.A., University of Wisconsin-Madison, M.S., University of Wisconsin-Oshkosh</td>
</tr>
<tr>
<td>Scott Hendrix, 2007</td>
<td>Associate Professor of History</td>
<td>B.A., Athens State University, B.A., Ph.D., University of Tennessee</td>
</tr>
<tr>
<td>Kimberly K. Hofkamp, 2005</td>
<td>Assistant Professor of Education</td>
<td>B.S., University of Wisconsin-Madison, M.A.E., Silver Lake College</td>
</tr>
<tr>
<td>Megan L. Holz, 2012</td>
<td>Clinical Assistant Professor of Nursing</td>
<td>B.S.N., University of Wisconsin-Oshkosh, M.S.N., University of Phoenix</td>
</tr>
<tr>
<td>Jane F. Hopp, 1994</td>
<td>Dean of the College of Natural Sciences and Health Sciences</td>
<td>B.S., University of Wisconsin-Madison, M.S., University of Wisconsin-Madison, Ph.D., University of Illinois at Chicago</td>
</tr>
<tr>
<td>Cynthia J. Horst, 1994</td>
<td>Associate Professor of Biology</td>
<td>B.A., Goshen College, Ph.D., Emory University</td>
</tr>
<tr>
<td>Chenglie Hu, 2001</td>
<td>Program Director Master of Software Engineering</td>
<td>B.S., M.S., East China Normal University, Ph.D., Wichita State University</td>
</tr>
<tr>
<td>Jennifer Huck, 2011</td>
<td>Assistant Professor of Sociology</td>
<td>B.S., Carroll College, M.S., University of Wisconsin-Milwaukee, Ph.D., Indiana University of Pennsylvania</td>
</tr>
<tr>
<td>Rebecca Imes, 2005</td>
<td>Associate Professor of Communication</td>
<td>B.A., Nebraska Wesleyan University, M.A., Emerson College/Tufts University School of Medicine, Ph.D., University of Iowa</td>
</tr>
<tr>
<td>Darrel A. Johnson, 2008</td>
<td>Senior Lecturer in Mathematics</td>
<td>B.S., M.S., University of Wisconsin-Milwaukee</td>
</tr>
<tr>
<td>Kathleen S. Sampson, 2010</td>
<td>Senior Lecturer in Nursing</td>
<td>B.S.N., University of Wisconsin-Madison, M.S.N., University of Phoenix</td>
</tr>
<tr>
<td>Jamie Scaglione, 2013</td>
<td>Assistant Professor of Chemistry</td>
<td>B.S., University of Evansville, Ph.D., Washington University School of Medicine, P.D.S., University of Michigan</td>
</tr>
<tr>
<td>Jamie L. Hansen, 2010</td>
<td>Chair of Life Sciences Department</td>
<td>B.A., Winona State University, M.A., Mankato State University, Ph.D., University of Nevada</td>
</tr>
<tr>
<td>Kelly Ash, 2009</td>
<td>Associate Professor of Psychology</td>
<td>M.S., University of Wisconsin-Madison, M.S., University of Wisconsin-Oshkosh</td>
</tr>
<tr>
<td>Kathleen A. Shields, 2005</td>
<td>Academic Coordinator of Clinical Education and Clinical Assistant Professor of Physical Therapy</td>
<td>B.S.P.T. University of Wisconsin-Madison, M.S., University of Wisconsin-Milwaukee</td>
</tr>
<tr>
<td>Jeff Sischo, 2013</td>
<td>Clinical Assistant Professor of Physical Therapy</td>
<td>B.S., University of Wisconsin-Madison, M.A., California State University-Long Beach, Ed.D., University of Southern California</td>
</tr>
<tr>
<td>Thomas E. St. George, 2014</td>
<td>Assistant Professor of Mathematics</td>
<td>B.A., Mennon College, M.S., University of West Florida, Ph.D., Northern Illinois University</td>
</tr>
<tr>
<td>Jeff Stobbe, 2015</td>
<td>Visiting Lecturer in Computational Science, Limited Term</td>
<td>B.S., University of Wisconsin-Madison, MBA, University of Wisconsin-Madison, M.S., Marquette University, JURIS Doctor, Marquette University</td>
</tr>
<tr>
<td>Lani R. Stockwell, 2014</td>
<td>Program Director and Clinical Assistant Professor of</td>
<td>M.A., Emerson College/Tufts University School of Medicine, B.S., University of Wisconsin-Madison, M.B.A., University of Wisconsin-Madison, M.S., Marquette University</td>
</tr>
</tbody>
</table>
Catherine E. Jorgens, 2006
Risk Manager
B.A., University of Wisconsin-Madison
J.D., University of Wisconsin School of Law

Lara P. Karpenko, 2006
Associate Professor of English
B.A., University of California-Santa Barbara
M.Ed., University of California-Los Angeles
Ph.D., University of Notre Dame

Margaret D. Kasimatis, 1998
Clinical Associate Professor of Health and Medicine
B.A., St. Mary's College, Notre Dame
M.A., Ph.D., Loyola University of Chicago

Deirdre M. Keenan, 1991
Professor of English
B.A., M.A., Ph.D., University of Wisconsin-Milwaukee

Barbara J. Kilgust, 2015
Visiting Lecturer in English and Writing
B.A., Carroll University
M.A., University of Wisconsin - Milwaukee
Ph.D., University of Wisconsin - Milwaukee

Barbara L. King, 1995
Associate Professor of Communication
B.A., Carroll College
M.A., Purdue University
Ph.D., Wayne State University

Ashley Knuth, 2015
Clinical Assistant Professor of Physical Therapy
B.S., Carroll University
DPT, Carroll University

Michael G. Konemann, 1984
Associate Professor of Computer Science
B.S., Carroll College
M.S., Marquette University

John T. Koshuta, 2010
Senior Lecturer in Health Science
B.A., University of Wisconsin-Eau Claire
B.S., University of Wisconsin-Oshkosh
M.A., University of Alabama

Kathrine Kramer, 2000
Assistant Professor of Education
B.S., M.S., University of Wisconsin-Whitewater

Philip L. Krejcarek, 1977
Professor of Art
B.S., University of Wisconsin-Oshkosh
M.F.A., University of Wisconsin-Milwaukee

Kerry Kretchmar, 2011
Assistant Professor of Education
B.A., New York University
M.S., Pace University
Ph.D., University of Wisconsin-Madison

Jamie Lee Krzykowski, 2008
Clinical Assistant Professor of Athletic Training and Exercise Science
B.S., Northwest Nazarene University
M.S.S., United States Sports Academy
Ph.D., Clayton College of Natural Health

Occupational Therapy
B.S., Weber State University
MSOT, Washington University, St. Louis
OTS, Creighton University

John C. Symms, 1995
Associate Professor of Mathematics
B.S., University of Arizona
M.S., Ph.D., Colorado State University

Carol D. Tallarico, 2014
Executive Director of the Department of Business,
Accounting and Economics
Professor of Economics
B.A., M.A., DePaul University
Ph.D., University of Illinois at Chicago

UVWXYZ

Gail M. Voigt, 2007
Distinguished Lecturer in Chemistry
B.A., St. Olaf College
Ph.D., University of Minnesota

Julie VonDerVellen, 2013
Lecturer in Graphic Communication
B.S., Edgewood College
M.A., M.F.A., University of Wisconsin-Madison

Ann H. Ward, 2015
Lecturer of Education and Coordinator of Education Network
B.A., University of Wisconsin - Madison
M.A., Marquette University
Ph.D., University of Wisconsin - Madison

Kimberly White, 2009
Associate Professor of Education
B.S.B.A., M.Ed., The Ohio State University
Ph.D., University of Wisconsin

Susan R. Wilbanks, 2015
Assistant Professor of Physical Therapy
B.S., Creighton University
M.S., Oregon State University
Ph.D., University of Alabama

Susan Wilson, 2015
Visiting Lecturer in Psychology, Limited Term
B.A., Harding University
M.A., Northern Illinois University
Ph.D., Northern Illinois University

Tate Wilson, 2012
Lecturer in Physics
B.S., University of Washington
Ph.D., University of Washington

Mary Ann Wisniewski, 2001
Professor of Business
B.A., Alverno College
M.S., University of Wisconsin-Milwaukee
Ph.D., University of Wisconsin-Madison

James Zager, 2008
The Cordelia Pierce Hedges Chair in Theatre Arts
Associate Professor of Theatre Arts
B.S., University of Wisconsin-Stevens Point
M.F.A., Arizona State University

Shaoqiong (Annie) Zhao, 2015
Assistant Professor in Marketing
B.A., Peking University, Beijing, China
M.S., University of Wisconsin - Milwaukee
Ph.D., University of Wisconsin - Milwaukee

Natalya Zinkevich, 2013
Senior Lecturer in Health and Medicine
M.S., Saint-Petersburg State
Ph.D., Vavilov Institute of General Genetics

Keith J. Zukas, 2013
Assistant Professor of Communication
Faculty Award Recipients

Recipients of the Benjamin F. Richason Jr. Faculty Award


Recipients of the Norman and Louise Allhiser Award for Teaching Excellence


Endowed Chairs

The Edna M and Edgar A. Thronson Chair in Chemistry  Kevin McMahon  
The Mary Robertson Williams Chair in English  Lori Dunn Kelly and Deirdre M. Keenan  
The P.E. and Becky MacAllister Chair in Religious and Biblical Studies  James P. Grimsshaw  
The Cordelia Pierce Hedges Chair in Theatre Arts  James Zager  
Gladys McKay Richter Endowed Chair  Angela Brindowski

Exemplary Contributions in Service Award

Emeriti

Mark C. Aamot, 1974  R. Merle Masonholder, 1980  
Professor Emeritus of Music  Associate Professor Emeritus of Physical Education

Judith C. Anderson, 1997  David Molthen, 1970  
Associate Professor Emeritus of Physical Therapy  Professor Emeritus of Theatre Arts

Harry A. Aucpher, 1953  Merlene A. Moody, 1983  
Associate Professor Emeritus of Physics  Associate Professor Emeritus of Business Administration

Associate Professor Emeritus of Political Science  Professor Emeritus of Mathematics

Robert G. Black, 1994  Ralph F. Parsons, 1974  
Professor Emeritus of Spanish  Professor Emeritus of Psychology

David A. Block, 1988  Virginia M. Parsons, 1976  
Associate Professor Emeritus of Environmental Science  Professor Emeritus of Psychology

John C. Clausz, 1979  Marcel V. Pultorak, 1970  
Professor Emeritus of Biology  Professor Emeritus of Art

Professor Emeritus of Religion and Philosophy  Associate Professor Emeritus of History

President Emeritus  Professor Emeritus of Physics

Associate Professor Emeritus of Communication  Associate Professor Emeritus of Art

Jack R. Dukes, 1970  Peter L. Settle, 1974  
Professor Emeritus of History  Professor Emeritus of Communication

Russel C. Evans, 1969  Lawrence A. Sinclair, 1958  
Librarian Emeritus  Professor Emeritus of Religious Studies

Frank S. Falcone, 1993  Claude H. Slusher, 1958  
President Emeritus  Professor Emeritus of Business Administration

Timothy J. Fiedler, 1976  Daniel T. Steffen, 1974  
Associate Professor Emeritus of Sociology  Assistant Professor Emeritus of Physical Education

Robert J. Friebus, 1975  Gary W. Stevens, 1970  
Associate Professor Emeritus of Sociology  Associate Professor Emeritus of English

Quinten C. Grosskopf, 1966  Bruce Strom, 2014  
Associate Professor Emeritus of Mathematics  Associate Professor Emeritus of Education

C. Willis Guthrie, 1946  Linda G. Thompson, 1981  
Professor Emeritus of Art  Professor Emeritus of Mathematics

Professor Emeritus of Music  Associate Professor Emeritus of Computer Science

Linda Hartig, 1997  James E. Van Ess, 1969  
Librarian Emeritus  Librarian Emeritus

Professor Emeritus of Political Science  Professor Emeritus of English

Professor Emeritus of Chemistry  Instructor Emeritus in Religious Studies

Uldis E. Inveiss, 1963  James B. Vopat, 1972  
Professor Emeritus of Economics and Business Administration  Professor Emeritus of English

Professor Emeritus of English  Professor Emeritus of Chemistry

William D. Welch Jr., 1987  Professor Emeritus of Physics
<table>
<thead>
<tr>
<th>Gay G. Knutson, 1982</th>
<th>Thomas R. Williams, 1966</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Emeritus of Education</td>
<td>Professor Emeritus of Philosophy</td>
</tr>
<tr>
<td>Emily S. Long, 1991</td>
<td>Manfred G. Wuerslin, 1958</td>
</tr>
<tr>
<td>Associate Professor Emeritus of Education</td>
<td>Associate Professor Emeritus of English</td>
</tr>
<tr>
<td>Bruce A. MacIntyre, 1968</td>
<td></td>
</tr>
<tr>
<td>Professor Emeritus of Biology</td>
<td></td>
</tr>
</tbody>
</table>

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### FALL Semester 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 28</td>
<td>Friday</td>
<td>8 a.m - 1 p.m.</td>
<td>Freshman &quot;Move in Day&quot;.</td>
</tr>
<tr>
<td>August 30</td>
<td>Monday</td>
<td>10 a.m. - 1 p.m.</td>
<td>All returning students &quot;Move in Day&quot;.</td>
</tr>
<tr>
<td>September 1/2</td>
<td>Tues/Wed</td>
<td>6 p.m.</td>
<td>First-half semester MBA courses begin.</td>
</tr>
<tr>
<td>September 1</td>
<td>Tuesday</td>
<td></td>
<td>Orientation for new part-time and full-time transfer students.</td>
</tr>
<tr>
<td>September 1</td>
<td>Tuesday</td>
<td></td>
<td>CCS100 courses meet. Attendance is required for students registered in CCS100</td>
</tr>
<tr>
<td>September 2</td>
<td>Wednesday</td>
<td></td>
<td>Opening Day Convocation.</td>
</tr>
<tr>
<td>September 3</td>
<td>Thursday</td>
<td>7 a.m.</td>
<td>FA14 UNDG and remaining GRAD courses begin. (New registrations and schedule changes must be done with add/drop cards)</td>
</tr>
<tr>
<td>September 7</td>
<td>Monday</td>
<td></td>
<td>Labor Day - no classes</td>
</tr>
<tr>
<td>September 8/9</td>
<td>Tues/Wed</td>
<td></td>
<td>First-half semester MBA courses; last day to add.</td>
</tr>
<tr>
<td>September 10</td>
<td>Thursday</td>
<td></td>
<td>FA16 UNDG and GRADE (non-MBA): last day to add classes. Last day to admit new students. Last day to change from FT to PT status OR to change from PT to FT status. FT students must be registered for 12 credits. WE DO NOT COUNT WAITLISTED COURSES.</td>
</tr>
<tr>
<td>September 18</td>
<td>Friday</td>
<td></td>
<td>First-half semester classes; last day to select S/U grading or change from S/U to letter grading (non-MBA).</td>
</tr>
<tr>
<td>September 25</td>
<td>Friday</td>
<td></td>
<td>Last day to turn in grade appeals to Academic Affairs for the SP14 and SU14 semesters.</td>
</tr>
<tr>
<td>September 29/30</td>
<td>Tues/Wed</td>
<td>6 p.m.</td>
<td>First-half semester MBA courses; last day to drop or change to audit.</td>
</tr>
<tr>
<td>October 1</td>
<td>Thursday</td>
<td></td>
<td>Last day to select S/U grading or to change from S/U to letter grading, First-half-semester classes: last day to drop or change to audit. (Non-MBA courses).</td>
</tr>
<tr>
<td>October 3</td>
<td>Saturday</td>
<td></td>
<td>Homecoming</td>
</tr>
<tr>
<td>October 5</td>
<td>Monday</td>
<td></td>
<td>Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund.</td>
</tr>
<tr>
<td>October 13</td>
<td>Tuesday</td>
<td>9 a.m.</td>
<td>Mid-term grades due.</td>
</tr>
<tr>
<td>October 16</td>
<td>Friday</td>
<td>5 p.m.</td>
<td>Fall break begins. Campus housing remains open for fall break.</td>
</tr>
<tr>
<td>October 20/21</td>
<td>Tues/Wed</td>
<td></td>
<td>First-half semester MBA courses end.</td>
</tr>
<tr>
<td>October 21</td>
<td>Wednesday</td>
<td>7 a.m.</td>
<td>UNDG and remaining GRADE: classes resume.</td>
</tr>
<tr>
<td>October 27/28</td>
<td>Tues/Wed</td>
<td>6 p.m.</td>
<td>Second-half semester MBA courses begin.</td>
</tr>
<tr>
<td>October 29</td>
<td>Thursday</td>
<td></td>
<td>Deadline for submitting work to instructors for incompletes received the previous spring and summer.</td>
</tr>
<tr>
<td>November 3/4</td>
<td>Tues/Wed</td>
<td></td>
<td>Second-half semester MBA courses; last day to add.</td>
</tr>
<tr>
<td>November 4</td>
<td>Wednesday</td>
<td>9 a.m.</td>
<td>Registration packets available ONLINE for all current students for SP16.</td>
</tr>
<tr>
<td>November 4</td>
<td>Wednesday</td>
<td></td>
<td>Advising begins for all students for SP16: required for UNDG students. Recommended for GRAD students.</td>
</tr>
<tr>
<td>November 5</td>
<td>Thursday</td>
<td></td>
<td>Second-half-semester classes: last day to select S/U grading or change from S/U to letter grading (Non-MBA courses).</td>
</tr>
<tr>
<td>November 5</td>
<td>Thursday</td>
<td></td>
<td>Incomplete grades lapse in &quot;F&quot; if no grade submitted from spring and summer.</td>
</tr>
<tr>
<td>November 12</td>
<td>Thursday</td>
<td>9 a.m.</td>
<td>Registration begins for WN16.</td>
</tr>
<tr>
<td>November 16</td>
<td>Monday</td>
<td></td>
<td>Second-half semester classes: last day to drop or change to audit (Non-MBA courses).</td>
</tr>
<tr>
<td>November 17</td>
<td>Tuesday</td>
<td></td>
<td>Registration begins for currently enrolled students for SP16.</td>
</tr>
<tr>
<td>November 23</td>
<td>Monday</td>
<td></td>
<td>Registration begins for all GRAD students for SP16.</td>
</tr>
<tr>
<td>November 24/25</td>
<td>Tues/Wed</td>
<td></td>
<td>Second-half semester MBA courses; last day to drop or change to audit.</td>
</tr>
<tr>
<td>November 25</td>
<td>Wednesday</td>
<td>4 p.m.</td>
<td>Thanksgiving recess begins.</td>
</tr>
<tr>
<td>November 25</td>
<td>Wednesday</td>
<td>4 p.m.</td>
<td>Campus housing closes.</td>
</tr>
</tbody>
</table>
## Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 25</td>
<td>Wednesday</td>
<td>6 p.m.</td>
<td>MBA courses will meet.</td>
</tr>
<tr>
<td>November 29</td>
<td>Sunday</td>
<td>Noon</td>
<td>Campus housing opens to students.</td>
</tr>
<tr>
<td>November 30</td>
<td>Monday</td>
<td>7 a.m.</td>
<td>Classes resume (All UNDG and GRAD).</td>
</tr>
<tr>
<td>November 30</td>
<td>Monday</td>
<td></td>
<td>Registration begins for all new students for SP16.</td>
</tr>
<tr>
<td>December 11</td>
<td>Friday</td>
<td></td>
<td>Last day of classes.</td>
</tr>
<tr>
<td>December 14</td>
<td>Monday</td>
<td></td>
<td>Reading Day: No classes; final exams for Monday evening &amp; Monday/Wednesday evening classes.</td>
</tr>
<tr>
<td>December 15-16</td>
<td>Tues/Wed</td>
<td></td>
<td>Second-half semester MBA courses end.</td>
</tr>
<tr>
<td>December 15-20</td>
<td>Tues - Sun</td>
<td></td>
<td>Final examinations.</td>
</tr>
<tr>
<td>December 21</td>
<td>Monday</td>
<td>Noon</td>
<td>Campus housing closes.</td>
</tr>
<tr>
<td>December 22</td>
<td>Tuesday</td>
<td>9 a.m.</td>
<td>Final grades due.</td>
</tr>
</tbody>
</table>

### WINTER Session 2016

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 3</td>
<td>Sunday</td>
<td>Noon</td>
<td>Campus housing opens for winter session students and approved groups.</td>
</tr>
<tr>
<td>January 4</td>
<td>Monday</td>
<td>8 a.m.</td>
<td>Classes begin. (New registrations and schedule changes must be done with add/drop cards)</td>
</tr>
<tr>
<td>January 6</td>
<td>Wednesday</td>
<td></td>
<td>Last day to add.</td>
</tr>
<tr>
<td>January 7</td>
<td>Thursday</td>
<td></td>
<td>Last day to drop.</td>
</tr>
<tr>
<td>January 18</td>
<td>Monday</td>
<td></td>
<td>Classes end.</td>
</tr>
</tbody>
</table>

### SPRING Semester 2016

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 12/13</td>
<td>Tues/Wed</td>
<td>6 p.m.</td>
<td>First-half semester MBA classes begin.</td>
</tr>
<tr>
<td>January 17</td>
<td>Sunday</td>
<td>Noon</td>
<td>Campus Housing opens.</td>
</tr>
<tr>
<td>January 18</td>
<td>Monday</td>
<td>5 p.m.</td>
<td>Orientation for new Transfer Students.</td>
</tr>
<tr>
<td>January 18</td>
<td>Monday</td>
<td></td>
<td>Last day to decrease or cancel meal plans. <a href="https://my.carrollu.edu/ICS/Departments/Dining_Services/Meal_Plans.jnz">https://my.carrollu.edu/ICS/Departments/Dining_Services/Meal_Plans.jnz</a></td>
</tr>
<tr>
<td>January 19</td>
<td>Tuesday</td>
<td>7 a.m.</td>
<td>SP16 UNDG and remaining GRAD courses begin. (New registrations and schedule changes must be done with add/drop cards).</td>
</tr>
<tr>
<td>January 19/20</td>
<td>Tues/Wed</td>
<td></td>
<td>First-half semester MBA classes; last day to add.</td>
</tr>
<tr>
<td>January 26</td>
<td>Tuesday</td>
<td></td>
<td>SP16 UNDG and GRAD (non-MBA): last day to add classes. Last day to admit new students. Last day to change from FT to PT status OR to change from PT to FT status. FT students must be registered for 12 credits. WE DO NOT COUNT WAITLISTED COURSES.</td>
</tr>
<tr>
<td>February 3</td>
<td>Wednesday</td>
<td>11 a.m.</td>
<td>Founder's Day Convocation</td>
</tr>
<tr>
<td>February 3</td>
<td>Wednesday</td>
<td></td>
<td>First-half semester classes: last day to select S/U grading or change from S/U to letter grading (Non-MBA courses).</td>
</tr>
<tr>
<td>February 9/10</td>
<td>Tues/Wed</td>
<td></td>
<td>First-half semester MBA courses - last day to drop</td>
</tr>
<tr>
<td>February 10</td>
<td>Wednesday</td>
<td></td>
<td>Last day to run in grade appeals to Academic Affairs for the FA15 and WN16 semesters.</td>
</tr>
<tr>
<td>February 17</td>
<td>Wednesday</td>
<td></td>
<td>Last day to select S/U grading or to change from S/U to letter grading. First-half-semester classes: last day to drop or change to audit (Non-MBA courses).</td>
</tr>
<tr>
<td>February 22</td>
<td>Monday</td>
<td>9 a.m.</td>
<td>Registration packets available ONLINE to all current students for FA16.</td>
</tr>
<tr>
<td>February 22</td>
<td>Monday</td>
<td></td>
<td>Advising begins for full-time students for FA16: required for UNDG students. Recommended for GRAD students.</td>
</tr>
<tr>
<td>February 22</td>
<td>Monday</td>
<td></td>
<td>Last day for part-time students not receiving Title IV aid to drop a class and receive a partial refund.</td>
</tr>
<tr>
<td>March 1/2</td>
<td>Tues/Wed</td>
<td></td>
<td>First-half semester MBA courses end.</td>
</tr>
<tr>
<td>March 1</td>
<td>Tuesday</td>
<td>9 a.m.</td>
<td>Registration begins for SU16.</td>
</tr>
<tr>
<td>March 5</td>
<td>Saturday</td>
<td>Noon</td>
<td>Spring Break begins.</td>
</tr>
<tr>
<td>March 5</td>
<td>Saturday</td>
<td>Noon</td>
<td>Campus housing closes.</td>
</tr>
<tr>
<td>March 13</td>
<td>Sunday</td>
<td>Noon</td>
<td>Campus housing opens.</td>
</tr>
<tr>
<td>March 14</td>
<td>Monday</td>
<td>7 a.m.</td>
<td>Classes resume.</td>
</tr>
<tr>
<td>March 15/16</td>
<td>Tues/Wed</td>
<td></td>
<td>Second-half semester MBA courses begin.</td>
</tr>
<tr>
<td>March 15</td>
<td>Tuesday</td>
<td></td>
<td>Mid-term grades due</td>
</tr>
<tr>
<td>March 22/23</td>
<td>Tues/Wed</td>
<td></td>
<td>Second-half semester MBA courses: last day to add.</td>
</tr>
<tr>
<td>March 23</td>
<td>Wednesday</td>
<td></td>
<td>Deadline for submitting work to instructors for incompletes received the previous fall and winter. Second half-semester classes: last day to select S/U grading or change from S/U to letter grading.</td>
</tr>
<tr>
<td>Date</td>
<td>Day</td>
<td>Time</td>
<td>Event</td>
</tr>
<tr>
<td>------------</td>
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<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>March 24</td>
<td>Thursday</td>
<td>11:00 p.m.</td>
<td>Classes end for Easter break. Campus housing remains open for Easter Break.</td>
</tr>
<tr>
<td>March 25</td>
<td>Friday</td>
<td></td>
<td>Good Friday: no classes.</td>
</tr>
<tr>
<td>March 28</td>
<td>Monday</td>
<td>7:00 a.m.</td>
<td>Classes resume.</td>
</tr>
<tr>
<td>March 28</td>
<td>Monday</td>
<td></td>
<td>Registration begins for current students for FA16 semester.</td>
</tr>
<tr>
<td>April 4</td>
<td>Monday</td>
<td></td>
<td>Registration begins for all students for FA16 semester.</td>
</tr>
<tr>
<td>April 4</td>
<td>Monday</td>
<td></td>
<td>Graduate registration opens for FA16 semester.</td>
</tr>
<tr>
<td>April 6</td>
<td>Wednesday</td>
<td></td>
<td>SPI6: last day to drop or change to audit (Non-MBA courses).</td>
</tr>
<tr>
<td>April 6</td>
<td>Wednesday</td>
<td></td>
<td>Incomplete grades lapse in &quot;F&quot; if no grade submitted from fall and winter.</td>
</tr>
<tr>
<td>April 12</td>
<td>Tuesday</td>
<td></td>
<td>Second-half-semester classes: last day to drop or change to audit.</td>
</tr>
<tr>
<td>April 12/13</td>
<td>Tues/Wed</td>
<td></td>
<td>Second-half semester MBA courses: last day to drop or change to audit.</td>
</tr>
<tr>
<td>April 20</td>
<td>Wednesday</td>
<td></td>
<td>Celebrate Carroll.</td>
</tr>
<tr>
<td>April 27</td>
<td>Wednesday</td>
<td></td>
<td>Last day of classes.</td>
</tr>
<tr>
<td>April 28</td>
<td>Thursday</td>
<td></td>
<td>Reading Day: No daytime classes; final exams for Thursday evening and Tuesday/Thursday evening classes.</td>
</tr>
<tr>
<td>April 29 - May 4</td>
<td>Fri. - Wed.</td>
<td></td>
<td>Final examinations.</td>
</tr>
<tr>
<td>May 3/4</td>
<td>Tues/Wed</td>
<td></td>
<td>Second-semester MBA classes: end</td>
</tr>
<tr>
<td>May 5</td>
<td>Thursday</td>
<td>Noon</td>
<td>Campus Housing closes for students not participating in Commencement.</td>
</tr>
<tr>
<td>May 5</td>
<td>Thursday</td>
<td>1:00 p.m.</td>
<td>Final grades due (for graduating seniors).</td>
</tr>
<tr>
<td>May 8</td>
<td>Sunday</td>
<td></td>
<td>Baccalaureate and Commencement (UNDG and GRAD)</td>
</tr>
<tr>
<td>May 9</td>
<td>Monday</td>
<td>Noon</td>
<td>Campus housing closes for students not participating in SI16 (Summer Session One 2016).</td>
</tr>
<tr>
<td>May 10</td>
<td>Tuesday</td>
<td>9 a.m.</td>
<td>Final Grades due.</td>
</tr>
</tbody>
</table>

**SUMMER Sessions 2016**

**Session I (May 5 - 26)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 5</td>
<td>Thursday</td>
<td>Classes begin (New registrations and schedule changes must be done online).</td>
</tr>
<tr>
<td>May 9</td>
<td>Monday</td>
<td>Last day to add (Non-MBA courses).</td>
</tr>
<tr>
<td>May 10/11</td>
<td>Tues/Wed</td>
<td>MBA courses Session One: begin.</td>
</tr>
<tr>
<td>May 12</td>
<td>Thursday</td>
<td>Last day to select S/U grading or change from S/U to letter grading.</td>
</tr>
<tr>
<td>May 13</td>
<td>Friday</td>
<td>Last day to drop or change to audit.</td>
</tr>
<tr>
<td>May 16</td>
<td>Monday</td>
<td>Physical Therapy summer courses begin.</td>
</tr>
<tr>
<td>May 17/18</td>
<td>Tues/Wed</td>
<td>MBA courses Session One: last day to add.</td>
</tr>
<tr>
<td>May 26</td>
<td>Thursday</td>
<td>S116 ends (Need to watch individual course dates).</td>
</tr>
<tr>
<td>May 26</td>
<td>Thursday</td>
<td>Last day to decrease or cancel meal plans.</td>
</tr>
</tbody>
</table>

**Session II (May 27 - July 11)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 27</td>
<td>Friday</td>
<td>Classes begin (New registrations and schedule changes must be done online).</td>
</tr>
<tr>
<td>May 30</td>
<td>Monday</td>
<td>Memorial Day - no classes.</td>
</tr>
<tr>
<td>June 3</td>
<td>Friday</td>
<td>Last day to add (Non-MBA courses).</td>
</tr>
<tr>
<td>June 7/8</td>
<td>Tues/Wed</td>
<td>MBA courses Session One: last day to drop or change to audit.</td>
</tr>
<tr>
<td>June 10</td>
<td>Friday</td>
<td>Last day to select S/U grading or change from S/U to letter grading.</td>
</tr>
<tr>
<td>June 17</td>
<td>Friday</td>
<td>Last day to drop or change to audit.</td>
</tr>
<tr>
<td>June 28/29</td>
<td>Tues/Wed</td>
<td>MBA courses Session One: end.</td>
</tr>
<tr>
<td>July 4</td>
<td>Monday</td>
<td>4th of July Holiday - no classes.</td>
</tr>
<tr>
<td>July 5/6</td>
<td>Tues/Wed</td>
<td>MBA courses Session Two: begin.</td>
</tr>
<tr>
<td>July 11</td>
<td>Monday</td>
<td>S216 ends (Need to watch individual course dates).</td>
</tr>
</tbody>
</table>

**Session III (July 12 - August 22)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 12/13</td>
<td>Tues/Wed</td>
<td>MBA courses Session Two: last day to add.</td>
</tr>
<tr>
<td>July 12</td>
<td>Tuesday</td>
<td>Classes begin (New registrations and schedule changes must be done online).</td>
</tr>
<tr>
<td>July 19</td>
<td>Tuesday</td>
<td>Last day to add (Non-MBA courses).</td>
</tr>
<tr>
<td>July 26</td>
<td>Tuesday</td>
<td>Last day to select S/U grading or change from S/U to letter grading.</td>
</tr>
<tr>
<td>August 2/3</td>
<td>Tues/Wed</td>
<td>MBA courses Session Two: last day to drop or change to audit.</td>
</tr>
<tr>
<td>August 4</td>
<td>Thursday</td>
<td>Last day to drop or change to audit.</td>
</tr>
<tr>
<td>August 19</td>
<td>Friday</td>
<td>Physical Therapy summer courses end.</td>
</tr>
<tr>
<td>August 22</td>
<td>Monday</td>
<td>S316 ends (Need to watch individual course dates).</td>
</tr>
<tr>
<td>August 23/24</td>
<td>Tues/Wed</td>
<td>MBA Session Two: courses end.</td>
</tr>
</tbody>
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Accounting

- **ACC100: Personal Finance (2 hours)**
The objective of the course is to provide the student with the necessary information and decision-making tools needed to manage his/her personal financial plan. For elective credit only. Open to all majors. (Fall only)

- **ACC205: Financial Accounting (4 hours)**
A study of the accounting cycle and extensive coverage of various financial topics such as cash, receivables, inventory, liabilities, equity, plant/equipment, and financial statements. (Fall and Spring)

- **ACC206: Managerial Accounting (2 hours)**
Study of the accounting data that aids in management decision making. Topics covered include budgeting, break-even, costing methods, ratio analysis, cash flow, pricing, and inventory control. (Fall and Spring)
  Pre-requisite: ACC205

- **ACC207: Intermediate Accounting I (4 hours)**
Study of the development of accounting standards underlying financial statements. An in-depth review of the income statement and balance sheet. Recognition, measurement and reporting of cash, receivables, inventory, plant assets, intangibles, liabilities, revenue recognition and present value analysis. (Fall only)
  Pre-requisite: ACC205.

- **ACC208: Intermediate Accounting II (4 hours)**
Recognition, measurement and reporting of stockholders' equity, earnings per share, cash flow, income tax allocation, pensions, leases, accounting changes, accounting errors and disclosure reporting. (Spring only)
  Pre-requisite: ACC207.

- **ACC305: Advanced Accounting I (4 hours)**
A study of the principles, concepts, and procedures applied to mergers and consolidations, foreign exchange, governmental, non-profit organizations, estates and trusts, insolvency and partnerships. (Fall only)
  Pre-requisite: ACC208.

- **ACC306: Advanced Accounting II (4 hours)**
A study of the principles, concepts, and procedures applied to mergers and consolidations, foreign exchange, governmental, non-profit organizations, estates and trusts, insolvency and partnerships. (Spring only)
  Pre-requisite: ACC305 or instructor consent.

- **ACC310: Advanced Cost Accounting and Budgeting (4 hours)**
Study of various costing methods and management tools to aid in the decision-making process. Topics covered are job costing, process costing, activity-based costing, standard costing, inventory planning/control, budgeting/responsibility accounting, variable/absorption costing, cost-volume-profit analysis, cost allocation, transfer pricing, capital budgeting and product/service pricing. (Fall only)
  Pre-requisite: ACC205.

- **ACC324: Advanced Business Law (4 hours)**
An advanced study of the current legal environment of businesses for accounting students taking the CPA exam or students interested in a career in law. (Spring only)
  Pre-requisite: BUS290.

- **ACC375: Pre-internship Seminar (2 hours)**
This course introduces students to the skills and knowledge needed to successfully compete for internship opportunities. Students develop personal action plans, resumes, interview techniques, networking, critical thinking and self-assessment skills - all crucial preparation for the job market. (Grading is on an S/U basis.) (Fall only)
  Pre-requisite: Junior standing.

- **ACC405: Tax Accounting I (4 hours)**
Federal and Wisconsin income tax laws and their application to individuals. (Fall only)
  Pre-requisite: ACC205.

- **ACC406: Tax Accounting II (4 hours)**
Federal income tax laws and their applications to partnerships, corporations, estates, trusts, and gift and inheritance taxes. (Spring only)
  Pre-requisite: ACC405.

- **ACC407: Auditing (4 hours)**
The study of general audit procedures, preparation of working papers, various types of reports, professional ethics and legal responsibility. Student will be expected to successfully conduct and complete a comprehensive simulated financial audit project. (Fall only)
  Pre-requisite: ACC306 or consent of instructor.

- **ACC414: Accounting Theory (4 hours)**
Comprehensive analysis of the theoretical structure underlying financial and managerial accounting topics. Students must integrate prior knowledge and demonstrate mastery of complex FASB/IFRS issues and updates. Case methodology, oral presentations and written summaries are used in the course. (Spring only)
  Pre-requisite: ACC306 or consent of the instructor.

- **ACC480: Internship in Accounting (1 TO 12 hours)**
The internship in accounting provides students with an opportunity to apply the theories and concepts learned in their accounting courses to work experience in the accounting field under the supervision of an
external supervisor and faculty instructor. Restrictions: Student must be a declared major or minor in Accounting. Pre-requisites: ACC207 and ACC 208 and approval of the internship instructor. Students may earn a maximum of 12 credits in ACC 480. 40 hours of work are required for each credit. (Grading is on an S/U basis.) With approval of the department chair, a 400 level course offered by the Department of Business, Accounting, and Economics may be substituted for ACC 480 when internship placement is not possible.

- **ACC483: Internship Option-Prior Work Experience (1 TO 4 hours)**
  Prior entry-level accounting experience may be substituted for the ACC 375 and ACC 480 requirement. Restrictions: Student must be a declared major in accounting. Pre-requisites: Approval of Internship Instructor and Department Chair. Students can earn a maximum of 4 credits through ACC 483. (Grading is on an S/U basis)

- **ACC498: Independent Study in Accounting (1 TO 4 hours)**
  A course designed to widen the student's knowledge of accounting theory, develop the ability to study independently, and demonstrate aptitude in planning and production of original work. (Fa, Sp, Su)
  Prerequisite: Approval of the college dean and consent of instructor.
Actuarial Science

- **ASC301: Financial Mathematics (4 hours)**
  Workshop-style course that develops fundamental concepts of financial mathematics and how those concepts are applied in calculating present and accumulated values for various streams of cash flows as a basis for future use in reserving, valuation, pricing, asset/liability management, investment income, capital budgeting and valuing contingent cash flows. Additionally, the course provides an introduction to financial instruments, including derivatives, and the concept of no-arbitrage as it relates to financial mathematics. (Sp) Prerequisite: MAT 160.

- **ASC302: Probability (4 hours)**
  This course develops fundamental probability tools for quantitatively assessing risk. Topics include general probability, univariate probability distributions (including binomial, negative binomial, geometric, hypergeometric, Poisson, uniform, exponential, gamma, and normal), and multivariate probability distributions (including the bivariate normal). Application of these tools to problems encountered in actuarial science is emphasized. (Fa) Co-requisite: MAT207. May not be taken for credit by those who have taken MAT312.

- **ASC313: Time Series and Forecasting (2 hours)**
  Workshop-style course that develops fundamental concepts and skills in time series/forecasting. Topics include linear time series models; moving average; ARIMA models; estimation, data analysis and forecasting with time series models; Forecast errors and confidence intervals. This course meets VEE requirements for Time Series/Forecasting. Offered when there is sufficient student demand (at least seven students take the course) and when sufficient time is provided to secure staffing. Prerequisites: MAT208, CMP114, and ECO225.

- **ASC380: Internship in Actuarial Science (4 TO 16 hours)**
  Professional work experience in the actuarial sciences under the supervision of faculty and professional actuaries. Course requirements will depend on the type of internship. S/U graded. (Fa, Wn, Sp, Su) Prerequisites: Junior or senior standing and approval of instructor are required prior to registration.

- **ASC401: Financial Economics (4 hours)**
  Workshop-style course that develops the theoretical basis of certain financial-economic models and the application of those models to insurance and other financial risks. Topics include interest rate models, rational valuation of derivatives securities, simulation, and risk management techniques. (Fa, odd years) Prerequisite: ASC 301 and ASC 302.

- **ASC402: Life Contingencies (4 hours)**
  Workshop-style course that develops theoretical basis of life contingencies and the application of those models to insurance and other financial risks. Topics include survival models, Markov Chain models, life insurances and annuities, and Poisson processes. (Fa, even years) Prerequisite: ASC 301 and ASC 302.

- **ASC480: Internship in Actuarial Science (4 TO 16 hours)**
  Professional work experience in the actuarial sciences under the supervision of faculty and professional actuaries. Course requirements will depend on the type of internship. S/U graded. (Fa, Wn, Sp, Su) Prerequisites: Junior or senior standing and approval of instructor are required prior to registration.
Anatomy and Physiology

- **ANP130: Introduction to Human Anatomy and Physiology I (4 hours)**
  This is the first of two courses which present the unifying concepts of anatomy and physiology required for understanding the human body as a structural and functional unit. This course emphasizes the mechanisms that underlie the normal functions of cells, tissues, organs, and organ systems. This course includes the study of basic biochemistry, cell biology, histology, and the integumentary, skeletal, muscular, nervous, and endocrine systems. Four hours lecture and three hours laboratory. (Required course fee) (Fa, Su)

- **ANP130L: Intro to Human Anat and Phys I Lab**
  Laboratory component for ANP130.

- **ANP140: Introduction to Human Anatomy and Physiology II (4 hours)**
  This is the second of two courses that present the unifying concepts of anatomy and physiology required for understanding the human body as a structural and functional unit. This course includes the study of the cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems. A body systems approach is used to emphasize the interrelationships between structure and function of the gross and microscopic levels of organization of the human body. Four hours lecture and three hours laboratory. (Required course fee) (Sp, Su) Prerequisite: ANP 130 or equivalent is strongly recommended.

- **ANP140L: Intro to Human Anat and Phys II Lab**
  Laboratory component for ANP140.

- **ANP402: Human Anatomy (4 hours)**
  The microscopic and gross anatomy of the skeletal, muscular, integumentary, nervous, cardiovascular, lymphatic, respiratory, renal, digestive, endocrine, and reproductive systems are studied. Multi-media software is used to dissect the male and female body in anterior, posterior, medial, and lateral views. Histologies, radiologies, cross-sections, and MRIs are linked to the anatomy. Models are also employed to study the structure of the human body. Palpation laboratories are also integrated into the course. (Required course fee) (Fa, Su) Prerequisites: Junior standing; BIO 225 or BIO 130 and 140 or ANP 130 and 140; or instructor consent.

- **ANP402L: Human Anatomy Laboratory**
  Laboratory component for ANP402.

- **ANP403: Human Physiology (4 hours)**
  Fundamental concepts related to the normal function of the human body are presented. Basic pathophysiological concepts are also introduced. This course includes the study of the nervous, endocrine, muscular, cardiovascular, respiratory, digestive, urinary, and reproductive systems. Experimental design, data analysis, computer simulations, case studies, and discussion/presentation of primary literature are incorporated into the course. Four hours lecture and three hours laboratory. (Required course fee) (Sp, Su) Prerequisites: Junior standing; BIO 225 or BIO 130 and BIO 140 or ANP 130 and ANP 140; and CHE 110 or CHE 101 and CHE 102.

- **ANP403L: Human Physiology Laboratory**
  Laboratory component for ANP403.
Animal Behavior

- **ANB301: Theory and Practice of Animal Training (3 hours)**
  This course provides an experiential venue for learning to use the methods and techniques described by theories of animal training. Students will actively assume the role of trainer as they work with animals within the environment of a large animal shelter, applying respondent and operant conditioning theory in activities germane to a career in animal behavior and training. The focus is on companion animal training and behavior analysis; however, methods and techniques used can be generalized to non-companion species. The course is taught at the Humane Animal Welfare Society in Waukesha.

- **ANB302: Winter Ecology of Wolf and Lynx (3 hours)**
  This course covers a broad range of topics related to wildlife. The focus will be the white-tailed deer, gray wolf, lynx, and other MN predators, but all animals directly or indirectly associated with or affected by these species may be included. The course is field-oriented and includes opportunities for backcountry travel, wildlife observation and tracking, as an introduction to habitats, how wildlife respond to natural and artificial disturbance, and human factors impacting wildlife. Additional topics include wildlife research techniques, data acquisition and analysis, and management practices. The course is taught at the Audubon Center of the North Woods in Sandstone, MN. Additional tuition is required and students provide their own transportation to the Audubon Center. (WN)

- **ANB380: Internship in Animal Behavior (2-4 hours)**
  The internship provides an opportunity to experience and better understand career opportunities in Animal Behavior, while also allowing a student to pursue a particular area of interest in greater depth than can not typically be accomplished in more traditional course settings. (Fa, Sp, Su). Prerequisites: Junior standing and consent of instructor.
Art

- **ART103: Prehistoric to Renaissance- Art History Survey (4 hours)**
  General Education F1. A survey of painting, sculpture, architecture and other visual arts from approximately 15,000 BC through early Renaissance. Explores historical, philosophical and cultural influences on artistic practices in the development of civilizations.

- **ART104: Renaissance to Early Modernism- Art History Survey (4 hours)**
  General Education F1. A survey of painting, sculpture, architecture and other visual arts from the 14th century through Impressionism (approximately 1880). Explores historical, philosophical and cultural influences on artistic practices in the development of western civilization.

- **ART106: Drawing and Composition (4 hours)**
  General Education F1. An introduction to drawing with emphasis on developing observational skills using a limited variety of materials. (Required course fee) (Fa, Sp, Su)

- **ART107: Beginning Design 2D and 3D (4 hours)**
  General Education F1. A multi-imagery approach to solving design problems as related to fine and commercial art. (Required course fee) (Fa, Sp)

- **ART201: Painting I (4 hours)**
  General Education F2. An introduction to the study of oil painting with an emphasis on technique, color, composition using a variety of supports including stretched canvas, wood, and paper. Subject matter will focus on issues of space, place and the still life. (Required course fee) (Fa, Sp) Prerequisite: ART 106 or ART107 consent of instructor.

- **ART206: Intermediate and Life Drawing (4 hours)**
  This course continues development of composition ideas in drawing with an emphasis on drawing as a visual expression requiring thought, visual clarity and imagination. A minimum of one third of the course will be drawing from the nude model. (Required course fee) (Fa) Prerequisite: ART 106

- **ART209: Photography I (4 hours)**
  General Education F1. The student learns basic skills in digital photography and directs this knowledge toward creative expression with strong emphasis on design and composition. An adjustable digital camera required and will be available for rental. (Required course fee) (Fa, Sp)

- **ART211: Gallery/Museum Experience (1 TO 2 hours)**
  Preparing gallery space, scheduling exhibitions and arranging and hanging shows. Working with the Carroll University permanent collection of Wisconsin artists gaining restoration experience in matting, framing and repairing. Enrollment recommended during semester of senior exhibition. May be repeated up to 4 credits. (Fa, Sp) Prerequisite: Art major/minor or consent of instructor.

- **ART212: Introduction to Book Art (4 hours)**
  General Education F2. This course will introduce students to the traditions and methods of the handmade book, as well as the expressive possibilities available with book art.

- **ART215: History of Photography (4 hours)**
  General Education F2. Students will study the origins and traditions of photography in both artistic and technological terms. The course will trace the evolution of photography from its beginnings in 1839 to the present. Through reading, writing, research, and oral assignments, students will learn the major figures in photography and examine important critical, cultural and social issues. Primary emphasis will be placed on cultural and aesthetic concerns of key figures in the history of photography. (Fa)

- **ART220: Sculpture I (4 hours)**
  General Education F2. An introduction to a variety of materials, shop equipment, and contemporary sculptors in order to expose students to the broad possibilities of sculptural expression. (Required course fee) (Sp) Prerequisite: ART 106 or ART 107 or ART 225.

- **ART223: Creative Arts for Children (2 hours)**
  Focus is on children's creative expression and integration of art with curricular needs in K-6 education. This course does not count toward an art major. (Required course fee) (Fa, Sp) Prerequisite: EDU 203.

- **ART225: Ceramics I (4 hours)**
  General Education F1. A serious exploration of clay as an artistic medium. This class introduces the beginner to a variety of techniques with an emphasis on hand-building. (Required course fee) (Fa, Sp, Su)

- **ART230: Printmaking I (4 hours)**
  General Education F2. A study of drawing and composition applied to the making of multiples. The course introduces the media of relief serigraphy, and etching with some opportunity for the student to specialize. (Required course fee) (Fa,Sp) Prerequisites: ART 106 or ART 107 or consent of instructor.

- **ART235: Art Metals (4 hours)**
  This course covers some fundamentals of jewelry and metalsmithing including basic hand-tool knowledge fabrication techniques, soldering, stone setting and an introduction to the history of jewelry and contemporary metalwork. (Required course fee)

- **ART258: Visual Communication (4 hours)**
General Education F2. This course is designed to help students understand aesthetic issues in art and design. Students will become familiar with the field of visual communication. Students will develop skills communicating with text and image through a series of studio assignments requiring problem-solving, conceptualizing, and critical thinking. Course topics will focus on the history, culture, social and technological aspects of communicating visually along with the role of the maker in raising awareness and stimulating thought. (FA)

- **ART291: Special Topics in Art (2 TO 4 hours)**
  Study of a special topic in art that is not covered in regular course offerings. This could be a studio or art history based course. The topic will be announced before registration.

- **ART298: Independent Study (1 TO 4 hours)**
  Independent study of selected areas already covered by a studio course. (Required course fee) (Fa, Sp) Prerequisite: Approval of divisional dean and consent of instructor.

- **ART300: Early Modernism to Present-Art History Survey (4 hours)**
  A survey of painting, sculpture, architecture and other visual arts from Postimpressionism (approximately 1880's) to present. Explores historical, philosophical and cultural influences on artistic practices in the development of western civilization. (Sp) Prerequisite: Junior standing, ART 104 recommended.

- **ART301: Painting II (4 hours)**
  Intermediate level study of oil painting with an emphasis on self-expression and continued skill development. Subject matter will focus on abstract issues as well as introduction to narrative ideas. (Required course fee) (Sp) Prerequisites: ART 201 or consent of instructor.

- **ART306: Advanced and Life Drawing (4 hours)**
  A continuation of ART 202 with more thematic development. A minimum of one third of the course will be drawing from the nude model. Taught simultaneously with ART 206. (Required course fee) Prerequisite: ART 206.

- **ART309: Photography II - Fine Art (4 hours)**
  General Education F2. Advanced photographic techniques in both black and white and color with further development of creative expression. Adjustable camera required. (Required course fee) Prerequisite: ART 209.

- **ART310: Photography II - Commercial (4 hours)**
  General Education F2. Advanced photographic techniques in both black and white, color and digital with emphasis in commercial photography. Adjustable camera required. (Required course fee) (FA) Prerequisite: ART 209.

- **ART314: Photography II Studio Lighting (4 hours)**
  General Education F2. Advanced photographic techniques with emphasis in the practices of studio lighting for photography. Adjustable digital camera required. (Required course fee) Prerequisite: ART209. (SP only)

- **ART313: Travel Journals-Italy (4 hours)**
  Students will read and discuss travel writing from the region of study as well as practice the writing and drawing skills necessary to record experiences and observations. As part of the course students will travel over Spring Break, or during May term, to the country of focus. Also offered as NCEP 313. (Sp, odd years) Prerequisite: Consent of instructor.

- **ART320: Sculpture II (4 hours)**
  This course is taught simultaneously with ART 220. Individually created problems in sculpture that focus on continued development of skills and on thematic development. (Required course fee) (Sp) Prerequisite: ART 220.

- **ART325: Ceramics II (4 hours)**
  Individually created problems in ceramics as well as advanced study in glazing and firing. (Required course fee) Prerequisite: ART 225.

- **ART330: Printmaking II (4 hours)**
  This course is taught simultaneously with ART 230. Advanced study in graphics with opportunity for self-direction in a concentration on one or two media. (Required course fee) (Fa) Prerequisite: ART 230.

- **ART340: Advanced Media Studies (4 hours)**
  This course is designed so that students who have had the beginning and intermediate courses in a specific medium can continue their study in this area with specific focus. Students are expected to develop a body of work in a series. (Required course fee) (Sp) Prerequisites: The beginning and intermediate course in the same medium, or consent of the instructor. (Junior standing recommended)

- **ART353: Methods of Teaching Secondary Art (2 hours)**
  This course is not included in an art major or minor but is part of the professional education program. (Fa) Prerequisite: Admission to the Teacher Education Program.

- **ART391: Special Topics in Art (4 hours)**
  Study of a special topic in art that is not covered in regular course offerings. This could be a studio or art history based course. The topic will be announced before registration.

- **ART398: Independent Study in Art (1 TO 4 hours)**
Independent study of selected areas already covered by a studio course. (Required course fee) (Fa, Sp) Prerequisite: Approval of divisional dean and consent of instructor.

- **ART401: Painting III (4 hours)**
  This course continues development in painting technique from Painting II, focusing on experiments in composition, exploring painting as process, and contemporary painting issues. In this course you will be required to do research and create a series of paintings. (Required course fee) (Sp) Prerequisite: ART 301.

- **ART480: Internship in Art (1 TO 4 hours)**
  Supervised professional work experience. Written report required. Limited to two semesters (8 credits) which will apply toward degree. (Fa, Sp, Su) Prerequisite: Consent of instructor.

- **ART490: Capstone in Art (4 hours)**
  Preparation for senior exhibitions through regular critiques and research into contemporary art issues. Professional development in writing and speaking about art as well as portfolio preparation. (Fa) Prerequisite: Senior standing.
Athletic Training

- **ATH101: Athletic Training Seminar I (2 hours)**
  This course will provide an overview of basic athletic training theory and techniques that is useful for those involved with athletics and physical activity. The student will gain an understanding of basic anatomy and common injuries associated with physical activity. Other topic areas that will be addressed include: prevention and management of injury, emergency medical plans, blood borne pathogen precautions, nutritional issues, and legal matters and risk management. Overall, this course will introduce the student to the sports medicine team, their roles and responsibilities, and how they themselves are a contributing member of the sports medicine team. (Required course fee) (Sp)

- **ATH101L: Athletic Training Seminar I Lab**
  Laboratory component for ATH101.

- **ATH102: Athletic Training Seminar II (2 hours)**
  This course will provide students with basic skills and knowledge used in the athletic training profession. It will include discussions regarding the role of preventative techniques, emergency management plan, injury treatment methods, components of a pre-participation exam, and wound management techniques. Competencies for injury prevention will be taught including developing an emergency plan, vision screenings, wound management, advanced taping techniques, wrapping techniques, and taking vital signs. (Required course fee) (Fa)

- **ATH102L: Athletic Training Seminar II Laboratory**
  Laboratory component for ATH102.

- **ATH301: Assessment and Evaluation I (4 hours)**
  This course will provide students with the knowledge and skills for clinical and on-the-field musculoskeletal assessment and evaluation of the upper and lower extremities for physically active people. General topics for the course will include patient care, interviewing and history taking, determining subjective and objective findings, and applying assessment and evaluation skills for the upper and lower extremities. Specific injuries and conditions specific to each extremity will be discussed as well as emergency, management, referral and return to participation measures for the physically active. (Fa) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

- **ATH301L: Assessment and Evaluation I Laboratory**
  Laboratory component for ATH301.

- **ATH302: Assessment and Evaluation II (4 hours)**
  This course provides students with the knowledge and skills for assessment and evaluation of the trunk and thorax, general medical conditions for systemic illnesses including viruses and skin conditions. Topics for the course include patient care, patient interviewing skills, history taking, subjective and objective findings, and assessment and evaluation skills using problem solving/scientific methods. (Sp) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

- **ATH302L: Assessment and Evaluation II Laboratory**
  Laboratory component for ATH302.

- **ATH304: Therapeutic Modalities (4 hours)**
  This course applies assessment and evaluation skills to develop treatment plans and protocols for physically active people. Students will relate the findings of their assessment to determine treatment plans and goals. Students will gain knowledge and skills regarding the rationale for therapeutic modalities and their physiologic effects. Students will gain experience in the application of therapeutic modalities including cryotherapy, thermotherapy, diathermy, electrotherapy, ultrasound, traction, intermittent compression, EMG biofeedback, laser, continuous passive motion, and therapeutic massage. (Sp) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

- **ATH304L: Therapeutic Modalities Lab**
  Laboratory component for ATH304.

- **ATH311: Athletic Training Practicum I (1 hours)**
  Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with high risk sports to include football, soccer, wrestling and basketball; equipment intensive sports including football at the youth, high school or university level; attend a surgical experience for the extremities and orthopedic round experience for the extremities. (Fa) Prerequisites: Professional phase of Athletic Training Program standing.

- **ATH312: Athletic Training Practicum II (1 hours)**
  Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with upper/lower extremity sports to include baseball, softball, track, soccer, wrestling, and basketball; attend a surgical experience and orthopedic rounds for the spine; orthopedic treatment and rehabilitation experience; and general medicine experience. (Sp) Prerequisites: Professional phase of Athletic Training Program standing.

- **ATH403: Applied Exercise for Musculoskeletal Injuries (4 hours)**
The course will explore the foundation for rehabilitation and reconditioning of physically active populations. Pathology of tissue injury and repair will be discussed. Progressions for range of motion, strength, speed, power, neuromuscular control, proprioception and coordination, agility, cardiorespiratory endurance, and mobilization techniques will be explored. (Fa) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

- **ATH403L: Applied Exercise for Musculoskeletal Injuries Laboratory**
  Laboratory component for ATH403.

- **ATH405: Admin of Athletic Training (2 hours)**
  This course covers topics associated with the administration and management of an athletic training facility and staff. These topics will be covered through lecture, class discussion, group work, and assignments. Some of the topics that will be covered include: management theories and styles, human resources, finances, facility design, information management, insurance, legal aspects/risk management, ethics, pre-participation physicals, developing a referral system, drug testing programs, and organizational bodies that provide governess/guidance to the field of athletic training/health care. (Fa) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

- **ATH407: Athletic Training Seminar III (2 hours)**
  This course will provide an overview of the domains of athletic training and the implications that clinical proficiencies have in athletic training and their role in the day to day management of an athletic training facility. This will serve as a forum to discuss and review skills and topics prevalent to the entry-level athletic trainer. This course also assists the student in becoming knowledgeable in the BOC exam process. (Fa) Prerequisites: Professional phase of Athletic Training Program standing.

- **ATH411: Athletic Training Practicum III (1 hours)**
  Students will gain experience in the field of athletic training and be expected to apply and perform competencies previously taught in the curriculum. Students will gain experience working with fall/winter sports to include football, soccer, basketball, and cross country at the university and/or high school level; football game coverage; professional sports; outpatient rehabilitation clinic; health and fitness setting; industrial setting; general medicine; emergency settings. (Fa) Prerequisites: Professional phase of Athletic Training Program standing or consent of instructor.

- **ATH499: Capstone-Internship in Athletic Training (14 hours)**
  Students will gain experience in the field of athletic training and perform competencies and display knowledge expected of the entry-level certified athletic trainer outlined by the National Athletic Trainers Association. This internship experience is directly supervised by a certified athletic trainer or health care provider. Students will present a case study modeled after the Journal of Athletic Training's format for a case study and present to faculty and students. (Sp, Fa) Prerequisites: Professional phase of Athletic Training Program standing.
Aviation Science

- **AVS101: Aviation Science I (4 hours)**
  A course which introduces basic concepts of aviation knowledge sufficient to prepare the student for completion of the FAA private pilot knowledge test. Content includes aerodynamics, aircraft systems, flight environment, weather, FAA regulations, aircraft performance, human factors, navigation and cross country flight planning. (Students must meet with course instructor prior to first class.)

- **AVS102: Aviation Science II (4 hours)**
  A continuation of AVS101. This course continues with the preparation of students for completion of the FAA private pilot knowledge test. Topics include: cross country planning, navigational systems, and visual and instrument flight rules (VFR/IFR). Prerequisite AVS101 (New students must meet with course instructor prior to first class)

- **AVS201: Advanced Aviation Science I (4 hours)**
  A course which introduces advanced concepts of aviation knowledge sufficient to prepare the student for successful completion of the FAA instrument and commercial knowledge tests. In combination with flight lab courses, this effort leads to completion of advanced rating or certification at the commercial/IFR level. Content includes FAA Regulations that apply to IFR and Commercial training (FAR 61.65, 61.125 a-d,), ATC systems, IFR Navigation, IFR charts, IFR approach procedures, Weather systems and wind shear avoidance, aeronautical decision making and crew management, NTSB reporting requirements, night and high altitude operations, aircraft performance limitations, use of the national airspace system. Prerequisite AVS102 (Students must meet with course instructor prior to first class.)

- **AVS202: Advanced Aviation Science II (4 hours)**
  A course which introduces advanced concepts of aviation knowledge sufficient to prepare the student for successful completion of the FAA instrument and commercial knowledge tests. In combination with flight lab courses, this effort leads to completion of advanced rating or certification at the commercial/IFR level. Content includes FAA Regulations that apply to IFR and Commercial training (FAR 61.65, 61.125 a-d, ), ATC systems, IFR Navigation, IFR charts, IFR approach procedures, Weather systems and wind shear avoidance, aeronautical decision making and crew management, NTSB reporting requirements, night and high altitude operations, aircraft performance limitations, use of the national airspace system. Prerequisite AVS201 (Students must meet with course instructor prior to first class.)
Biology

- **BIO120: General Biology I (4 hours)**
  General Education N1. This course investigates the origins and diversity of life and how organisms interact with each other and their environment. Students will learn how evolutionary principles provide the foundation for understanding life throughout Earth's history. Case studies and student research during laboratory will develop the ability of students to apply their knowledge of how organisms interact at different biological scales. This is the first course in the Biology major and is traditionally challenging for non-science majors. Four hours lecture/discussion and two and one half hours laboratory. (Required course fee) (Fa)

- **BIO120L: General Biology I Laboratory**
  Laboratory component for BIO120.

- **BIO125: General Biology II (4 hours)**
  This course investigates the structure, function, and biochemistry of cells. Students will learn how evolutionary principles provide the foundation for understanding the cellular processes that support life. Case studies and student research during laboratory will develop the ability of students to apply their knowledge of how underlying cellular processes explain complex organismal functions. Four hours lecture/discussion and two and one half hours laboratory. (Required course fee) (Sp) Prerequisite: BIO 120.

- **BIO125L: General Biology II Laboratory**
  Laboratory component for BIO125.

- **BIO131: Genetics in Family and Society (4 hours)**
  General Education N1. This course will introduce non-science majors to human genetics and the scientific way of knowing. Students will learn how DNA determines traits and how traits are inherited. Students will also learn how modern genetic technologies influence the products we buy, our health and, potentially, our genetic futures. The relationship between the scientific method and our understanding of human genetics will be stressed, and students will have the opportunity to propose and perform an experiment of their own design. Four hours lecture/discussion and three hours laboratory. (Required course fee) (Fa)

- **BIO131L: Genetics in Family and Society Lab**
  Laboratory component for BIO131.

- **BIO212: Microbiology (4 hours)**
  This course examines the fundamentals of microbiology (structure, metabolism, genetics, and growth) and surveys the microbial world. The interaction between microbe and host and the diseases caused by microbes is examined. Four hours of lecture/discussion and two two-hour laboratories. (Required course fee) (Fa, Sp, Su) Prerequisites: BIO 130; CHE 102 or concurrent registration; or instructor consent.

- **BIO212L: Microbiology Laboratory**
  Laboratory component for BIO212.

- **BIO220: Genetics (4 hours)**
  This course investigates molecular, classical and population genetics to highlight how evolutionary principles are based on genetic processes. Students will learn the molecular processes that govern gene expression, genetic diversity, and inheritance. Students will also discuss the role of genetic research in current society. Laboratory periods will give students hands on experience in several techniques used in modern genetic research. Four hours lecture and two and half hours laboratory. (Required course fee) (Fa) Prerequisite: BIO 125.

- **BIO220L: Genetics Laboratory**
  Laboratory component for BIO220.

- **BIO225: Organismal Physiology (4 hours)**
  This course investigates the diverse of form and function of plants and animals at the physiological level. Students will learn the cellular and biochemical basis of physiological processes and the diversity of organismal forms, as well as an in-depth study of the biological adaptations of plants and animals to cope with the environment. Using comparative experiments, the laboratory is designed to solidify the concepts of physiology learned in lecture and to develop the ability of the students to apply their understanding of physiological mechanisms in diverse organisms. Four hours lecture and three hours laboratory. (Required course fee) (Sp) Prerequisite: BIO 220.

- **BIO225L: Organismal Physiology Laboratory**
  Laboratory component for BIO225.

- **BIO271: Clinical Immunology (4 hours)**
  This course covers the theory and application of immunology. Students will learn about the development and function of the immune system including immune responses, antigen-antibody reactions, intercellular communication, and autoimmune and immunodeficiency disorders. The course will emphasize the principles and performance of protocols in cellular immunology, immunochemistry, and clinical serology. Four hours lecture and three hours laboratory. (Required course fee) Prerequisites: ANP 140 and CHE 102.

- **BIO271L: Clinical Immunology Laboratory**
Laboratory component for BIO271.

**BIO312: Microbiology (4 hours)**
Most microorganisms are beneficial to mankind; some microbes decompose and recycle nutrients in the environment and some microbes protect humans from other disease-causing microbes. This course will investigate the molecular and structural properties of a variety of microorganism, the human immune system that has evolved to protect us from pathogenic microbes, and the immune evasion strategies employed by a variety of pathogenic microbes. Students will gain experience in traditional and newer microbiology techniques during laboratory. Four hours lecture and four hours laboratory (two hour lab twice a week). (Required course fee)(Sp) Prerequisite: BIO220 and either BIO324 OR CHE308; or instructor consent.

**BIO312L: Microbiology Laboratory**
Laboratory component for BIO312.

**BIO322: Comparative Vertebrate Zoology (4 hours)**
This course examines the anatomical similarities and differences among major vertebrate classes. The majority of the lecture material explores the evolution and diversity of structure and function in vertebrate systems. The application of morpholgy in current science, specifically systematics and ecological morphology will also be discussed. The laboratory will emphasize the lecture material through dissection of taxonomic representatives, systematics and experiments in ecological morphology. Four hours lecture/discussion and three hours of laboratory. (Required course fee) (Fa) Prerequisite: BIO 225 or instructor consent.

**BIO322L: Comparative Vertebrate Zoology Laboratory**
Laboratory component for BIO322.

**BIO332: Gene Manipulation and Genomics (4 hours)**
This course introduces students to the fields of gene manipulation and genomics through an integrated laboratory/lecture/discussion approach. Students will gain hands-on experience with the basic methods, the biological basis for those methods, and a practical understanding of how they are applied in the fields of medicine, basic science research, environmental science, ethics, and law. (Required course fee) (Fa, even years) Prerequisite: BIO 220 or instructor consent.

**BIO332L: Gene Manipulation and Genomics Lab**
Laboratory component for BIO332.

**BIO333: Ecology (4 hours)**
This course will develop students understanding of ecological and evolutionary processes in populations, communities, and ecosystems and allow students to explore the diversity of methods used in field biology. Course readings will draw heavily on primary literature. Four hours lecture/discussion and four hours laboratory. (Required course fee)(Fa) Prerequisite: BIO 225 or ENV 201, or instructor consent.

**BIO333L: Ecology Laboratory**
Laboratory component for BIO333.

**BIO350: Endocrinology (4 hours)**
The structural and functional classification of hormones, principles of hormone action, and the regulation of body functions by the endocrine system are presented. Special emphasis is placed on species differences and evolutionary changes in some selected hormone systems as they relate to homeostasis. Small group discussions, clinical cases, research article presentations, and grant writing are included. (Sp) Prerequisite: BIO 225 or instructor consent.

**BIO360: Aquatic Ecology (4 hours)**
An advanced ecology course that builds upon the Biology core courses. This course explores the basic ecology of wetlands, lakes, and streams. Students will examine physical and chemical processes that are largely responsible for the biological responses evident in these different habitat types. The lecture component draws about half of its material from the textbook with the other half relying heavily upon peer-reviewed scientific literature. Laboratory activities (a three-hour laboratory is part of the course) further examine and reinforce ecological concepts derived from lecture and readings. (Required course fee) (Sp) Prerequisite: BIO 225 or ENV 201, or instructor consent.

**BIO360L: Aquatic Ecology Laboratory**
Laboratory component for BIO360.

**BIO399: Capstone in Biological Sciences (4 hours)**
This course allows students to synthesize their understanding of biology through exploration of contemporary issues in biology across multiple biological scales. Students will also explore case studies related to ethical practice in science and develop skills necessary to transition to future careers in biology. Four hours lecture/discussion, may be taught in a hybrid format. (Fa, Sp) Prerequisites: Junior standing; BIO 225.

**BIO417: Behavioral Ecology (4 hours)**
This course investigates the biological bases of animal behavior, focusing particularly on the evolution of social behavior in nonhuman animals. Theoretical foundations of the field as well as their practical
applications are studied through discussion/lecture/activities. Experience in experimental design and observation techniques are developed through studies of animal behavior. These experiences culminate in a final research project of the student's own design. Four hours lecture/discussion and four hours laboratory. (Required course fee) (Fa) Prerequisite: BIO 220 and at least junior standing; or instructor consent.

- **BIO417L: Behavioral Ecology Laboratory**  
  Laboratory component for BIO417.

- **BIO452: Cell Biology (4 hours)**  
  In this course, basic principles of cell physiology, molecular biology, biochemistry, and biophysics are studied in relation to the structure and function of cells and their organelles through an integrated laboratory/lecture/discussion approach. Four hours lecture/discussion and three hours laboratory. (Required course fee) (Fa) Prerequisite: BIO 220 or instructor consent.

- **BIO452L: Cell Biology Laboratory**  
  Laboratory component for BIO452.

- **BIO462: Conservation Biology (4 hours)**  
  Using basic and applied science, students will explore how populations, communities and ecosystems are managed and preserved in the face of ever-growing threats from human activities. We will also explore the ideas of resilience and resistance of biological systems to outside influence, including how natural systems recover with and without intervention. The functioning of biological systems will be placed into the context of human influence, philosophical approaches and ethics. Field trips may replace some classes. Prerequisites: BIO225 or ENV201 or consent of the instructor. (Spring even years)

- **BIO480: Internship in Biology (1 TO 4 hours)**  
  This internship places students in industry, hospital, field, health agency, laboratory, school, or other professional settings to obtain on-the-job experience and develop skills relevant to future career opportunities. The BIO 480 Internship differs from the BIO 380 Internship because it incorporates application of research-based skills to the internship experience. Prerequisites: BIO 225 and instructor consent.

- **BIO485: Research in Biology (1 TO 4 hours)**  
  This experience involves independent laboratory or field-based research of selected areas in biology under supervision of a faculty member. Students will develop sufficient mastery of their system of interest to allow them to acquire data appropriate for resolution of their specific problem. Prerequisite: Instructor consent.

- **BIO491: Special Topics in Biology (1 TO 4 hours)**  
  This course is a study of a selected topic not covered in regular course offerings. Lecture and discussion. The topic will be announced prior to registration.

- **BIO498: Independent Study (1 TO 4 hours)**  
  This experience involves independent study of selected areas in biology under supervision of a faculty member that generally does not involve laboratory work. Prerequisite: Approval of the department chair and instructor consent.
BUS101: Introduction to Business (4 hours)
This course is designed to define and describe business-related terminology and concepts and expose students to the various subjects covered in the business world. Topics covered include the global perspective of business; environmental issues; current business practices; marketing, management, finance, accounting, information systems, and the impact of the Internet on business. (Fall and Spring)

BUS260: Ethics in Business, Govt, and Society (4 hours)
General Education S1. An interdisciplinary course that deals with the nature and scope of business/government relationships. The emphasis is on ethical and social issues affecting society's stakeholder groups (consumers, owners, employees, communities and environmentalists) and the challenges for business in the future. It encourages comparative analysis of business ethics with the moral standards of the world community. (Fall only)

BUS265: Human Resource Management (4 hours)
The study of managerial responsibilities for human resources in the areas of productivity, quality of work life, compensation and job design. The course material deals with the recognition that an organization's most valuable resource is its personnel. The course is consistent with the systems orientation of human resource management, which recognizes the interrelationship of the personnel functions. (Fall and Spring)

BUS290: Principles of Business Law (2 hours)
A study of the legal environment including the nature and sources of law, court systems, litigation, and alternative dispute resolution; constitutional and administrative law, tort law and product liability, contract law, agency law; business organizations; business ethics and social responsibility; international law; and selected topics of government regulation of business including antitrust law, employment law, environment law, and securities regulation. (If not completed within the past five years, no credit will be granted. The student has the option of retaking the course for credit or taking an examination for credit to show mastery of the current subject matter.) (Fall and Spring)

BUS291: Special Topics (1 TO 4 hours)
A study of selected processes, developments, problems or issues in business administration or economics that are not covered in other courses. Changing topics may be drawn from any area of business administration. Courses may be repeated for credit with changed topics.

BUS301: Principles of Marketing (4 hours)
The marketing process is analyzed as part of our socio-economic system that anticipates and satisfies consumer needs, adjusts to demand and sales, and procurement of goods and services. Topics include the marketing concept, new product development, channels of distribution, pricing, promotion and Internet marketing. (Fall and Spring) Pre-requisite: ECO124 or sophomore standing.

BUS302: Principles of Management (4 hours)
Examines the theory, techniques, and applications of management systems. Planning, organizing, leading, and controlling are issues addressed. Topics include environmental influences, organization design and structure, motivation, total quality management, ethics, production and international management. Emphasis is on learning through application. (Fall and Spring) Pre-requisite: ECO124 or sophomore standing.

BUS304: Principles of Finance (4 hours)
An analysis of the three functional and interrelated areas of finance: (1) financial institutions and markets, (2) corporate financial management, and (3) the investment management environment. The purpose of this course is to give all business students an expansive as well as applied understanding of the role of finance in business. Greater emphasis is placed on corporate financial management. (Fall and Spring) Pre-requisites: ECO124, ECO225, CMP114 and either ACC206 or ACC310.

BUS305: Principles of Operations Management (4 hours)
This course provides a survey of the operations function within a variety of enterprises and an understanding of how the design, operation and control of systems can most effectively provide goods and services. Topics include operations strategy, process selection, quality management and control, supply chain management, forecasting, scheduling, inventory planning and control, and lean systems. (Fall and Spring) Pre-requisite: CMP114.

BUS320: Promotion Management (4 hours)
Development and control of the managerial structure for the elements involved in the marketing promotion function. Areas of concern are the relationship between the customer's needs and behavior, the corporation's approach to promotion, and the analysis of organizational structure alternatives in the marketing promotional area. An integrated marketing perspective is utilized. (Spring only) Pre-requisite: BUS301.

BUS321: Careers in Finance (2 hours)
This course provides students with the tools necessary to succeed in their future careers. Students will learn and experience about their chosen career path and develop further their career action plans and resume. Networking, interviewing techniques, critical thinking and self-assessment skills are also
addressed as students prepare for entering the job market upon graduation. (Fall only) Pre-requisite: junior standing.

- **BUS327: Business to Business Marketing (4 hours)**
  Analysis of the problems of marketing industrial goods. Particular attention given to acquiring market information, marketing planning, methods of distribution, pricing, and the promotional challenges of industrial marketing. Personal selling techniques and sales management are also covered. (Spring only) Pre-requisite: BUS301.

- **BUS341: Applied Risk Management (4 hours)**
  An introductory course covering the basics of business risk management. This course provides an overview of the nature, process, and methods of dealing with risk. Students study traditional insurance contracts, as well as all other forms of transference (non-insurance), as risk management tools in the business world. (Spring only) Pre-requisite: BUS304.

- **BUS342: Investment Management (4 hours)**
  A study of financial instruments, the markets in which they trade, and their use in developing basic portfolios. A key emphasis of this course involves the valuation decision process of fundamental analysis and its application towards portfolio management. In addition, topics such as investing risks, efficient markets, and the use of fixed income securities in portfolio management are examined. (Fall only) Pre-requisite: BUS304.

- **BUS344: Management of Financial Institutions (4 hours)**
  A study of the decision making process of depository financial intermediaries such as commercial banks, credit unions, insurance companies, and savings and loan associations. A primary emphasis is on commercial bank management. Topics covered in the course are related to asset and liability management, capital formation, bank regulation, interest rate risks, and other banking innovations and functions. (Fall only) Pre-requisite: BUS304.

- **BUS356: Applied Financial Management (4 hours)**
  A case-study format that applies the principles and models of financial management to current business problems. All students are expected to be involved in detailed discussions of the case issues on a daily basis. In addition, ethical, moral, and social issues are addressed, where appropriate, with topics related to working capital management, capital budgeting, dividend, capital structure, financing decisions, and firm valuation. Computer technologies are used extensively to analyze issues related to case studies and the presentation of those results. (Spring only) Pre-requisites: BUS304.

- **BUS360: Career Development (4 hours)**
  This course provides students with the tools necessary to succeed in their future careers. Students develop their business writing and communication skills as well as prepare a career action plan and resume. Networking, interviewing techniques, team work, critical thinking and self-assessment skills are also addressed as students prepare for entering the job market upon graduation. (Fall only) (Course fee required) Pre-requisite: junior standing.

- **BUS345: Marketing Research (4 hours)**
  Study of the research process as an aid to data analysis in marketing management. Emphasis on the planning of research and the gathering, quantitative analysis, and interpretation of information with emphasis on net based research and primary data collection. (Fall only) Pre-requisites: CMP114 and BUS301 (CMP114 can be taken as co-requisite).

- **BUS347: Consulting Management (4 hours)**
  An integrative course intended to give students the opportunity to solve actual management problems in organizations. Class members form teams and establish a 'work world' symbiotic relationship with a local business firm while acting as consultants to the assigned client. Total quality management and a team approach are emphasized. (Fall and Spring) Pre-requisites: BUS302.

- **BUS480: Internship in Business (1 TO 12 hours)**
  The internship in business provides students an opportunity to apply theories and concepts learned in their courses to actual work experiences under the supervision of an external supervisor and faculty instructor. Restrictions: Student must be a declared major or minor in one of the programs offered by the Department of Business, Accounting, and Economics. Prerequisites: Approval of the faculty instructor. The student may earn a maximum of 12 credits in BUS 480. 40 hours of work are needed for each credit. (Grading is on an S/U basis.)

- **BUS483: Internship Option-Prior Work Experience (1 TO 4 hours)**
  Sufficient prior work experience in the area of finance may be substituted for the BUS 321 and BUS 480 requirement in the finance major. Restrictions: Student must be a declared finance major. Prerequisites: Approval of the department chair and the faculty instructor. (Grading is on an S/U basis).

- **BUS496: Business Policies (4 hours)**
  A study of the process of decision-making and the development of business policies and strategies through the use of a business simulation game in a team-building environment. (Fall and Spring) Pre-requisites: BUS301, BUS302, BUS304, and BUS305.
**BUS498: Independent Study in Business (1 TO 4 hours)**
A course of study designed to widen the student's knowledge of business, organizational, and system theory. This develops the ability to study independently and demonstrate aptitude in the planning and production of original work. (Fa, Sp, Su) Prerequisites: Junior/Senior standing respectively, approval of the divisional dean and consent of instructor.

**LEA190: Leadership and Personal Effectiveness (4 hours)**
Personal leadership represents a passionate desire to take charge of your life and is characterized by the strong values that become your moral compass, providing direction to your actions and behaviors. In this class, you will develop strategies to increase your individual effectiveness as you discover your unique purpose and initiate a personal vision to guide your life, and learn principle-centered approaches for solving problems, how to be a more effective communicator and listener, time management skills, how to set and achieve challenging goals and principles that help you adapt to change. (Fall only)

**LEA302: Leadership Theory and Practice (4 hours)**
This course facilitates development of the student's capacity to become an effective leader in a business, public/government organization, or nonprofit agency. Through an examination of various approaches to leadership, students identify key principles, competencies, and qualities characteristic of effective leaders and integrate these concepts into a personal leadership style. (Fall and Spring)

**LEA499: Leading Change (4 hours)**
This course integrates prior academic experiences and provides students with an experimental, comprehensive approach to leadership. The processes of developing a vision, strategic thinking and planning, communicating the vision, empowering employees, and appreciating differences are applied and utilized within an actual organizational setting as a means of integrating academic knowledge with leadership skills. (Fall and Spring) Pre-requisite: LEA302.
CHEMISTRY

- **CHE101: General Chemistry (4 hours)**
  General Education N1. A health science oriented survey course that introduces the basic concepts of inorganic and organic chemistry. Specific topics include: atomic theory, nuclear chemistry, compounds, chemical reactions, energy and organic functional groups. Four hours of lecture/discussion and one two-hour laboratory. (Required course fee) (Fa, Sp) Prerequisite: Demonstrated proficiency in high school chemistry and algebra.

- **CHE101L: General Chemistry Laboratory**
  Laboratory component for CHE101.

- **CHE102: Biological Chemistry (4 hours)**
  A survey of organic chemistry and biochemistry that considers the structure and function of biomolecules (carbohydrates, lipids, proteins and nucleic acids) and their metabolism. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Sp, Su) Prerequisite: CHE 101/101L with a grade of C or better.

- **CHE102L: Biological Chemistry Laboratory**
  Laboratory component for CHE102.

- **CHE104: Forensic Science (4 hours)**
  General Education N1. A course that focuses on the application of scientific principles to the analysis of forensic data. The analysis and interpretation of physical, chemical, and biological tests is discussed utilizing a firm grounding in basic science. The laboratory utilizes simulated crime data and includes both basic and instrumental analyses. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Sp)

- **CHE104L: Forensic Science Laboratory**
  Laboratory component for CHE104.

- **CHE106: Drug Discovery (4 hours)**
  General Education N1. A general survey of drug design and development of pharmaceuticals. This course examines the methods used in drug discovery. Topics include: the role of the FDA, clinical trials, drug action, and the pharmaceutical industry. Various sources of new drugs will be explored and several case studies will be discussed. Laboratory work will introduce students to methods and instrumentation used to develop new drugs. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa)

- **CHE106L: Drug Discovery Laboratory**
  Laboratory component for CHE106.

- **CHE109: Principles of Chemistry I (4 hours)**
  An introduction to the basic concepts of modern inorganic chemistry. The topics in this course include units and measurements, stoichiometry, behavior of gases, liquids, and solids, atomic structure, the periodic table, chemical bonding and thermodynamics. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa, Su)

- **CHE109L: Principles of Chemistry I Laboratory**
  Laboratory component for CHE109.

- **CHE110: Principles of Chemistry II (4 hours)**
  A continuing discussion of modern chemistry with a focus on quantitative analysis of chemical problems. Topics include kinetics, equilibrium, acid-base theory, and oxidation-reduction reactions. Modern instrumentation is utilized in the laboratory. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Sp, Su) Prerequisite: CHE 109/109L.

- **CHE110L: Principles of Chemistry II - Laboratory**
  Laboratory component for CHE110.

- **CHE201: Analytical Chemistry (4 hours)**
  This course introduces students to the theory and practice of chemical analysis. The principles of titrimetric, spectroscopic, chromatographic and electrochemical methods are examined in terms of chemical equilibrium theory. Topics discussed include ionic equilibrium, gravimetric analysis, solubility/precipitation, acid-base titrations, complexation, potentiometry, UV-visible and atomic absorption spectrophotometry, and gas and liquid chromatography. Laboratory experiments are designed to illustrate the chemical principles discussed in class and to provide hands-on experience with modern analytical methods and instrumentation. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa) Prerequisite: CHE 110/110L.

- **CHE201L: Analytical Chemistry Laboratory**
  Laboratory component for CHE201.

- **CHE203: Organic Chemistry I (4 hours)**
  An introduction to the study of carbon and its compounds. Emphasis is placed on the simpler aliphatic and aromatic compounds, and functional groups. The course examines the underlying chemical principles and the mechanistic nature of organic reactions. Associated laboratory work is devoted to chemical and
physical properties, as well as synthetic techniques. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa, Su) Prerequisite: CHE 110/110L.

- **CHE203L: Organic Chemistry I Laboratory**
  Laboratory component for CHE203.

- **CHE204: Organic Chemistry II (4 hours)**
  A continuation of Chemistry 203. Major emphasis is placed upon carbonyl chemistry. The use of spectroscopic techniques is explored. The latter part of the course is devoted to the study of carbonyl compounds and modern synthetic strategies. Laboratory work consists of synthetic techniques, chromatography, and structural analysis. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Sp, Su) Prerequisite: CHE 203/203L.

- **CHE204L: Organic Chemistry II Laboratory**
  Laboratory component for CHE204.

- **CHE204L: Organic Chemistry II Laboratory**
  Laboratory component for CHE204.

- **CHE302: Advanced Inorganic Chemistry (4 hours)**
  This course emphasizes structure, bonding, reactivity, and periodicity of inorganic compounds. The laboratory includes the preparation of metal and non-metal compounds and their characterization by chemical and physical methods. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Sp, odd years) Prerequisite: CHE 204/204L, and 303/303L or 304/304L.

- **CHE302L: Advanced Inorganic Chemistry Laboratory**
  Laboratory component for CHE302.

- **CHE303: Quantum Mechanics and Spectroscopy (4 hours)**
  Thorough introduction to the principles of physical chemistry providing the theoretical basis of quantum chemistry and atomic and molecular spectroscopy. Laboratory experiments incorporate modern instrumental design and data analysis. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Sp) Prerequisite: MAT 160, PHY 204/204L and CHE 110/110L.

- **CHE303L: Quantum Mechanics and Spectroscopy Laboratory**
  Laboratory component for CHE303.

- **CHE304: Thermodynamics and Kinetics (4 hours)**
  Study of reaction kinetics and the thermodynamic treatment of equilibrium in chemical systems. Topics include kinetic theory of gases, classical and statistical thermodynamics, phase equilibria, reaction rates and mechanisms. The laboratory relies on original student experimental design and data analysis of physical measurements that yield quantitative results of chemical interest. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa, even years) Prerequisite: MAT 161, PHY 204/204L and CHE 110/110L.

- **CHE304L: Thermodynamics and Kinetics Laboratory**
  Laboratory component for CHE304.

- **CHE306: Synthesis and Structure (4 hours)**
  The course will consider advanced topics in organic chemistry including selected topics from advanced spectroscopy, reaction mechanisms, synthetic methodology and photochemistry. Emphasis will be on reading, understanding, and orally presenting articles from the original literature. Four hours of lecture/discussion. (Fa, odd years) Prerequisite: CHE 204/204L.

- **CHE308: Biochemistry I (4 hours)**
  The course investigates the properties of buffers and the related chemistry of amino acids, the structure and function of proteins including an intensive look at hemoglobin, and the structure of lipids and carbohydrates. The course also focuses on the kinetics, thermodynamics, and mechanisms of enzymatic reactions, the structure of nucleic acids, and the regulation of nucleotide biosynthesis. The laboratory serves to strengthen the understanding of these topics and includes the purification and/or characterization of several classes of biomolecules. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa, Sp) Prerequisite: CHE 203/203L.

- **CHE308L: Biochemistry I Laboratory**
  Laboratory component for CHE308.

- **CHE309: Biochemistry II (4 hours)**
  The course focuses on the investigation of basic topics in metabolism, including bioenergetics, carbohydrate metabolism, and lipid metabolism. Additional topics include the biosynthesis of amino acids, nucleotides, and heme. Four hours of lecture/discussion. (Sp) Prerequisites: CHE 204/204L and 308/308L.

- **CHE310: Advanced Forensic Science (4 hours)**
  An advanced course in forensic science designed for, but not limited to, those hoping to pursue careers in criminalistics. Some of the topics will have been addressed in the survey class CHE104 but will now be discussed in greater detail. There will be an emphasis placed on the use of primary literature. (Required course fee) Prerequisites: CHE 104/104L and CHE 204/204L. 310L. Advanced Forensic Science Laboratory

- **CHE310L: Advanced Forensic Science Laboratory**
  Laboratory component for CHE310.

- **CHE390: Projects in Chemistry (1 TO 4 hours)**
Students work on a research project under the direction of a faculty member. It is highly advisable for every student to participate in research projects during their educational experience. Course credit is assigned on the basis of one credit per 40 hours of laboratory work. (Required course fee) (Fa, Sp)

Prerequisite: Approval of the department chair and the consent of the instructor.

- **CHE391: Special Topics in Chemistry (1 TO 4 hours)**
  This course is a study of a selected chemical topic not covered in other courses. Lecture and discussion. The topic will be announced prior to registration.

- **CHE391L: Special Topics Laboratory**
  Laboratory component for CHE391.

- **CHE401: Advanced Chemical Analysis and Instrumentation (4 hours)**
  This course will complete the student's introduction to modern chemical analysis and instrumentation. The theory and applications of chromatography and separation science will be emphasized, to include gas and liquid chromatographic instrumentation. The laboratory focuses on configuring, operating, and maintaining instruments while conducting quantitative and qualitative analyses. The course will also serve to initiate student research projects that are completed and presented in CHE 402. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Sp) Prerequisites: CHE 201/201L.

- **CHE401L: Advanced Chemical Analysis and Instrumentation Laboratory**
  Laboratory component CHE401.

- **CHE402: Capstone - Modern Chemistry (4 hours)**
  This capstone course will involve the implementation and completion of a research project proposed and approved in CHE 401. The research project will involve the development of an experimental plan, the use of integrative laboratory analysis using a wide range of equipment and instrumentation, the collection, analysis, and interpretation of data, and the presentation of results in written and oral formats. The course will also formally review current trends in chemical research and the future of the chemical enterprise. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (Fa) Prerequisite: CHE 401/401L or consent of instructor.

- **CHE402L: Capstone - Modern Chemistry Laboratory**
  Laboratory component for CHE402.

- **CHE480: Internship in Chemistry (1 TO 4 hours)**
  A cooperative arrangement with industries or governmental organizations that provides students with 'real world' experiences in chemistry. The student must spend time at the company working on a specific project. The student must also be involved in answering some educational questions regarding industrial chemistry. This experience is strongly recommended for students who will be seeking an industrial position after graduation. Plans should be discussed with the instructor during the junior year. (Fa, Sp, Su) Prerequisite: Senior standing and consent of the instructor.
Communication

- **COM101: Principles of Communication (4 hours)**
  General Education S1. Introduction to human communication process. Application of principles in relational, public and mass media contexts. (Fa, Sp)

- **COM111: Debate and Forensic Activities (1 hours)**
  (Fa) Prerequisite: Consent of instructor.

- **COM137: Introduction to Newswriting and Reporting (4 hours)**
  Basic writing and reporting for newspapers, magazines, the Internet, and other media. (Fa)

- **COM150: Research Methodology (4 hours)**
  Study of the principles of experimental, survey, textual and naturalistic methodologies. (Fa, Sp)

- **COM200: Interpersonal Communication (4 hours)**
  Study of dyadic relationships. Topics include intimacy, uncertainty, disclosure, identity, competence, transactional paradigms and goals. (Fa)

- **COM202: Small Group Communication (4 hours)**
  Study of small group process, models and theories. Participation in casual, cathartic, therapeutic, learning and decision-making groups. (Fa, even years)

- **COM203: Advertising (4 hours)**
  Examines the components of an advertising campaign. Includes units on persuasion, market research, target analysis, creative strategy and media planning. (Fa)

- **COM207: Intercultural Communication (4 hours)**
  General Education S1. Identifies parameters which affect communication across cultures. English 170 is recommended prior to enrollment. (Fa, Sp)

- **COM208: Introduction to Public Relations (4 hours)**
  Examines theory, scope, techniques, and influence of public relations in society. Includes units on public opinion, message preparation, media selection, and ethics. (Sp)

- **COM227: Technical Writing in Organizations (4 hours)**
  Provides understanding of principles related to audience adaptation, format, style, research, and writing in various organizational settings. (Fa)

- **COM230: Organizational Communication (4 hours)**
  Examines theoretical history, structures, functions, systems, analysis and management of communication processes in complex organizations. (Fa, odd years)

- **COM237: Advanced Newswriting and Reporting (4 hours)**
  Expands on existing skills, enabling students to research and write more specialized news stories for print and online media. The class will emphasize computer-assisted reporting, interviewing techniques, development of story ideas and self-editing. (Sp) Prerequisite: COM 137 or similar experience.

- **COM241: Communication and Conflict (4 hours)**
  Study of interpersonal conflict processes. Emphasis on application of theory; analysis of ongoing conflict and management. (Sp)

- **COM250: Society and Mass Media (4 hours)**
  Surveys the history and influence of print, radio, film and television in society. Examines the political theories that relate to government control over the media. (Sp)

- **COM255: Digital Journalism (4 hours)**
  An introduction to visual communication, digital film & photography, and online media. The course provides a historical background, core skills in visual technologies, and practical digital applications. (FA odd years)

- **COM275: Feature Writing (4 hours)**
  Planning and writing feature stories for newspapers and magazines. (Fa, even years) Prerequisite: COM 137 or similar experience with the consent of instructor.

- **COM278: Broadcast News Reporting (4 hours)**
  Principles and techniques of broadcast news reporting, writing and editing. (Sp, odd years) Prerequisite: COM 137 or similar experience with the consent of instructor.

- **COM290: Intro to Health Communication (4 hours)**
  General Education S1. Explore concepts and theories of communication and health. Examine interpersonal issues including clinician-patient, family, and social support as well as topics of mass communication including health communication campaigns and how the news/entertainment media present and affect health information. (Sp)

- **COM290H: Intro to Health Communication (4 hours)**
  Explore concepts and theories of communication and health. Examine interpersonal issues including clinician-patient, family, and social support as well as topics of mass communication including health communication campaigns and how the news/entertainment media present and affect health information. Acceptance to the Honors Program required. (Sp, odd years)
- **COM291: Topics in Communication (1 TO 4 hours)**
  Intensive investigation of special subject matter not covered in regular course offerings. Students may take more than one of these topics courses. Prerequisite (for 300-level): Junior standing or consent of instructor.

- **COM296: Research in Communication (1 TO 4 hours)**
  Supervised research of significant problem area within communication field. Prerequisites: Senior standing, approval of the divisional dean and consent of instructor.

- **COM298: Indep Study in Communication (1 TO 4 hours)**
  Prerequisite: Junior or senior standing, approval of the divisional dean and consent of instructor.

- **COM317: Communication Criticism (4 hours)**
  This course introduces students to the theory and practice of communication criticism. Students will apply a variety of methods to the analysis of rhetorical artifacts and develop proficiency in argumentative writing. (Sp) Prerequisite: Junior standing or consent of instructor.

- **COM319: Communication Theory (4 hours)**
  General Education S2. Exploration of human communication theories including interpersonal, intercultural, group, persuasive, and mediated communication. Develops a working knowledge of communication theories and considers relationships between various theoretical positions. (Fa) Prerequisite: Junior standing or consent of instructor.

- **COM350: Communication Law (4 hours)**
  Examines First Amendment communication freedoms. Considers dissent, association, academic freedom, obscenity, defamation, privacy, copyright, news gathering, electronic media regulation and other topics. Uses moot-court format. (Sp) Prerequisite: Junior standing or consent of instructor.

- **COM360: Communication Technology and Society (4 hours)**
  Considers personal, ethical, legal, social and other impacts of communicating in an information-technical based society. (Fa) Prerequisite: Junior standing or consent of instructor.

- **COM380: Internship in Communication (1 TO 4 hours)**
  Student intern experience. Prerequisite: Junior or senior standing; communication major and approval of adviser required prior to registration. S/U graded.

- **COM383: Prior Work Experience in Comm (1 TO 4 hours)**
  Professional work experience can substitute for required internship. S/U graded.

- **COM391: Topics in Communication (4 hours)**
  Intensive investigation of special subject matter not covered in regular course offerings. Students may take more than one of these topics courses. Prerequisite (for 300-level): Junior standing or consent of instructor.

- **COM396: Research in Communication (1 TO 4 hours)**
  Supervised research of significant problem area within communication field. Prerequisites: Senior standing, approval of the divisional dean and consent of instructor.

- **COM398: Indep Study in Communication (1 TO 4 hours)**
  Prerequisite: Junior or senior standing, approval of the divisional dean and consent of instructor.

- **COM480: Internship in Communication (1 TO 4 hours)**
  Student intern experience. Prerequisite: Junior or senior standing; communication major and approval of adviser required prior to registration. S/U graded.

- **COM483: Prior Work Experience in Comm (1 TO 4 hours)**
  Professional work experience can substitute for required internship. S/U graded.

- **COM499: Senior Capstone Seminar (4 hours)**
  Participation in advanced research and work-oriented experiences. (Fa) Prerequisite: Senior standing and a grade of C or better in COM 150 or consent of instructor. Professional printing of capstone poster required.
Computational Science

- **CMP112: Computational Thinking I (4 hours)**
  Introduces students to elementary statistical methods and intermediate-level uses of Excel spreadsheets with a focus on data analysis, organization, visualization, and interpretation. Students will be exposed to some essential elements of computational thinking. They will solve problems with the statistical and software tools they've learned by developing simple algorithms and using elementary mathematical models. The topics may include, but are not limited to descriptive statistics, 1 and 2-parameter tests (e.g., 2 independent sample t-tests) as well as correlation and regression. Probabilistic models will be used to simulate stochastic processes and develop concepts in algorithmic thinking and mathematical modeling. (Fa, Sp, Su) Prerequisite: MAT 101.

- **CMP112H: Honors Computational Thinking I (4 hours)**
  Introduces students to elementary statistical methods and intermediate-level uses of Excel spreadsheets with a focus on data analysis, organization, visualization, and interpretation. Students will more deeply explore the conceptual underpinnings of computational thinking: algorithmic thinking, mathematical modeling and data analysis. They will solve problems with the statistical and software tools they've learned by developing algorithms, applying programming methods, and using elementary mathematical models. The topics may include, but are not limited to descriptive statistics, 1 and 2-parameter tests (e.g., 2 independent sample t-tests) as well as correlation and regression. Probabilistic models will be used to simulate stochastic processes and develop concepts in algorithmic thinking and mathematical modeling. (Fa) Acceptance to the Honors Program required. Prerequisite: MAT 101.

- **CMP113: Computational Thinking II (4 hours)**
  This course introduces students to the discipline of Computer Science by maintaining a balance between computing breadth and computational thinking depth. First, it serves to expose the students to the field of computing via topics such as the Internet and Web, computer networks, computer architecture, data bases, algorithms, and the history of computing. Second, it provides some depth in two areas that play important roles in fostering computational thinking - database design and programming. Third, students will gain heads-on experience in using Microsoft Access database application software, JavaScript, Scratch visual programming environment, and Microsoft Expression Web development environment. (Fa, Sp, Su) Prerequisite: CMP 112.

- **CMP114: Computational Thinking II - Statistical Analysis Emphasis (4 hours)**
  This course will continue developing computational skills, but with heavy focus on statistics. Statistical analyses to be covered will include: 1-way and 2-way ANOVA, multiple regression, and chi-square tests. Some experimental design issues will be discussed. As in course I, analyses will be done using a spreadsheet and/or statistical software, but will also include some scripting. Sections of the course may be taught for specific majors, e.g., we will offer sections of CMP 114 with a business emphasis, using an appropriate text. (Fa, Sp, Su) Prerequisite: CMP 112.

- **CMP114H: Honors Computational Thinking II- Statistical Analysis Emphasis (4 hours)**
  In CMP114H, students will more deeply explore the mathematical and conceptual underpinnings of statistical techniques like the regression, ANOVA, and non-parametric methods. For example, students will perform a deconstruction of the F-ratio used in ANOVA, which yields a deeper understanding of how factor-effects are measured in ANOVA. As a signature assignment, students will design, conduct, analyze, and present an experiment by employing statistical and computational methods (e.g., programming) learned through the semester. This project would be substantially more sophisticated and rigorous than would be found in the non-honors version of the course. (Sp) Acceptance to the Honors Program required. Prerequisite: CMP 112H.

- **CMP330: Computational Techniques for Life and Behavioral Sciences (4 hours)**
  By way of a variety of examples from Life and Behavioral Sciences, students will develop data analysis, algorithmic design, and mathematical modeling skills. Possible examples are Neural Cluster Simulations, Macroeconomic Simulations, Population Dynamics, Bioinformatics, Disease Transmission Modeling, Simulating Gene Expression, and/or Bone Remodeling Models. Techniques used will include Neural Networks Models, Agent-Based Models, Differential Equations, Cellular Automata, Compartmental Models, and Stochastic Models. (Sp, even (starting 2014)) Prerequisites: CMP 113 or CMP 114, CSC 111 or CSC 112, and MAT 140 or MAT 160.

- **CMP340: Computational Techniques for Physical Sciences (4 hours)**
  By way of a variety of examples from the Physical Sciences, students will develop data analysis, algorithmic design, and mathematical modeling skills. Possible examples are Fluid Dynamics, ROTMOKE Magnetic Anisotropy, Mossbauer Spectroscopy, Molecular Modeling, Contaminate Models for Soil and/or Water, Stellar-structure models, or various Chaotic Systems. Techniques used will include Data Analyses, Differential Equations and Finite-Difference Simulations, Cellular Automata, Compartmental Models, and Stochastic Models. (Sp, odd (starting 2015)) Prerequisites: CMP 113 or CMP 114, CSC 111 or CSC 112, and MAT 140 or MAT 160.
Computer Science

- **CSC109: Technological Productivity (2 hours)**
  This course uses Microsoft Windows and the Office suite of application software as a foundation for personal and organizational productivity. Students will be presented with an overview of computing specifics at Carroll University, and when/how to take advantage of the tools available in the Office applications (Word, Access, PowerPoint). Note that Microsoft Excel is currently the focus of the CSC 107 course. (Fa, Wn, Sp, Su)

- **CSC110: Problem Solving through Programming (4 hours)**
  This course is designed as a first-semester foundation course for those students planning to major or minor in computer science and for others with an interest in the area. The course is about developing problem solving and structured programming skills, using the computer as a tool for solving problems. It covers the development of computer programs while focusing on the use of Dijkstra's structural programming principles with sequence, iteration, selection, and top-down structural program decomposition at its core. (Fa, Sp)

- **CSC111: Introduction to JAVA (4 hours)**
  This course studies the Java programming language, which is used to promote the student's understanding of object-oriented concepts (classes, methods, abstraction, inheritance, polymorphism, and encapsulation) in conjunction with algorithm design, style, debugging and testing. (Sp) Prerequisite: CSC 110.

- **CSC112: Advanced Programming with C# (4 hours)**
  The course has essentially the same objectives as for CSC 111 but uses the programming language C#. The course is designed to be a continuation of CSC 110, in which more advanced programming concepts, constructs, and problem solving skills are addressed. Topics include, but are not limited to, object-orientation, inheritance, polymorphism, exception handling, event-driven programming, files and streams, and collections. Fundamentals of the .NET framework may also be covered.

- **CSC211: Database Web Creation and Networks (4 hours)**
  The primary objectives of this course are to develop database skills using Microsoft Access and Web development skills using HTML and Microsoft Web-authoring software Expression Web. E-commerce business problems will be solved using a web front end and database back end. A secondary objective is an introduction to networks concentrating on Ethernet and TCP/IP. Also covered is understanding the internals of personal computers to aid their purchase for home or organizational use. This course also continues the discussion on ethical use of technology. (Fa, Sp, Su)

- **CSC220: Information Systems (4 hours)**
  This course will provide the student with an understanding of the fundamental aspects of Information Systems. The student will be exposed to the various types of information systems found in a business environment; encompassing operational, tactical and strategic systems. The student will also learn of the developmental processes involved in creating, implementing and securing an information system. This class was formerly the two-credit CSC 201 and will meet this requirement from previous catalogs. (Fa, Sp, Su)

- **CSC226: Data Structures using JAVA (4 hours)**
  This course focuses on the object-oriented paradigm, with particular reference to the design and implementation of data structures such as: stacks, queues, linked lists, and trees. Java collections framework and searching algorithms are also introduced. The course builds on the concepts introduced in CSC 111 to allow students to use and write their own classes and objects. (Fa) Prerequisite: CSC 111 or equivalent.

- **CSC271: Computer Organization (2 hours)**
  This course is intended as a foundation in the installation, maintenance and support of PCs and their components. Terminology and fundamentals of the hardware, software and networks integrated with an Intel processor is to be mastered. Simulated experience with PCs and their components is the foundation of this class. (Sp, even years) Prerequisite: CSC 211.

- **CSC272: Computer Architecture (2 hours)**
  This course is the study of technology and its advancement, specifically, computer architecture. Computer architecture is the study of the structure and operation of digital computers. This study will concentrate on the acquisition, processing, storage and output of data, as well as the connection and interaction between computers. (Sp, even years) Prerequisite: CSC 271.

- **CSC303: Network Protocols (4 hours)**
  This course provides a unified view (both theoretical and applied) of the broad field of data communications and networking. Topics: data transmission, data encoding, data link control, multiplexing, circuit switching, packet switching, radio and satellite networks, local area networks (LANs), wide area networks, and protocols. Networking trends for the future will be covered. (Fa) Prerequisite: CSC 211.

- **CSC307: Operating Systems and Web Master Fundamentals-Unix/Linux Apache (4 hours)**
  This class covers the elements and design of Win32 and UNIX/Linux operating systems, the fundamentals of system administration, and the installation, configuration and maintenance of the Microsoft IIS and
Apache Web Servers. Problems such as concurrence, communication, and security will be addressed. (Fa) Prerequisite: CSC 211.

- **CSC319: World Wide Web Programming (4 hours)**
  This hands-on course introduces the development of dynamic Web sites. It focuses on Web programming fundamentals and mastery of one of the current server-side technologies. (Fa, even years) Prerequisite: CSC 211 or either CSC 111 or CSC 112.

- **CSC320: Programming Using C++ (4 hours)**
  This course assumes the student has had programming experience in some other language, and wishes to learn the C/C++ environment. It focuses on the object-oriented paradigm in the language C++, real-time programming, and provides an introduction to creating Windows Applications using Microsoft Visual Studio .NET. Prerequisite: CSC 110 or equivalent.

- **CSC323: Programming Languages (4 hours)**
  The objective of this course is to develop in students an understanding of the design and uses of different kinds of programming languages. Several programming languages will be examined including C, C++, Ada, and Lisp/Scheme. Issues considered include: the formal specification of programming language syntax, language design, translator design, and run time behavior of programs. Representatives of various kinds of languages such as assembly level, object-oriented, functional, logical, etc., are examined and students have the opportunity to solve problems in these languages. In addition, students may focus on a particular language of their choice to gain deeper understanding of its design issues. (Sp, odd years) Prerequisite: CSC 226.

- **CSC341: Software Design and Development (4 hours)**
  This course presents a formal approach to state-of-the-art techniques in software design and development, and the means for students to apply the techniques. Formal models for capturing requirements for object-oriented and procedural designs are presented and used in the course. Other topics include Unified Modeling Language, Design Patterns, and various design principles and guidelines. (Sp) Prerequisites: CSC 226.

- **CSC351: Database Design and Implementation (4 hours)**
  The emphasis in this course is on the design and construction of databases as tools in business. Concepts covered include entity-relationship modeling, normalization, and efficient table design. Programming with SQL is stressed using a professional Database Management System. The role of databases in Web applications is particularly considered. (Fa) Prerequisites: CSC 111 or CSC 112 and CSC 211.

- **CSC352: Advanced Business Web Applications (4 hours)**
  Students learn how to build web-based business applications by using the technologies introduced in CSC 319 and the skills they have developed. Students develop Web-based applications linking Web sites to back-end databases while also learning how to build distributed, component-based web applications. Web services issues will also be discussed. Applications that scale are stressed in the context of performance, business goals, security, and other relevant topics. The current Web software development principles and methodologies are also stressed. (Sp) Prerequisite: CSC 319 or CSC 353.

- **CSC353: Mobile Application Development (4 hours)**
  Mobile devices (primarily tablets and smart-phones) are used by millions for purposes requiring mobile applications. This includes using the devices to access remote information and a myriad of job-related and recreational uses. The number of apps currently available for distribution at the App-Stores for the most popular mobile platforms is in excess of one million, and growing rapidly. This course will cover developing applications using the current most popular mobile platforms, (e.g., as of 2013 this might include Google Android, Apple iOS, Window 8). This will allow for compare/contrast discussions. Differences between desktop computing and mobile computing will be covered. Development tools for mobile apps will be discussed. (Fa, odd years) Prerequisite: CSC319 or equivalent.

- **CSC390: Workshop in Computer Science (4 hours)**
  Information Technology Prerequisite: Approval of the divisional dean and consent of instructor.

- **CSC391: Special Studies/Topics (1 TO 4 hours)**
  This course offers a study of a selected topic not covered in regular curriculum with lectures and/or discussions. The topic will be announced prior to registration. Prerequisite: Consent of instructor.

- **CSC392: Seminar (4 hours)**
  This is an advanced course of study involving individual research. Discussion of this research takes place through informal group participation. Prerequisite: Approval of the College Dean and consent of instructor.

- **CSC396: Research in Computer Science (4 hours)**
  Information Technology Advanced research is designed to permit individual students or groups of students to undertake special projects related to their educational interests and goals. Prerequisite: Approval of the divisional dean and consent of instructor.

- **CSC398: Independent Study (1 TO 4 hours)**
Independent study is designed to offer a study of selected areas under the supervision of one or more faculty. Four credits maximum applied toward degree. Prerequisite: Approval of divisional dean and consent of instructor.

- **CSC401: Advanced Network Protocols and Programming (4 hours)**
  The course will discuss advanced protocols that exist in the Internet today. This class will also cover network programming using sockets. This will let students study the Internet in depth in terms of software architectures and implementation. As programming exercises, students will implement client-server models as they exist in the Internet. (Fa, odd years) Prerequisite: CSC 303.

- **CSC402: Fundamentals of Network Security Design and Implementation (4 hours)**
  This course provides students with an in-depth look at the security risks and threats to an organization's electronic assets, and an overview of components used in an enterprise security infrastructure. Topics will include the theoretical background necessary to understand the various types of risks, as well as practical techniques to securing an enterprise network. The integration of the different components will be studied in detail. Skills covered are intended for IT professionals who work in a typically complex computing environment of a medium to large company. (Sp, odd years) Prerequisite: CSC 303.

- **CSC409: Information Technology Mgmt in an E-Commerce World (4 hours)**
  The emphasis of this class is on the management of information technology within an organization and the use of information technology from a strategic, tactical and operational perspective. The current trends towards e-business and e-commerce are integrated throughout. The class is concerned with the management issues surrounding information technology today. Topics include technology trends, IT planning and strategy, management of end-user computing, network management, asset protection, ethical considerations, in-house or outsourcing the hosting of aWeb site, choosing a suitable host, Web site privacy issues/statements, and people management skills. (Sp, odd years) Prerequisite: Junior standing.

- **CSC411: Artificial Intelligence (4 hours)**
  This course provides an introduction to the basic theoretical concepts of artificial intelligence, emphasizing the role of AI techniques for game programming. (Sp, odd years) Prerequisite: CSC 111.

- **CSC436: Theory of Computation (4 hours)**
  This course is concerned with the theory of computers, i.e., the forming of several abstract mathematical models that describe computers and similar machines and their capabilities. Topics covered include: Finite Automata, Pushdown Automata, Turing machines, the Chomsky Hierarchy and P and NP problems. Prerequisite: CSC 226 and MAT 205.

- **CSC437: Computer Graphics (4 hours)**
  For those students who wish to understand how graphics are used and created. The computer graphics fundamentals, transformations of objects, shape modeling, 3-D viewing, rendering for realism, and curve and surface design are studied. Prerequisite: CSC 226.

- **CSC440: Software Engineering (4 hours)**
  This course presents state-of-the art techniques in software design and development. Topics will include the software engineering lifecycle and current approaches to software development management, including formal methods, software metrics, agile methodologies and other innovative techniques. In addition the course will cover version control, software maintenance and quality assurance. A semester-long software development experience is provided. (Fa) Prerequisite: CSC 341.

- **CSC450: Projects-Computer Science Majors (4 hours)**
  This course requires students to work on a real-world project, and is a very demanding course open only to majors in their senior year. The course allows students to select, design, code, document and formally present a substantial project of their own choosing. Students should coordinate with an instructor of their choice to provide guidance and receive consent prior to registration. (Sp, Su) Prerequisites: Completion of ALL required CSC prefix coursework.

- **CSC451: Projects for Information Technology Majors (4 hours)**
  This course requires students to work on a real-world project of their own choosing, and is a very demanding course open only to majors in their senior year. The project allows students to use the knowledge gained in the coursework to produce a substantial product in the area of information technology by going through the entire development lifecycle. Students should coordinate with an instructor of their choice to provide guidance and receive consent prior to registration. (Sp, Su) Prerequisites: Completion of ALL required IT coursework.

- **CSC455: Projects-Computer Science Minors (4 hours)**
  This course gives the student a real world experience in a computer-related project and is designed for minors only. (Sp, Su) Prerequisites: Completion of ALL other minor requirements.

- **CSC480: Internship in Computer Science (1 TO 12 hours)**
  The course provides professional work experience in computer science or information technology under the supervision of faculty and industry personnel. Written report is required at the end of internship. S/U graded. (Fa, Sp, Su) Prerequisites: Junior or senior standing and consent of departmental chair required.
prior to registration. The course may be repeated for a maximum of 12 credits, but each repetition requires a substantially different work experience. 40 hours of work is needed for each credit.

- **CSC490: Workshop in Computer Science (4 hours)**
  Information Technology Prerequisite: Approval of the divisional dean and consent of instructor.

- **CSC491: Special Studies/Topics (1 TO 4 hours)**
  This course offers a study of a selected topic not covered in regular curriculum with lectures and/or discussions. The topic will be announced prior to registration. Prerequisite: Consent of instructor.

- **CSC492: Seminar (4 hours)**
  This is an advanced course of study involving individual research. Discussion of this research takes place through informal group participation. Prerequisite: Approval of the divisional dean and consent of instructor.

- **CSC496: Research in Computer Science (4 hours)**
  Information Technology Advanced research is designed to permit individual students or groups of students to undertake special projects related to their educational interests and goals. Prerequisite: Approval of the divisional dean and consent of instructor.

- **CSC498: Independent Study (1 TO 4 hours)**
  Independent study is designed to offer a study of selected areas under the supervision of one or more faculty. Four credits maximum applied toward degree. Prerequisite: Approval of divisional dean and consent of instructor.
Cross Cultural Experiences

- **CCS300: Cross Cultural Experience (2 hours)**
- **CCS400H: Global Perspectives Colloquium (2 hours)**

In the Global Perspectives Colloquium, advanced students (usually seniors) from multiple disciplines engage in critical reading and discussion. Students reflect on their distribution courses and cross-cultural experiences while also refining their writing skills. Acceptance to the Honors Program required. (Fa, Sp)
Economics

- **ECO124: Principles of Economics I - Microeconomics (4 hours)**
  General Education S1. An intensive analysis of the microeconomics theory that explains the market's determination of prices, resource allocation, and distribution of goods and services. (Fall and Spring)

- **ECO225: Principles of Economics II - Macroeconomics (4 hours)**
  General Education S1. An intensive analysis of the macroeconomic theory that explains the aggregate behavior of our economy and its public and private policy implications. (Fall and Spring) Pre-requisites: ECO124 or sophomore standing.

- **ECO306: Microeconomic Theory (4 hours)**
  General Education S2. An examination of modern price theory with specific emphasis on consumer demand, production and cost, the firm and market organization, and theory of distribution. (Fall only) Pre-requisite: ECO124.

- **ECO307: Macroeconomic Theory (4 hours)**
  General Education S2. A study of the analytical core and the central issues of the measurement and determination of the level of national income, fluctuations, and growth. Fiscal and monetary policy effects on unemployment and inflation are examined. (Spring only) Pre-requisite: ECO225.

- **ECO314: Econometrics (4 hours)**
  This course is an undergraduate course in econometrics focusing on the basics of econometrics essential to empirical research. The course will begin with the classical regression model, and then allow for violations of the classical model. The course will then focus on time series estimation methods including ARIMA modeling techniques. (Fall only) Pre-requisites: CMP114 and either ECO124 or ECO225.

- **ECO343: Money and Banking (4 hours)**
  The nature of money, the behavior of commercial banks, and the function of the Federal Reserve System are examined. The role of money in the economy is analyzed within the framework of the classical, Keynesian, and monetarist theories of the demand for money. (Fall only) Pre-requisite: ECO225.

- **ECO363: International Economics (4 hours)**
  A survey of the global economy, with emphasis on international trade theory, international finance, monetary markets, commercial policies, economic integration, and major international institutions. (Spring only) Pre-requisites: ECO124 and ECO225.

- **PPE499: Capstone in Philosophy, Politics, and Economics (4 hours)**
  The capstone course will have 4 components. 1) A major research paper: Each capstone student will propose and write a research paper on a topic approved by the capstone instructor. 2) Oral defense: each student will present and defend his or her research project to a panel of faculty in the major and other capstone students. 3) Comprehensive exam: each student will take an exam created by faculty in the major to test their mastery of the broad content of the major. 4) Transition plan: Students will be assisted in preparing a transition plan to career or graduate school as described in the capstone experience guidelines. Prerequisite: Senior standing as a PPE major. (Sp)
EDU102: Exploration in Education and Society (4 hours)
The purpose of this course is to introduce the field of education as a significant cultural function in society. Through active engagement in class discussion, interaction with guest speakers, and participation in field explorations, the course examines a variety of elements in the social and cultural environments in which schooling occurs. Students will: (a) reflect on their own experiences as learners, (b) reflect on the environments in which formal and informal education occurs, (c) examine elements of and issues faced by professionals working in various traditional and non-traditional educational settings, (d) critically review the knowledge, skills and dispositions necessary for doing such work, (e) survey the historical and philosophical foundations of education, and (f) learn how education is grounded in sociocultural theories. (Fa, Sp, Su-occasionally)

EDU202: Intercultural Context in Education (4 hours)
This course is designed to foster cultural awareness at the individual and systemic levels and to promote equity, anti-racist behaviors, and social justice in educational practices. Intercultural and multicultural education describe education policies and practices that recognize, accept, and affirm human differences and similarities related to gender, race, religion, linguistic diversity, disability, class and sexuality. To aid in this process, students will work to understand and question how differences and norms are conceptualized. A required twenty-hour field experience supplements the content and context of the course. Prerequisites: EDU 100/EDU 102 and completion or concurrent enrollment in EDU 203. Concurrent enrollment in EDU 261 and EDU 210 required (Fa, Sp)

EDU203: Educational Psychology (4 hours)
This course examines how children, early adolescents, and adolescents develop and learn, with particular emphasis upon the classroom. Students will engage in the study of principles and theories of cognitive, social, emotional, moral and physical development, complex cognitive processes, memory, constructivism, motivation, and the creation of a positive learning environment. Prerequisite: Completion of or concurrent enrollment in EDU 100/EDU 102. (Fa, Sp)

EDU210: Field Experience in Educ I (1 hours)
A pre-student teaching practicum in an assigned classroom in an area school. Grade level or subject is determined by the student’s certification intentions. Throughout the semester, students complete a minimum of 40 student contact clock hours in the assigned classroom. This is achieved by attending a minimum of ten (10) full school days. Seminars accompany experiences in the school. Students must attend all seminars to receive course credit. A multicultural placement, determined by the Education Placement Coordinator is required in either EDU 210 or EDU 311/312. Students are responsible for their own transportation to urban (and other) placements not within walking distance of campus. S/U graded. (Fa, Sp) Prerequisites: EDU 102. Satisfactory results of a T.B. test and background and criminal history check are required.

EDU215: Intercultural Immersion Field Experience I (2 hours)
The purpose of this course is to provide participating students with a cross cultural and/or international immersion experience. The course carries CCE credit in the Pioneer Core. Open to non-education students. All students are engaged through reflection, reading and seminar discussion. Seminars will be held prior to, on-site and post-experience. For education students, the Carroll University field experience program promotes reflective classroom practice commensurate with the Education Department's Guiding Principles and Wisconsin Model Standards. S/U graded. Prerequisites: EDU 100/EDU 102, completion or concurrent enrollment in EDU 203, or consent of instructor. Additional requirements are subject to specific placement. (Occasional offerings in Fa, Sp, Wn, Su)

EDU246: Development, Observation and Assessment in Early Childhood (4 hours)
This course is focused on the study of principles and theories of child development from birth to age eight in cognitive, affective, psychomotor, social, and language domains. Cross-cultural perspectives of development are considered. Students will gain strategies for observation and its uses both as a curriculum guide and as an assessment tool. The course offers an overview of other forms of assessment, including criterion-referenced and standardized tests. Students will learn about developmentally appropriate assessment tools.

EDU248: Early Childhood Education: Home, School, and Community Relationships (4 hours)
This course focuses on developing an understanding and acceptance of the diversity of contemporary families and the range of strengths that they can contribute to the education process. Students will develop skills in communicating with, working with, and educating parents, families, advisory groups, community resource agencies, pupil services, and support staff. Additionally, this course examines home and classroom behavior management strategies appropriate for young children. Prerequisite: EDU 203. (Fa, Sp)

EDU249: Development, Observation, and Assessment of Young Children with Exceptional Needs (4 hours)
This introductory course provides principles and theories of child development from birth to age eight in cognitive, affective, psychomotor, social and language domains. The course will provide the core
EDU306: Literacy in Middle/Secondary School Content Areas (3 hours)
Prerequisites: EDU 203 and admission to TEP. Concurrent enrollment in EDU 303 required. (Fa)
This course explores literacy as it relates to both print and non-print mediums. Students examine a variety of strategies for content area literacy instruction and assessment to enhance student learning. A practicum tutoring a middle or high school aged learner is a requirement of this course. Prerequisites: EDU 203 and admission to the TEP. Concurrent enrollment in EDU 353 is required for EA-A candidates. (Sp)

EDU270: Using Data and Assessment for Planning, Instruction, and Learning (2 hours)
This course will present students with the best current practices and principles of assessment across the curriculum of elementary schools. The characteristics and uses of both formal and informal assessment instruments and procedures will be studied with emphasis on formative assessment and principles for effective standards-based instruction. Students will also learn how to design, administer, and interpret a variety of assessment measures. Prerequisites: EDU 102, EDU 202, EDU 203, EDU 210, EDU 261. (Fa, Sp, Su-occasionally)

EDU301: Democracy, Schools, and Society (4 hours)
The study of social, political, philosophical, and historical issues and antecedents of K-12 schooling and curriculum. Consideration of traditional, alternative, and innovative approaches to curriculum. Study of social concerns affecting the schools; the organization, administration, and financing of schools; alternative schooling; the world of work and the future of education. Prerequisite: EDU 202, 203. Concurrent enrollment in EDU 311 and EDU 360 required. (Fa, Sp)

EDU303: Instructional Design for the Early Adolescent/Adolescent Learner (2 hours)
This course provides a practical overview of early adolescent/adolescent behavior, curriculum planning, instructional methodology, and assessment applicable to teaching and learning at the secondary level. As a class, we will work to understand and question how we conceptualize what it means to be a teacher and a learner. Candidates explore how teachers engage in practices that establish high expectations for all students and encourage, develop, and support learning by all students. Prerequisites: EDU 203 and admission to TEP. Concurrent enrollment in EDU 305 required. (Fa)

EDU264: Collaboration for Academic, Social and Career Development (4 hours)
This course is designed to develop the knowledge, skills, and dispositions in future educators to effectively interact and collaborate with families, colleagues, and community agencies. Candidates will consider the perspectives of families of children with special needs and disabilities. Candidates will identify how to develop collaborative relationships with students and families. Students will gain a deeper understanding of agency systems, develop an awareness of the wide range of services provided by community agencies, and consider how families and schools can access these services. Students will understand contemporary legislation, issues, and trends pertaining to the career and vocational development of students with special needs. Prerequisite: EDU 261. (Sp, Su-occasionally)

EDU305: Foundations of Reading (3 hours)
This course explores the foundations of reading through the examination of literacy theories, research, and best practices. Students explore oral language development, phonemic awareness, phonics instruction, vocabulary and word study, and reading comprehension strategies. Students examine a variety of formal and informal literacy assessments and how they are used to inform instruction for individual learners. Prerequisites: EDU 203 and admission to TEP. Concurrent enrollment in EDU 303 required. (Fa)

EDU306: Literacy in Middle/Secondary School Content Areas (3 hours)
This course examines literacy acquisition in discipline specific areas for learners in grades 6-12. Students explore literacy as it relates to both print and non-print mediums. Students examine a variety of strategies for content area literacy instruction and assessment to enhance student learning. A practicum tutoring a middle or high school aged learner is a requirement of this course. Prerequisites: EDU 203 and admission to the TEP. Concurrent enrollment in EDU 353 is required for EA-A candidates. (Sp)
- **EDU311: Field Experience in Education II (1 hours)**
  A pre-student teaching practicum in an assigned classroom. Grade level or subject is determined by the student's certification intentions. Throughout the semester, students complete a minimum of 40 student contact clock hours in the assigned classroom. This is achieved by attending a minimum of ten (10) full school days. Campus seminars accompany experiences in the school. Students must attend all seminars to receive course credit. The 311 field experience is distinguished from the 210 experience by an added measure of student responsibility for active involvement in classrooms. Seminars will emphasize preparation for and discussion of the added involvement. A multicultural placement, determined by the Education Placement Coordinator, is required in either EDU 210 or EDU 311/312. Students are responsible for their own transportation to placements not within walking distance of campus. This experience must be completed at Carroll and not in a school district where the candidate is employed. S/U graded. Prerequisites: Successful completion of EDU 102, EDU 210 or EDU 215, completion of or concurrent enrollment in a methods course, satisfactory results of a T.B. test and admission to the TEP are required. (Fa, Sp)

- **EDU312: Field Experience-Adaptive Educ (1 hours)**
  A pre-student teaching practicum in a non-categorical special education setting. Students work between four and six hours per week for a semester total of 40 clock hours. Or this can be achieved by attending a minimum of ten (10) full school days, a consideration for candidates who work Full Time. Campus seminars accompany experiences in the school. The 312 field experience is distinguished from the 210 experience by an added measure of student responsibility for active involvement in classrooms. Seminars will emphasize preparation for and discussion of the added involvement. A multicultural placement, determined by the Education Placement Coordinator, is required in either EDU 210 or EDU 311/312. Students are responsible for their own transportation to placements not within walking distance of campus. This experience must be completed at Carroll and not in a school district where the candidate is employed. S/U graded. Prerequisites: EDU 102, EDU 203, EDU 210 or EDU 215, EDU 261, completion of or concurrent enrollment in a methods course, satisfactory results of a T.B. test, a criminal history and background check, and admission to the TEP. (Fa, Sp)

- **EDU315: Intercultural Immersion Field Experience II (2 hours)**
  The purpose of this course is to provide participating students with a cross cultural and/or international immersion experience. The course carries CCE credit in the Pioneer Core. Students are engaged through reflection, reading and seminar discussion. Seminars will be held prior to, on-site and post-experience. The Carroll University field experience program promotes reflective classroom practice commensurate with the Education Department's Guiding Principles and Wisconsin Model Standards. S/U graded. Prerequisites: EDU 100/EDU 102, EDU 210 or EDU 215, completion or concurrent enrollment in a methods course, admission to the TEP, additional requirements are subject to specific placement. (Occasional offerings in Fa, Sp, Wi, Su)

- **EDU321: Social Studies in the Elementary /Middle School (2 hours)**
  This course is an examination of the objectives and techniques of teaching social studies in the elementary/middle school. Instruction includes the study of curriculum materials, methods, assessment and evaluation. Curriculum integration is examined through literacy and social studies. Students are challenged to develop lessons and use instructional strategies that help prepare children for active citizenship in a democratic and multicultural society. This course also provides opportunities for practical application of the course content. Prerequisites: EDU 203 and admission to the TEP. Concurrent enrollment in EDU 324 and EDU 327 required. (Fa, Sp)

- **EDU323: Literacy I: Early Childhood - Middle Childhood (4 hours)**
  This course examines literacy in the social, intercultural and educational context. Emphasizes using children's literature to create the reading and language arts curriculum through a balanced literacy approach. Using the Common Core Standards as the framework, this comprehensive literacy program has students explore and incorporate effective instructional and assessment strategies to develop literacy in early childhood and middle childhood learners. A 10 hour tutoring practicum in an elementary school is required. Tutoring hours will be either before or after school hours. Prerequisites: EDU 202, EDU 203 and admission to TEP. Concurrent enrollment with EDU 326 required. (Fa, Sp)

- **EDU324: Literacy II: Middle Childhood - Early Adolescence (4 hours)**
  This course examines literacy in the social, intercultural and educational context. Throughout the course, a variety of children's and early adolescent literature is used to model a comprehensive literacy approach. Using the Common Core Standards as the framework, this comprehensive literacy program has students explore, incorporate, and implement effective instructional and assessment strategies to develop literacy in middle childhood and early adolescent learners. A semester-long practicum in an elementary school is required. Tutoring hours will be either before or after school hours. Prerequisites: EDU 323 and admission to TEP. (Fa, Sp)

- **EDU326: Mathematics in the Elementary/ Middle School (4 hours)**
Students develop understanding of mathematics content and pedagogies to facilitate teaching and learning in K-8 classrooms. Emphasis is on problem solving and constructivism and their implications to mathematics instruction. Course includes analysis of the CCSSM Content and Practice standards and NCTM’s Principles and Standards. Course includes fieldwork to support students’ understanding of how children learn mathematics. Students implement appropriate and effective assessments. (Fa, Sp)

Prerequisites: EDU 203, MAT 201, and admission to the TEP. Concurrent enrollment in EDU 323 required. (Fa, Sp)

- **EDU327: Science Methods in the Elementary/Middle School (2 hours)**
  This course is designed to develop competencies in selecting methods and resources for teaching elementary and middle level science. All strands of science will be explored including environmental education. An emphasis is placed on effective instructional strategies, assessment, and the relationship of science to all other subject areas. Prerequisites: EDU 203 and admission to the TEP. Concurrent enrollment in EDU 321 and EDU 324 required. (Fa, Sp)

- **EDU330: Introduction to Diagnostic Assessment of Students with Exceptional Needs (4 hours)**
  This introductory course provides core theoretical and practical background necessary to evaluate students having exceptional educational needs. An overview of educational assessment and diagnosis of individuals with disabling conditions will be provided. Emphasis will be placed upon testing for IEP development and teaching. Prerequisites: EDU 261. (Fa)

- **EDU332: Instructional Strategies for an Inclusive Classroom (4 hours)**
  This course is designed to facilitate the education student’s knowledge, skills and disposition to increase the effectiveness of teaching for the inclusion of children with special needs in the classroom. This will include content, strategies, and structuring the environment to make inclusion a viable experience for the special needs student. Classroom management will also be explored as it relates to the special needs of the students. Prerequisites: EDU 261. (Fa, Sp)

- **EDU334: Language Development and Disorders of the Exceptional Child (4 hours)**
  This course is designed to present background information about normal language development as a foundation for evaluating speech and language disorders in children. Emphasis will be placed on current techniques for the identification of language disorders in school-age children as well as methods for enhancing their language skills. (Sp) Prerequisites: EDU 261 and admission to the TEP.

- **EDU341: Integrated Curriculum in Early Childhood I - Literacy and Social Emotional Development (4 hours)**
  This course focuses on facilitating the development of literacy and social emotional skills in young children based on their developmental and cultural characteristics. Students gain experiences in curriculum development, assessment and implementation in the areas of social studies, environmental education, literacy (reading, language arts, children’s literature), and social emotional development. Prerequisites: EDU 249, and admission to the TEP. (Fa)

- **EDU342: Integrated Curriculum in Early Childhood II: Physical and Mathematical Knowledge (4 hours)**
  This course focuses on facilitating the development of physical and mathematical knowledge in young children based on their developmental and cultural characteristics. Students gain experiences in curriculum development, assessment, and implementation in the areas of science, physical education, mathematics, and the creative arts. This course also examines children’s interests and readiness as opportunities to employ emergent curriculum and incidental teaching. Prerequisites: EDU 341 and admission to the TEP. (Fa)

- **EDU349: Curriculum Development in Special Education/Special Education Methods (4 hours)**
  This course builds the foundation for development of developmentally appropriate curriculum based upon child development, learning theory, and research for all children birth through age eight, including those with developmental delays and disabilities. Students study effective teaching strategies, learn how to adapt curriculum for individual differences, study the organization of curriculum and instruction for special education students with a focus on literacy, socio-emotional, and social studies areas. This course also explores child find strategies, informed referral networks, evaluation team responsibilities, individualized family service plans, individualized education program processes, and pertinent state and federal laws, regulations, and policies. (Fa) Prerequisites: EDU261, EDU341 and Admission to TEP.

- **EDU353: Special Methods in Teaching Secondary School Subjects (2 hours)**
  Daytime clinical experiences in a secondary school required. Examination of models of learning and instruction in specific subject-matter areas, including 25 hours of work in an assigned school to directly apply methodology. Special emphasis on selection, use, and preparation of resources for the various areas. Attention given to assessment, technology, curriculum development and evaluation. Prerequisites: EDU 203, EDU 303, and admission to the TEP. Concurrent enrollment in EDU 306 required for EA-A candidates. (Sp)

- **EDU355: Special Methods in Teaching Elementary and Secondary Subjects - Modern Languages (3 hours)**
  Daytime clinical experiences in a secondary school required. Examination of models of learning and instruction in specific subject-matter areas, including 25 hours of work in an assigned school to directly
apply methodology. Special emphasis on selection, use, and preparation of resources for the various areas. Attention given to assessment, technology, curriculum development and evaluation. Required for all Modern Language majors. Prerequisites: EDU 203, EDU 304, EDU 306 or permission from Chair for concurrent enrollment, and admission to the TEP. (Sp)

- **EDU360: Teaching and Learning with English Language Learners (4 hours)**
  This course is designed to help foster an understanding of the English Language Learner and the role of the educator as an effective advocate for students. As a class, we will identify the English Language Learner, consider aspects of language acquisition and linguistics, explore legal implications, and observe various program models. To aid in this process, we will outline effective strategies to instruct and engage the English Language Learner. Students will be encouraged to continue their advocacy for the English Language Learner as they progress through the teacher development process and their ongoing professional practice. Prerequisites: EDU 202 and EDU 261. Concurrent enrollment in EDU 301 and EDU 311 required. (Fa, Sp)

- **EDU372: Instructional Design and Methodology for Students with Mild to Moderate Learning Disabilities (2 hours)**
  This course is designed to provide a background in, as well as practical opportunities with, general methods and materials appropriate for working with students with disabilities at the elementary and middle level. Emphasis will be placed on the methods, materials, resources, requirements and responsibilities of teachers working with students who have mild to moderate academic disabilities including, but not limited to specific learning disabilities. Students will explore the development, implementation and monitoring of Individualized Education Plans (IEPs) related to instructional planning for students with disabilities within the general curriculum. The course also focuses on the role of the special educator in the school community. Prerequisites: EDU 261 and admission to TEP. Concurrent enrollment in EDU 373 required. (Fa, Sp-occasionally)

- **EDU373: Instructional Design and Methodology for Students with Emotional/Behavioral Disabilities (2 hours)**
  This methods course provides core theoretical and practical background necessary to evaluate, support and teach students with emotional and/or behavioral disabilities at the elementary and middle level. Emphasis will be placed on the methods, materials, resources, requirements and responsibilities of teachers working with students who have been identifies with EBD. Candidates will explore the development, implementation and monitoring of Individualized Education Plans (IEPs) related to instructional planning for students with disabilities within the general curriculum. The course also focuses on the role of the special educator in facilitating special education services with families and the school community. Prerequisites: EDU 261 and admission to TEP. Concurrent enrollment in EDU 372 required. (Fa, Sp-occasionally)

- **EDU391: Special Topics in Education (1 TO 4 hours)**
  Application of theories and concepts in practicum experience focused on a specific area of interest. Open to Educational Studies majors only. (Fa, Sp).

- **EDU398: Independent Study in Education (1 TO 4 hours)**
  Extensive study of an approved subject area, or problem in education, in which the student has a special interest or need. Approval of divisional dean and consent of instructor. (Fa, Sp, Su)

- **EDU400: Capstone in Elementary Educational Studies (4 hours)**
  A research seminar and practicum culmination of the academic and experiential work of the Educational Studies major. Students complete a project that explores the Education Program’s Guiding Principles in connection with gateways to educational employment outside of PK-12 schools. Individual practicum placements are made to capitalize on student interests. Placements are approximately 8 weeks long. Open only to Educational Studies majors. Prerequisites: Senior Standing. (Fa, Sp)

- **EDU409: Secondary and K-12 Student Tchng (6 hours)**
  The student teaching experience is an intensive, comprehensive requirement that provides students with a culminating opportunity to apply theory, methods and skills learned throughout their teacher preparation in a school setting, working under the direction and guidance of a master classroom teacher. A university supervisor is responsible for observing and evaluating the student teacher throughout the classroom teaching assignments. Placement is limited to schools that are within 30 miles of Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach into June. Prerequisites: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), and/or ACTFL Language Test, and/or FoRT, admission to the student teaching program, education faculty approval, satisfactory physical exam, TB test, and criminal history and background check. (Fa, Sp).

- **EDU410: Secondary and K-12 Student Tchng (6 hours)**
The student teaching experience is an intensive, comprehensive requirement that provides students with a culminating opportunity to apply theory, methods and skills learned throughout their teacher preparation in a school setting, working under the direction and guidance of a master classroom teacher. A university supervisor is responsible for observing and evaluating the student teacher throughout the classroom teaching assignments. Placement is limited to schools that are within 30 miles of Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach into June. Prerequisites: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), and/or ACTFL Language Test, and/or FoRT, admission to the student teaching program, education faculty approval, satisfactory physical exam, TB test, and criminal history and background check. (Fa, Sp)

EDU419: Early Childhood/Elementary Student Teaching (6 hours)
The student teaching experience is an intensive, comprehensive requirement that provides students with a culminating opportunity to apply theory, methods and skills learned throughout their teacher preparation in a school setting, working under the direction and guidance of a master classroom teacher. A university supervisor is responsible for observing and evaluating the student teacher throughout the classroom teaching assignments. Placement is limited to schools that are within 30 miles of Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach into June. Prerequisites: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), and/or ACTFL Language Test, and/or FoRT, admission to the student teaching program, education faculty approval, satisfactory physical exam, TB test, and criminal history and background check. (Fa, Sp)

EDU420: Early Childhood/Elementary Student Teaching (6 hours)
The student teaching experience is an intensive, comprehensive requirement that provides students with a culminating opportunity to apply theory, methods and skills learned throughout their teacher preparation in a school setting, working under the direction and guidance of a master classroom teacher. A university supervisor is responsible for observing and evaluating the student teacher throughout the classroom teaching assignments. Placement is limited to schools that are within 30 miles of Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach into June. Prerequisites: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), and/or ACTFL Language Test, and/or FoRT, admission to the student teaching program, education faculty approval, satisfactory physical exam, TB test, and criminal history and background check. (Fa, Sp)

EDU422: Special Student Teaching Practicum (1 TO 5 hours)
A practicum for the licensed student who is extending teaching certification beyond his/her present license. University supervised student teaching at the level(s) and/or subject for which additional certification is desired. A portfolio and demonstrated proficiency in the Wisconsin Teacher Standards is also required. Additional Notes: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), and/or ACTFL Language Test, and/or Foundations of Reading Test required prior to endorsement for licensure. (Fa, Sp)

EDU423: Special Education Student Teaching (6 hours)
The student teaching experience is an intensive, comprehensive requirement that provides students with a culminating opportunity to apply theory, methods and skills learned throughout their teacher preparation in a school setting, working under the direction and guidance of a master classroom teacher. A university supervisor is responsible for observing and evaluating the student teacher throughout the classroom teaching assignments. Placement is limited to schools that are within 30 miles of Carroll. Placement within walking distance of Carroll cannot be guaranteed; therefore, students must have transportation. Student teaching is considered a full load; no other courses should be added. Because of state requirements several weeks will be added to the Carroll semester to coincide with school district semesters. Fall student teachers will begin in August and teach into January. Spring student teachers will begin in January and teach into June. Prerequisites: Successful completion of appropriate PRAXIS II Content Knowledge Exam(s), and/or ACTFL Language Test, and/or FoRT, admission to the student teaching program, education faculty approval, satisfactory physical exam, TB test, and criminal history and background check. (Fa, Sp)
Engineering

- **GEN100: Engineering Seminar I (1 hours)**
  New engineering students will be given opportunities to develop and improve problem solving, computer literacy and study skills to maximize their chances for success in their university careers and prepare them for subsequent engineering courses. Topics include: making the transition from high school to university; time management; exploration of the engineering disciplines, learning styles, introduction to computer skills including spreadsheets, word processing and presentation software; engineering ethics; introduction to engineering methods. (Fa)

- **GEN101: Engineering Seminar II (1 hours)**
  New engineering students are given opportunities to explore the engineering programs through interdisciplinary projects. Emphasis will be placed on written and oral communication skills, data collection and analysis, computer application skills and group work. (Required course fee) (Sp) Prerequisite: GEN 100.

- **GEN105: Engineering Graphics (4 hours)**
  Problems relative to points, lin's laws, work-energy methods, linear and angular momentum. (Fa, even years) Prerequisite: PHY 203, and MAT 207 or concurrent registration in MAT 207.

- **GEN210: Statics and Dynamics (4 hours)**
  Principles of statics and dynamics with applications in engineering. Topics include force/movement vectors, resultants, distributed loads, internal forces in beams, properties of areas, moments of inertia and the laws of friction, kinematics and kinetics of particles, rigid bodies in translation, rotation and general plane motion, Newton's laws, work-energy methods, linear and angular momentum. (Fa, even years) Prerequisite: PHY 203, and MAT 207 or concurrent registration in MAT 207.

- **GEN310: Strengths of Materials (4 hours)**
  Simple stress and strain; design and investigation of joints, beams, torsion members and columns; evaluation of shear, moment, slope and deflection of beams and combined stresses. (Sp, odd years) Prerequisite: GEN 210.

- **GEN320: Advanced Circuits and Electronics (2 hours)**
  Expanding on topics covered in PHY 204 and 301, analog circuits are treated in greater detail, including steady-state AC circuits, transfer functions, transient current dynamics, circuit analysis, phasors, follower circuits, and operational and transistor amplifiers. Additional analog topics include diodes, transistors (bipolar junction and field effect), elementary amplifier circuits, transistor limitations, comparators, and oscillators. Lectures and laboratories are expanded to include digital electronics, electronic devices and applications. Digital topics include digital circuits, digital logic, flip flops, counter, memory, A/D and D/A conversion. Additional topics may include arithmetic units and microprocessors. (Sp, even years) Prerequisite: PHY 204.

- **GEN320L: Advanced Circuits and Electronics Laboratory**
  Laboratory component for GEN320.

- **GEN380: Engineering Internship (4 hours)**
- **ENG140: Introductory Language Skills for Liberal Arts (4 hours)**
  An intensive review of the basic skills required by a Liberal Arts education - reading, writing and critical thinking. May not be counted toward an English major or minor. (Enrollment by assignment only.) (Fa, Su)

- **ENG162: Science Fiction and Gender (4 hours)**
  General Education H1. In this course, students will interrogate science fiction's role in exploring cultural constructions of gender. In addition, this course will acquaint students with the questions and critical conversations that shape both the study of science fiction and the study of gender. ENG 170 is recommended prior to enrollment. (SP)

- **ENG164: American Indian Literature and Spirituality (4 hours)**
  General Education H1. An introduction to the study of American Indian literature and cultures, representing select geographical locations, through literature, film, and primary sources.* Students will examine the importance of storytelling in reflecting, maintaining, and shaping tribal cultures, identities, histories, and traditions. *Course texts will represent a selection of geographically diverse American Indian cultures that will always include a Great Lakes Indian tribe to promote understanding of local cultural diversity. (Sp)

- **ENG165: Writing the Body: Cultural Explorations of Race, Gender and Class (4 hours)**
  General Education H1. This course explores how different cultures write meaning onto bodies, the mechanisms used to write those meanings, and the impact those meanings have on the bodies so inscribed. In general, this course looks at how culture uses the body as a site for enacting cultural practice and understanding. (Fa)

- **ENG170: Writing Seminar (4 hours)**
  Required for all first year students. Through critical reading - and with special attention to language, audience, purpose and structures - students develop effective approaches to writing. May not be counted toward an English major or minor. (Fa, Sp, Su)

- **ENG170H: Writing Seminar (4 hours)**
  Required for all first year honors program students. Students develop effective approaches to writing to an advanced degree. May not be counted toward an English major or minor. (Sp)

- **ENG190: Intro to Creative Writing - Imagination and Rhetoric (4 hours)**
  In this workshop, students will learn the conventions of three major genres of creative writing - fiction, non-fiction and poetry - as they develop their own process of creating these texts. This course is designed as an ideal introduction to creative writing and the workshop format for those students who are curious about, yet perhaps unfamiliar with, the area. (Fa)

- **ENG206: Fiction Writing (4 hours)**
  General Education F1. By studying master works of short fiction selected from contemporary authors and by participating in writing workshops, students will work to develop and refine their skills of writing fiction. (Sp)

- **ENG207: Poetry Writing (4 hours)**
  General Education F1. In this workshop, students will learn the conventions of poetry writing by studying master works of poetry and writing their own poems. (Fa)

- **ENG210: African American Literature (4 hours)**
  General Education H1. Students will read and respond to a variety of African-American literature - novels, poems, plays, autobiographies, short stories, and commentaries. The goal is that students will be able to write thoughtfully about the ethics and aesthetics of these works, and will more fully appreciate and understand the relationship between literature, history, and cultural values. ENG 170 is recommended prior to enrollment. (Fa, even years)

- **ENG211: Intro to Literary Study I - Poetry (4 hours)**
  General Education H1. By examining numerous classic and contemporary examples, students will consider how poems are constructed to achieve their meanings. Numerous poetic elements and forms of analysis will be defined and discussed, and students will have the opportunity to analyze poetry in discussions and in writing. (Fa)

- **ENG212: Intro to Literary Study II - Short Fiction & Drama (4 hours)**
  General Education H1. This course teaches students to originate questions about literature and to formulate strategies to answer those questions. In addition to reading a wide variety of authors, students will have practice with using various methods of literary analysis. (Sp)

- **ENG214: Global Film Theory and Criticism (4 hours)**
  General Education H1. This course will help develop a critical vocabulary for analyzing and writing about film in a global context. This course will supplement film viewings with reading, discussion, and writing activities to improve student's ability to craft arguments based in evidence. (SP odd)

- **ENG219: Introduction to Linguistics (4 hours)**
  Students develop their own view on language policy, both in the classroom and in public arenas. Beginning with language production, students will piece together the fascinating story of human language
development. In papers, discussions, and presentations, students will investigate social, psychological, and historical implications of language study.

- **ENG226: Africa: Literature and Culture of Its Many Nations (4 hours)**
  General Education H2. This course is designed to develop an awareness and understanding of the varied voices contained in contemporary African literature. In addition to examining these works as artistic productions, the course situates the narratives within the historical and political circumstances that give rise to them. ENG 170 is recommended prior to enrollment. (Fa)

- **ENG240: British Literature I - Medieval to 1700 (4 hours)**
  Course content focuses on major movements, authors, and texts in English Literature, beginning with the works of early Anglo-Saxon writers and continuing through the 17th century. (Fa)

- **ENG241: British Literature II - 1700 to Contemporary (4 hours)**
  Course content focuses on major movements, authors, and texts in English Literature, beginning with the works of the late 18th century and continuing through the present day. (Sp)

- **ENG242: American Literature: One Nation, Many Voices (4 hours)**
  General Education H2. This course looks at the ways America's original narrative, which was initially dominated by an exclusively Puritan perspective, has evolved, and continues to evolve, in response to historical events and an every changing cast of characters. (Sp even years)

- **ENG255: Postcolonial Literature and Theory (4 hours)**
  General Education H1. Literature of indigenous world cultures (non-Western-Eurocentric literature), to consider relationships between place and cultural identity, constructions of cultural difference, relationships between cultures, and operations of domination and resistance. The course also looks at the roles writers play in establishing or reestablishing cultural identity and addresses issues of ethics and morality in crossing cultures. (Fa even, Sp) (255H: Fa odd years)

- **ENG255H: Postcolonial Literature and Theory (4 hours)**
  General Education H1. Literature of indigenous world cultures (non-Western-Eurocentric literature), to consider relationships between place and cultural identity, constructions of cultural difference, relationships between cultures, and operations of domination and resistance. The course also looks at the roles writers play in establishing or reestablishing cultural identity and addresses issues of ethics and morality in crossing cultures. Acceptance to the Honors Program required. (Fa, Sp, Su) (255H: Fa, odd years)

- **ENG288: Spectacle and Text: Visual Culture 1700 - 1920 (4 hours)**
  General Education H1. This course is designed to introduce you to the multiple texts that inundated the British and American visual landscape before the age of "talking films". As we proceed through the class, we will ask how these technologically and aesthetically innovative forms influenced Anglo-American subjectivity and identity. (FA odd)

- **ENG298: Independent Study in English (1 TO 4 hours)**
  Prerequisites: Junior standing, approval of the divisional dean and consent of the instructor.

- **ENG299: Introduction to Medical Humanities (4 hours)**
  General Education H2. This course looks at the ways in which narratives surrounding illness become constructed. In addition to comparing the patient and physician perspectives, the course looks at ways in which perception of illness reflects both historical and cultural understandings. (Sp even)

- **ENG300: Great Authors (4 hours)**
  General Education H2. Intensive study of a body of work by an author deemed 'great' by scholars and critics. This study will include relevant critical and biographical readings and discussion of what, ultimately, makes the author 'great.' ENG 170 is recommended prior to enrollment. (Fa, odd years) Prerequisite: Junior standing or consent of the instructor.

- **ENG301: Chaucer (4 hours)**
  General Education H2. Intensive reading of the works of Geoffrey Chaucer, with special focus on the ways in which he both operated within and transcended the artistic conventions of his period. (Sp, odd years) Prerequisite: Junior standing or consent of the instructor.

- **ENG303: Milton and Moral Choice - His Age and Ours (4 hours)**
  General Education H2. Study of John Milton's poetry and prose, supplemented by other seventeenth century writers, concentrating on issues of the nature of Good and Evil, Moral Choice, Free Will, Guilt and Innocence, Gender, Desire, War, and Censorship. Discussion focuses on how these issues represent some of the most pressing anxieties of Milton's time and our own. (Fa, even years) Prerequisite: Junior standing or consent of the instructor.

- **ENG304: Shakespeare: From Stage to Screen (4 hours)**
  General Education H2. Intensive study of representative histories, comedies, tragedies and late plays, with a focus on understanding their historical contexts as well as how the plays have been adapted in recent films. (Sp, even years) Prerequisite: Junior standing or consent of the instructor.

- **ENG305: Advanced Exposition and the Rhetorical Tradition (4 hours)**
General Education H2. Rhetorical Tradition
Students will read and analyze rhetorical texts ranging from Classical authors like Aristotle, to Modern and Postmodern theorists like Burke and Foucault. Theories learned from these texts will be used to examine historically important American speeches. (Fa, even years)

- **ENG309: Romantic and Victorian Literature (4 hours)**
  Students will read major writers of the nineteenth century in their historical context with emphasis on major poetry and prose, including the novel, in relation to literary and cultural history. (Sp, odd years) Prerequisite: Junior standing or consent of the instructor.

- **ENG312: Modernism (4 hours)**
  General Education H2. Students read major works of the modern and postmodern periods in relation to prevailing cultural constructions of self, art, and the nature of reality. Students will also consider the causes and consequences of the widening gulf between highbrow literature and popular fiction. (Fa, odd years) Prerequisite: Junior standing or consent of the instructor.

- **ENG323: Renaissance English Literature (4 hours)**
  Verse, prose and drama of the Early Modern Period, including works by Behn, Donne, Herbert, Jonson, Marlowe, Marvell, Milton, Spenser, Sidney and others. The course studies sixteenth and seventeenth century literary traditions as they reflect and construct culture, as well as the ways the Early Modern Period anticipates and resists issues such as power, gender, love and faith in our time. (Sp, even years) Prerequisite: Junior standing or consent of the instructor.

- **ENG333: Advanced Creative Writing (4 hours)**
  General Education F2. Students will have the opportunity for advanced study in the genre of their choice: fiction or poetry. Students in this workshop will build upon the foundational skills they studied in ENG 206 or ENG 207. Readings will focus on understanding and analyzing the conventions of the student’s chosen genre. Students will do extensive writing in their genres, and student work will be discussed and analyzed in a writing workshop format. (Fa, odd years) Prerequisite: ENG 206 or ENG 207.

- **ENG380: Internship in English (2 TO 4 hours)**
  Work experience under professional supervision with opportunities to observe and question. Written report required. Only four credits may be applied toward completion of the major. Recommended as 10th course in the major. Prerequisite: Consent of the instructor.

- **ENG398: Independent Study in English (1 TO 4 hours)**
  Prerequisites: Junior standing, approval of the divisional dean and consent of the instructor.

- **ENG480: Internship in English (4 hours)**
  Work experience under professional supervision with opportunities to observe and question. Written report required. Only four credits may be applied toward completion of the major. Recommended as 10th course in the major. Prerequisite: Consent of the instructor.

- **ENG497: Guided Senior Thesis (2 hours)**
  The thesis will be completed under the guidance of a selected faculty member. Students will create a unified thesis of revised and polished work that will be used for final assessment. Prerequisites: ENG 496 and consent of the instructor. (Sp)

- **ENG499: English Major Capstone-Advanced Literature Seminar (4 hours)**
  In the capstone, students are expected to demonstrate mastery of the five English Program Learning outcomes. Course will be conducted as an advanced literature seminar and students will read primary as well as secondary materials in order to understand and insert themselves into a contemporary critical discussion. At the end of the seminar, students will submit a senior thesis project which demonstrates scholarly research, critical engagement and literary analysis. (Fa) Prerequisite: Senior standing as an English major.
Environmental Science

- **ENV105: Earth Science (4 hours)**
  General Education N1. Introduction to the basic concepts in earth science, including the description, analysis, and interpretation of the major components of the earth's natural environment. The first part of the course introduces geologic elements of the earth system including earth materials, internal processes, and external processes. The second part of the course focuses on the structure and processes of the atmosphere, along with resulting weather patterns. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (FA, SU of even years)

- **ENV105L: Earth Science Laboratory**
  Laboratory component for ENV105.

- **ENV120: Conservation and Environmental Improvement (4 hours)**
  General Education N1. A study of global natural resources and methods used in their conservation. The course includes the basic concepts of ecological biology including interactions between the living and the non-living elements of the environment, concepts of energy transformation in physical and biological systems, the nature of the Earth's ecosystems, and the implications of continued growth of the human population. Emphasis is placed on human environmental concerns and methods to be used to study and alleviate human environmental problems. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (FA, SP, SU of odd years)

- **ENV120L: Conservation and Environmental Improvement Laboratory**
  Laboratory component for ENV120.

- **ENV120H: Conservation and Environmental Improvement (4 hours)**
  General Education N1. For students in the honors program. A study of global natural resources and methods used in their conservation. The course includes the basic concepts of ecological biology including interactions between the living and the non-living elements of the environment, concepts of energy transformation in physical and biological systems, the nature of the Earth's ecosystems, and the implications of continued growth of the human population. Emphasis is placed on human environmental concerns and methods to be used to study and alleviate human environmental problems. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (SP of even years)

- **ENV120HL: Conservation and Environmental Improvement Laboratory**
  Laboratory component for ENV120H.

- **ENV150: Climate Science (4 hours)**
  General Education N1. Changing climate is at the root of many environmental, political, and social issues because climate fundamentally impacts both natural ecosystems and human society. This course is an introduction to the scientific basis of understanding climate and climate change. Through lecture and lab activities, students will learn the structure and governing principles of the climate system, the interactions of various components of the climate system, the techniques used by scientists to monitor and predict climate, and how human and natural systems influence and are influenced by climate. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (SP)

- **ENV150L: Climate Science Laboratory**
  Laboratory component for ENV150.

- **ENV201: Problem Solving in Environmental Systems (4 hours)**
  This course takes an inquiry-based approach to address current and future environmental issues (water, energy, biodiversity loss, climate change, and agriculture/aquaculture) through a project-based problem solving approach. Environmental issues will be explored through their scientific as well as sociological, economic, and political contexts. Students will be expected to examine environmental issues through compiling information from a variety of sources - textbook, internet, popular literature, and peer-reviewed publications. The course is a pre-requisite for some upper-level biology courses and will cover critical thinking skills required in upper-level Biology and Environmental Science courses. (SP of even years)
  Prerequisite: BIO 120 or consent of instructor.

- **ENV222: Environmental Sustainability (4 hours)**
  Environmental sustainability is a broad area of study that is generally focused on prudent use of the earth's resources in the production of goods and services that humans need and want in such a way as to ensure the well-being of future generations and the earth. This lecture and lab course will be designed to give students the conceptual knowledge and practical skills to assess the sustainability of environmental system in light of human resource consumption practices. Field trips to local organizations will be used to plan and create sustainability audits (required course fee) (Sp) Prerequisite: ENV 105 or ENV 120.

- **ENV222L: Environmental Sustainability Laboratory**
  Laboratory component for ENV222.

- **ENV252: Contemporary Issues in Environmental Science (2 hours)**
  This course highlights various contemporary issues relating to the global environment with a focus on the distributional patterns of environmental problems such as natural resource depletion, food production, overpopulation, energy use, water pollution, and global climate change. This course may be used with a
prior university biology laboratory course to satisfy the environmental science requirement for teachers. (WN, SU)

- **ENV277: Natural Resource Management (4 hours)**
  The course provides an introduction to the biological and social aspects of renewable and nonrenewable natural resource management. In addition to the management of fisheries and wildlife populations and their habitats, emphasis will be placed on forestry, vegetative communities, and non-renewable (fossil fuel) natural resources. Students will read and discuss the biological, physical, and social aspects of natural resource management. (SP of odd years) Prerequisite: BIO 120

- **ENV290: Workshop-Environmental Science (2 TO 4 hours)**
  Topical workshops, field studies, or short courses are established in various areas of interest as recognized/needed by the program. For example, under this listing, the program offers a 'Cultural and Environmental Geography of Alaska' field study during May term (odd years), which is also offered for NCEP credit.

- **ENV292: Environmental Ethics (4 hours)**
  General Education P1. This course addresses historic philosophical and religious perspectives concerning the natural environment, including contemporary ethical responses to such global concerns as resource stewardship and management, technological change and impact, ecological diversity and sustainability, environmental politics and economics, energy use, population growth, and overconsumption. An emphasis will be placed on global resource challenges and social issues related to resource utilization. (Sp)

- **ENV325: Soils and Hydrology (4 hours)**
  This course addresses various technical aspects of global soil and water resources, how we utilize and impact the quality and quantity of these vital resources, and how we manage and conserve them for future generations. Topics include soil classification, soil physics, soil chemistry, soil fertility, water chemistry, hydrology, and sediment and contaminant transport. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (FA of even years) Prerequisites: ENV 105, CHE 109, CHE 110, or consent of instructor.

- **ENV367: Geographic Information Systems (4 hours)**
  General Education N2. Geographic information systems (GIS) are a specialized computer program used widely at all levels of the scientific, business, government, and educational communities to examine data that are distributed on the Earth's surface. Through lecture, students will learn the theory behind and the terminology associated with GIS and spatial data. Through lab, students will learn techniques to create, collect, manage, analyze, and present data to address environmental and other issues through hands-on use of the industry standard ESRI ArcGIS software. Students will also create and present their own GIS based research project. (Required course fee) (SP) Prerequisite: ENV105 or ENV120

- **ENV370: Earth Surface Processes (4 hours)**
  The processes, landforms, and sediments found on the Earth's surface play a fundamental role in resource management, reclamation, and many other environmental issues. This course explores the relationships between surface landforms and the underlying geologic structures; processes of wind, water, ice, and gravity that shape the Earth's surface; and the history of environmental and geologic change recorded in surface environments. Coursework focuses on qualitative and quantitative description of processes, landforms, and sediments through fieldwork and interpretation of aerial photographs, remote sensing images, and topographic and geologic maps. Four hours of lecture/discussion and one three-hour laboratory. (Required course fee) (FA of odd years) Prerequisite: ENV 105.

- **ENV370L: Earth Surface Processes Laboratory**
  Laboratory component for ENV370.

- **ENV380: Internship in Environmental Sci (2 TO 4 hours)**
  Prerequisite: Junior or senior standing and consent of major adviser. 480. Work-Oriented Internship 2-4 credits*** Prerequisite: Junior or senior standing and consent of major adviser. 491. Special Topics in Environmental Science 1-4 credits*** This course is a study of a selected topic not covered in regular course offerings. Lecture and discussion. Offered as needed. The topic will be announced prior to registration. A course fee may apply.

- **ENV391: Topics in Environmental Science (1 TO 4 hours)**
  This course is a study of a selected topic not covered in regular course offerings. Lecture and discussion. Offered as needed. The topic will be announced prior to registration. A course fee may apply.

- **ENV396: Research-Environmental Science (2 TO 4 hours)**
  Prerequisite: Junior or senior standing and consent of major adviser.

- **ENV398: Independ Study-Environmental Sci (1 TO 4 hours)**
  Prerequisite: Junior or senior standing, approval of the divisional dean and consent of the instructor.

- **ENV455: Watershed Management (4 hours)**
  This course examines the interaction of abiotic, biotic, and social components in the management of a drainage basin's terrestrial and aquatic resources. Through the examination of global watershed management literature and related case studies, students will actively engage in the development of a
watershed management plan. Class projects will focus on selected Wisconsin, upper Midwest, and Great Lakes watersheds. (Fall) Prerequisites: ENV277 or BIO225, plus junior or senior standing. ENV 367 recommended.

- **ENV480: Work-Oriented Internship (2 TO 4 hours)**
  Prerequisite: Junior or senior standing and consent of major adviser.

- **ENV491: Topics in Environmental Science (1 TO 4 hours)**

- **ENV496: Research in Environmental Sci (2 TO 4 hours)**
  Prerequisite: Junior or senior standing and consent of major adviser. (Course fee required)

- **ENV498: Independent Study in Envir Science (1 TO 4 hours)**
  Prerequisite: Junior or senior standing, approval of the divisional dean and consent of the instructor.
Exercise Science

- **ESC100: Introduction to Exercise Science (2 hours)**
  An introductory level class for exercise science majors in which the student will understand the terminology, primary concepts and trends, and current scientific research within the major subdisciplines of exercise science. Students will describe and demonstrate an understanding of the role and responsibilities of exercise science professionals to include career opportunities and paths related to pursuing a career in exercise science or related disciplines. (Fa, Sp)

- **ESC201: Sports Nutrition (4 hours)**
  The goal of this course is to develop an understanding of the interaction of good nutrition and exercise habits for optimal functioning of the human body. Focus will be on nutritional strategies to maximize energy and recovery. (Fa) Prerequisites: CHE 208 or HED 201.

- **ESC202: Advanced Sports Nutrition (4 hours)**
  This course offers an in-depth study of acute and chronic metabolic adaptations to exercise, followed by a study of diet manipulations to optimize exercise metabolism and improve performance. (Required course fee) (Sp) Prerequisites: ESC 201 or consent of instructor.

- **ESC215: Group Exercise Workshop (2 hours)**
  This course is designed to develop proficiency in teaching skills specific to group exercise instruction for apparently healthy populations. The course focus is on the standards of basic exercise guidelines, choreography and design, instructional technique and cueing, exercise supervision, and overall presentation and performance. Supporting topics include kinesiology, nutrition, and legal implications. These standards are aligned with those of the American College of Sports Medicine. (Required course fee) (Fa, Sp)

- **ESC280: Exercise Physiology (4 hours)**
  Students explore the functions and the underlying scientific mechanisms of the body’s physiological systems. The course will examine the acute response and chronic adaptations to cardiorespiratory and muscular conditioning. The students will also explore proper exercise prescription to enhance health and physical performance. (Required course fee) (Fa, Sp) Prerequisites: ANP130 or equivalent. Co-requisite: ANP140.

- **ESC280L: Exercise Physiology Lab**
  Laboratory component for ESC280.

- **ESC300: Nutrition and Health (4 hours)**
  This course investigates the functions of the six classes of nutrients: carbohydrates, lipids, proteins, vitamins, minerals, and water. The study of these nutrients will be extended to human physiological requirements, energy balance, food sources, labeling and safety, and deficiency symptoms. Students will examine healthy nutrition through the life cycle involving selected cultural groups, diet and physical activity as well as designated diseases. Students will be expected to apply their nutrition knowledge to their own lives along with a client/patient's life to assess dietary adequacy and compatibility with optimal health. (Fa, Sp) Prerequisites: ANP130 and ANP140.

- **ESC302: Exercise in Health & Disease (3 hours)**
  This course examines and applies the principles of exercise prescription for normal and special cases. Development of exercise strategies for the apparently healthy, elderly, obese, hypertensive, and cardiac patients are discussed. In addition, exercise considerations for diabetes, asthma, arthritis, osteoporosis and pregnancy are explored. (Sp) Prerequisites: ESC 210 or consent of instructor.

- **ESC303: Nutrition Assessment and Prescription (3 hours)**
  This course is designed to give the student knowledge and tools to assess the current diet and exercise habits of an athlete. Students will be able to use the assessment results to prescribe an eating plan. (Wn) Prerequisites: ESC 201.

- **ESC304: Nutrition and Fitness for Special Populations (3 hours)**
  The objective of this course is to apply the principles of sports nutrition to improve the health and functionality of special populations, including athletes with eating disorders. (Su I) Prerequisites: ESC 210 and ESC 303.

- **ESC305: Supplements for Sports Performance (2 hours)**
  The goal of this course is to provide the student with information on both safe and harmful supplementation for athletes. Specifically, the students will understand the proposed mechanism of action of a supplement, learn to evaluate the claim of effectiveness and evaluate its potential as an ergogenic aid. (Wn)

- **ESC315: Exercise Science Practicum I (1 hours)**
  This course provides students with an opportunity to observe and apply skills learned in exercise science and recreational management programs under the direction and supervision of the Exercise Science faculty. (Required course fee) (Fa, Wn, Sp, Su I) Prerequisites: ESC 210 for exercise science students, junior standing, current Professional Rescuer CPR & First Aid certification. (Course Fee Required) (Grading is on an S/U basis.)
- **ESC320: Exercise Testing and Prescription (4 hours)**
  This course provides students with the knowledge, skills, and abilities (KSA's) to appropriately select, perform and interpret preparticipation screenings, pre-exercise evaluations, commonly used field and laboratory exercise tests, basics of exercise prescription, and metabolic assessment for apparently healthy populations across the lifespan. (Required course fee) (Fa, Sp) Prerequisites: ESC280 or equivalent.

- **ESC320L: Exercise Testing & Prescription Lab**
  Laboratory component for ESC320.

- **ESC322: Kinesiology (4 hours)**
  This course explores the underlying mechanisms of human movement (anatomical and mechanical). Biomechanical terminology and principles are introduced. Students examine the laws of nature which govern movement, and how they can be applied to human movement in a manner designed to enhance performance. The course also explores the roles and functions of the nervous and musculoskeletal systems in human movement and performance and the manner in which they work individually and collectively during movement. Four hours of lecture/discussion and two hours of laboratory per week. (Required course fee) (Fa, Sp) Prerequisites: ANP130 and ANP140 or consent of instructor.

- **ESC322L: Kinesiology Lab**
  Laboratory component for ESC322.

- **ESC390: Strength & Conditioning Theory Across the Lifespan (4 hours)**
  This course is intended to prepare future professionals to apply scientifically sound principles to strength and conditioning programs. Students will study strength, speed, cardiovascular, and flexibility training through the use of concepts learned in physiology, anatomy, kinesiology, and psychology. Students will learn appropriate exercise program design, safe exercise technique, and the ways to assess physical improvement in clients. (Required course fee) (Fa, Sp) Prerequisites: ESC280 and ESC320 or equivalent.

- **ESC390L: Strength and Conditioning Theory Across the Lifespan Lab**
  Laboratory component for ESC390.

- **ESC391: Strength & Conditioning for Sport (2 hours)**
  This course presents advanced strength training and conditioning theory and practice. Designed primarily for students that may be involved in strength and conditioning for athletes at any age, the course explores periodization models and their utilization, mastery and analysis of explosive lifts, plyometric programming, speed and agility drills and programming, facility design, and ergogenic aids. (Required course fee) (Wn) Prerequisites: HSC 303, HSC 322, HSC 110 or permission from instructor.

- **ESC420: Exercise Prescription for Special Populations (4 hours)**
  This is an advanced course in clinical exercise testing and prescription that will focus on the applicable assessment techniques, treatment procedures, exercise prescription, and patient education for individuals with cardiovascular, pulmonary, metabolic, musculoskeletal and neuromuscular diseases. This course will also examine common special needs such as cognitive, psychological and sensory disorders. The course is designed to provide the student with a basic understanding of the pathophysiology and exercise responses in these special populations. (Required course fee) (Fa, Sp) Prerequisites: ESC320 or equivalent.

- **ESC421: Exercise and Sport Psychology (4 hours)**
  This course examines the psychosocial foundation of exercise and sport to include the application of research findings as they apply to performance in exercise and sport settings, such as personality/character, confidence, motivation, arousal regulation, team dynamics, goal setting, self-destructive behavior, and psychological skills training. (FA, SP)

- **ESC435: Exercise Science Practicum II (1 hours)**
  This course provides students with an opportunity to develop practical, hands-on skills and experiences in exercise science and recreation management under the direction and supervision of the Exercise Science faculty. (Required course fee) (Fa,Wn, Sp, Su I) Prerequisites: ESC 315, current Professional Rescuer CPR and First Aid certification. (Course Fee Required) (Grading is on an S/U basis.)

- **ESC440: Lifetime Weight Management and Behavior Change (4 hours)**
  This course focuses on the various components of and strategies for successful weight management. The role of diet, physical activity, and behavior modification, as well as the physiological, sociological and psychological aspects of weight management will be discussed. Students will complete lifestyle, physical activity and nutritional analyses, and design weight management programs to include tailored physical activity plans. Students will also participate in client-centered physical activity and nutritional counseling. (Sp) Prerequisites: PSY101, ESC300, and ESC320 or equivalent.

- **ESC460: Exercise Science Capstone (4 hours)**
  This course provides students with an opportunity to observe and apply skills learned within the clinical or strength and conditioning tracks in the exercise science program under the direction and supervision of Exercise Science faculty. The course is also designed to prepare students for appropriate professional organization certification exams and for post-graduate study in exercise science or other health related disciplines such as medicine, physical therapy, cardiac rehab, occupational therapy and physician assistant. (Required course fee) (Fa)
• **ESC480: Internship (12 hours)**
This course is an opportunity for students to apply theories and concepts to actual work experiences under the direction of the capstone advisor and the site supervisor. The purpose of the internship is to provide opportunities to improve skills, reach goals, and adapt to the world of work. (Fa, Sp, Su) Prerequisites: Senior standing, major requirements completed, current Professional Rescuer CPR and First Aid certification, and approval of the instructor.
French

- **FRE101: Elementary French I (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted primarily in French. (101-Fa; 102-Sp)

- **FRE102: Elementary French II (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted primarily in French. (101-Fa; 102-Sp)

- **FRE201: Intermediate French I (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted in French. (201-Fa; 202-Sp) Prerequisites: FRE 102 for FRE 201, FRE 201 for FRE 202 or equivalent.

- **FRE202: Intermediate French II (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted in French. (201-Fa; 202-Sp) Prerequisites: FRE 102 for FRE 201, FRE 201 for FRE 202 or equivalent.

- **FRE298: Independent Studies in French (2 TO 4 hours)**
  Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration.

- **FRE301: Conversation & Composition (4 hours)**
  General Education H1. Emphasis on active use of the language, and functional grammar review, including interaction in social and general conversations, vocabulary building, syntactic structures and sentence patterns. Constant focus on pronunciation and diction, with introduction to basic phonetic and linguistic principles. Reading of literary and cultural texts. Discussions of contemporary topics. Conducted in French. Prerequisites: FRE 202 or equivalent.

- **FRE307: French Civilization (4 hours)**
  General Education H2. Acquaints students with the major events of French history, including the various artistic, cultural and social elements which have contributed to making France what it is today, in order to better understand the French, their customs and their lifestyle. Oral and written reports. Conducted in French. Prerequisite: FRE 301 or consent of instructor.

- **FRE318: Topics in French and Francophone Literatures (4 hours)**
  This course focuses on the study of French literature and theater. Students will discuss, analyze and develop their own critical approach and ideas around the texts in class and through oral, written and research reports and papers. Topics are drawn from the literature of French-speaking Europe, Africa, and the Caribbean. Conducted in French. May be repeated with change of topic. Prerequisites: FRE 301 or consent of the instructor.

- **FRE398: Independent Studies in French (2 TO 4 hours)**
  Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration.
GER101: Elementary German I (4 hours)
A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the German language. Introduction to Germanic cultures, politics, history, and literature through texts in English or in English translation from German. Conducted primarily in German. (101-Fa; 102-Sp) Prerequisite for GER 102: a grade of C or better in GER 101 or consent of the instructor.

GER102: Elementary German II (4 hours)
A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the German language. Introduction to Germanic cultures, politics, history, and literature through texts in English or in English translation from German. Conducted primarily in German. (101-Fa; 102-Sp) Prerequisite for GER 102: a grade of C or better in GER 101 or consent of the instructor.

GER201: Intermediate German I (4 hours)
Continued practice in comprehension, speaking, reading, and writing. Review of and elaboration in grammatical structures, composition, and vocabulary building serve as aids in the development of conversational ability. Growth in reading skills and cultural enrichment produced through readings on contemporary German life. Conducted in German. (201-Fa; 202-Sp) Prerequisites: a grade of C or better in GER 102 or consent of the instructor for GER 201; a grade of C or better in GER 201 or equivalent or consent of the instructor for GER 202.

GER202: Intermediate German II (4 hours)
Continued practice in comprehension, speaking, reading, and writing. Review of and elaboration in grammatical structures, composition, and vocabulary building serve as aids in the development of conversational ability. Growth in reading skills and cultural enrichment produced through readings on contemporary German life. Conducted in German. (201-Fa; 202-Sp) Prerequisites: a grade of C or better in GER 102 or consent of the instructor for GER 201; a grade of C or better in GER 201 or equivalent or consent of the instructor for GER 202.

GER298: Independent Studies in German (2 TO 4 hours)
Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

GER301: Conversation & Composition (4 hours)
General Education H1. An advanced German language course, which provides continued practice in conversation and composition with emphasis on new vocabulary. This course includes functional grammar review. Readings and discussions of literary as well as non-literary texts introduce students to more complex topics in German life, history, and culture. Reinforcement of basic phonetic elements and syntax to further refine pronunciation and composition. Conducted in German. (Fa) Prerequisites: a grade of C or better in GER 202 or equivalent or consent of the instructor.

GER318: Topics in German Culture and Literature (4 hours)
General Education H2. This course surveys specific time periods and/or movements in German cultural history, including art, architecture, music, and literature. Students develop their ideas and improve their written and spoken communication skills through essays, oral reports, and a research paper. May be repeated with change of topic. Conducted in German. (Sp) Prerequisites: a grade of C or better in GER 301 or consent of instructor.

GER398: Independent Studies in German (1 TO 4 hours)
Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

GER401: Advanced Conversation (2 hours)
Guided discussions on a variety of topics enhance vocabulary building. Opportunities for both formal oral presentation and informal conversation promote practice, skill and confidence. Grammar is reinforced through practice centering on a particular voice, tense, and/or theme. Conducted in German. Prerequisites: a grade of C or better in GER 301 or 318 or equivalent or consent of the instructor.

GER498: Independent Directed Study (2 TO 4 hours)
Reading in a specific area of German literature, culture, or history. Weekly conferences conducted in German. Eight credits maximum will apply toward the degree. (Fa, Sp) Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration.
Graphic Communication

- **GRC106: Intro-Communication Technology (2 hours)**
  This class provides an introduction to numerous computer applications (Adobe Creative Suite) used within the field of digital communication. Special emphasis will be placed on desktop publishing software, history of graphic design, inter-environment communications, graphics formats and file handling software. (Fa, Sp)

- **GRC150: Digital Toolbox - Photoshop/ Illustrator 1 (4 hours)**
  This course introduces Graphic Communication students to the professional design tools used by current design industry. Students will learn the differences between the raster and vector applications and the uses of each, how to access/utilize various color systems (print and web), and prepare files for final production within print, web, and multimedia. (Fa, Sp)

- **GRC200: Color and Typography (4 hours)**
  Color and Typography will explore, in detail, two of the four primary elements in digital media: the implementation of color and use of typography. Use of additive, subtractive and Pantone colors will comprise the color portion of the course; examination into word/letterforms, typefaces, and comprehension studies will comprise the typography portion of the course. (Sp) Prerequisite: GRC 150.

- **GRC210: History of Graphic Design (2 hours)**
  The history of Graphic Design begins with cave markings from approximately 200,000 years ago and continues through to today's digital technology processes. Students will investigate specific periods in graphic design history, explore historic methods in communication, and be introduced to the global influences in graphic design. (Fa)

- **GRC230: Digital Photography (4 hours)**
  Digital Photography is designed to develop a student's skills in digital photography and its uses within print and digital presentations. Throughout the course of the semester, students will learn the differences between film and digital cameras, digital photo editing techniques, aesthetic qualities of photography, and the tools associated with digital photography. Students will learn to digitally capture images among a variety of photographic situations. Students will also learn how to prepare images for print and onscreen presentation. ($67 course fee) (Fa, Sp)

- **GRC290: Digital Design Studio (4 hours)**
  Students will build upon their skill set acquired in Digital Toolbox Photoshop and Illustrator I. Students will explore animation, web image development, paths and shapes creation, print file preparation, automation, and execution into other digital vehicles. Students will create a variety of projects that emphasize the importance of communication and audience. Prerequisite: GRC 150 for GRC Majors; ART 250 for Art Majors. (Sp)

- **GRC295: 3-D Digital Design (4 hours)**
  3D Digital Design affords students the opportunity to create realistic environments, characters, and objects using state-of-the-art software. Students will learn to model, paint, sculpt, render and animate for environmental design, package design, gaming, product design, and industrial design. (Fa)

- **GRC320: Intro to Multimedia Production (4 hours)**
  This course is designed as a Graphic Communication course, emphasizing artistic production using web development software (Adobe Dreamweaver), including, but not limited to: animation, digital video, and creating multimedia presentations and artworks. Multimedia, for the purposes of this course, means utilizing more than one of the following media elements: sound, images, text, video, animation, and/or interactivity, in all projects. Emphasis will be on the marriage of sound design, sophisticated content and visual interest. (Fa) Prerequisite: ART 250, GRC 106, or GRC 150.

- **GRC330: Digital Video I (4 hours)**
  Students will learn how to use storyboarding techniques to develop short video project, videotape indoor and outdoor scripted scenes, edit digital video using iMovie, enhance audio, upload video to their own websites, and create DVDs/VCDS. Students will learn to identify scenes and still images that work best in a video project. Students will develop short video projects for specific and general audiences alike. (Fa)

- **GRC340: Digital Video II (4 hours)**
  Students will utilize skill sets learned in Digital Video 1 to create two documentaries utilizing Final Cut Pro Studio 2 (the industry standard in video production). Students will learn the elements of defining and writing storyboards and develop scene scripting for two one-hour documentaries that address public issues. Students will learn interviewing techniques, hone video production skills, and learn the latest trends/techniques in producing social awareness videos. (Sp)

- **GRC350: Digital Video III (4 hours)**
  Digital Video III will continue the path outlined for a student's understanding of producing works for personal and commercial video work. Students will learn how to develop short and long video projects, develop greater skill in editing techniques (audio and video), work in detail with lighting (available and supplemental), and be introduced to special effects through Adobe After Effects including work with green
screen capabilities. In addition to the video projects, students will produce one written essay. (Fa) Prerequisite: GRC 330 and GRC 340.

- **GRC355: Digital Video IV (4 hours)**
  Digital Video IV culminates in the production of one original 30-minute video (documentary, comedy, fiction, drama, historical, horror, science fiction). Students will work in pairs to produce the video. The result will be an exhibition in Waukesha, and will be open to the public. Additionally, students will work with theater majors as talent to complete this project. The overall learning objective if this course is to (1) demonstrate an understanding of the complexity, depth, and structure of producing a long video project, (2) produce an original screenplay for a long video project, (3) secure a dynamic working relationship with talent and team members, (4) exhibit and establish professional relationship with cinema professionals video screening, (5) oversee and create advertising and marketing materials for the long video project, (6) create and continually update a blog about the experience. (Sp) Prerequisite: GRC 330, GRC 340, GRC 350.

- **GRC360: Interactive Media (4 hours)**
  Students will utilize skills learned in GRC 320 to create Adobe Flash games for creative marketing application and entertainment. In addition to creating flash games, students will learn how to upload files for general audience use. Students will be assigned specific marketing projects for their Adobe Flash games for use across a wide variety of digital vehicles. Other Flash projects may be assigned during the semester to expand the student's understanding of techniques and objectives. (Sp)

- **GRC391: Special Studies/Topics (1 TO 4 hours)**
  Study of a selected topic not covered in the regular curriculum. The topic will be announced prior to the beginning of the semester. Four credits maximum will apply toward degree. Prerequisite: Consent of instructor.

- **GRC450: Capstone-Projects for Graphic Communication Majors (4 hours)**
  A seminar intended to consolidate and expand your experience and education as well as a foundation for continued research as you prepare to enter your chosen field. (Sp) Prerequisites: All program requirements completed.

- **GRC480: Internship-Graphic Communication (1 TO 12 hours)**
  Students must complete a minimum of four credits (120 hours) of internship work while at Carroll University. The internship course involves professional work experience in your field under the supervision of faculty and industry personnel. Course is repeatable to a maximum of 12 credits. Each four credits should have substantially different learning experiences. 120 hours of internship work experience is expected for every 4 credit hours attempted. (Fa, Sp, Su) Prerequisites: Junior or senior standing and director approval. Grading is S/U.

- **GRC491: Special Studies/Topics (1 TO 4 hours)**
  Study of a selected topic not covered in the regular curriculum. The topic will be announced prior to the beginning of the semester. Four credits maximum will apply toward degree. Prerequisite: Consent of instructor.

Courses Offered at Waukesha County Technical College

- **GRC110: Print Media/Digital Publishing I (3 hours)**
  Study offset lithography, flexography, and digital printing. Compare and contrast the advantages and disadvantages of the printing methods of gravure, and screen-printing. Produce single, two- and four-color printed pieces. Acquire knowledge relating to CTP, the PMS system, screens, halftones, print careers, print economics and the four-color process.

- **GRC120: Print Media II (3 hours)**
  Print single and multicolored projects using primarily Heidelberg Printmaster GTO2 color 20-inch presses. Study the common elements of all presses the feeder, registration, printing, and delivery systems. Learn basic press maintenance and problem solving, pressroom chemistry, and safety. Become familiar with paper of various kinds, weights, textures, and sizes, as well as various types of ink. Prerequisites: GRC 106.

- **GRC121: Digital Illustration (3 hours)**
  Enhance ability to draw on the computer with Adobe Illustrator. Learn how to apply various filters and colors to objects; create masks around objects; use the transformation tools (rotate, scale, reflect, shear, blend); create compounds and make special dashed lines to create many special effects. Prerequisites: ART 250 and GRC 106.

- **GRC122: Post Press/Distribution (3 hours)**
  Explore current and emerging technologies for binding, finishing, and distributing printed materials. Learn the basic operations of commercial bindery and finishing equipment.

- **GRC130: Print Media III (3 hours)**
  Use a computerized press console to set up and operate a Heidelberg SM742 color perfecting press. Reproduce high quality line and halftone copy in multiple colors on a Komori Sprint 262 color, a
Heidelberg Printmaster GTO 525 color and other two-color presses. Discuss flexographic printing and platemaking.

- **GRC135: Digital Workflows (3 hours)**
  Study computer integrated manufacturing technologies as applied to commercial printing production problems. Discuss preflighting, trapping, and imposition. Learn to properly prepare and analyze digital files for output to eliminate problems that can occur during the printing production process.
  Prerequisites: 204121 Digital Illustration and 204131 ImageEditing/Photoshop.

- **GRC140: Print Materials and Estimating (3 hours)**
  Examine the scope and functions of printing estimating. Estimate, cost, and price various printing services. Discuss topics including computers for production and management, developing a cost estimating system, estimating paper, ink electronic prepress, press and finishing operations, and marketing and management issues. Analyze various operations within the printing industry.
  Prerequisites: 204139 Digital Workflows.

- **GRC141: Production Coordination/Customer Service (3 hours)**
  Customer Service Explore the commercial printing manufacturing process. Examine the role and function of the customer service representative, electronic workflows, and time requirements for production of commercially printed products that are within budget. Prerequisites: 204122 Post Press/Distribution, 204130 Print Media.

- **GRC142: Color Management (3 hours)**
  Combine math, physics, and chemistry concepts with measurement and statistical process control methods to appraise, control, and improve color reproduction. Learn to use and work with densitometers, spectrodensitometers, spectrophotometers, tone reproduction control software, and color measurement software.
Health Care Administration

- **HCA100: Health Care Terminology (2 hours)**
  The study of basic medical terminology by learning root words, prefixes and suffixes. The study focuses on correct pronunciation, spelling and use of medical terms. Anatomy, physiology, and pathology of disease are discussed yet no previous knowledge of these topics is necessary. (Spring only)

- **HCA150: Introduction to Health Care (4 hours)**
  This course provides an introduction to the U.S. Health Care system. The current and historical social, political, and scientific factors that influence the U.S. Health Care System are reviewed. Students are introduced to the structure, organization, financing, and utilization of health and care services in the United States. Comparison of international and United States health delivery and are reviewed. (Spring only)

- **HCA200: Health Care Economics and Policy (4 hours)**
  Health policy is examined from an economic perspective. Basic economic theories and their relationships to the structure and function of the U.S. health care system are explored. Alternative health care systems and health care reforms are also evaluated. (Fall only) Pre-requisites: BUS101 and HCA150.

- **HCA300: Health Care Management (4 hours)**
  This course addresses the management of organizations that deliver health care services. The courses will examine the principles of effective management including organizational design, motivation, leadership, conflict management, teamwork, and cultural proficiency. Management issues that distinguish health services organizations from other types of organizations will be identified and strategies for dealing with these issues will be evaluated. (Spring only) Pre-requisites: BUS101 and HCA150.

- **HCA350: Health Care Law and Ethics (4 hours)**
  Principles of law and the U.S. legal system are applied, in part through case study and exploration of current events, in the areas of health care management. Legal issues include malpractice, contracts, corporate liability, professional liability, patient rights, and the legal aspects of managed care. (Fall only) Pre-requisites: BUS101 and HCA150.

- **HCA400: Health Care Financial Management (4 hours)**
  This course is designed to impart a working knowledge of introductory accounting and financial management concepts, techniques, and vocabulary as they apply to health care organizations. Applications of modern hospital and healthcare organization financial management and decision-making are explored to prepare students for executive roles in healthcare settings. Financial management techniques used in budget preparation, investment alternatives, financial forecasting, and capital structures are presented with a focus on healthcare organizations. (Fall only) Pre-requisites: ACC205, BUS101 and HCA150.

- **HCA450: Health Care Information Management (4 hours)**
  Principles of law and the U.S. legal system are applied, in part through case study and exploration of current events, in the areas of health care management. Legal issues include malpractice, contracts, corporate liability, professional liability, patient rights, and the legal aspects of managed care. (Spring only) Pre-requisites: BUS101 and HCA150.
Health Sciences

- **HSC130: Health Careers Exploration (2 hours)**
  This course will help students to explore the various health care professions. There is a great deal of interest in health care careers, and there is a need for workers in all health care fields. Certain professions such as doctor and nurse are well known among the general population. Others may be unknown or not understood well, yet may be valuable options for the student to explore as a possible health care career opportunity. Those students who are sure of their majors in a health care area may want to know more about the function of other individuals on the health care team. Information regarding resume writing and job searching will also be presented. A variety of methods including lecture, discussion, presentations, a job shadow/interview experience, and writing assignments will be employed. (Fa, Sp)

- **HSC290: Cultural Influences in Hispanic Health Care (2 hours)**
  This course will focus on the impact of cultural influences in Hispanic populations as people make health care decisions. The learning objectives will be based on the need for students to obtain an understanding of Hispanic culture as it affects the clinician/patient relationship. The topics covered will enhance the effectiveness of the students to develop better research questions and to be able to anticipate the most appropriate ways of interacting with Hispanic populations. This course will be taught in English as a main language but also will introduce students to bilingual terminology. (Fa)

- **HSC300: Pharmacology (3 hours)**
  Addresses pharmacology for the licensed athletic trainer and nurse. Students explore basic knowledge about major drug groups, physiological effects of pharmacotherapeutic agents, utilization of pharmacotherapeutic agents, and storage, dispensing, and tracking protocols for pharmacotherapeutic agents. (Fa only) Prerequisites: CHE 101/102 or higher, BIO 103/104 or ANP 130/140 or higher.

- **HSC311: Cardiovascular Physiology (3 hours)**
  This course is designed to put into practice basic and advanced cardiovascular physiology concepts. The course will include the conduction system, circulation system, ECG pattern recognition and intracardiac pressures. CV physiology will also explore the heart at the cellular level. Student will learn about the cardiac action potential, coupling and uncoupling of myocardial sarcomeres and preload/afterload concepts. This course will include cardiac heart sounds and other clinical clues used in conjunction with echocardiographic evidence to determine a cardiac diagnosis.

- **HSC312: Cardiovascular Principles (2 hours)**
  The first half of the course focuses on structure, function and pathology of the cardiovascular system. Mechanisms of function of the cardiovascular system will be discussed. Cardiac structures and identification will be covered. The second portion of this course will provide the necessary skills and knowledge to perform a complete cardiac Doppler examination. The course will cover the introduction to cardiac Doppler assessment, Doppler hemodynamics, and color flow imaging. The student will learn how to perform Doppler assessment and quantification of severity of valvular stenosis and regurgitation. Students will also learn how to provide information for both systolic and diastolic Doppler assessments.

- **HSC313: Adult Echocardiography - Cardiomyopathy (3 hours)**
  This course focuses on the necessary knowledge and assessment of adult cardiomyopathies. Students will learn how to perform a comprehensive assessment of hypertrophic, restrictive, arrhythmogenic and unclassified cardiomyopathies. Students will learn the necessary 2D imaging and Doppler hemodynamics assessments to complete a full comprehensive examination.

- **HSC314: Adult Echocardiography - Valvular Disease (3 hours)**
  This course focuses on the necessary knowledge and assessment of adult valvular heart disease. Students will learn how to perform a comprehensive valvular heart assessment. This course will include an introduction to valvular disease, echocardiographic assessment of the aortic, mitral, tricuspid and pulmonary valve using 2D, M-mode, Doppler and color flow imaging. The course will also cover surgical valvular interventions and interrogation of both pre-op and post-op complete echocardiographic hemodynamic assessments.

- **HSC315: Adult Echocardiography - Advanced Pathologies (3 hours)**
  The focus of this course is to provide the basic knowledge of major cardiac pathophysiology that students will encounter while practicing echocardiography. This course will cover systemic and pulmonary hypertension, infiltrative heart disease, cardiac tumors and masses, pericardial disease, cardiac diseases related to systemic illness, and diseases of the great vessels. Students will learn how to complete a comprehensive 2D and Doppler assessment of these major cardiac diseases.

- **HSC316: Embryology of the Heart (3 hours)**
  This course will discuss cardiovascular development as it relates to various types of congenital heart disease.

- **HSC317: Special Procedures in Echocardiography (3 hours)**
  This course focuses on the necessary knowledge and role of cardiac sonographers in special cardiac imaging procedures. Students will learn the fundamentals as well as the basic techniques of
HSC357: Imaging Procedures II (5 hours)
This is a five-credit course, utilizing lectures, demonstrations and laboratory practice. Items to be covered include radiographic anatomy and procedures and of the upper and lower extremities, chest, abdomen, and barium studies. Pediatric imaging for each procedure will be discussed. The intern will identify radiographic anatomy, assess radiographic images for accurateness and identify evaluation criteria for a variety of procedures. This course integrates knowledge and skills from several didactic units. Evaluation will be based on quizzes, unit tests and a final exam.

HSC356: Imaging Procedures II (5 hours)
This course will introduce the student echocardiographer to various types of congenital heart disease. The types congenital heart disease to be discussed in this course are; atrial septal defect (ASD), ventricular septal defect (VSD), patent ductus arteriosus (PDA), transposition of the great arteries (TGA), double outlet right ventricle (DORV) and double outlet left ventricle (DOLV).

HSC355: Principles of Imaging II (3 hours)
This course will provide the intern with advanced knowledge of aseptic and sterile techniques, venipuncture, pharmacology and medical ethics and law. Evaluation will be on the basis of quizzes, unit tests, and a final exam.

HSC354: Principles of Imaging I (2 hours)
This is a two-credit course; content is designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. Course content will include an introduction to basic mathematics, an introduction to x-ray production, exposure factors, the control panel, beam restriction, filters, computed radiography, grids and radiographic quality. Evaluation will be based on quizzes, unit exams and a final exam.

HSC353: Medical Terminology (2 hours)
This is a two-credit course. This will be a self-study unit. Interns will be required to complete all tests on the intranet. All assignments must be completed by the end of the second semester. Course work includes medical suffixes and prefixes, word-roots, and combining forms. Evaluation will be based on unit tests.

HSC352: Radiation Protection (2 hours)
This is a two-credit course. Content is designed to provide an overview of the foundations in radiography and the practitioner’s role in the health care delivery system. Principles, practices and policies of the health care organizations are examined and discussed in addition to professional responsibilities of the radiographer. Course content will include an introduction to basic concepts of body mechanics, vital signs, EKG, infection control and medical emergencies. CPR certification will be completed. Evaluation will be on the basis of critical thinking questions, a patient care paper, unit tests and a final exam.

HSC351: Seminar in Radiography I (3 hours)
This course will focus on preparing the student for coronary artery disease and stress echocardiography testing. Students will become competent in coronary artery distribution and anomalies. Student will actively participate in numerous stress echocardiographic examinations during this rotation.

HSC319: Stress Echo Cardiography (3 hours)
This course will discuss the role of ultrasound in evaluating the pediatric heart and complex congenital heart disease. Types of CHD to be discussed in this course include inflow lesions, review of conotruncal anomalies, outflow lesions, cardiac chamber anomalies, abnormal vascular communications, cardiomyopathies, and post-operative evaluation of repair of congenital heart disease.

HSC318: Pediatric Echocardiography I (3 hours)
This 16 week two-credit course is designed as an introduction to provide an overview of the principles of echocardiography and the practitioner’s role in the health care delivery system. Principles, practices and policies of the health care organizations are examined and discussed in addition to professional responsibilities of the radiographer. Course content will include an introduction to basic concepts of body mechanics, vital signs, EKG, infection control and medical emergencies. CPR certification will be completed. Evaluation will be on the basis of critical thinking questions, a patient care paper, unit tests and a final exam.

HSC317: Introduction to Radiologic Science and Healthcare (2 hours)
This is a two-credit course. Content is designed to provide an overview of the foundations in ultrasound and the practitioner’s role in the health care delivery system. Principles, practices and policies of the health care organizations are examined and discussed in addition to professional responsibilities of the radiographer. Course content will include an introduction to basic concepts of body mechanics, vital signs, EKG, infection control and medical emergencies. CPR certification will be completed. Evaluation will be on the basis of critical thinking questions, a patient care paper, unit tests and a final exam.

HSC316: Medical Terminology (2 hours)
This is a two-credit course. This will be a self-study unit. Interns will be required to complete all tests on the intranet. All assignments must be completed by the end of the second semester. Course work includes medical suffixes and prefixes, word-roots, and combining forms. Evaluation will be based on unit tests.

HSC315: Principles of Imaging I (2 hours)
This is a two-credit course; content is designed to provide an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. Course content will include an introduction to basic mathematics, an introduction to x-ray production, exposure factors, the control panel, beam restriction, filters, computed radiography, grids and radiographic quality. Evaluation will be based on quizzes, unit exams and a final exam.
- **HSC358: Imaging Procedures III (3 hours)**
  This is a three-credit course, utilizing lectures, demonstrations, and laboratory practice. Radiographic anatomy and procedures for the cranium, facial bones will be discussed. Pediatric imaging for each procedure will be discussed. The interns will identify radiographic anatomy, assess radiographic images for accurateness and identify evaluation criteria for a variety of procedures. Historical exams and special fluoroscopic imaging will also be presented. This course integrates knowledge and skills from several didactic units. Evaluation will be based on quizzes, unit tests, and a final exam.

- **HSC359: Radiography Clinical Educ I (3 hours)**
  The clinical education is broken down into six semesters. There are a required number of competencies the intern must complete by the end of the 6th semester. Evaluation of the intern's positioning skills, equipment manipulation, and use of radiation protection, patient care, and knowledge of image production is conducted by the Clinical Instructors, Clinical Coordinator, Program Director, and qualified staff technologists. The breakdown of clinical credit is as follows: Semester I HSC 359 3 credits Semester II HSC 360 3 credits Semester III HSC 361 4 credits Semester IV HSC 459 3 credits Semester V HSC 460 3 credits Semester VI HSC 461 4 credits

- **HSC360: Radiography Clinical Educ II (3 hours)**
  The clinical education is broken down into six semesters. There are a required number of competencies the intern must complete by the end of the 6th semester. Evaluation of the intern's positioning skills, equipment manipulation, and use of radiation protection, patient care, and knowledge of image production is conducted by the Clinical Instructors, Clinical Coordinator, Program Director, and qualified staff technologists. The breakdown of clinical credit is as follows: Semester I HSC 359 3 credits Semester II HSC 360 3 credits Semester III HSC 361 4 credits Semester IV HSC 459 3 credits Semester V HSC 460 3 credits Semester VI HSC 461 4 credits

- **HSC361: Radiography Clinical Educ III (4 hours)**
  The clinical education is broken down into six semesters. There are a required number of competencies the intern must complete by the end of the 6th semester. Evaluation of the intern's positioning skills, equipment manipulation, and use of radiation protection, patient care, and knowledge of image production is conducted by the Clinical Instructors, Clinical Coordinator, Program Director, and qualified staff technologists. The breakdown of clinical credit is as follows: Semester I HSC 359 3 credits Semester II HSC 360 3 credits Semester III HSC 361 4 credits Semester IV HSC 459 3 credits Semester V HSC 460 3 credits Semester VI HSC 461 4 credits

- **HSC370: Introduction to Diagnostic Medical Sonography (3 hours)**
  This course encompasses the first four (4) weeks of training. Course content includes emphasis on personal adaptation skills, nursing skills and staff development issues. An introduction to basic sonographic terminology, techniques, ultrasound physics, scanning techniques, and abdominal sonography form the framework for future study. Lectures are correlated with scan lab demonstration and practice. The student handbook policies and procedures are emphasized.

- **HSC371: Abdominal Sonography I (3 hours)**
  This course focuses on the normal gross, cross-sectional, relational and sonographic anatomy of the upper abdomen to include blood vessels, liver, gall bladder, biliary system, and pancreas. Physiology, pathology, and related laboratory values are emphasized and correlated with sonographic findings. Lectures are correlated with scan lab demonstration and practice for each organ system.

- **HSC372: Abdominal Sonography II (3 hours)**
  This course focuses on the normal gross, cross-sectional, relational and sonographic anatomy of the upper abdomen to include kidneys, spleen, adrenal glands, and retroperitoneum. Physiology, pathology, and related laboratory values are emphasized and correlated with sonographic findings. The use and importance of color and spectral Doppler will be emphasized. Each student must formally present one case study during this semester. Lectures are correlated with scan lab demonstration and practice for each organ system.

- **HSC373: Clinical Education I (3 hours)**
  The clinical component of our program allows students to rotate through all aspects of general and vascular sonography. Students progress in competence and ability on an individual basis and within the guidelines set forth by program faculty. A total of 19 competencies must be achieved during the duration of the program. This course focuses on an introduction to sonographic scanning, beginning abdominal technique and development of clinical skills. Sonographic technique is also practiced during routinely scheduled scan lab sessions, which are conducted by the program faculty.

- **HSC374: Clinical Education II (3 hours)**
  The clinical component of our program allows students to rotate through all aspects of general and vascular sonography. Student's progress in competence and ability on an individual basis and within the guidelines set forth by program faculty. A total of 19 competencies must be achieved during the duration of the program. This course will focus on the mastery of abdominal and pelvis/transvaginal scanning, and
development of obstetrical scanning skills. Sonographic technique is also practiced during routinely scheduled scan lab sessions, which are conducted by the program faculty.

- **HSC375: Clinical Education III (3 hours)**
  The clinical component of our program allows students to rotate through all aspects of general and vascular sonography. Student's progress in competence and ability on an individual basis and within the guidelines set forth by program faculty. A total of 19 competencies must be achieved during the duration of the program. This course focuses on the refinement of abdominal, pelvic, obstetrical and small parts scanning skills. Sonographic technique is also practiced during routinely scheduled scan lab sessions, which are conducted by the program faculty.

- **HSC376: OB/GYN Sonography I (3 hours)**
  This course focuses on the normal gross, cross-sectional, relational and sonographic anatomy of the non-gravid female pelvis and the first trimester gravid uterus and developing fetus. Physiology, pathology and related laboratory values are emphasized and correlated with sonographic findings.

- **HSC377: OB/GYN Sonography II (3 hours)**
  This course focuses on the gravid uterus and developing fetus. Normal gross, cross-sectional, relational and sonographic anatomy will be discussed. Gestational dating methods, measurements, fetal and maternal health, placenta and multiple pregnancies are considered. Physiology, pathology and related laboratory values are emphasized and correlated with sonographic findings. Lectures are correlated with practical clinical experience.

- **HSC378: OB/GYN Sonography III (3 hours)**
  This course encompasses the disease states and toxins affecting both the developing fetus and the mother. Abnormal fetal development, anatomy and anomalies are emphasized. Lectures are correlated with practical clinical experience. Each student must formally present one case study during this semester.

- **HSC379: Specialized Sonography (3 hours)**
  This course focuses on the normal gross, cross-sectional, relational and sonographic anatomy of superficial structures, to include the male pelvis (bladder, prostate and scrotum), the thyroid and parathyroid glands and the breast. Pathologic findings encountered during these exams will be correlated with possible causative etiologies. Physiology, pathology and related laboratory values are emphasized and correlated with sonographic findings.

- **HSC380: Sonography Principles & Instrumentation (3 hours)**
  This course focuses on mathematical principals, the characteristics of sound and the mechanism of sonographic image production and display. Potential biological effects and safety are discussed together with the practical application of physical concepts.

- **HSC391: Topics in Health Science (2 TO 4 hours)**

- **HSC401: Health Science Capstone (2 TO 4 hours)**
  FOR TWO CREDITS: The capstone course emphasizes knowledge integration, demonstrating development of life-long skills and enduring values, and training for effective transition from school to career. • Students complete a substantial major project that integrated the Carroll University General Education Program with coursework specific to the BS in Health Science major. This project is presented to appropriate faculty and community. Concepts of critical inquiry and reflective thinking in physical therapy or an approved health science topic are introduced. FOR FOUR CREDITS: The capstone course emphasizes knowledge integration, demonstrating development of life-long skills and enduring values, and training for effective transition from school to career. The course consists of two components. • First, students complete a substantial major project that integrated the Carroll University General Education Program with coursework specific to the BS in Health Science major. This project is presented to appropriate faculty and community. Concepts of critical inquiry and reflective thinking in physical therapy or an approved health science topic are introduced. • Second, students participate in activities to facilitate the intentional transition from undergraduate study to post-baccalaureate careers.

- **HSC402: Human Anatomy (4 hours)**
  The microanatomy and gross anatomy of muscle, bone and cartilage and the integumentary, nervous, cardiovascular, lymphatic, respiratory, renal, digestive, endocrine, and reproductive systems are studied. Using multi-media software, male and female bodies are dissected from anterior, posterior, medial, lateral, and medial/lateral views and histologies, radiologies, cross-sections, and MRIs are linked to the anatomy. Models are also employed to study the structure of the human body. In addition, palpation laboratories are integrated into the course. (Required course fee) (Fa) Prerequisites: Junior Standing, ANP 130/140 or BIO 150/160 and 221.

- **HSC402L: Human Anatomy Laboratory**
  Laboratory component for HSC402.

- **HSC403: Human Physiology (4 hours)**
  Fundamental concepts related to the normal function of the human body are presented. The normal functioning of the human body is discussed across gender, race, and life span. Basic pathophysiological concepts are introduced. Resources used include physiology laboratories, computer simulations, and
videos. (Required course fee) (Sp) Prerequisites: Junior standing, BIO 130/140 or BIO 150/160, CHE 110 or a C or better in CHE 101 and 102.

- **HSC403L: Human Physiology Laboratory**
  Laboratory component for HSC403.
- **HSC430: Seminar in OB/GYN (3 hours)**
- **HSC431: Fetal Echocardiography (3 hours)**
  This course will discuss the role of ultrasound in evaluating the fetal heart and introduce the student to a broad spectrum of congenital heart disease. This course will cover embryology of the heart along with the fetal echocardiography exam and protocols.
- **HSC432: Vascular Sonography III (3 hours)**
  This course focuses on the normal and abnormal gross, relational, cross-sectional and sonographic anatomy of the vascular system to include the abdominal vasculature, organ transplants, and penile Doppler. Mechanisms of disease, unique to the vascular system, as well as the relationship between cardiovascular disease and the health of other organ systems will be discussed. Correlation of laboratory findings and etiologies of disease will be covered. A short correlation of statistical data and vascular testing will be covered.
- **HSC433: Introduction to Neurosonography (3 hours)**
  This course focuses on the normal gross, cross-sectional, relational and sonographic anatomy of the neonatal brain and spine. Pathologic findings encountered during the neurosonography exam will be correlated with possible causative etiologies. Physiology, pathology and related laboratory values are emphasized and correlated with sonographic findings. Lectures are correlated with scan lab demonstration and practice.
- **HSC434: Introduction to Pediatric Imaging (3 hours)**
  This course focuses on the anatomy, physiology, pathology and pathophysiology of each organ system of the abdomen, pelvis and other structures typically seen in the pediatric and adolescent patient. Normal anatomy and disease processes within the gastrointestinal system of the pediatric and adult patient will also be discussed. Students will become familiar with the clinical symptoms, lab values and specific ultrasound protocols for normal and abnormal cases.
- **HSC435: Introduction to Musculoskeletal Imaging (2 hours)**
  This course focuses on the normal gross, cross-sectional, relational and sonographic anatomy of the musculoskeletal system. Pathologic findings encountered during these exams will be correlated with possible causative etiologies. Physiology and pathology are emphasized and correlated with sonographic findings.
- **HSC450: Radiographic Physics I (2 hours)**
  This course is a two-credit course. Course content is designed to establish basic knowledge of atomic structure and terminology. Also presented are the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Introduction will include magnetism, electricity, and electromagnetism. Evaluation will be on the basis of unit tests and a final exam.
- **HSC451: Radiographic Physics II (2 hours)**
  This course is a two-credit course. Content is designed to establish knowledge in tube and generator circuitry. Also presented are the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Evaluation will be on the basis of quizzes, unit tests and a final exam.
- **HSC452: Digital Imaging (3 hours)**
  This is a three-credit course; content is designed to impart an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition display, archiving and retrieval are discussed. Guidelines for selection of exposure factors and evaluating images within a digital system assist interns to bridge between film-based and digital imaging systems. Evaluation will be on the basis of quizzes, unit tests and a final examination.
- **HSC453: Seminar in Radiography II (2 hours)**
  This course is a two-credit course; content is designed to provide the intern the ability to evaluate all aspects of the imaging system from processor to generator. The intern will perform basic equipment tests, identify and trouble shoot equipment problems. Lecture on quality control and quality assurance procedures within a radiology department will be covered. Evaluation will be on the basis of the accuracy and timeliness of laboratory procedures, unit tests and a final examination.
- **HSC454: Cross Sectional Anatomy (3 hours)**
  This course is a three-credit course designed to give the intern basic knowledge of cross-sectional anatomy at a minimum of the head and neck, thorax and abdomen. Evaluation will be on the basis of quizzes, unit tests and a final exam. Instruction incorporates CT and MR images.
- **HSC455: Independent Study (2 hours)**
  Interns will be assigned a written research project that will include an oral presentation, video display or a scientific exhibit. This project will be assigned two credits. This will enable the intern to develop critical thinking, research and writing skills along with an appreciation for professional development. Evaluation
will be on the basis of research organization, completeness and presentation. The intern will select a topic of their choice. Successful completion of the independent study is a graduation requirement.

- **HSC456: Imaging Procedures IV (2 hours)**
  This is a two-credit course. Topics to be covered include Special Orthopedic positioning, special gastrointestinal positioning, interventional procedures, basic principles of CT and MRI imaging. Evaluation will be on the basis of quizzes, tests and a final exam.

- **HSC457: Radiographic Pathology (2 hours)**
  This is a two credit course; content is designed to introduce concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection. Evaluation will be on the basis of quizzes, unit exams and a final exam.

- **HSC458: Radiation Biology (2 hours)**
  This is a two-credit course; content is designed to provide an overview of the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Factors affecting biologic response are presented, including acute and chronic effects of radiation. Evaluation is on the basis of quizzes, unit tests and a final exam.

- **HSC459: Radiography Clinical Educ IV (3 hours)**
  The clinical education is broken down into six semesters. There are a required number of competencies the intern must complete by the end of the 6th semester. Evaluation of the intern's positioning skills, equipment manipulation, and use of radiation protection, patient care and knowledge of image production is conducted by the Clinical Instructors, Clinical Coordinator, Program Director and qualified staff technologists. The breakdown of clinical credit is as follows: Semester I HSC 359 2 credits Semester II HSC 360 3 credits Semester III HSC 361 4 credits Semester IV HSC 459 3 credits Semester V HSC 460 3 credits Semester VI HSC 461 4 credits

- **HSC460: Radiography Clinical Educ V (3 hours)**
  The clinical education is broken down into six semesters. There are a required number of competencies the intern must complete by the end of the 6th semester. Evaluation of the intern's positioning skills, equipment manipulation, and use of radiation protection, patient care and knowledge of image production is conducted by the Clinical Instructors, Clinical Coordinator, Program Director and qualified staff technologists. The breakdown of clinical credit is as follows: Semester I HSC 359 2 credits Semester II HSC 360 3 credits Semester III HSC 361 4 credits Semester IV HSC 459 3 credits Semester V HSC 460 3 credits Semester VI HSC 461 4 credits

- **HSC461: Radiography Clinical Educ VI (4 hours)**
  The clinical education is broken down into six semesters. There are a required number of competencies the intern must complete by the end of the 6th semester. Evaluation of the intern's positioning skills, equipment manipulation, and use of radiation protection, patient care and knowledge of image production is conducted by the Clinical Instructors, Clinical Coordinator, Program Director and qualified staff technologists. The breakdown of clinical credit is as follows: Semester I HSC 359 2 credits Semester II HSC 360 3 credits Semester III HSC 361 4 credits Semester IV HSC 459 3 credits Semester V HSC 460 3 credits Semester VI HSC 461 4 credits

- **HSC462: Professional Development (2 hours)**
  This is a two-credit course that serves as an overview of the entire program. This course will prepare the intern for the American Registry of Radiologic Technologists. Course will also include study of the evolution of modern health care systems and professional organizations in Radiology. Evaluation will be on the basis of mock registry examinations.

- **HSC470: Vascular Sonography I (3 hours)**
  This course focuses on the physical principles relating to the vascular system, normal gross, relational, cross-sectional and sonographic anatomy of the carotid. Mechanisms of disease, unique to the vascular system, as well as the relationship between cardiovascular disease and the health of other organ systems will be discussed. Correlation of laboratory findings and etiologies of disease will be covered. Doppler principles and vascular hemodynamics are presented.

- **HSC471: Vascular Sonography II (3 hours)**
  This course focuses on the normal gross, relational, cross-sectional and sonographic anatomy of the vascular system to include intracranial vessels, lower and upper extremity venous and arterial systems. Mechanisms of disease unique to the vascular system, as well as the relationship between cardiovascular disease and the health of other organ systems will be discussed. Correlation of laboratory findings and etiologies of disease will be covered. Doppler principles and vascular hemodynamics are presented. Various vascular scanning techniques will be discussed.

- **HSC472: Seminar in Professional Development (3 hours)**
  The main objective is for the student to apply the academic and clinical knowledge used in this program to develop a senior project. This course is designed to showcase the student's ever evolving knowledge in sonography. The senior project consists of two parts: an in-depth written paper and oral presentation to one's peers. Preparation for the sonography boards and professional review: The main objective is to
provide the student with the opportunity to improve test-taking skills in preparation for the examination of the American Registry for Diagnostic Medical Sonography. Job-hunting, interview skills and resume writing will provide the student with skills needed when seeking employment. An overview of professional behavior and standards will be reviewed at this time.

- **HSC473: Clinical Education IV (3 hours)**
  Students are scheduled for clinical practicum at participating clinical education centers. Students progress in competence and ability on an individual basis and within the guidelines set forth by program faculty. Students are routinely evaluated on professional growth, personal interactions, and technical ability. A predetermined number of competencies specific to each learning concentration must be achieved throughout the duration of the program. Clinical experience rotations include abdominal imaging, OB/GYN, transthoracic cardiac imaging and vascular technology. Sonographic technique is also practiced during routinely schedule scan lab sessions, which are conducted by the program faculty.

- **HSC474: Clinical Education V (5 hours)**
  The clinical component of our program allows students to rotate through all aspects of general and vascular sonography. Student's progress in competence and ability on an individual basis and within the guidelines set forth by program faculty. A total of 19 competencies must be achieved during the duration of the program. This course focuses on the mastery of all previously learned concentrations. Scan labs are no longer administered. Students should demonstrate the ability to perform at a level that does not require direct supervision.
History

- **HIS103: Roots of the Western World (4 hours)**
  General Education H1. This survey course traces the Western experience from our classical heritage to the French Revolution. It examines the major political, social, economic, and religious institutions which worked to shape the world we live in today. (Fa, Sp)

- **HIS104: Europe and the Modern World (4 hours)**
  General Education H1. This survey course complements HIS 103 by exploring ideas and events that have shaped European society and Europe's relations with other parts of the world since the French Revolution. (Fa, Sp)

- **HIS105: America to 1877 (4 hours)**
  General Education H1. This course introduces students to the origins of the United States from pre-Columbian times to the end of Reconstruction. (Fa, Sp)

- **HIS106: America since 1877 (4 hours)**
  General Education H1. A study of the American experience since Reconstruction. (Fa, Sp)

- **HIS106H: America Since 1877 (4 hours)**
  A study of the American experience since Reconstruction, which focuses primarily on stimulating critical thinking and historical inquiry. The course draws upon extensive primary sources to explore a series of historical questions about recent American history and culture. (Fa, odd years) Prerequisite: Honors student or permission of instructor.

- **HIS107: Understanding the Premodern World (4 hours)**
  General Education H1. An examination of global societies prior to 1500 with an emphasis on the non-western world, this course considers their development individually and in contact with one another, as well as their contributions to the making of the early modern world system. (Fa)

- **HIS108: Understanding Our Contemporary World (4 hours)**
  General Education H1. An examination of non-western societies from 1500, their development, their responses to the West, and their contributions to the making of the modern world. (Sp)

- **HIS110: History of Modern China (4 hours)**
  General Education H1. This course examines Chinese history and culture with an emphasis on the 19th and 20th centuries. Specific attention is given to China's reformers and revolutionaries and their attempts to transform Chinese political, economic, and social institutions.

- **HIS112: Intro to Latin American History (4 hours)**
  General Education H1. This course examines Latin America from preconquest to the present focuses on the historical roots of contemporary issues in Latin America such as poverty, race relations, cultural mixing, and international relations. The class draws in part on Latin American literature, arts, and cinema to facilitate this investigation. ENG 170 is recommended prior to enrollment. (Sp)

- **HIS200: Workshop for Historians (4 hours)**
  This course prepares students for independent research in 300 level courses, the capstone, and beyond. Students discuss and apply tools, methods and interpretative approaches used in historical research. Students should plan to take this during their sophomore year, before enrolling in 300-level history courses. (Sp)

- **HIS203: The American Civil War (4 hours)**
  Examines the multiple origins of the American Civil War and the two cultures swept up in the conflict. Traces the political, social, diplomatic, and military history of the war years. Prerequisite: HIS 105 or permission of the department chair.

- **HIS210: Hist-American Foreign Relations (4 hours)**
  An overview of the foreign relations of the United States from colonial times to the present, with an emphasis on the period since 1900. The course examines the ways in which economic developments, domestic concerns, and cultural attitudes have helped shape the foreign policies of the United States. (Sp, even years)

- **HIS213: Women in American History (4 hours)**
  General Education H2. This course investigates the history of women in the United States from the colonial era to the present, with particular emphasis on the ways in which race and class have shaped women's experiences. (Fa, even years)

- **HIS215: American Encounters: Natives, Africans, and Europeans in the Americans, 1350-1750 (4 hours)**
  General Education H2. This course examines the complex interactions between indigenous peoples, European colonizers, and African peoples in the Spanish, Portuguese, French and British American colonial worlds. The course begins with examination of the pre-Columbian native cultures and then traces the development colonial society with particular emphasis on the cultural exchanges that occurred between these disparate peoples and the role of labor, religion, and popular resistance in that history. (Fa, odd years)

- **HIS216: Philosophy and History of Science (4 hours)**
General Education H1. A study of the historical and philosophical foundations of science. The class will discuss the nature, purpose and methodologies of scientific inquiry starting with Aristotelian science and tracing the development to the modern period. The class will also discuss the nature of scientific proof, the evaluation of evidence, and the formation and evaluation of scientific theories. (Fa, odd years)

- **HIS224H: The World Since 1945 (4 hours)**
  General Education H1. A discussion-based study of themes and conflicts that have shaped global society since the end of World War II. Students use primary documents, autobiographies, oral histories and other sources of their own choosing to examine the Cold War, the developing world, genocide and other topics. (Fa, even years) Prerequisite: Honors student or permission of instructor.

- **HIS225H: Medieval Europe, China, and the Islamic Crescent (4 hours)**
  General Education H2. A study of the period before the development of European hegemony, focusing on contact between these three overlapping world cultural zones. In this course we examine the way in which economic, cultural, and intellectual interchanges affected the development of the civilizations under consideration as well as laying the foundation for future global interaction. (Sp, even years) Prerequisite: Honors student; history majors and minors may be admitted by prior consent of the instructor.

- **HIS254: Topics in Medieval European History (4 hours)**
  General Education H2. This reading seminar topically examines Western Europe during the Middle Ages. The period from 500 to 1500 is studied for its own sake as well as for its contributions to the making of the modern world. (Fa, even years)

- **HIS280: Internship in History (2 TO 4 hours)**
  An opportunity for majors to earn elective credit for work experiences related to history. Examples of potential internships include: research work at local historical societies, museum experience at OldWorldWisconsin, work in public history, in non-profit organizations, or with various government agencies. Other work-oriented experiences may be designed by the student with the approval of the instructor. Internship credits will apply toward the degree but not toward the history major. The work is S/U graded, requires the consent of the instructor, and has a prerequisite of junior or senior standing. (Fa, Sp, Su)

- **HIS291: Topics in History (2 TO 4 hours)**
  Intensive investigations of special subject matter. Recent topics include: World War II: Experiences and Legacies; America in the 1960s; Native American history; Central Europe; and Medieval Magic. Topics courses may be offered also at the 300 research course level. Students may take more than one of these topic courses. Prerequisite (for 300-level): Junior standing or consent of the instructor.

- **HIS298: Independent Study in History (2 TO 4 hours)**
  Generally permitted only in areas where the student has some background. (Fa, Sp) Prerequisite: Approval of the divisional dean and consent of the instructor.

- **HIS301: The Forging of a Nation - The Colonial and Revolutionary Experience in North America (4 hours)**
  This course investigates the transformation of the English colonies in North America from the first encounters in the 1580s through the American Revolution, with particular emphasis on the social, political, and religious institutions that emerged out of the encounters between English colonists, Native Americans, and Africans. (Sp, even years) Prerequisite: Junior standing or consent of the instructor.

- **HIS305: Recent America (4 hours)**
  This course examines the history of the United States since the end of World War II to the present. It explores in particular the important social, political, and cultural developments of the period. (Sp, odd years) Prerequisite: Junior standing or consent of the instructor.

- **HIS316: Renaissance and Reformation Europe (4 hours)**
  General Education H2. This is a research-oriented course focusing on important changes occurring in Europe from the last quarter of the fourteenth century to the mid seventeenth century. The period was one of educational, cultural, and religious change and reform. We will explore topics through the reading of primary and secondary sources, culminating in a research project focused on primary sources. (Sp, even years, but NOT 2014)

- **HIS318: American Indian History (4 hours)**
  General Education H2. This course examines the history of the indigenous peoples of North America from prehistory to the present. Major themes will include the relationship between native peoples and the environment, the effect of contact on native cultures, the relationship among native tribes and between natives and the state, the place of the 'Indian' in popular culture, and the changing status and identity of American Indians in American society (Sp, odd years)

- **HIS329: The German Experience (4 hours)**
  General Education H2. A research-oriented course examining modern German history. Emphasis is placed on the process of unification, the Nazi era, the GDR and reunification. Also offered as POL 329. (Fa, odd years) Prerequisite: Junior standing or consent of the instructor. Students planning to take HIS 329 for their German language minor must contact the instructor (in the semester before they enroll in HIS 329)
to develop a plan for adapting coursework to incorporate and demonstrate appropriate use of the language.

- **HIS391: Topics in History (4 hours)**
  Intensive investigations of special subject matter. Recent topics include: World War II: Experiences and Legacies; America in the 1960s; Native American history; and Medieval Magic. Topics courses may be offered also at the 300 research course level. Students may take more than one of these topic courses. Prerequisite (for 300-level): Junior standing or consent of the instructor.

- **HIS398: Independent Study in History (2 TO 4 hours)**
  Generally permitted only in areas where the student has some background. (Fa, Sp) Prerequisite: Approval of the divisional dean and consent of the instructor.

- **HIS495: Kennan Seminar (1 hours)**
  This course provides our Kennan Scholars with the opportunity to discuss historical literature with history faculty in a small group setting. (Fa, Sp) Prerequisite: Open only to Kennan Scholars.

- **HIS499: Capstone - Senior Seminar for Historians (4 hours)**
  This course requires students to produce a high-quality research paper based largely on primary sources and to formally present their work before other students and the history faculty. Students will also complete a portfolio including a representative sample of their previous written work in history courses. (Fa) Prerequisites: HIS 200 and one 300-level research course.
Interdisciplinary Studies

- **IDS200: Interdisciplinary Studies (2 hours)**
  The purpose of the career exploration and preparation course is to provide students with the tools necessary to succeed in their future careers by providing an innovative teaching and learning environment capable of maximizing student understanding knowledge, diversity and lifelong skills needed by graduates for effective adaptability, problem solving, and competitive excellence in a dynamic and complex world.
Mathematics

- **MAT101: Intermediate Algebra (4 hours)**
  Building on MAT 098 skills, this course is equivalent to high school Algebra II. Topics include number systems, theory of equations and inequalities, introduction to functions and their graphs, applications of algebra. This course is the prerequisite to MAT 104, 106, 112 and 130. (Fa, Sp, Su) Prerequisites: one year of high school algebra and one year of high school geometry or MAT 098 or placement recommendation.

- **MAT104: Foundations of Elementary Mathematics I (4 hours)**
  An introduction to problem solving, sets, number theory, numeration systems, and the structure of the real number system. Course material will be presented in a manner consistent with the NCTM Principles and Standards for School Mathematics. Recommended for education students only. (Fa, Sp) Prerequisite: MAT 101 or placement recommendation.

- **MAT106: Mathematics for the Liberal Arts (4 hours)**
  This elementary course in contemporary mathematics introduces the Bachelor of Arts student to the usefulness of mathematics. Real current-day problems are presented along with some of the mathematics techniques which have been used to solve them. Problems discussed will involve such topics as 'the traveling salesman problem,' exponential growth, voting systems, analysis of arguments and fractal geometry. (Fa, Sp, Su) Prerequisites: MAT 101 or placement recommendation.

- **MAT130: Elementary Functions (4 hours)**
  A study of rational, radical, exponential, logarithmic, and trigonometric functions designed to prepare students for MAT 140 or 160 (Fa, Sp) Prerequisites: MAT 101 or placement recommendation.

- **MAT140: Calculus and Its Applications (4 hours)**
  A compact version of Calculus I, II stressing problem-solving techniques and applications. Designed for students who need only one semester of calculus. Numerous examples are presented from accounting, biology, business, economics, and other fields. (Fa, Sp, Su) Prerequisite: MAT 130 or placement recommendation. May not be taken for credit by those who have completed MAT 160.

- **MAT160: Calculus I (4 hours)**
  A brief review of inequalities, functions and plane analytic geometry; limits and continuity; the derivative and the differential; applications of differentiation; L'Hospital's Rule; introduction to the Riemann integral. Includes differentiation of logarithmic and exponential functions, and indeterminate forms. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (Fa, Sp) Prerequisite: MAT 130 or placement recommendation.

- **MAT160L: Calculus I - Laboratory**
  Laboratory component for MAT160.

- **MAT161: Calculus II (4 hours)**
  Applications of the Riemann integral; calculus of the natural logarithm and exponential functions; formal techniques of integration; improper integrals; series and sequences. History of selected topics is studied. Four hours of lecture and one hour of laboratory/recitation. (Fa, Sp) Prerequisite: MAT 160 or placement recommendation.

- **MAT161L: Calculus II - Laboratory**
  Laboratory component for MAT161.

- **MAT201: Foundations of Elementary Mathematics II (4 hours)**
  A study of introductory geometry, measurement, algebra, coordinate and transformation geometry, statistics and probability. Students will also be introduced to geometry computer software. Designed for the elementary education major. (Fa, Sp) Prerequisite: MAT 104.

- **MAT205: Discrete Mathematics (4 hours)**
  A study of set theory, propositional calculus, algorithms, relations, functions, combinatorics, recursion, discrete graphs, trees, automata. Intended for Computer Science majors only. (Sp) Prerequisites: CSC 226, MAT 140 or 160. May not be taken for credit by those who have completed MAT 206.

- **MAT206: Transition to Adv Mathematics (4 hours)**
  An introduction to fundamental concepts, structures and style of mathematics. Core topics are logic, sets, mathematical induction, relations, functions and graph theory. Special topics may include number theory, calculus, or the construction of the real numbers. Special emphasis will be placed on developing and communicating mathematical arguments. (Sp) Prerequisites: MAT 140 or 160. May not be taken for credit by those who have completed MAT 205.

- **MAT207: Calculus III (4 hours)**
  Vectors in the plane and in space, solid analytic geometry; calculus of functions of two variables; partial derivatives; divergence and gradient; multiple integrals, vector fields, line integrals, and surface integrals, Green's Theorem, Stoke's Theorem, Divergence Theorem. History of selected topics is studied. (Fa) Prerequisite: MAT 161 or placement recommendation.

- **MAT208: Linear Algebra (4 hours)**
Vector spaces; linear transformations and matrices; systems of linear equations; applications. (Sp)

MAT215: Engineering Mathematics I (4 hours)
An introduction probability and statistics as applied in engineering. Topics to be covered include descriptive
statistics, probability distributions, confidence intervals, hypothesis testing, quality control, acceptance
sampling, goodness of fit, nonparametric tests, and regression. May be used toward the mathematics
minor, but not the mathematics major. (Fall, odd years) Prerequisite: MAT207, or concurrent registration
in MAT207.

MAT216: Engineering Mathematics II (4 hours)
An introduction linear algebra and differential equations as applied in engineering. Topics to be covered
include matrix algebra, linear independence and span, eigenvalues and eigenvectors, first-order ODE?s,
linear ODE?s, series solutions, numerical methods, and Laplace Transforms. May be used toward the
mathematics minor, but not the mathematics major. (Fall, even years) Prerequisite: MAT207, or
concurrent registration in MAT207.

MAT250: Mathematics Seminar (4 hours)
Mathematics Seminar topics vary by year. The course meets concurrent with MAT 350 and MAT 450, the
Capstone Experience. The course is designed to give students exposure to the Capstone Experience and to
give all mathematics students the opportunity to increase their breadth of study. (Sp) Prerequisite: MAT
206 or instructor approval.

MAT305: Modern Geometry (4 hours)
A study of elementary geometry from an advanced standpoint; includes distance and congruence axioms,
parallelism, incidence and order, and non-Euclidean geometries. History of selected topics is studied. (Sp)
Prerequisite: MAT 206.

MAT309: Differential Equations (4 hours)
An introduction to the theory and solution of ordinary differential equations and their applications; power
series solution; introduction to numerical methods; and other topics. Prerequisites: MAT 161. Co-requisite
MAT207.(Fa, even)

MAT312: Theory of Probability & Statistics (4 hours)
An introduction to the mathematical theory of probability and statistics. Topics include: sample spaces;
probability distribution functions; regression and correlation; hypothesis testing. History of selected topics
is studied. (Fa, odd years) Co-requisite: MAT 207. May not be taken for credit by those who have
completed ASC 302.

MAT320: Abstract Algebra (4 hours)
An introduction to modern abstract algebra to include topics in the theory of groups, rings and fields.
Required of all mathematics majors. History of selected topics is studied. (Fa, odd years) Prerequisites:
MAT 206 and 208.

MAT324: Numerical Analysis (4 hours)
Introduction to the numerical methods and algorithms fundamental to mathematical and scientific
analysis. Error analysis and efficient programming techniques are stressed. Includes solving equations,
linear and nonlinear systems, curve fitting, function approximation, interpolation, differentiation,
integration and numerical solutions to differential equations. (Sp, even years) Prerequisites: MAT 161 and
CSC 110; Co-requisite MAT 208.

MAT350: Mathematics Seminar (4 hours)
Mathematics Seminar topics vary by year. The course meets concurrent with MAT 350 and MAT 450, the
Capstone Experience. The course is designed to give students exposure to the Capstone Experience and to
give all mathematics students the opportunity to increase their breadth of study. (Sp) Prerequisite: MAT
206 or instructor approval.

MAT391: Adv Topics in Mathematics (2 TO 4 hours)
These courses are designed to meet the special needs of students who have completed the prescribed
courses for a major and wish to extend their study in specific areas. Students planning on graduate study
should take courses in topology and other appropriate topics. Students interested in actuarial science
should arrange for additional study in probability and statistics. Courses in applied mathematics can also
be arranged. These courses may not be taken in lieu of courses specified for the major or minor. (Fa, Sp,
Su with instructor consent) Prerequisites: Junior or senior standing, approval of the divisional dean and
consent of the instructor.

MAT409: Mathematical Analysis (4 hours)
The study of theory and applications of analysis on the real line. Limits; continuity; differentiation;
sequences and series of functions; integration. (Fa, even years) Prerequisites: MAT 161 and 206.

MAT450: Mathematics Senior Capstone (2 TO 4 hours)
All majors will complete a mathematics-related project. Projects may involve original or expository
research in applied mathematics, pure mathematics, or mathematics education. Applied mathematics
projects may involve mathematical consultancy work for area businesses. (Sp) Prerequisite: 80 credit hours completed.

- **MAT491: Adv Topics in Mathematics (2 TO 4 hours)**
  These courses are designed to meet the special needs of students who have completed the prescribed courses for a major and wish to extend their study in specific areas. Students planning on graduate study should take courses in topology and other appropriate topics. Students interested in actuarial science should arrange for additional study in probability and statistics. Courses in applied mathematics can also be arranged. These courses may not be taken in lieu of courses specified for the major or minor. (Fa, Sp, Su with instructor consent) Prerequisites: Junior or senior standing, approval of the divisional dean and consent of the instructor.
Modern Languages

- **FRE101: Elementary French I (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted primarily in French. (101-Fa; 102-Sp)

- **FRE102: Elementary French II (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted primarily in French. (101-Fa; 102-Sp)

- **FRE201: Intermediate French I (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted in French. (201-Fa; 202-Sp) Prerequisites: FRE 102 for FRE 201, FRE 201 for FRE 202 or equivalent.

- **FRE202: Intermediate French II (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the French language. Introduction to French cultures, politics, history, and literature through texts in English or in English translation from French. Conducted in French. (201-Fa; 202-Sp) Prerequisites: FRE 102 for FRE 201, FRE 201 for FRE 202 or equivalent.

- **FRE298: Independent Studies in French (2 TO 4 hours)**
  Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration.

- **FRE301: Conversation & Composition (4 hours)**
  General Education H1. Emphasis on active use of the language, and functional grammar review, including interaction in social and general conversations, vocabulary building, syntactic structures and sentence patterns. Constant focus on pronunciation and diction, with introduction to basic phonetic and linguistic principles. Reading of literary and cultural texts. Discussions of contemporary topics. Conducted in French. Prerequisites: FRE 202 or equivalent.

- **FRE307: French Civilization (4 hours)**
  General Education H2. Acquaints students with the major events of French history, including the various artistic, cultural and social elements which have contributed to making France what it is today, in order to better understand the French, their customs and their lifestyle. Oral and written reports. Conducted in French. Prerequisite: FRE 301 or consent of instructor.

- **FRE318: Topics in French and Francophone Literatures (4 hours)**
  This course focuses on the study of French literature and theater. Students will discuss, analyze and develop their own critical approach and ideas around the texts in class and through oral, written and research reports and papers. Topics are drawn from the literature of French-speaking Europe, Africa, and the Caribbean. Conducted in French. May be repeated with change of topic. Prerequisites: FRE 301 or consent of the instructor.

- **FRE398: Independent Studies in French (2 TO 4 hours)**
  Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration.

- **GER101: Elementary German I (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the German language. Introduction to Germanic cultures, politics, history, and literature through texts in English or in English translation from German. Conducted primarily in German. (101-Fa; 102-Sp) Prerequisite for GER 102: a grade of C or better in GER 101 or consent of the instructor.

- **GER102: Elementary German II (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the German language. Introduction to Germanic cultures, politics, history, and literature through texts in English or in English translation from German. Conducted primarily in German. (101-Fa; 102-Sp) Prerequisite for GER 102: a grade of C or better in GER 101 or consent of the instructor.

- **GER201: Intermediate German I (4 hours)**
  Continued practice in comprehension, speaking, reading, and writing. Review of and elaboration in grammatical structures, composition, and vocabulary building serve as aids in the development of conversational ability. Growth in reading skills and cultural enrichment produced through readings on contemporary German life. Conducted in German. (201-Fa; 202-Sp) Prerequisites: a grade of C or better
in GER 102 or consent of the instructor for GER 201; a grade of C or better in GER 201 or equivalent or consent of the instructor for GER 202.

- **GER202: Intermediate German II (4 hours)**
  Continued practice in comprehension, speaking, reading, and writing. Review of and elaboration in grammatical structures, composition, and vocabulary building serve as aids in the development of conversational ability. Growth in reading skills and cultural enrichment produced through readings on contemporary German life. Conducted in German. (201-Fa; 202-Sp) Prerequisites: a grade of C or better in GER 102 or consent of the instructor for GER 201; a grade of C or better in GER 201 or equivalent or consent of the instructor for GER 202.

- **GER298: Independent Studies in German (2 TO 4 hours)**
  Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

- **GER301: Conversation & Composition (4 hours)**
  General Education H1. An advanced German language course, which provides continued practice in conversation and composition with emphasis on new vocabulary. This course includes functional grammar review. Readings and discussions of literary as well as non-literary texts introduce students to more complex topics in German life, history, and culture. Reinforcement of basic phonetic elements and syntax to further refine pronunciation and composition. Conducted in German. (Fa) Prerequisites: a grade of C or better in GER 202 or equivalent or consent of the instructor.

- **GER318: Topics in German Culture and Literature (4 hours)**
  General Education H2. This course surveys specific time periods and/or movements in German cultural history, including art, architecture, music, and literature. Students develop their ideas and improve their written and spoken communication skills through essays, oral reports, and a research paper. May be repeated with change of topic. Conducted in German. (Sp) Prerequisites: a grade of C or better in GER 301 or consent of instructor.

- **GER398: Independent Studies in German (1 TO 4 hours)**
  Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

- **GER401: Advanced Conversation (2 hours)**
  Guided discussions on a variety of topics enhance vocabulary building. Opportunities for both formal oral presentation and informal conversation promote practice, skill and confidence. Grammar is reinforced through practice centering on a particular voice, tense, and/or theme. Conducted in German. Prerequisites: a grade of C or better in GER 301 or 318 or equivalent or consent of the instructor.

- **GER498: Independent Directed Study (2 TO 4 hours)**
  Reading in a specific area of German literature, culture, or history. Weekly conferences conducted in German. Eight credits maximum will apply toward the degree. (Fa, Sp) Prerequisites: Junior standing and consent of instructor. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration.

- **SPA101: Elementary Spanish I (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the Spanish language. Introduction to Hispanic cultures, politics, history, and literature through texts in English or in English translation from Spanish. Weekly out-of-class discussion sections. Conducted primarily in Spanish. (101-Fa, 102-Fa, Sp)

- **SPA102: Elementary Spanish II (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the Spanish language. Introduction to Hispanic cultures, politics, history, and literature through texts in English or in English translation from Spanish. Weekly out-of-class discussion sections. Conducted primarily in Spanish. (101-Fa, 102-Fa, Sp)

- **SPA201: Intermediate Spanish I (4 hours)**
  Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Introduction to Hispanic cultures. Weekly out-of-class discussion sections. Conducted in Spanish. (SP201-Fa; SP202-Sp) Prerequisites: SPA 102 or consent of the instructor.

- **SPA202: Intermediate Spanish II (4 hours)**
  Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Introduction to Hispanic cultures. Weekly out-of-class discussion sections. Conducted in Spanish. (SP201-Fa; SP202-Sp) Prerequisites: SPA 201 or consent of the instructor.

- **SPA290: Spanish for Health and Human Services (2 hours)**
  Focus on health and human service vocabulary, language skills for professional communication, and cross-cultural awareness in order to communicate effectively, both formally and informally. Students participate in hands-on, experiential learning opportunities in the community. Conducted in Spanish. (Sp) Prerequisites: SPA 202 or consent of instructor.

- **SPA298: Independent Studies in Spanish (4 hours)**
Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

- **SPA300: Introduction to Spanish Phonetics and Phonology (4 hours)**
  This course focuses on the sounds of the Spanish language. Through the study of phonetics (the science that examines sounds) and phonology (the organizational system of sounds), students will improve their pronunciation, learn about and recognize different dialects of the language, understand how the phonic system functions at both contrastive and descriptive levels, and gain an appreciation of the phonological development of the language. Prerequisites: SPA202 or instructor's consent. (Fa)

- **SPA301: Conversation and Composition I (4 hours)**
  General Education H1. Practice in conversation and composition with emphasis on new and technical vocabulary. Functional grammar review. Reading, discussion and interpretation of more challenging literary texts. Reinforcement of basic linguistic elements such as phonetics and syntax as an aid to further refinement of the four language skills. Conducted in Spanish. (Fa) Prerequisites: SPA 202 or consent of instructor.

- **SPA302: Conversation & Composition II (4 hours)**
  This course strengthens skills already learned in Spanish courses by integrating elements of print journalism interviewing, writing and editing. It also expands the cultural knowledge of the students by focusing on their writing on themes of cultural relevance. Conducted in Spanish. (Sp) Prerequisite: SPA 301 or consent of instructor.

- **SPA305: Spanish for the Professions (4 hours)**
  This course introduces students to the vocabulary and discourse appropriate to the professions. It develops communicative skills for professional situations (speaking, listening, comprehension, reading, writing, translation, interpretation, and computer skills) and provides cultural and cross-cultural awareness. Students prepare oral and written reports. Conducted in Spanish. Not to be taken in conjunction with SPA325.(Sp) Prerequisites: SPA 202.

- **SPA307: Latin American Civilization (4 hours)**
  General Education H2. Lectures and discussion on Latin American cultural history and trends, particularly as they relate to the arts, political thought, and economics. Conducted in Spanish. (Fa, odd years) Prerequisites: SPA 202.

- **SPA308: Hispanic Civilization (4 hours)**
  General Education H2. Lectures and discussion on Hispanic cultural trends, particularly as they relate to the arts, political thought, and economic conditions. Topics will focus on social movements in Spain or Spain's impact on Latin America, the Caribbean, and the United States. Conducted in Spanish. (Fa, even years) Prerequisites: SPA 202.

- **SPA325: Spanish for the Professions (4 hours)**
  This upper-intermediate level course will allow students to explore the diverse career possibilities available to those proficient in Spanish. Building upon previous knowledge of the Spanish language, students will expand their communication, reading, videos, oral presentations, written reports, projects and a variety of interactive activities will expand cross-cultural awareness as well as increase familiarity with the language. During spring break, students will travel to Lima, Peru, to complete volunteer work related to their field(s) of interest. Both pre- and post-reflection will compliment reflection completed during the immersion experience. Not to be taken in conjunction with SPA305. Prerequisite SPA202.

- **SPA398: Independent Studies in Spanish (2 TO 4 hours)**
  Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

- **SPA401: Advanced Conversation (2 hours)**
  A panorama of customs, life styles, attitudes, and cultural achievements of the Spanish-speaking peoples today. Emphasis on informal conversation with individual interests and projects encouraged. Includes oral and written reports as well as grammar and syntax review. Conducted in Spanish. (Sp) Prerequisite: SPA 301 or 305 or 307 or 308 or 325 or consent of instructor. (May be taken twice.)

- **SPA480: Internship/Capstone Internship in Spanish (2 TO 4 hours)**
  Applications of foreign language and culture using language skills in professional settings. This course may also serve as a culminating capstone experience. Facilitates transition from university to career or graduate school through the creation of a resume and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. S/U graded. (Fa, Sp) Prerequisites: SPA 307 or 308, 318 and senior standing.

- **SPA498: Indep Directed/Capstone Study (2 TO 4 hours)**
  Intensive reading in a specific area of Spanish or Spanish-American literature or culture. Weekly conference conducted in Spanish. Eight credits maximum may apply toward degree. This course may also serve as a culminating capstone experience for seniors. Facilitates transition from university to career or
graduate school through the creation of a resume and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp) Prerequisites: SPA 307 or 308, 318.
Music Therapy

- **MTY101: Introduction to Music Therapy (2 hours)**
  This course provides an introduction to the field of Music Therapy encompassing theoretical and historical review, clinical applications, professional requirements, case studies and research and development, and implications for future.

- **MTY180: Music Therapy Practicum (1 or 2 hours)**
  This course is designed to provide students continued in-depth exposure and training in the culture and techniques of music therapy. Through various lectures, presentations, simulations, and instructor-directed actual clinical experiences, the students will start to learn and practice the process of assessment and application of music therapy procedures. Section A is 1 credit, section B is 2 credits. Prerequisites: MTY101 (FA, SP)

- **MTY251: Psychology of Music (3 hours)**
  This course examines the cognitive, social, and biological basis of our ability to perceive, remember, appreciate and produce music. We will examine selected empirical studies and review papers encompassing the evolutionary, developmental, social/personality, and cognitive neuroscience approaches to understanding musical practice. This course also includes lab assignments involving listening exercises, data collection and analyses. Prerequisites: PSY101, CMP112, MUS111. (SP)

- **MTY301: Music Therapy Foundations and Principles (2 hours)**
  This course will provide a foundation for the student to build a conceptual framework for developing his or her own approach to the use of music as therapy, a sequential understanding of the process of music therapy intervention, and a functional understanding of the dynamics of therapist-client interaction. Prerequisites: MTY101. (Alternate FA)

- **MTY304: Influence of Music on Behavior (3 hours)**
  This course develops an objective, scientifically sound explanation for the therapeutic effects of music regularly observed by music therapists in professional practice. Students will learn research terminology and basic compositional format used in writing research literature. They will develop knowledge of the purpose, prevailing methodology, data analysis techniques, and ways to interpret results reported in published historical, quantitative and qualitative research. Prerequisites: MTY101, MTY251. (SP)

- **MTY382: Music Therapy Activities for Specific Populations (2 hours)**
  Learn how to select, adapt, and use musical instruments and other equipment to elicit participation from children and adult clients including those having disabilities due to aging. Prerequisites: MTY101, MTY180. (SP)

- **MTY401: Music Therapy Procedures and Applications (2 hours)**
  Students will learn how to apply the various assessment procedures, planning processes, accepted and emerging treatment techniques, evaluation instruments, and reporting protocols used by music therapists who treat infants, children, adults, and geriatric clients who exhibit a variety of physical and mental disorders. Prerequisites: MTY101, MTY302, and at least 5 credits of MTY180. (FA)

- **MTY480: Music Therapy Internship (12 hours)**
  The Music Therapy Internship is the culminating, in-depth clinical training at the professional level at an AMTA-approved site under continuous, qualified supervision by a credentialed music therapist. Prerequisites: Must be enrolled in the Music Therapy Program and in good standing at the senior level. ANP130, PSY101, PSY201, PSY221, CMP112, and at least 7 credits of MTY180. Student must have passed Piano Proficiency, Guitar Proficiency, and Voice Proficiency exams. (FA, SP)
Music

- **MUS105: Class Piano I (1 hours)**
  Fundamental piano skills to establish basic piano proficiency. May be taken a maximum of four semesters. (Does not count toward major or minor.) *106, 107 and 108 need consent of instructor. (105 & 107-Fa; 106 & 108-Sp)

- **MUS106: Class Piano II (1 hours)**
  Fundamental piano skills to establish basic piano proficiency. May be taken a maximum of four semesters. (Does not count toward major or minor.) *106, 107 and 108 need consent of instructor. (105 & 107-Fa; 106 & 108-Sp)

- **MUS107: Class Piano III (1 hours)**
  Fundamental piano skills to establish basic piano proficiency. May be taken a maximum of four semesters. (Does not count toward major or minor.) *106, 107 and 108 need consent of instructor. (105 & 107-Fa; 106 & 108-Sp)

- **MUS108: Class Piano IV (1 hours)**
  Fundamental piano skills to establish basic piano proficiency. May be taken a maximum of four semesters. (Does not count toward major or minor.) *106, 107 and 108 need consent of instructor. (105 & 107-Fa; 106 & 108-Sp)

- **MUS111: Music Theory I (3 hours)**
  Training in the fundamental materials of music: pitch notation, common clefs, major and minor scales, common-practice rhythm and meters, intervals, simple diatonic melody, triads, and seventh chords. (Fa)

- **MUS112: Music Theory II (3 hours)**
  Study of basic part-writing, harmonic progression, chord identification, figured bass, and roman numeral analysis of diatonic common-practice music. (Sp) Prerequisite: MUS 111.

- **MUS113: Musicianship I (1 hours)**
  These courses complement the Music Theory sequence: 113 corresponds to MUS 111; 114 corresponds to MUS 12; 213 corresponds to MUS 211; and 214 corresponds to MUS 212. The goal of these courses is to develop the aural skills necessary for success in the performing or teaching fields of music. The writing of dictated rhythms, melodies, and harmonies, and the sight-singing of rhythms and melodies are the central activities of each course. Prerequisites and corequisites: the corresponding Music Theory course is a corequisite or prerequisite for each Aural Skills course, and the Aural Skills courses must be taken in numerical order. Co-requisite: Music Theory I, II, III or IV. (Fall)

- **MUS114: Musicianship II (1 hours)**
  These courses complement the Music Theory sequence: 113 corresponds to MUS 111; 114 corresponds to MUS 12; 213 corresponds to MUS 211; and 214 corresponds to MUS 212. The goal of these courses is to develop the aural skills necessary for success in the performing or teaching fields of music. The writing of dictated rhythms, melodies, and harmonies, and the sight-singing of rhythms and melodies are the central activities of each course. Prerequisites and corequisites: the corresponding Music Theory course is a corequisite or prerequisite for each Aural Skills course, and the Aural Skills courses must be taken in numerical order. Co-requisite: Music Theory I, II, III or IV. (Spring)

- **MUS117: Class Voice (1 hours)**
  Class lessons to learn basic vocal skills. May be taken a maximum of two semesters. (Fa, even years)

- **MUS140: Foundations of Music Education (2 hours)**
  The purpose of this course in Music Education is to introduce students to the profession in a way that will give them focus and motivation in the rest of their academic work. By understanding the role that music will play in the transformation of education in the future, students will become clear about why they are undertaking the curriculum of music study designed to result in mastery of the discipline. Students will gain a working knowledge of the Department of Public Instruction's Wisconsin Model Standards for Teacher Development and Licensure as well as the K-12 Standards in Music. Particular emphasis will be given to the role of schools within the society, curriculum development, assessment strategies, pedagogy, financial and legal aspects of schooling and governance in the public schools. (Sp)

- **MUS141: Workshop - Intro to Education**
  This one-day (8-hour) workshop is designed to introduce students to the philosophy and requirements of the Carroll University Teacher Education Program and the Wisconsin Department of Public Instruction (DPI). The Workshop provides students with a working knowledge of the Wisconsin Model Standards for Teacher Development and Licensure and the Guiding Principles of Carroll University's Education Department. It also introduces students to topics that connect schooling and society including the social context of schooling and teaching, curriculum, financial and legal aspects of schooling, and governance in schools. It also promotes selfreflection, critical thinking and the development of a teaching philosophy. (Sp)

- **MUS151: History of Jazz (4 hours)**
  General Education F1. Origins and evolution of jazz to the present, emphasizing various performance styles and improvisational techniques. (Sp, even years)
- **MUS156: Listening to Classical Music (4 hours)**
  General Education F1. This course is intended as an introductory course and focuses on the development of perceptive listening skills and a broad understanding of Western concert literature. (Fa)

- **MUS157: Beethoven (4 hours)**
  Designed for the general student, the course examines the life, stylistic development and importance of Beethoven within the context of the times in which he lived. (Sp, odd years)

- **MUS158: Rock Music - Roots and History (4 hours)**
  General Education F1. Designed for the general student, the objective of this course is to understand the origins, development, and significance of one of the most popular musical forms in the modern world. (Sp)

- **MUS159: Digital Music Production (4 hours)**
  General Education F1. Students will learn the techniques and concepts of digital audio production with computers, including recording, editing, and song writing, culminating in the creation of an original professional-quality radio commercial.

- **MUS161: Violin (1 TO 2 hours)**
  (Fa, Sp)

- **MUS162: Viola (1 TO 2 hours)**
  (Fa, Sp)

- **MUS163: Cello (1 TO 2 hours)**
  (Fa, Sp)

- **MUS164: Bass (1 TO 2 hours)**
  (Fa, Sp)

- **MUS165: Guitar (1 TO 2 hours)**
  (Fa, Sp)

- **MUS166: Harp (1 TO 2 hours)**
  (Fa, Sp)

- **MUS167: Piano (1 TO 2 hours)**
  (Fa, Sp)

- **MUS168: Organ (1 TO 2 hours)**
  (Fa, Sp)

- **MUS169: Voice (1 TO 2 hours)**
  (Fa, Sp)

- **MUS170: Flute (1 TO 2 hours)**
  (Fa, Sp)

- **MUS171: Oboe (1 TO 2 hours)**
  (Fa, Sp)

- **MUS172: Clarinet (1 TO 2 hours)**
  (Fa, Sp)

- **MUS173: Bassoon (1 TO 2 hours)**
  (Fa, Sp)

- **MUS174: Saxophone (1 TO 2 hours)**
  (Fa, Sp)

- **MUS175: Horn (1 TO 2 hours)**
  (Fa, Sp)

- **MUS176: Trumpet (1 TO 2 hours)**
  (Fa, Sp)

- **MUS177: Trombone (1 TO 2 hours)**
  (Fa, Sp)

- **MUS178: Tuba (1 TO 2 hours)**
  (Fa, Sp)

- **MUS179: Percussion (1 TO 2 hours)**
  (Fa, Sp)

- **MUS181: Class Guitar (1 hours)**
  This is the level of study for the absolute beginner as well as the self-taught guitarist who wishes to re-examine the fundamentals of guitar technique. (FA)

- **MUS182: Introduction to Rhythmic Movement (1 hours)**
  This introductory, experiential course is designed to provide students with fundamental knowledge of and an appreciation for the role of movement and body awareness. Basic movement models, concepts and terminology are introduced and applied. Contemporary cross-cultural rhythmic movement methods are presented and experienced. (SP)

- **MUS183: Men's Chorus (1 hours)**
Carroll's only all-male vocal ensemble, Men's Chorus builds vocal technique, musicianship, and community through the rehearsal and performance of great choral and vocal literature. (FA, SP)

- **MUS185: Concert Choir (1 hours)**
  General Education F1. Prerequisite: Placement audition and approval of conductor. (Fa, Sp)

- **MUS186: Chamber Singers (1 hours)**
  Prerequisite: Placement audition and approval of conductor. (Fa, Sp)

- **MUS187: Women's Ensemble (1 hours)**
  Prerequisite: Placement audition and approval of conductor. (Fa, Sp)

- **MUS188: Wind Symphony (1 hours)**
  General Education F1. Prerequisite: Placement audition and approval of conductor. (Fa, Sp)

- **MUS189: Jazz Lab (1 hours)**
  Jazz Lab allows students to explore jazz and contemporary styles and improvisation through small group collaboration and coaching. Prerequisite: Placement audition and approval of conductor. (Fa, Sp)

- **MUS190: Chamber Music (1 hours)**
  Section A-Brass, Section B-Strings, Section C-Flute Choir, Section D-Woodwinds, Section E-Piano, Section F-Handbell Choir. Prerequisite: Placement audition and approval of conductor. Prerequisite: Permission of conductor. (Fa, Sp)

- **MUS191: Chamber Orchestra (1 hours)**
  The Chamber Orchestra is comprised mostly of strings and complemented by woodwinds, brass, and timpani, as needed. Musicians come together to learn and properly perform the classical chamber orchestra repertoire. Prerequisite: placement audition and approval of conductor.

- **MUS192: The Carroll Chorale (1 hours)**
  Prerequisite: Permission of the conductor. (Fa, Sp)

- **MUS211: Music Theory III (3 hours)**
  A continuation of MUS 112, this course presents chromatic harmony with particular emphasis on how it is used by composers in selected music literature. (Fa) Prerequisite: MUS 112. Prerequisite: MUS 112 and passing competency exam.

- **MUS212: Music Theory IV (3 hours)**
  Study of advanced chromatic harmony, post-tonal musical analysis, and large scale formal organization of solo, chamber, and orchestral works by common practice composers. (Sp) Prerequisites: MUS 211 or consent of instructor.

- **MUS213: Musicianship III (1 hours)**
  These courses complement the Music Theory sequence: 113 corresponds to MUS 111; 114 corresponds to MUS 112; 213 corresponds to MUS 211; and 214 corresponds to MUS 212. The goal of these courses is to develop the aural skills necessary for success in the performing or teaching fields of music. The writing of dictated rhythms, melodies, and harmonies, and the sight-singing of rhythms and melodies are the central activities of each course. Prerequisites and corequisites: the corresponding Music Theory course is a corequisite or prerequisite for each Aural Skills course, and the Aural Skills courses must be taken in numerical order. Co-requisite: Music Theory I, II, III or IV.

- **MUS214: Musicianship IV (1 hours)**
  These courses complement the Music Theory sequence: 113 corresponds to MUS 111; 114 corresponds to MUS 112; 213 corresponds to MUS 211; and 214 corresponds to MUS 212. The goal of these courses is to develop the aural skills necessary for success in the performing or teaching fields of music. The writing of dictated rhythms, melodies, and harmonies, and the sight-singing of rhythms and melodies are the central activities of each course. Prerequisites and corequisites: the corresponding Music Theory course is a corequisite or prerequisite for each Aural Skills course, and the Aural Skills courses must be taken in numerical order. Co-requisite: Music Theory I, II, III or IV.

- **MUS215: Songwriting and Improvisation (1 hours)**
  This course instructs students in the technical and artistic aspects of develop original melodies, accompaniments, and short pieces extemporaneously in a variety of moods and styles, vocally and instrumentally. Students will learn to write lyrics, set the text to music, and developing accompaniments for a variety of ensembles, technical levels, styles, and moods. Prerequisites: MUS211, MUS212. Co-requisite: MUS214. (SP)

- **MUS220: Functional Guitar (1 hours)**
  This course teaches the practical skills of functional guitar, the ability to accompany basic folk tunes and simple familiar melodies without written music in a variety of keys, and to create musically appropriate and fluent accompaniments to songs noted in lead sheet notation. Prerequisites: MUS111, satisfactory evaluation in Guitar Proficiency Exam. (SP)

- **MUS241: Workshop - Education in a Multicultural Context**
  This one-day (8-hour) workshop is designed to satisfy the current DPI requirements for education in cultural diversity for K-12 certification in the state of Wisconsin. The Workshop on Education in a Multicultural Context provides students with an overview of multicultural education as it stands within our
current society and educational system. It specifically focuses on how issues of race, ethnicity and gender impact choices made in the classroom. The workshop engages students in critical thinking about the theoretical, conceptual, and political opinions that fuel and influence the debate over multicultural education. (Sp, odd years)

- **MUS251: String Methods (1 hours)**
  Development of basic performance skills, maintenance methods, and materials for the teaching of strings in the public schools. Violin, viola, cello, and bass will be covered. (Every third year beginning in Fa10)

- **MUS252: Percussion Methods (1 hours)**
  Development of basic performance skills, maintenance methods, and materials for the teaching of percussion in the public schools. Snare and bass drums, timpani, drum set, all mallet instruments and auxiliary percussion will be covered. (Every third year beginning in Sp11)

- **MUS253: Woodwind Methods (1 hours)**
  This course is designed to provide students with the skills necessary to teach the woodwind instruments in large and small group settings in the public schools. Students will learn to perform on each of the major woodwind instruments. Instruments will be provided for students' use during the course. (Fall, every third year)

- **MUS255: Brass Methods (1 hours)**
  This two-course sequence is designed to provide students with the skills necessary to teach the brass instruments in large and small group settings in the public schools. Students will learn to perform on each of the major brass instruments. Instruments will be provided for students' use during the course. (Fall, every third year)

- **MUS291: Topics in Music (2 TO 4 hours)**

- **MUS298: Independent Study in Music (1 TO 4 hours)**
  Prerequisite: Junior standing, approval of the divisional dean and consent of instructor.

- **MUS303: Conducting I (2 hours)**
  Fundamentals of conducting including baton technique, score reading and rehearsal procedures. (Sp, even years) Prerequisite: MUS 211 and MUS 213.

- **MUS304: Conducting II - Choral (2 hours)**
  (Fa, even years) Prerequisite: MUS 303.

- **MUS305: Conducting II - Instrumental (2 hours)**
  (Fa, even years) Prerequisite: MUS 303.

- **MUS307: Practical Keyboard Harmony (1 hours)**
  Practical keyboard facility, including harmonic progressions, modulation, figured bass realization, transposition and score reading. (Fa) Prerequisite: MUS 211.

- **MUS311: Music History I - Early Music through the Baroque Period (4 hours)**
  Surveys Western music from Antiquity through the Baroque period, with particular emphasis on music literature and identification of stylistic characteristics of each period. (Fa, even years) Ability to read music required.

- **MUS312: Music History II - The Classic and Romantic Periods (4 hours)**
  Designed for the music major as well as the general student, this course traces the development of Western music from the Classical period through the Romantic period (1750-1900). Ability to read music required. (Sp, odd years) Prerequisite: ENG 170.

- **MUS313: Music History III - The 20th Century (2 hours)**
  This course continues with the study of music history begun in MUS 311 and 312, concentrating on 20th century style characteristics, major composers, 'isms,' forms, techniques, terminology, and actual music from 1900 until the present. Study of the social, philosophical, and political background against which all this music unfolded will also be a focus of the course. (Fa, odd years) Ability to read music required.

- **MUS323: Diction - German and English (1 hours)**
  Develops a basic understanding of the International Phonetic Alphabet as applied to the mastery of foreign language pronunciation for singing. 323 is English and German diction and is a prerequisite for MUS 324; 324 is French and Italian diction. (323-Fa, even years; 324-Sp, odd years)

- **MUS324: Diction - French and Italian (1 hours)**
  Develops a basic understanding of the International Phonetic Alphabet as applied to the mastery of foreign language pronunciation for singing. 323 is English and German diction and is a prerequisite for MUS 324; 324 is French and Italian diction. (323-Fa, even years; 324-Sp, odd years)

- **MUS350: Materials/Techniques Elem Music (2 hours)**
  Fundamental music skills, methods and materials for the elementary classroom teacher. (Fa, Sp, Su)

- **MUS352: Choral Methods and Literature (4 hours)**
  Organization and administration of choral music curricula. Observation and participation in the classroom. Investigation of historical and contemporary philosophies of choral music education. (Fa, odd years)
  Prerequisite: Admission to the Teacher Education Program.
- **MUS354: General Music in the Schools (2 hours)**
  Organization and administration of general music curricula in grades K-12. Survey and application of European and American trends in teaching methodology and materials. Observation and participation in the classroom. (Sp, odd years) Prerequisite: Admission to the Teacher Education Program.

- **MUS355: Instrumental Methods (4 hours)**
  Explores methods and materials used in teaching instrumental music in grades K-12. Observation and participation in the classroom. (Fa, odd years) Prerequisite: Admission to the Teacher Education Program.

- **MUS357: Choral Literature & Performance Practice (2 hours)**
  This course provides students with broad knowledge of representative repertoire for all levels and sizes of ensembles from the 5th-grade choir to the professional ensemble. The course will introduce students to a viable philosophy of music and establish why the choice of quality repertoire in educational settings is of critical importance to the success of music teaching. Traditional interpretations of core repertoire will be studied through various recordings. (Sp, odd years) Prerequisite: MUS 211.

- **MUS358: Wind Literature and Performance Practice (2 hours)**
  This course provides students with broad knowledge of representative repertoire for all levels and sizes of ensembles from the 5th-grade band to the professional wind ensemble. The course will introduce students to a viable philosophy of music and establish why the choice of quality repertoire in educational settings is of critical importance to the success of music teaching. Traditional interpretations of core repertoire will be studied through various recordings. (Sp, odd years) Prerequisite: MUS 211.

- **MUS359: Orff/Kodaly Methods (4 hours)**
  This is a course designed to increase each student's knowledge and understanding of music teaching materials, methodologies, and techniques of teaching general music at the elementary school level using the methodologies of Orff and Kodaly. Systems of teaching developed by others, such as Dalcroze, will be studied and put into practice as well. (Fa, odd years) Prerequisite: MUS 354.

- **MUS366: Voice Pedagogy (2 hours)**
  The study of voice production and how to recognize and solve vocal problems. Students have the opportunity to teach voice lessons under the guidance of the instructor. (Fa, odd years)

- **MUS391: Topics in Music (2 TO 4 hours)**

- **MUS398: Independent Study in Music (1 TO 4 hours)**
  Prerequisite: Junior standing, approval of the divisional dean and consent of instructor.

- **MUS399: Music Capstone (2 hours)**
  During the semester in which the senior recital is presented, students will enroll in 499 in lieu of the regular Applied Music number. Students will work with the applied teacher in the presentation of a public recital. This will include research and the development of the ability to communicate clearly in written program notes. Further, demonstration of a high level of mastery of the voice/instrument is expected. Corequisite: MUS 471. Prerequisite: senior standing. Regular applied music fee will be charged. Periodic group meetings with all capstone students are required.
New Cultural Experiences Program

- **NCE207: Practicing Intercultural Communication in Thailand (4 hours)**
  Magical, mystical, modern Thailand. Studying and visiting Thailand offers a unique opportunity—you will come to understand your own culture in a new way through your journey through this beautiful and fascinating land. Intercultural communication is influenced by societal norms and values, history, arts, and the media. We will study intercultural communication in Bangkok, Chiang Mai, the Elephant Nature Reserve, and Phuket. This class may be substituted for COM207: Intercultural Communication requirements. Students who have already taken COM207 may also apply and count the class as an elective or as a 300-level Communication class. This class may count as a student’s CCE and CCD requirement in the General Education program. Offered Fall Semester every three years with January travel (next offering in Fall 2016)

- **NCE302: Russia & Central Asia - History, Environment, and Geography Halfway Around the World (4 hours)**
  This course is designed to provide students the opportunity to study and have firsthand experience in Russia and Central Asia. Students will have a better understanding of the region’s culture, history, geography and environment. We visit St. Petersburg and Moscow in Russia and Kokshetau, Kazakhstan and their surrounding regions. We study the interrelationship of historical events, cultural characteristics and environmental quality. We will be working with St. Petersburg University, Moscow State University, Kokshetau State University, the Peace Corps, and the Waukesha Area Sister City Association. (Spring odd years, travel in summer)

- **NCE305: Reefs, Rainforests and Ruins of Belize (4 hours)**
  This course focuses on tropical reef biology and rainforest ecology. While in Belize, students explore the world's second largest barrier reef and trek through a tropical rainforest to observe bullet trees, howler monkeys and exotic birds. While at these sites, students design and perform investigative experiments to gain an understanding of the scientific method. In addition, students experience the ancient Mayan civilization visiting the ruins at Lamanai, Caracol and Tikal. (Fall odd years, travel in January)

- **NCE309: Germany, Poland and Hungary (4 hours)**
  This course examines personal and communal treatment of 'the other' in Eastern Europe, where recent history has left not only deep scars, but also a strong commitment to social justice and tolerance. Guided by visits to historical sites, guest speakers, one-on-one conversations and individual observations, students examine how questions of tolerance and intolerance have shaped and still inform Eastern European culture and society. (Sp, Travel in May)

- **NCE312: China - Its Modern Reality (4 hours)**
  This course examines Chinese culture with an emphasis on the roles China currently plays on the international stage. Specific attention is given to China’s reform that has brought about great changes taking place in its economy and the social lives of the people. Important current issues in semi-capitalism, U.S. business outsourcing and internationalism in education will be stressed. (Spring even years, travel in May)

- **NCE313: Revising Italy - Travel Writing in the Italian Tradition (4 hours)**
  In this course, students will spend the semester exploring readings in the tradition of the Italian travel narrative, including classic works by authors such as Twain and James, as well as more contemporary examples. Students will work to practice their own skills in writing travel essays, and at the completion of the semester-study portion of the course, we will travel to Italy for approximately three weeks and explore several distinct regions of the country (city, country and sea) and reflect on how our experiences there have been shaped by the major authors we have read during the semester. At the completion of the off-campus portion of the course, students will produce their own major travel essay. (Spring even years, travel in May)

- **NCE315: Australia - The Land and the People Down Under (4 hours)**
  This course explores the geographic and demographic forces that have shaped Australia by focusing on the amazing geographic diversity and how the peoples of Australia have left their mark on contemporary culture. The course will review the economic, political, religious, environmental and social realities of Australia and its neighboring Oceanic Islands. (Spring even years, travel in May-June)

- **NCE316: Multicultural South Africa (4 hours)**
  This course builds on the material covered in the prerequisite course. A truly interdisciplinary experience, the course incorporates discussions of politics, history, economics and language in an attempt to understand the nature of power, particularly as it is exercised within the context of racial and ethnic oppression of indigenous peoples. (Sp, Travel in May) Prerequisite: ENG 225, South Africa: Culture & History of the Rainbow Nation.

- **NCE317: The Cultural and Environmental Geography of Alaska (4 hours)**
  The purpose of this academic field study is to explore the environmental resources and cultural heritage of America's final frontier. Spring coursework will ground students in an understanding of Alaska's history, physical landscape, Native American heritage, and current natural resource base. The three-week May
NCE318: Mexico - Culture, Health and Human Services (4 hours)
This course has been designed for students who are interested in careers where they will work in health or human service settings that serve Hispanic populations. Using Mexico as a central focus, students will gain an understanding of Mexican and Mexican-American culture and customs. In May students will study in Cuernavaca, Mexico, where they will live with families, participate in seminars related to health, social services, migration, medical anthropology and politics. Intensive language classes are optional for those with near-native fluency. (Fall even years, travel in January)

NCE319: Art and Culture of the Ancient and Modern Maya (4 hours)
In this course, students will spend the first half of the spring semester at Carroll studying ancient Mayan history, culture and art/architecture. Over spring break, students will spend ten days in Mexico exploring the world they have studied. Upon return to Carroll, the second half of the semester will involve developing written and artistic projects that reflect what they have learned on campus and abroad. (Spring even years, travel over Spring Break)

NCE320: Paris - Art and Culture (4 hours)
This course traces the civilization and culture of France through the centuries, beginning with the Gallo-Roman times and progressing to the present. While in Paris, students will experience first-hand the wealth of art and architecture which Paris has to offer. Students will be introduced to various artistic movements born in France and will investigate how history is reflected by the many monuments in the City of Light. Previous knowledge of French is not required. (Spring, travel in May)

NCE321: Contemporary Germany - Its Culture, Economy, and Politics (4 hours)
This course studies contempoporary Germany, its culture and politics. Students will then travel to Germany to develop a first hand understanding of what they have learned in the classroom. Home base will be in Marburg with travel to Berlin, Cologne, Frankfurt, Gottingen and other locations. (Spring even years, travel over Spring Break)

NCE322: The Historical Evolution of Culture, Trade and Economics in Ireland (4 hours)
This course offers an examination how culture in Ireland evolved through the centuries as their economy advanced toward their current state in the global environment. The course fosters an appreciation of the differences in culture between Ireland and the U.S. — as well as the multifarious ways in which "culture" is to be understood— and the history of Ireland through readings, discussions and projects while including an eleven-day hands-on experience to Ireland’s cultural and business centers. (Spring odd years with May travel)

NCE323: Travel Journals (4 hours)
Writing and drawing both require refined observational skills. This course seeks to develop these skills in an interrelated, experiential workshop format, partially taught off campus. Using readings taken from the long tradition of Italian travel writing, the course will seek to uncover the way writers influence our perceptions of place and specifically of Italian culture. The travel to Italy provides an opportunity to practice observational and expressive skills, and an opportunity to develop a new way of being in the world. The process of keeping a travel journal as well as the final essay about this experience will reflect this new awareness of place and of self. Travel to Italy in May if there is enough interest, as additional section might go to Sicily over Spring Break. In Fall semesters, this course will focus on Argentina, with travel in January.

NCE324: Identity, Culture and the European Union (4 hours)

NCE325: Politics and Theatre in the UK and USA (4 hours)
In depth look into the interrelationship of Politics and Theatre in the dynamic defining and redefining of the British culture. Students will explore plays and politics from three distinct periods: Elizabethan, Victorian, and Modern England and counterpoint them with study of American responses and innovations during the same eras. Travel to London during summer will include visits to the New Globe Theatre, the National Theatre, Stratford on Avon, Parliament, the Victoria & Albert Museum, and the British Imperial War Rooms. Travel to Chicago to explore US correlations will take place during the semester. (Spring even years, summer travel)

NCE341: Health Care in Guatemala (4 hours)
This course provides an introduction to the field of international health, using Guatemala as a focus of study. After an overview of the geography, history, and culture of Guatemala, there will be an emphasis on understanding factors that impact illness and injury, data assessment, and the development of meaningful solutions to identified problems. The semester long course will serve as preparation for a practicum experience in Guatemala. During the two week immersion in Guatemala, students will tour health care facilities in eastern Guatemala, Mayan, and colonial historical sites, and cultural points of interest. Students will also assist with mobile clinics in several villages and present a health education lecture. (Sp) Prerequisites: Junior standing, NRS 233.
Nursing

- **NRS100: Health Care and Nursing (4 hours)**
  This is the first course in the nursing major. It is designed to acquaint the student with three broad areas that encompass the professional nursing role. Students acquire a foundational ability to use appropriate professional language including the terms and abbreviations that are necessary for professional communication. The process of nursing is studied from the context in which the program is offered, including consideration of global, regional and institutional needs and expectations of the practicing nursing professional. (Fa, Sp) Prerequisite: Admission to the nursing program or approval by nursing faculty.

- **NRS100L: Health Care and Nursing Laboratory**
  Laboratory component for NRS100.

- **NRS230: Health Assessment (4 hours)**
  The foundational concepts, scientific basis and theoretical constructs of effective therapeutic communication, interviewing, health history, and physical assessment across the life span are presented. Laboratory practice is designed to produce the cognitive and psychomotor skills necessary to conduct a systematic and accurate assessment of an individual's health status. The ability to collect, organize, document and analyze health history and physical assessment data, as well as the ability to recognize and promote adaptive human responses are the expected outcomes of this course. (Fa, Sp) Prerequisite: Admission to the Nursing Program, ANP130, Pre or Co-requisite: NRS 100.

- **NRS230L: Health Assessment Laboratory**
  Laboratory component for NRS230.

- **NRS233: Foundations of Nursing Practice (4 hours)**
  This course is an introduction to the scientific basis and theoretical foundations of professional nursing practice. Nursing theory is incorporated with nursing process to enable the student to identify basic health responses and intervene appropriately at the foundational level of care. The student learns to use a systematic framework to implement the nursing process and begins to recognize and apply nursing research to practice. A continued development of an attitude of inquiry is expected. (Fa, Sp) Prerequisite: ANP130, ANP140, NRS230. Concurrent with NRS 234.

- **NRS234: Foundations - Practicum (2 hours)**
  This course focuses on the application and integration of the nursing process to promote physical wellness. Simulated and actual client-care experiences provide an opportunity for student development and practice in the roles of professional nursing that assist the individual to regain or maintain an optimal health state. Therapeutic interventions related to fundamental needs across the life span are addressed and a basic skill level is expected as an outcome of the course. S/U graded. (Fa, Sp) Prerequisite: ANP130, ANP140, NRS230. Concurrent with NRS233.

- **NRS236: Human Pathophysiologic Responses (4 hours)**
  This course is focused on the alterations in cell, tissue and system mechanisms that manifest as health problems throughout the life span and prevent or limit individuals from making adaptive responses. Although the focus of the course is on the systemic pathophysiology of the individual, the response of the family are acknowledged as inseparable from the health state of a family member. (Sp) Prerequisite: ANP130, ANP140, CHE101, CHE102.

- **NRS300: Critical Inquiry in Nursing Research (2 hours)**
  This course examines the concepts and the process of research. A systematic and critical inquiry into published nursing research and an understanding of its practice application (s) provide the course emphasis. (Fa, Sp) Prerequisite: Admission to the nursing program, NRS233, NRS236, CMP112.

- **NRS300H: Critical Inquiry in Nursing Research Honors (2 hours)**
  NRS300H is a honors program course emphasizing critical reading, critical analysis, and effective writing in the context of professional nursing. Concepts and processes of research that undergird evidence-based practice are examined. Students gain essential knowledge and experience in the search of electronic databases; the retrieval, appraisal, and synthesis of empirical evidence; and the development and submission of a professional manuscript for publication. Prerequisites: Admission to the Nursing Program, acceptance in the CU Honors Program, NRS233, NRS236, CMP112. (SP only)

- **NRS310: Mental Health Nursing Care (3 hours)**
  This course focuses upon the theoretical principles of psychiatric/mental health nursing and on practical foundations for assessing, planning, intervening, and evaluating within psychiatric/mental health situations to promote health. The course examines measures for identifying, supporting and fostering the abilities of individuals, families, groups, and communities to cope and assist mentally unhealthy individuals to higher levels of function and quality of life. (Fa) Prerequisites: NRS 233, NRS234, NRS236, PSY 221.

- **NRS312: Family Centered Obstetric Nursing Care (2 hours)**
  This course focuses on the specialized health care needs of the childbearing family. The health response of the family unit is emphasized as essential to the promotion and maintenance of health of mother and child. Students develop the necessary knowledge base and learn the importance of collaboration with
others of the health care delivery team to provide care and teaching for pregnancy, delivery, and newborn nursing. (Fa, Sp). Prerequisites: NRS 233, 234, 236, BIO 212. Pre-requisite or Co-requisite: PSY 221. Do not take concurrently with NRS 320.

- **NRS316: Introduction to Medical Surgical Nursing (4 hours)**
  
  This course is designed to provide the student with an understanding of the effects of selected physiologic problems on adults in inpatient care settings and the relevant nursing interventions to care for those problems. The content explores ways to promote physical and emotional health in the ill individual, across the adult lifespan, through a partnership with the patient and the patient's support system. (Sp).
  
  Prerequisites: NRS 233, 234, 236, 310, HSC 300. Pre-requisite or Co-requisite: NRS 300. Concurrent with 317.

- **NRS317: Medical Surgical Nursing Practicum (5 hours)**
  
  This course is designed to provide the student with an understanding of the effects of selected physiologic problems on adults in inpatient care settings and the relevant nursing interventions to care for those problems. The content explores ways to promote physical and emotional health in the ill individual, across the adult lifespan, through a partnership with the patient and the patient's support system. (Fa, Sp).
  
  Prerequisites: NRS 233, 234, 236, 310, HSC 300. Concurrent with 316.

- **NRS318: Family Centered Pediatric Nursing Care (2 hours)**
  
  The course focuses on the specialized health care needs of the child in the family. The course provides the necessary knowledge base to maintain optimal health in the pediatric population through developmentally and culturally competent care of the acute and chronic illness and through the promotion of wellness behaviors in the child and family. (Fa, Sp).
  
  Prerequisites: NRS 233, 234, 236, 310, HSC 300. Concurrent with 316.

- **NRS391: Special Topics in Nursing (2-4 hours)**

- **NRS415: Community Health Practicum (2 hours)**
  
  This course is designed to provide the nursing student with opportunities to apply evidence and theoretical principles of community and public health nursing in the clinical setting. Care is focused on health promotion and disease prevention in communities, populations, families, and individuals in a variety of community settings. Pre-requisites: NRS 300, 312, 316, 317, 320. Concurrent with NRS 416. (Fall course)

- **NRS416: Community Health Nursing Care (3 hours)**
  
  This course provides a body of knowledge that allows the student to view the community as a complex system of forces. Public health and community nursing strategies will be defined and integrated to assess overall health of populations and communities. Students focus on the community as client, and learn to assess and analyze data from public health sources in order to plan and implement community nursing care utilizing primary, secondary, and tertiary prevention strategies. Prerequisites: NRS 300, 310, 312, 316, 317, 320. Concurrent with NRS 415. (Fa only)

- **NRS417: Advanced Medical Surgical Nursing (3 hours)**
  
  This course is designed to provide the student with an understanding of the effects of multiple diagnoses on adults in various clinical contexts (e.g. ER, ICU, sub-acute, community). Learners will gain knowledge and then are capable of assessment and management of patients with complex problems. The content explores ways to prioritize problems and interventions, use practice guidelines and outcome indicators in planning and implementing nursing care to ill individuals across the adult lifespan. Integrated in all modules is discussion related to ethical issues, cultural awareness and diversity along with supporting theories and models. Prerequisites: NRS 310, 316, 317. Concurrent with NRS 419. (Fall only)

- **NRS419: Advanced Medical Surgical Practicum (5 hours)**
  
  This course continues and expands, in practice, the concepts of patient care introduced in the medical surgical nursing theory courses. The practicum and laboratory experiences focus on implementing the nursing process and skills with ill individuals from diverse populations and developmental levels in a variety of medical/surgical in-patient settings. (Fa) Prerequisites: NRS 300, 310, 316, 317. Concurrent with NRS 417.

- **NRS429: Health Policy and Administration (3 hours)**
  
  This course provides an opportunity for the student to synthesize knowledge from all previous coursework and clinical experiences. This interdisciplinary course allows students to work together to understand regional, national, and global health care policy. The course presents leadership concepts and management skills as a basis for implementing change at the policy level. (Sp). Prerequisites: NRS 415, 416, 417, 419. Concurrent with 431.

- **NRS431: Capstone (4 hours)**
  
  The course provides an opportunity for the student to synthesize knowledge from all previous course work and clinical experiences. The student will be provided with the opportunity to practice professionally through delegation of tasks, supervision of nonprofessional staff, and management of patient groups. Students will provide direct patient care for clients and families with complex health needs. Capstone students will apply critical and creative thinking skills to synthesize and integrate nursing knowledge into...
an oral and/or written presentation of a project. (Sp). Prerequisites: NRS 415, 416, 417, 419. Concurrent with NRS 432.

- **NRS432: Professional Practice Preparation (1 hours)**
The professional practice lab experience provides opportunities for students to identify strengths and areas for improvement in their professional nursing skills. Along with faculty support, students are provided simulation experience, study group work, group review sessions, and professional practice experiences that will strengthen nursing knowledge and build confidence to practice as a nurse. (Sp). Prerequisites: NRS 415, 416, 417, 419. Concurrent with NRS 431.

- **NRS498: Independent Study in Nursing (1 TO 4 hours)**
Prerequisite: Approval of the divisional dean and consent of the chair of nursing and instructor.
Philosophy

- **PHI101: Introduction to Philosophy (4 hours)**
  General Education P1. A historical introduction to the major fields of Western philosophy including logic, metaphysics, epistemology, and ethics. This course helps students better understand the world by studying significant interpretations of self, the world, and morality that have been offered by thinkers, past and present. (Fa, Sp)

- **PHI105: Introduction to Logic (4 hours)**
  General Education P1. A study of the principles and methods of logical reasoning. The class will focus primarily on formal mathematical deductive logic but will also include principles of inductive logic and Aristotelian syllogistic logic. (Fa)

- **PHI106: Ethics, Values and Judgment (4 hours)**
  General Education P1. This course is a practical overview of key issues, questions and concepts in applied ethics. Special emphases are placed on the variety of ethical approaches to moral and ethical issue. Students will examine a variety of personal, social, and professional ethical issues and problems and learn methods of researching and evaluating them through the use of critical thinking skills and sound ethical reasoning. Students are provided an active learning experience, increased student interaction and opportunities for independent research into ethical issues of personal interest. (FA, SP, SU)

- **PHI192: Environmental Ethics (4 hours)**
  General Education P1. This course addresses historic philosophical and religious perspectives concerning the natural environment, including contemporary ethical responses to such global concerns as resource stewardship and management, technological change and impact, ecological diversity and sustainability, environmental politics and economics, energy use, population growth, and overconsumption. An emphasis will be placed on global resource challenges and social issues related to resource utilization. (Sp)

- **PHI194: Bioethics (4 hours)**
  General Education P1. This course explores contemporary topics in biomedical ethics through an understanding of foundational biological principles and multiple ethical perspectives. Students critically read, analyze, and discuss essays that contrast viewpoints on bioethical topics. Improvement of student writing is emphasized. (Fall, Spring)

- **PHI205: Philosophy, Politics, and Economics (4 hours)**
  General Education P2. A discussion-based interdisciplinary course exploring the interrelated nature of fundamental ideas and methods used by philosophers, political scientists, and economists to study important socio-economic issues such as globalization, freedom and markets, citizenship and political power, and others. (Sp)

- **PHI206: Ethics (4 hours)**
  General Education P2. An introductory investigation of alternative systems for determining and justifying ethical values. The course explores both theories of conduct (What should I do?) and theories of character (Who should I be?) through an exploration of the contemporary significance of theorists such as Aristotle, Kant, and Mill. (Fa, Sp, Su)

- **PHI206H: Ethics (4 hours)**
  General Education P2. An introductory investigation of alternative systems for determining and justifying ethical values. The course explores both theories of conduct (What should I do?) and theories of character (Who should I be?) through an exploration of the contemporary significance of theorists such as Aristotle, Kant, and Mill. Acceptance to the Honors Program required. (Sp, odd years)

- **PHI207: History and Philosophy of Science (4 hours)**
  General Education P1. A study of the philosophical foundations of science. The class will discuss the nature, purpose and methodologies of scientific inquiry starting with Aristotelian science and tracing the development to the modern period. The class will also discuss the nature of scientific proof, the evaluation of evidence for scientific claims, and the formation and evaluation of scientific theories. (Fa, odd years)

- **PHI213: Philosophy of Art (4 hours)**
  General Education P1. This course introduces students to some of the most historically defining philosophical reflections on the notion of “art”. In particular it will offer insight into some of the most prominent discussions circa its relationship with the concepts of nature and beauty, its social and moral function, and its autonomy in relation to the human mind and the artist’s intention. (SP alternate years)

- **PHI298: Independent Study in Philosophy (1 TO 4 hours)**
  Qualified students will undertake an independent study project. Prerequisites: Junior or senior standing, approval of the divisional dean and consent of instructor.

- **PHI307: World Philosophy (4 hours)**
  General Education P2. This course is an introduction to the study of contemporary non-Western philosophy: philosophical traditions that originated and developed in the cultural regions of Asia, Africa, and Latin America. Students will engage in an in-depth study of three works by contemporary thinkers that exemplify philosophical discourses of the three geographical and broad cultural areas identified. By means of the study of these distinct approaches to the discussion, for example, on the foundations of knowledge
and reality, conceptions of the divine and the afterlife, ethical and political theories, students will be required to reflect on these works per se as well as in relation to their specific cultural and intellectual traditions, and to their intrinsic post-colonial character as reactions to distinctively Western and Classical philosophical and political theories. (FA, odd years)

- **PHI308: Philosophy of Religion (4 hours)**
General Education P2. This is an advanced introduction to the main issues in the philosophy of religion. Topics that may be covered are the rationality of religious belief, cognitive experience of the divine, the comp possibility of divine attributes, the efficacy of prayer, the problem of evil, and other issues that arise in philosophical theology. Also offered as REL 308. (Sp, odd years)

- **PHI320: Ancient and Mediaeval Philosophy (4 hours)**
General Education P2. An advanced survey of philosophical thought from the Pre-Socratics to Late Scholasticism. The course will trace the development of western philosophical thought and the seminal ideas of western civilization as found in the work of the leading thinkers of the ancient and mediaeval world. (Fa, even years)

- **PHI321: Modern and Contemporary Philosophy (4 hours)**
General Education P2. An advanced survey of philosophical thought from the modern period beginning with Descartes through key 20th century and current philosophers. The course will trace the development of western philosophical thought and the seminal ideas of western civilization as found in the work of the leading thinkers since approximately 1600. (Sp, even years)

- **PHI398: Independent Study in Philosophy (1 TO 4 hours)**
Qualified students will undertake an independent study project. Prerequisites: Junior or senior standing, approval of the divisional dean and consent of instructor.

- **PPE499: Capstone in Philosophy, Politics, and Economics (4 hours)**
The capstone course will have 4 components. 1) A major research paper: Each capstone student will propose and write a research paper on a topic approved by the capstone instructor. 2) Oral defense: each student will present and defend his or her research project to a panel of faculty in the major and other capstone students. 3) Comprehensive exam: each student will take an exam created by faculty in the major to test their mastery of the broad content of the major. 4) Transition plan: Students will be assisted in preparing a transition plan to career or graduate school as described in the capstone experience guidelines. Prerequisite: Senior standing as a PPE major. (Sp)
**Physical and Health Education**

- **HED101: Intro to Health Care Skills (1 hours)**
  The purpose of this course is to provide the knowledge and skills that are necessary to become First Aid and Professional Rescuer CPR/AED (Automated External Defibrillator) certified in accordance with the American Red Cross. These skills include the ability to call for help, to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until advanced medical care arrives. Students will also be trained on policies and standards regarding blood borne pathogens and occupational exposure in accordance with the Occupational Safety and Health Administration (OSHA) guidelines. (Required course fee) (Fa, Wn, Sp)

- **HED103: Personal and Community Health (4 hours)**
  Studies the dynamics of health in modern life with special emphasis on health concepts relevant to personal and community living. (Fa, Sp)

- **HED201: Nutrition (2 hours)**
  Basic principles of nutrition are covered as well as current problems and topics regarding both personal and world nutrition today. Designed for the public school teacher, the community health educator or those in related fields. (Fa)

- **HED202: Drugs, Society and Human Behavior (2 hours)**
  This course is directed at introducing social, psychological, pharmacological and cultural aspects of drug use, misuse and abuse. In addition, the methods, materials and theories of drug abuse prevention in the school and community are introduced. (Wn)

- **HED203: Consumerism in Health (2 hours)**
  The aim of this course is to identify content, resources, materials and instructional strategies for providing consumer education to various populations. (SuI)

- **HED204: Human Sexuality (2 hours)**
  This course reviews current information on health and human sexuality. Emphasis is given to cognitive and affective components of human sexuality. Major issues and topics in human sexuality are covered with particular attention to gender as it affects these issues. (Sp)

- **HED323: School Health Programs (4 hours)**
  Studies the importance of well-organized and planned school health programs with special emphasis on the importance of health to the school. Graduate credit available. (Sp) Prerequisite: HSC 103.

- **HED353: Special Methods in Teaching Health Education (4 hours)**
  Applications of general principles and methods of teaching health education. Special emphasis upon selection, use, and preparation of equipment, materials, teaching aids, and other resources especially designed for the health education setting (Pre-K-12). (Sp) Prerequisites: HED 323 and HSC 103.

- **PED102: Basic and Intermediate Swim (2 hours)**
  This course is open to Physical Education majors only. Emphasis is placed on the improvement of the individual student's swimming skill. Course content ranges from the non-swimmer level through American Red Cross intermediate skill level. Physical education teaching majors and minors are required to enroll in this class unless they hold one of the following American Red Cross certifications: Water Safety Instructor or Lifeguard Training. (Sp)

- **PED103: Philosophy, Principles & History of Physical Education/Athletics (3 hours)**
  Physical and Health Education/Athletics This course gives the student a broad historical, philosophical, and futuristic view of the physical education/athletics field. Principles of physical education/athletics are also introduced with emphasis on curricular development and design. (Required course fee) (Sp)

- **PED110: Basic Weight Training Instruction (1 hours)**
  This course provides training for the entry-level resistance-training instructor, introducing basic strength training techniques, basic training principles, functional anatomy, and exposure to a variety of forms of resistance training. Students learn to apply basic physiology, biomechanics, weight room safety, and basic program design. (Required course fee) (Sp)

- **PED110L: Basic Weight Training Instruction Laboratory**
  Laboratory component for PED110.

- **PED120: Fundamental Motor Development (4 hours)**
  Introductory course exploring the growth and development of basic motor skills from infancy to adulthood and changes which occur in skills with advanced age. This course will also explore different learning theories and variables associated with mastering motor skills. (Sp) Prerequisites: ANP 130.

- **PED208: Organization and Administration of Physical Activities/Athletics (2 hours)**
  In this course, students study the organization and administration of physical education/fitness and athletic programs. Course content addresses organizational issues at various levels of administration K-12 through adult. (Fa)

- **PED214: Teaching Outdoor Activities in Physical Education (2 hours)**
  This course is designed to offer undergraduate students an in-depth experience with various outdoor skills for orienteering, outdoor survival, canoeing, mountain (wall) climbing, all season camping, safety
outdoors, outdoor fitness (trail running, backpacking, hiking, mountain biking) and ropes course.
(Required course fee) (Fa)

- **PED310: Elementary Physical Education Activities (3 hours)**
  In this course, students study basic movement patterns in games of lower and higher organization as well as tumbling and individual activities. Fitness activities are incorporated throughout as well as early childhood assessment. (Required course fee) (Fa)

- **PED311: Team Sports and Officiating (3 hours)**
  This course gives students a background in the history, rules, equipment, values and the fundamental skills and techniques necessary to participate in and enjoy team sports. Officiating techniques in team sports are also included. Prerequisite: Concurrent with PED 312. (Required course fee) (Odd Years)

- **PED311L: Team Sports and Officiating Laboratory**
  Laboratory component for PED311.

- **PED312: Individual/Dual and Lifetime Activities (3 hours)**
  This course gives students a background in the history, rules, equipment, values and the fundamental skills and techniques necessary to participate in and enjoy individual and lifetime activities. Prerequisite: Concurrent with PED 311. (Required course fee) (Even Years)

- **PED312L: Individual/Dual and Lifetime Activities Laboratory**
  Laboratory component for PED312.

- **PED320: Coaching Theory (2 hours)**
  The course is designed to be a comprehensive introduction to the art and science of coaching. The course introduces coaching philosophy, sport pedagogy, sport physiology, sport medicine, sport psychology, and sport management. This course is designed to examine theories and techniques in coaching through developing information, organization and management skills. Development of technical information, safety aspects and human relationships will also be studied. This course includes American Sport Education Program Coaching Principles certification. (SP)

- **PED328: Elem Phy Ed Activities and Health Education (3 hours)**
  The course is specifically designed for elementary education majors to introduce both the content and techniques for delivering appropriate school health and physical education programs at the K-9 level. Content reflects Wisconsin's Model for Academic Standards for Physical Education and Health. (Required course fee) (Fa, Sp, Su)

- **PED353: Capstone: Special Methods in Teaching Physical Education (4 hours)**
  Applications of general principles and methods of teaching physical education are presented in this course. Special emphasis is placed upon selection, use and preparation of equipment, materials, teaching aids and other resources especially designed for the physical education setting (Pre-K-12). Prerequisites: Successful completion of the PPST, admission to TEP or instructors permission and junior standing (Required course fee) (Sp)

- **PED391: Special Problems and Research (4 hours)**
  Prerequisite: Approval of the divisional dean and consent of instructor.

- **PED398: Special Studies in Physical Educ (1 TO 3 hours)**
  Prerequisite: Approval of the divisional dean and consent of instructor.

- **PED411: Adapted Physical Education (4 hours)**
  This course introduces the student to skills, knowledge, and competencies necessary to evaluate, plan and organize educational and recreational activities for students with exceptional educational needs. A laboratory experience with students is also required. (Required course fee) (Fa)

- **PED412: Assessment/Program Evaluation in Adapted Physical Education (2 hours)**
  This course introduces the core theoretical and practical background necessary to assess and evaluate the motor development and physical fitness needs of persons with disabilities. Students are able to administer various psychomotor assessment tools and apply the results in the design of an individualized motor program. (Required course fee) (Sp) Prerequisites: HSC 120, PED 411. Co-requisite: PED 414.

- **PED414: Field Experience in Adapted P.E. (1 hours)**
  This experience provides the student with an opportunity to work with students in an adapted physical education setting under the supervision of a Wisconsin 860 licensed physical education teacher. Attendance at a monthly seminar and a minimum of 40 clock hours must be spent at early childhood, elementary, and secondary levels. (Sp) Prerequisites: 411. Co-requisite: PED 412.

- **PED421: Psycho-Social Aspects of Physical Activity (4 hours)**
  This course presents an introduction to basic issues and current research in the psychology and sociology of American sport, physical activity, rehabilitation and leisure. Specific emphasis is placed on the social and psychological factors affecting an individual's performance in motor activities. (Fa/Sp)
Physical Therapy

- **PTH400: Foundations of Professional Practice (3 hours)**
  Fundamental concepts related to professionalism and the roles and responsibilities of the physical therapist are introduced. Emphasis is placed on professional practice expectations, including professional behavior and development, education and clinical reasoning. Practice management expectations include prevention/wellness/health promotion, management of health care delivery administration, consultation, and social responsibilities. (Fa)

- **PTH401: Statistical and Research Methods (3 hours)**
  This course introduces evidence-based practice and the theory and practice of research. The components and processes of statistical methodology and quantitative and qualitative research designs are emphasized. Learners access a variety of literature sources to develop a research question, proposes methods, and expected clinical outcomes, which are defended orally and evaluated by peers and faculty. (Fa)

- **PTH404: Biomechanics (3 hours)**
  This course integrates anatomy with mechanical principles to study and understand the causes and effects of forces acting on and produced by biological systems. Connective tissue properties and their relation to function and adaptation are discussed. The interactions of skeletal muscle, tendon, and general properties of human joints are analyzed in the context of normal human movement. (Fa)

- **PTH404L: Biomechanics Laboratory**
  Laboratory component for PTH404.

- **PTH405: Neuroscience (3 hours)**
  This course is offered within the neurological track and introduces the nervous system and how behavior is produced from cellular change in the brain. The class will focus on understanding the fundamental anatomy and physiology involved in the pathways that connect neural activity with coordinated muscle movement. We will also cover relevant embryology, higher cognitive functions, and disease states. (Sp)

- **PTH406: Exercise Physiology (3 hours)**
  This course provides fundamental knowledge about the adaptability of human physiological systems in meeting a range of exercise demands. Areas covered include nutrition; energy transfer during rest and exercise; function of the cardiovascular, respiratory, and skeletal muscle systems including energy delivery & utilization and exercise performance; acute and chronic physiologic and performance effects of exercise; exercise prescription for healthy adults; and body composition/weight management. Research evidence regarding how exercise and physical activity impact health, performance, and disease is included. (Fa)
  **Prerequisite:** Entry-Level Physical Therapy Program Standing.

- **PTH406L: Exercise Physiology Laboratory**
  Laboratory component for PTH406.

- **PTH408: Introduction to Patient Management (3 hours)**
  This course introduces students to basic clinical skills germane to the profession of physical therapy. Standard safety procedures, communication skills, fundamentals of body mechanics, positioning and draping, gait training, mobility aids, and wheelchair management are introduced and integrated into the patient-client management model. This course will also emphasize clinical reasoning using simple patient problems in order to prepare students for patient care experiences in future coursework and internships. **Prerequisite:** Entry level in DPT program, CPR and First-Aid certified. (Fa)

- **PTH408L: Introduction to Patient Management Laboratory**
  Laboratory component for PTH408.

- **PTH411: Foundations of Clinical Research (2 hours)**
  This course continues to build on previously taught concepts of evidence-based practice but emphasizes appraisal of the literature and application to clinical practice. Learners will be introduced to methods of appraisal across the patient-client management spectrum. They will perform comprehensive appraisals of research articles, both under the guidance of faculty and individually. Learners will practice applying the best evidence to clinical scenarios while considering its limitations. **Prerequisite:** PTH401. (Sp)

- **PTH411L: Foundations of Clinical Research Laboratory**
  Laboratory component for PTH411.

- **PTH412: Tests & Measures (3 hours)**
  This course emphasizes the clinical test and measure skills needed during patient/client examination. This course strongly emphasizes laboratory experiences where skills are practiced and content is applied to clinical examination procedures of multiple body systems. (Sp)

- **PTH412L: Tests & Measures Laboratory**
  Laboratory component for PTH412.

- **PTH414: Advanced Kinesiology (3 hours)**
  This course applies biomechanical concepts to joint specific and whole-body kinesiology. Musculoskeletal structure and function as they relate to the production of normal human movement are explored using a
variety of analysis techniques. Palpation clinical skills are introduced and practiced. The course integrates concepts of posture, balance, and human movement, including gait analysis. (Sp)

- **PTH414L: Advanced Kinesiology Laboratory**
  Laboratory component for PTH414.

- **PTH416: Therapeutic Exercise (4 hours)**
  This course continues to develop fundamental knowledge about the adaptability of human physiological systems in meeting a range of exercise demands. Areas covered include therapeutic exercise prescription, flexibility, considerations for aging and pediatric exercise and aquatic exercise. Research evidence regarding how exercise and physical activity impact health, performance, and disease is included. (Sp)

- **PTH416L: Therapeutic Exercise Lab**
  Laboratory component for PTH416.

- **PTH498: Independent Study (1-3 hours)**
  This course involves independent study of selected areas of physical therapy under the supervision of a faculty member.
Physics

- **PHY101: Introductory Physics I (4 hours)**
  The first course of a non-calculus based two-course sequence in the basic principles of physics covering the general areas of mechanics, thermal physics and fluids. The mathematical proficiency expected for this course is algebra and introductory trigonometry. This course satisfies the physics requirement for some majors, and pre-health professional requirements. Four hours of lecture/discussion and two hours of laboratory per week. (Credit cannot be received for both 101 and 203.) (Required course fee) (Sp, Su) Prerequisite: MAT 101 or higher.

- **PHY101L: Introductory Physics Laboratory**
  Laboratory component for PHY101.

- **PHY102: Introductory Physics II (4 hours)**
  The second course of a non-calculus based two-course sequence in the basic principles of physics covering the general areas of wave motion (oscillations, waves and sound), light and optics, and electromagnetism. The mathematical proficiency expected for this course is algebra and introductory trigonometry. This course satisfies the physics requirement for some majors, and pre-health professional requirements. Four hours of lecture/discussion and two hours of laboratory per week. (Credit cannot be received for both 102 and 204.) (Required course fee) (Fa, Su) Prerequisite: PHY 101. Instructor consent is necessary for enrollment in 102 without completion of 101.

- **PHY102L: Introductory Physics Laboratory**
  Laboratory component for PHY102.

- **PHY105: Astronomy (4 hours)**
  General Education N1. The course includes the study of the motions and structures of the earth, the moon, the sun, planets, stars and galaxies, and consideration of cosmological theories. The laboratory includes telescopic observational astronomy. Labs are scheduled for twice a week but only meet once a week on average for three hours. (Required course fee) (Fa, Sp, Su) Prerequisites: Satisfaction of the mathematics competency requirement for graduation.

- **PHY105L: Astronomy Laboratory**
  Laboratory component for PHY105.

- **PHY203: General Physics I (4 hours)**
  The first course of a calculus level two-course sequence in the basic principles of physics covering the general areas of mechanics, fluids and wave motion. This course satisfies the physics requirement for some majors, and pre-health professional requirements. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 101 and 203.) (Required course fee) (Sp) Prerequisites: MAT 160.

- **PHY203L: General Physics I Laboratory**
  Laboratory component for PHY203.

- **PHY204: General Physics II (4 hours)**
  The second course of a calculus level two-course sequence in the basic principles of physics covering the general areas of heat, light, electricity and circuits, and magnetism. This course satisfies the physics requirement for some majors, and pre-health professional requirements. Four hours of lecture/discussion and three hours of laboratory per week. (Credit cannot be received for both 102 and 204.) (Required course fee) (Fa) Prerequisites: MAT 160 and 161. Instructor consent is necessary for enrollment in 204 without the successful completion of 203.

- **PHY204L: General Physics II Laboratory**
  Laboratory component for PHY204.

- **PHY301: Electricity and Magnetism (4 hours)**
  Physical principles underlying modeling of charges and currents, including circuit elements and fundamentals of analog electrical circuits are explored through lecture and laboratory. Topics will include the following: Maxwell’s equations, electric and magnetic fields in vacuum and in matter, potentials and the uniqueness theorem, current and voltage sources, resistors, Ohm’s Law, Kirchhoff’s Laws, Thevenin and Norton theorems. Four hours of lecture/discussion and three hours of laboratory per week. (Required course fee) (Sp, even years) Prerequisites: PHY 204, MAT 207.

- **PHY301L: Electricity and Magnetism Laboratory**
  Laboratory component for PHY301.

- **PHY303: Modern Physics (4 hours)**
  A course in the basic principles of modern physics treating the general subjects of atomic and nuclear physics, relativity, cosmology and quantum physics. Four hours of lecture/discussion and three hours of laboratory per week. (Required course fee) (Sp, odd years) Prerequisites: PHY 204 or 102 and MAT 160 and 161.

- **PHY303L: Modern Physics Laboratory**
  Laboratory component for PHY303.

- **PHY304: Classical Mechanics (4 hours)**
An intermediate course in mechanics including vector calculus, conservation laws of mechanics, and dynamics of a particle and of a rigid body. Four hours of lecture/discussion and three hours of laboratory per week. (Required course fee) (Sp, odd years) Prerequisites: PHY 204 or 102 and MAT 160 and 161.

- **PHY320: Thermodynamics (4 hours)**
  An introduction to the basic concepts of thermodynamics, including temperature, thermal expansion, heat flow, calorimetry, the First and Second Laws of Thermodynamics, statistical mechanics and fundamental theories of phase transitions, topics on gas, vapor, combined power cycles, refrigeration cycles, gas mixtures, and gas-vapor mixtures. Engineering applications will be emphasized alongside theoretical fundamentals. (Sp, even years) Prerequisites: PHY 204, MAT 207.

- **PHY380: Engineering Internship (4 hours)**
  A work-oriented experience in applied physics. This is to be planned in advance with a physics faculty member. It does not count toward a minor in physics. S/U graded.

- **PHY396: Special Problems and Research (4 hours)**
  Prerequisite: Approval of the divisional dean and consent of instructor. (Required course fee)

- **PHY398: Independent Study in Physics (1 TO 4 hours)**
  Prerequisite: Junior standing, approval of divisional dean and consent of the instructor.

- **PHY450: Advanced Experimental Physics (4 hours)**
  In this advanced physics lab course, students design and complete a research project, discuss general physics topics and physics research, as well as attend seminars by physics and engineering professionals. Preparation for employment and professional skills development are emphasized. The course meets for 5 hours per week. (Required course fee.) (Fa) Prerequisites: PHY 301 or PHY 303.

- **PHY450L: Advanced Experimental Physics Laboratory**
  Laboratory component for PHY450.

- **PHY480: Work-Oriented Experience (4 hours)**
  A work-oriented experience in applied physics. This is to be planned in advance with a physics faculty member. It does not count toward a minor in physics. S/U graded.

- **PHY496: Special Problems and Research (4 hours)**
  Prerequisite: Approval of the divisional dean and consent of instructor. (Required course fee)
Political Science and Global Studies

- **POL103: Politics of the World's Nations (4 hours)**
  General Education S1. A survey of political systems that introduces students to fundamental concepts and their applications in many nations. The course examines public institutions (legislatures, executives, courts) and political processes (voting, policy-making). (Sp, Su)

- **POL141: Intro to American Politics (4 hours)**
  General Education S1. A broad survey of American national politics. Political Science majors should take this course before taking any other course in politics. (Fa, Sp, Su)

- **POL155: Contemporary Global Politics (4 hours)**
  General Education S1. This course provides an analysis of the dynamics of global politics and focuses on two general themes: 1) global conflict and cooperation and 2) the global political economy. Topics include state and non-state actors, the role of power and morality, the types and causes of war, foreign policy decision-making, just war tradition, humanitarian intervention, the democratic peace theory, global financial institutions, trade and international monetary policy, and the role of multinational corporations. (Fa)

- **POL200: Social Science Inquiry (4 hours)**
  This course is designed to introduce students to the application of quantitative and qualitative research methods within social science disciplines. Students will also be introduced to SPSS statistical software. The course will culminate with students developing and presenting their own empirical research design proposals. The content in this course is intended to assist students in the preparation of upper-level seminar research papers including Capstone. (Fa) Prerequisite: sophomore standing or above.

- **POL269: The American Congress (4 hours)**
  This course explains the operations and assesses the effectiveness of the contemporary Congress. Students will examine the United States Congress from an institutional perspective. We will also explore the behavior of members of Congress and their quest for office. (Fa, even years)

- **POL275: Political Theory (4 hours)**
  General Education S1. A broad survey of the concerns, problems and achievements of recent political thought. Topics include democratic theory, African-American political thought, Feminist political theory, and post modernism. (Fa) Prerequisite: sophomore standing or permission of instructor.

- **POL276: Democracy, Globalization, and International Governance (4 hours)**
  General Education S1. This course provides an overview of the concerns, problems, and achievements of recent occidental political thought in addressing normative issues emerging from globalization and its impact on democratic governance. (Sp) Prerequisite: sophomore standing or permission of instructor.

- **POL280: Politics and Culture (4 hours)**
  This course explores the intersection of politics and high, low, and popular culture. The emphasis during the course of the semester will be to analyze the way in which culture and politics each influence each other. (Fa, odd years)

- **POL285: International Conflict and Security (4 hours)**
  General Education S2. The course introduces students to causes and consequences of war and conflict in the international system. The course covers the nature of security and insecurity in the international system and the various ways in which actors (states, IOs, groups and individuals) seek to prevent and mitigate the outbreak of conflict. Among the topics covered include the threat posed by the proliferation of weapons of mass destruction, terrorism, asymmetrical conflict, ethnic conflict, human security, and the challenges these problems present to the international system, states, and individuals.

- **POL291: Topics in Politics (2 TO 4 hours)**
  Focused study of a topic of special concern to political scientists. Changing topics may be draw from any area of politics. Course may be repeated for credit. Two-credit Topics in Politics courses may not be counted toward a political science or global studies major or minor.

- **POL298: Independent Study in Politics (1 TO 4 hours)**
  (Fa, Sp, Su) Prerequisite: Junior standing, approval of divisional dean and consent of instructor.

- **POL301: Politics of Developed Nations (4 hours)**
  General Education S2. A comparative treatment of political systems in several advanced democratic nations. The course focuses on the policy problems that governments of developed countries face as they attempt to regulate ‘post-industrial’ economies and societies. (Fa, odd years) Prerequisite: POL 103 or consent of instructor.

- **POL303: Politics of Developing Nations (4 hours)**
  General Education S2. Through an examination of the political systems in a number of non-western countries in Africa, Latin America, Asia and the Middle East, this course studies the problems of political development in an environment of domestic and international challenges. (Fa, even years) Prerequisite: POL 103 or consent of instructor.

- **POL321: International Law (4 hours)**
General Education S2. This course covers the historical development, sources, principles, enactment and enforcement of international laws. Attention will be paid to the expansion of the field from its traditional focus on states to the inclusion of non-state actors such as International Organizations, Non-Governmental Organizations and individuals. Specific topics include: war and conflict, human rights, and environmental law. Readings and discussions review relevant decisions from both U.S. and international courts, utilizing the case method approach widely used in law schools. (Sp, even years)

- **POL329: The German Experience (4 hours)**
  A research-oriented course examining modern German history. Emphasis is placed on the process of unification, the Nazi era, the GDR and reunification. (Fa, odd years) Prerequisite: Junior standing or consent of the instructor. Students planning to take POL 329 for their German language minor must contact the instructor (in the semester before they enroll in POL 329) to develop a plan for adapting coursework to incorporate and demonstrate appropriate use of the language.

- **POL332: Public Policy (4 hours)**
  This course focuses on the formulation, implementation and evaluation of public policy. Emphasis is given to the variety of ways public goals are pursued by governments, especially within the United States. The class will explore a number of different policy areas as case studies. (Sp, odd years)

- **POL335: Public Administration (4 hours)**
  A broad survey of the whole area of administrative politics and processes at the national, state and local levels while focusing on the work of public agencies and nonprofit organizations in implementing public policy. (Sp, odd years)

- **POL336: The American Presidency (4 hours)**
  This course examines the origins, growth, and complexity of the American presidency. The constitutional role and historical developments of the Chief Executive will be considered in relationship to the meaning of democratic government, the separation of powers, and the expansion of public administration during the 20th century. (Sp, even years)

- **POL344: Constitutional Law and Politics (4 hours)**
  A study of the interpretation of the United States Constitution by the Supreme Court; the role of politics on judicial interpretations and their influence in American government and society. (Fa, even years)

- **POL381: Internship in Politics (4 TO 12 hours)**
  Prerequisites: Senior standing and at least a 2.5 grade point average in courses in the major. S/U graded. (Fa, Sp, Su)

- **POL382: Internship in Global Studies (4 hours)**
  Prerequisites: Senior standing and at least a 2.5 grade point average in courses in the major. S/U graded. (Fa, Sp, Su)

- **POL391: Topics in Politics (4 hours)**
  Focused study of a topic of special concern to political scientists. Changing topics may be drawn from any area of politics. Course may be repeated for credit. Two-credit Topics in Politics courses may not be counted toward a political science or global studies major or minor.

- **POL398: Independent Study in Politics (1 TO 4 hours)**
  (Fa, Sp, Su) Prerequisite: Junior standing, approval of divisional dean and consent of instructor.

- **POL399: Capstone in Political Science and Global Studies (4 hours)**
  The political science/global studies capstone asks majors in these disciplines to formally demonstrate and integrate their substantive knowledge of political science or global studies through a significant research project, which they present in a public forum. The capstone also engages students in the process of transitioning from undergraduate life to advanced study or the workforce. Students develop transition plans and are encouraged to assess how their experiences at Carroll have prepared them for the next steps in life - both professional and personal. (Sp)

- **PPE499: Capstone in Philosophy, Politics, and Economics (4 hours)**
  The capstone course will have 4 components. 1) A major research paper: Each capstone student will propose and write a research paper on a topic approved by the capstone instructor. 2) Oral defense: each student will present and defend his or her research project to a panel of faculty in the major and other capstone students. 3) Comprehensive exam: each student will take an exam created by faculty in the major to test their mastery of the broad content of the major. 4) Transition plan: Students will be assisted in preparing a transition plan to career or graduate school as described in the capstone experience guidelines. Prerequisite: Senior standing as a PPE major. (Sp)
Psychology

- **PSY101: Introductory Psychology (4 hours)**
  General Education S1. An introduction to the science of behavior and mental processes. Emphasis is placed upon methods of inquiry utilized in the social sciences. These methods will be used to investigate psychological questions regarding topics such as perception and consciousness, learning, memory and thinking, biological and developmental processes, motivation and emotion, personality, social determinants of behavior, and mental health. (Fa, Sp)

- **PSY201: Abnormal Psychology (4 hours)**
  A study of major and minor psychological disorders. Consideration of classification issues and theoretical perspectives precedes an examination of research on genetic, biobehavioral and psychosocial determinants of stress reactions and psychological disorders. Consideration is also given to healthy adjustment and coping strategies as well as prevention and therapy options. (Fa, Su) Prerequisite: PSY 101.

- **PSY205: Statistics and Experimental Design (4 hours)**
  Required for the psychology major and highly recommended for many others, this course teaches the data analysis procedures most widely used by researchers in the social and behavioral sciences. Instructional emphasis will be on learning which statistic to use, how to perform the data analyses and how best to communicate one's results. Students will gain extensive experience collecting, analyzing, thinking about and using statistical data. Computations will be done both by calculator and by computer. Four hours of lecture-discussion and one two-hour laboratory. (Lab fee required) (Fa, Sp, Su) Prerequisite: PSY 101 and at least sophomore standing or special permission from the instructor.

- **PSY205L: Statistics and Experimental Design Lab**
  Laboratory component for PSY205.

- **PSY206: Developmental Psychology (4 hours)**
  A study of the theories, research, and issues related to physical, intellectual, social and emotional development. Slight emphasis on children, including observational strategies for behavioral assessment of infants and children, are included. (Sp) Prerequisite: PSY 101.

- **PSY211: Industrial and Organizational Psychology (4 hours)**
  The psychological study of factors related to people at work. Employee selection methods such as testing and interviewing, performance evaluations, job descriptions, statistical validation and decision techniques, motivation, leadership, satisfaction, job redesign and organizational development are examined. (Fall, Summer even years) Prerequisite: PSY 101.

- **PSY221: Life-Span Psychology (4 hours)**
  General Education S2. A comprehensive course with an applied emphasis which examines individual development throughout life. Topics such as genetic inheritance, intellectual change and social adjustment are viewed as processes that extend from the neonatal period through very old age. (Fa, Sp, Su) Prerequisite: PSY 101.

- **PSY228: Consumer Behavior (4 hours)**
  An applied psychology course focusing upon the behavior of the individual consumer. Concepts derived from perception, motivation, personality, learning and cognition are developed in the analysis of consumer decision-making. Theory and research in social media and on-line advertising is discussed. (Spring, Summer odd years) Prerequisite: PSY 101.

- **PSY240: Biopsychology (4 hours)**
  This course examines the biological substrates of the mind and behavior. Foundational to the course is an understanding of the electrochemical processing that occurs in and between neurons, with relevant applications to drug use, emotions, learning, memory, sleep, consciousness, sensory systems, evolution, and psychiatric disorders. (Sp) Prerequisite: PSY 101. Credit cannot be received for PSY 240 and PTH 405.

- **PSY260: Health Psychology (4 hours)**
  Based on the research of clinical, experimental social and health psychologists, this course examines how psychological, social, and biological factors affect health and illness. Topics include coping with stress and pain, psychoneuroimmunology, and living with chronic illness, such as diabetes, cardiovascular disease, or cancer. Emphasis is also placed on effective patient-clinician communication and on the modification of health-related behaviors. (Sp, Su) Prerequisite: PSY 101.

- **PSY303: Experimental Social Psychology (4 hours)**
  This course reviews and critically examines the research findings of experimental social psychologists. Among the topics explored are attitude change, prejudice, conformity, altruism, aggression and group dynamics. Instructional emphasis will be on developing ideas for further needed social psychological research. (Fa) Prerequisite: PSY 101 and 205.

- **PSY306: Psychological Testing and Assessment (4 hours)**
  This course gives students a strong foundation in the technical and methodological principles of test construction and in the social and ethical implications of psychological testing. Students will learn criteria for selecting and critically evaluating tests. In addition, students will actually take and study in depth a
number of widely used tests of personality, occupational interests, intelligence and values. (Course fee required) (Sp) Prerequisite: PSY 101 and 205.

- **PSY307: Experimental Psychology (4 hours)**
  A research methods course in experimental science. Knowledge gained from PSY 205 is combined with laboratory exercises in physical control and measurement of variables. A class component covers experimental and quasi-experimental research methods. In addition, students conduct an individual experimental project and learn how to write research reports. Four hours of lecture/discussion and one three-hour laboratory. (Lab fee required ) (Winter, and summer) Prerequisites: PSY 101, 205, and one additional four-credit 200-level PSY course taken at Carroll University.

- **PSY307L: Experimental Psychology Lab**
  Laboratory component for PSY307.

- **PSY314: Learning and Animal Behavior (4 hours)**
  A systematic survey of basic principles of learning and behavior in animals including humans. In the context of evolutionary psychology, attention is directed toward Pavlovian and instrumental conditioning, behavioral approaches to learning, species specific concerns, and motivation. Basic research is related to applied efforts in behavior modification and educational technologies. (Fa, Sp) Prerequisites: PSY205. Credit cannot be received for both 314 and PTH 407.

- **PSY316: Thinking, Problem Solving, and Cognition (4 hours)**
  A study of human intelligence. This course focuses upon cognitive processes and structures involved in perception, memory, critical thinking, problem-solving and creativity. Applications to effective study and reading comprehension are also examined. (Fa, Sp) Prerequisite: PSY 101.

- **PSY317: Adult Development & Aging (2 hours)**
  This course provides an introduction into the concept that adult development and aging is just one part of the life span. A person’s chronological age as well as his or her life experiences are important considerations in understanding the person as a whole. A discussion of research methods used in adult development research will also be examined (e.g., age effects, cohort effects, and time-of-measurement). Normal development is emphasized; however, special human circumstances are also explored. (Wn, Su) Prerequisites: PSY 101.

- **PSY321: Personality - Theory and Assessment (4 hours)**
  The personality theories of Freud, Jung, Erikson, Rogers, Cattell and others are examined using both textbook treatments and original works of the psychologists. Biological contributions to personality are also discussed. Various psychological assessments are used to help students examine aspects of their own personalities. (Course fee required) (Fa) Prerequisite: PSY 101.

- **PSY321L: Personality - Theory and Assessment Laboratory**
  Laboratory component for PSY321.

- **PSY331: Psychology of Developmental and Behavioral Neuroscience**
  This course introduces the developmental and behavioral neuroscience concepts and principles. It covers the latest research and theories in the field. Prerequisites: PSY 101 and PSY 205, or consent of instructor.

- **PSY391: Special Studies in Psychology (2 hours)**
  One-time courses, offered as announced. Topics vary. (Fa, Sp, Su) Prerequisite: PSY 101.

- **PSY398: Independent Study in Psychology (1 TO 4 hours)**
  (Fa, Sp, Su) Prerequisites: PSY 101, Junior standing, approval of divisional dean and consent of instructor.

- **PSY401: Behavioral Neuroscience (4 hours)**
  Building on the introduction to the brain provided in PSY 240, this course examines deeper principles of brain function. Understanding the brain at a deep level requires studying and manipulating models grounded in principles of brain function. In this course, students will systematically explore neural network models of learning, attention, memory, language, and higher-level cognition in an integrated lecture-lab format. (Lab fee required) (Fa) Prerequisite: PSY 101 and PSY 240, or consent of instructor.

- **PSY401L: Behavioral Neuroscience Laboratory**
  Laboratory component for PSY401.

- **PSY403: Capstone-Historical and Modern Viewpoints of Psychology (4 hours)**
  This capstone course prepares the psychology major for a career in or related to the major. It also integrates traditional subject matter of perception, learning, social and developmental processes, as well as intelligence, motivation and personality. Historical roots, contemporary issues, as well as career opportunities, form the bases of class activities. Each student also completes career and major project portfolios. (Course fee required) (Fall, Spring) Prerequisites: Junior or Senior standing, and Psychology as a declared major.

- **PSY414: Research Methods in Behavior Analysis (2 hours)**
  This laboratory course will introduce students to behavior analytic research methods. Specifically, students will learn behavior recording techniques, methods of establishing interobserver agreement, and experimental methods for studying behavior change at the individual-level. By the end of the semester, students will design, carry-out, and write-up original research using nonhuman-animal subjects (Sp) Prerequisites: PSY205.

- **PSY480: Internship in Psychology (2 TO 4 hours)**
  Provides majors contemplating a career in psychology or in related areas with supervised field experience. S/U graded. (Fa, Sp, Su) Prerequisite: PSY 101, Junior standing and consent of instructor.

- **PSY492: Research Seminar (4 hours)**
This course is required for those psychology majors who are in the university-wide honors program and is recommended for all psychology majors. Students conduct systematic empirical research in the context of a seminar directed and coordinated by a faculty member. Seminar discussion is focused upon a current topic and is largely confined to asking researchable questions, exploring the feasibility of student-generated research proposals and evaluating student research reports. (Fa, Sp) (Lab fee required) Prerequisite: PSY 101, 205 and 307.
Public Health

- **PBH101: Introduction to Public Health (4 hours)**
  General Education S1. This course is designed to expose students to core topics in the area of public health. The course will examine varying health, environmental, and behavioral influences on the health of the public in the United States. The course will challenge students to think critically at the varying nature of public health and current events. Students will evaluate case studies and be provided with a basic didactic background. The course will be team taught and/or will include multiple guest speakers who can address the breadth of topics in this area. (Fa,Sp)

- **PBH102: Global Health (4 hours)**
  General Education S1. This course will introduce students to the main concepts of the public health field and the critical links between public health and social and economic development. Students will get an overview of various factors, including social, economic, and political issues on the health of individuals and of communities. The course will also introduce students to key concerns regarding nutrition, reproductive health, infectious diseases, and chronic diseases. The course will cover key concepts but be very practical in orientation. The course will be global in coverage but with an important focus on the developing world and on the health of the poor. (Fa,Sp)

- **PBH210: Public Health for Communities (4 hours)**
  This course is designed to provide students in public health with a broad-based overview of public policies, service delivery systems, and family-centered approaches to public health. Prerequisites: PBH 101, PBH 102. (Fa)

- **PBH211: Public Health Field Experience (2 hours)**
  This course will provide students with an opportunity to observe public health professionals under the direction and supervision of the Public Health faculty. Students will be placed at an on- or off-campus organization to apply, and further develop, core public health competencies. Depending on the placement site, students will have the opportunity to assist with a variety of activities, including health promotion and education, program development and assessment, and disease surveillance. (Course fee required) Prerequisites: PBH 101, PBH 102, PBH 210. (Sp) (Required course fee)

- **PBH302: Environmental and Occupational Health (2 hours)**
  This course is designed to introduce environmental and occupational health issues and key concepts related to environmental risk and policy. The specific topics covered during this course include air and water quality, food safety, vector-borne diseases, and pesticides. The goal of the course is to provide students with basic knowledge of environmental and occupational health as it applies to the principles of public health practice from individual, organizational and political perspectives. Prerequisite PBH 101,102. (Fa)

- **PBH312: Public Health Policy and Administration (4 hours)**
  This course is about making public policy in public health and in health care: what it is, who makes it, and how and when it is made successfully. The course aims (1) to highlight several selected critical public policy issues and (2) to build skills in critical, reflective thinking that will help the student in making decisions about, or advocating for, policies that reflect individual and societal values. In the study of public policy, there are two broad theoretical models for explaining the policy making process. One is the rational model that emphasizes economic analysis and rational decision making. The other model is based in political science. This course is built on the political science model and emphasizes the political context in which public policy is always developed. Prerequisites: PBH 101, PBH 102. (Sp)

- **PBH324: Program Development, Assessment, and Evaluation in Public Health (4 hours)**
  This course presents methods for the identification of population-based needs for public health intervention, development of programs to meet those needs, and evaluation of the effectiveness of these public health interventions. The course integrates several knowledge and skill areas including: research methods, epidemiology, biostatistics, proposal writing, budget planning, project management, and program evaluation. Prerequisites: PBH 101, PBH 102, PBH 210. (Sp)

- **PBH421: Epidemiology (4 hours)**
  General Education S2. Modern epidemiology, as a science applicable to investigations of disease and other outcomes, policy assessment, and population science, evolved during the last half of the 20th century. Epidemiologic methods focused on application of statistical theory, use of survey methods, and information technology implementation. Epidemiology also broadened its scope to include concepts of causation applicable to non-communicable disease and other health determinants, including social and behavior factors. Applications to intervention efficacy, effectiveness, and safety, testing and decision-making methods, and policy analysis applicable to social concerns recently have been integrated into epidemiology teaching and research. Prerequisites: CMP 112, PBH 101, PBH 102, PBH 210. (Fa)

- **PBH480: Public Health Internship (6-12 hours)**
  Students are given the opportunity to apply public health theories and concepts to actual work experiences under the supervision of an external and capstone supervisor. This course is a part-or full-time internship with an affiliated organization or facility actively engaged in the field of public health. The purpose of the
internship program is to enhance and develop personal growth in public health disciplinary knowledge, ethical behaviors, career development, interpersonal skills, problem solving abilities, and personal responsibility. Further, it is intended to complement and reinforce the academic goals of the institution. Prerequisite: completion of major requirements, 2.75 gpa in the major and consent from program faculty required. Course fee required)(Fa,Sp,Su)
Recreation Management

- **REC203: Therapeutic Recreation Process* (3 hours)**
  Study of Therapeutic Recreation (TR) process including the values and underpinning of practice, and the inter-relationships between TR, health care and human service professionals. Counts as a repeat of TherRec 390 with same topic. Course taught completely online.

- **REC300: Therapeutic Recreation Assessment and Documentation* (4 hours)**
  Students will study and explore the practice of assessment and documentation in the field of therapeutic recreation. (Sp) Prerequisite: none.

- **REC308: Therapeutic Recreation in Physical Rehabilitation and Behavioral Health* (4 hours)**
  This course will focus on the study of therapeutic recreation services for individuals with physical disabilities and behavioral health disorders. (Fa) Prerequisite: none.

- **REC310: Facilitation Techniques in Therapeutic Recreation* (4 hours)**
  The study of various facilitation techniques used in the field of therapeutic recreation. Specific emphasis will be placed on leisure education. (Sp) Prerequisite: none.

- **REC400: Issues and Trends in Therapeutic Recreation* (3 hours)**
  Examination of the most current trends and issues in the field of TR. (Su) Prerequisite: REC 308 or consent of instructor.

- **REC480: Internship-Recreation Management (12 hours)**
  The purpose of this course is to enhance and develop personal growth in recreation management knowledge, ethical behaviors, career development, interpersonal skills, problem solving abilities, and personal responsibilities through participation in an internship at a recreation facility. During a 15-week internship, students will spend 30 hours/week (450 total hours) developing, implementing, and administering recreation and outdoor adventure programs in a university affiliated recreation program. During the 15-week internship, students participating in the internship will come together for seminars. (Su, Fa) Prerequisites: REC 405 and 410.
REL100: World Religions (4 hours)
General Education P1. This course is a survey of religions practiced around the world today, including 'world' religions like Hinduism, Judaism, Buddhism, Christianity, Islam, Taoism, and Confucianism, but also touching on native and folk religions, Baha'í, Sikhism, and others. The approach is interdisciplinary, addressing historical development in addition to central beliefs and practices of a wide range of religions. Students will leave with a better sense of the variety of religious thought and practice, and of the importance of historical context in the formation and development of religions. The course also prepares the student for further study of particular religious traditions. (Fa, Sp)

REL102: Introduction to the Hebrew Bible (4 hours)
General Education P1. An introduction to the history, literature, and interpretation of the Hebrew Bible/Old Testament. The course includes a study of the historical and cultural traditions of the ancient Israelites and the use of archaeological, historical, and literary methods in studying the Hebrew Bible literature. (Fa, Sp)

REL103: Intro to the New Testament (4 hours)
General Education P1. An introduction to the history, literature, and interpretation of the New Testament. The course includes the study of the Jewish and Greco-Roman historical backgrounds of Jesus and the earliest church and the use of historical, sociological, and literary methods to examine the New Testament writings. (Fa, Sp)

REL106: Understanding Religion (4 hours)
General Education P1. We can describe religion; we can compare our own experiences with one another; we can watch other people when they are being 'religious'; we can see films, listen to music, look at advertising and watch news reports to discover where religion shows up, but what does it take to actually define religion? To begin the task of defining religion in this course, we will consider what religious people do, including: creating rituals, reading sacred texts, making sacred spaces, using special language, behaving ethically and sometimes behaving violently. We will look at ideas and practices across religious traditions but this is not a course in religions of the world. Rather, it is an introduction to the big ideas and common practices that help define what religion is. (Fa, Sp)

REL201: Jesus of Nazareth (4 hours)
General Education P1. A study of Jesus in his first-century historical context as a Jew and in the different literary contexts of the New Testament (e.g. the Gospels, Paul, Revelation). The course will also include an examination of how Jesus is interpreted in today's global context (e.g. Africa, Latin America, Asia, and North America). (Fa)

REL202: Religious Traditions in America (4 hours)
General Education P1. A variety of religious traditions has played and continues to play important roles in our communities, small and large. This course focuses on the origins of contemporary religious traditions in the US, their basic beliefs, and their impact on life. The course may include presentations by local representatives of traditional faiths as well as more recent developments, and may involve visits for participants' exposure to new religious experiences. (Sp)

REL210: Suffering and Hope (4 hours)
General Education P1. An in-depth examination of the theme of suffering and hope through a survey of foundational primary texts and contemporary theologies in different cultural and religious traditions. Students will learn several major perspectives on suffering and hope, explore assumptions that are made regarding suffering, and examine the ethical implications of the different views of suffering. ENG 170 recommended prior to enrollment. (Fa, odd years)

REL215: Women in Religion (4 hours)
General Education P1. A reading of world religions through the lens of women's experience. In studying religions such as Hinduism, Islam, Buddhism, Christianity, and Native American traditions , we will not only discuss the essential teachings of the religion but we will consider how women have changed those teachings and the backlash against them for it. (Fa, even years)

REL220: Health and Religion (4 hours)
General Education P1. This course examines the relationship between health, healthcare and religion in different world cultures (Western, traditional Indian, Chinese, Middle Eastern and a selection of indigenous systems across the world). It examines different worldviews and their understanding of health, medicine, and questions such as the role of spirituality in health and healthcare, religious and medical approaches to illness and suffering, and the integration of traditional medico-religious approaches in contemporary healthcare. (Fa, Sp)

REL230: Foundations of Christianity (4 hours)
General Education P1. This course examines Christian teachings about God, Christ, and Salvation developed from 100 to 1650 C. E. The study of the concepts, practices, and experiences of this formative period of Christianity is background for a critical understanding of Christianity in our times. (Fa)

REL231: Christianity in the Modern World (4 hours)
General Education P1. How has Christianity been involved in the life of the modern world from 1650 to the present? We will consider how Christians rethought their faith commitments while science and philosophy challenged their traditional assumptions. We will also examine recent Christian theological and ethical responses to such topics as gender and sexuality, environmental concerns, poverty, global conflicts, and the relationships among religions. (Sp)

- **REL291: Topics in Religious Studies (4 hours)**
  A study of a selected topic in religious studies that is not covered in regular course offerings. Different topics in the fields of Bible, theology, history, ethics and current issues in culture and religion will be offered.

- **REL298: Independent Study in Religious Studies (1 TO 4 hours)**
  A course for students who are interested in working with a faculty member on a specific area of study. (Fa, Sp) Prerequisites: Junior standing, approval of divisional dean and consent of instructor.

- **REL306: Asian Religions (4 hours)**
  General Education P2. In this course, students will explore the sacred literature, practices and cultures of Islam, Buddhism, Hinduism, Jainism, Sikhism, Confucianism, Taoism, and the religions of Japan. (Fa, odd years) Prerequisite: Sophomore standing or consent of the instructor.

- **REL308: Philosophy of Religion (4 hours)**
  General Education P2. This is an advanced introduction to the main issues in the philosophy of religion. Topics that may be covered are the rationality of religious belief, cognitive experience of the divine, the composability of divine attributes, the efficacy of prayer, the problem of evil, and other issues that arise in philosophical theology. Also offered as PHI 308. (Sp, odd years)

- **REL310: Powers, Politics, and Pluralism in Biblical Interpretation (4 hours)**
  General Education P2. This class examines how the Bible has been interpreted to support certain positions regarding politics, class, race, gender, and sexual orientation. The class will explore how the Bible has been interpreted in global contexts and will focus in particular on how those in the United States have read and lived out the Bible through history. Topics may include slavery, roles of women, politics, same-sex relations, class relations, postcolonialism, anti-Semitism, end-time beliefs, and religious cults. (Sp, odd years)

- **REL316: Judaism, Christianity, and Islam (4 hours)**
  General Education P2. In this course students will explore the foundational texts, histories, beliefs, and practices of the three western monotheistic religions: Judaism, Christianity and Islam. An emphasis will be placed on learning each of the three traditions on their own as well as the variety of perspectives expressed within each tradition. A comparative study on several topics will also be included. Contemporary issues and conflicts involving these traditions will be explored. (Sp, even years)

- **REL362: New Testament Greek Tutorial (2 hours)**
  Independent study with instructor. Specifically offered for those planning to attend graduate school in religious studies. Does not count toward major or minor. S/U graded. (Offered when requested)

- **REL364: Hebrew Tutorial (2 hours)**
  Independent study with instructor. Specifically offered for those planning to attend graduate school in religious studies. Does not count toward major or minor. S/U graded. (Offered when requested)

- **REL380: Internship in Religious Studies (1 TO 4 hours)**
  An opportunity for students to work for local churches, social service agencies or other appropriate institutions under faculty supervision. The program provides practical experience supported by study and reading. The student may choose to participate in the program for a semester or a year. The work is S/U graded. Prerequisite: Consent of the instructor.

- **REL391: Topics in Religious Studies (4 hours)**
  A study of a selected topic in religious studies that is not covered in regular course offerings. Different topics in the fields of Bible, theology, history, ethics and current issues in culture and religion will be offered.

- **REL398: Independent Study in Religious Studies (1 TO 4 hours)**
  A course for students who are interested in working with a faculty member on a specific area of study. (Fa, Sp) Prerequisites: Junior standing, approval of divisional dean and consent of instructor.

- **REL480: Internship in Religious Studies (1 TO 4 hours)**
  An opportunity for students to work for local churches, social service agencies or other appropriate institutions under faculty supervision. The program provides practical experience supported by study and reading. The student may choose to participate in the program for a semester or a year. The work is S/U graded. Prerequisite: Consent of the instructor.

- **REL499: Capstone: Senior Seminar (4 hours)**
  Seniors research and write a substantial research paper which demonstrates their competency in religious studies and their ability to incorporate general education skills. Students will also give an oral presentation of the paper to faculty and interested students. As part of the seminar, students are required to complete
an intentional plan for their transition from undergraduate school to a career and/or to graduate/professional school. Prerequisite: Senior standing.
Sociology and Criminal Justice

- **SOC101: Introduction to Sociology (4 hours)**
  General Education S1. An introduction to sociological concepts, explanations, and research findings to enable students to better understand the society in which they live and their place in that society. Topics include: culture, inequality, social relationships, deviance, membership in groups and social institutions such as education, religion and the family. (Fa, Sp)

- **SOC102: Sociology of Social Problems (4 hours)**
  General Education S1. A survey and analysis of major problem areas in contemporary American society, including areas such as drug use and abuse, family issues, poverty, crime, delinquency, environmental issues and war. (Fa, Sp)

- **SOC102H: Sociology of Social Problems (4 hours)**
  A survey and analysis of major problem areas in contemporary American society, including areas such as drug use and abuse, family issues, poverty, crime, delinquency, environmental issues and war. (Fa, odd years)

- **SOC103: Introduction to Criminal Justice (4 hours)**
  A survey of the history, structure, functions and operations of the primary components in the criminal justice system in the United States including law enforcement, courts and corrections. Includes an analysis of current issues such as discretion, sentencing practices, disparities in sentencing, and alternatives to incarceration. May not be counted toward a sociology major or minor. (Fa, Sp)

- **SOC110: Cultural Anthropology (4 hours)**
  General Education S1. The study of literate and nonliterate cultures from throughout the world using basic anthropological concepts. Explores descriptive data from a variety of cultures and the general patterns that exist across cultures. Includes topics such as culture, language, subsistence, stratification, family, kinship, descent, religion, social control and cultural change. (Fa, Sp) ENG 170 is recommended prior to enrollment.

- **SOC130: Culture and Crime (4 hours)**
  General Education S1. This course examines the American culture and society to understand why and how it perpetuates criminal lifestyles. It illustrates how America's vision of economy, morality, and race determines how the criminal justice system operates, the policies the criminal justice system follows, and the creation of criminal statistics. In essence, it helps form the notion that crime and criminals are a product of society and culture. This class is a general distribution course and does not count towards the criminal justice major or minor. (SU)

- **SOC202: Society and Ecology (4 hours)**
  This course examines the relationships between the cultural and structural patterns of society and the ecosystem. The course focuses on a critical examination of contemporary social systems and their relationships to the natural environment. It investigates the role culture plays in affecting human relationships with the earth and how the belief systems of a people shape their perspective regarding the role of humans in the natural world. Students identify and examine parameters of sustainable social systems. (Sp) Prerequisite: SOC 101 or 102.

- **SOC202L: Society and Ecology Laboratory**

- **SOC211: Juvenile Delinquency (4 hours)**
  A general survey and analysis of juvenile delinquency. Includes explanations of juvenile delinquency as deviant behavior with an emphasis on the nature, extent and causes of delinquency. Explores factors such as social structure, school, family and peers that have a major impact on juveniles. Also explores the role of police courts and the nature and history of attempts to control, prevent and treat delinquents. (Fa) Prerequisite: SOC 101 or 102; for criminal justice majors, SOC 103 is required.

- **SOC212: Criminology (4 hours)**
  A general survey and analysis of crime. Explores criminological theory, societal values with respect to crime, criminal behavior systems and criminal processing systems including police, courts and correctional procedures. (Sp) Prerequisite: SOC 101 or 102; for criminal justice majors, SOC 103 is required.

- **SOC213: Race and Ethnicity Studies in Criminal Justice (4 hours)**
  General Education S2. This course examines the historical and present role of various races and ethnicities in the criminal justice system. Readings and discussions focus on the statistics and disparities found in arrests, charging, convictions, and sentencing. The course provides rationales for why racial and ethnic minorities appear to be less privileged by systems including law, discrimination, and poverty. (Fa) Prerequisite: Sociology 101, 102 or 103

- **SOC217: Social Psychology (4 hours)**
  The study of how people are influenced by and relate to one another. Explores how membership in groups and organizations influences the thoughts, feelings, and actions of people. Includes topics such as socialization, attitudes, conformity, leadership, power, persuasion, aggression, attraction and collective behavior. (Sp) Prerequisite: One course in sociology or psychology.
- **SOC220: Police in Society (4 hours)**
  A study of the history, goals, organization, structure and role of police in American society. Addresses a range of critical issues facing police and society including police culture, discretion, ethics, use of force, legal boundaries, police work and community relations. This course is not a how-to training course for police officers. May not be counted toward a sociology major or minor. (Sp) Prerequisite: SOC 103.

- **SOC240: Victims and Victimology (4 hours)**
  This course examines the historical and present role and plight of the victim in the criminal justice system. Students will investigate theories of victimization, experiences of victims in the system, victim-offender relationship, and crime presentation strategies. In this class, special emphasis will be placed upon restorative justice principles and victim assistance programs. (FA) Prerequisites: SOC103, WRI199

- **SOC291: Special Topics in Sociology or Criminal Justice (4 hours)**
  Study of a selected topic in sociology that is not covered in regular course offerings. Generally takes a lecture and discussion format. The topic will be announced prior to registration. Prerequisite: SOC 101 or 102; for criminal justice majors, SOC 103 is required.

- **SOC296: Reading and Research in Sociology (1 TO 3 hours)**
  Research conducted under the supervision of a faculty member and designed to permit individual students or groups of students to research special areas in sociology related to their educational interests and goals. Prerequisites: Sociology or Criminal Justice major or minor, junior standing, and consent of instructor.

- **SOC298: Independent Study in Sociology (4 hours)**
  A course for students who have completed the necessary background courses in a specific area and wish to work with a faculty member to extend their study in that area. Students considering this course must get the approval of the divisional dean and consent of the instructor during the previous semester at least two weeks prior to registering for the course. Results of the study will be presented to the sociology faculty. Prerequisites: Sociology or Criminal Justice major, junior standing, and consent of the instructor. (Fa, Sp, Su)

- **SOC301: Social Change and the Future of Society (4 hours)**
  A general examination of the topic of social change. This course studies the role of social change in the development of societies, the consequences of social change for contemporary societies, and how change in various areas of society might affect life in the future. (Fa, odd years) Prerequisite: SOC 101 or 102.

- **SOC302: Complex Organizations and Work Life (4 hours)**
  Analyzes organizations, work life and their relationship to sustainability. Explores types of organizations, the changing nature of work, work/family conflicts, and how organizations impact workers and societies worldwide. Examines sustainable careers—especially through lab exercises. (Fa) Prerequisite: SOC 202.

- **SOC303: Criminal Procedure, Evidence and Investigation (4 hours)**
  Introduces principles of evidence and techniques of investigation. Includes constitutional limitations on arrest, search and seizure, the exclusionary rule, interrogation and confessions. Identifies problems of evidence gathering and presentation as well as basic skills and procedures of criminal investigation. May not be counted toward a sociology major or minor. (Fa) Prerequisites: SOC 103, and Junior standing.

- **SOC304: Introduction to Criminal Law (4 hours)**
  An examination of the nature, variety and sources of criminal law and the relationship of criminal law to theories of punishment and social control. Includes the classification of crimes, as well as the creation, organization and content of criminal law. May not be counted toward a sociology major or minor. (Sp) Prerequisites: SOC 103, and 211 or 212.

- **SOC305: Marriage & Family-Contmp Society (4 hours)**
  The study of the changing nature of marriage and family life in the United States. An emphasis on processes and issues that challenge modern family life, including how the family interacts with other major social institutions. Topics include cohabitation, sexuality, mixed families, communication, parenting and divorce. (Sp) Prerequisite: Junior standing.

- **SOC307: Corrections in American Society (4 hours)**
  A study of the history, trend, purpose, organization and practice of corrections in American society. Includes jails, probation, intermediate sanctions, corrections in the community, prisons and supervision after release. Includes issues such as restorative justice, offender rights and incarceration of women, juveniles, special needs populations and members of minority groups. May not be counted toward a sociology major or minor. (Fa) Prerequisites: SOC 103; 211 or 212.

- **SOC308: Sociological Theory (4 hours)**
  An examination of the foundations and development of sociological theory from its beginning to the present. Explores the major theories and schools of thought and the relationship between theory and research through the works of important classical and contemporary sociological theorists. (Sp) Prerequisites: SOC 101 or 102 and junior standing.

- **SOC311: Methods of Social Research (4 hours)**
A study of the ways sociologists use data to explore, describe and explain human social life. The focus will be on learning, evaluating and applying the techniques and methodology used in generating, gathering and analyzing social scientific data. (Fa, Sp) Prerequisite: SOC 101 or 102 and junior standing.

- **SOC318: Sociology of Sex Roles (4 hours)**
  This course explores the social construction of masculinity and femininity and how they are maintained or challenged in interaction. The course also considers patriarchy and how gender intersects with other systems of inequality, such as race and class. (Fa, even years)

- **SOC380: Internship in Applied Sociology (4 hours)**
  An opportunity for majors to work as a sociologist in a designated institution or agency under faculty supervision. Students considering this course must consult with their program adviser during the semester preceding the internship. (Fa, Sp) Prerequisites: Junior standing, SOC 311, and consent of the instructor.

- **SOC390: Sustainability Field Project (2 to 4 credits hours)**
  Applied work in a designated organization or setting under faculty and field supervision. Offers three project types, depending on career path: Field Work, Internship, or similar experience in an alternate cultural setting. (Fa, Sp, Su) Prerequisite: SOC 202, SOC 302, ENV 120, ENV 222, consent of instructor and advisor.

- **SOC391: Special Topics in Sociology (4 hours)**
  Study of a selected topic in sociology that is not covered in regular course offerings. Generally takes a lecture and discussion format. The topic will be announced prior to registration. Prerequisite: SOC 101 or 102.

- **SOC396: Reading and Research in Sociology (1 TO 3 hours)**
  Research conducted under the supervision of a faculty member and designed to permit individual students or groups of students to research special areas in sociology related to their educational interests and goals. Prerequisites: Sociology or Criminal Justice major or minor, junior standing, and consent of instructor.

- **SOC398: Independent Study in Sociology (4 hours)**
  A course for students who have completed the necessary background courses in a specific area and wish to work with a faculty member to extend their study in that area. Students considering this course must get the approval of the divisional dean and consent of the instructor during the previous semester at least two weeks prior to registering for the course. Results of the study will be presented to the sociology faculty. Prerequisites: Sociology or Criminal Justice major, junior standing, and consent of instructor. (Fa, Sp, Su)

- **SOC399: Capstone in Sociology (4 hours)**
  Students will review their education experience as sociology majors and explore career paths. Assignments include readings that recap sociology as a field of study and writings that consider the relevance of sociology to professional and social life. (Sp) Prerequisite: Senior standing.

- **SOC481: Internship in Criminal Justice (4 hours)**
  The internship course is a semester long field experience. It provides an opportunity for criminal justice majors to work in a designated agency or institution under faculty and agency supervision. Includes reflection journals to see how your internship connects to other class coursework. (Fa/Sp/Su) Prerequisites: SOC 103, 311, IDS 200, WRI 199, Senior standing, criminal justice major, consent of internship instructor and a minimum of 2.6 grade point average in courses in the major.

- **SOC499: Capstone - What works in criminal justice policy (2 hours)**
  Students will explore the historical relevance of criminal justice policies by analyzing the rationale behind the policy and the effect of the policy. Evidence-based principles and criminological theories provide a foundation for this analysis. Students will create a policy proposal to help local criminal justice agencies. (FA/SP/SU) Prerequisites: Sociology 212, 311, WRI 199, senior standing
Spanish

- **SPA101: Elementary Spanish I (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the Spanish language. Introduction to Hispanic cultures, politics, history, and literature through texts in English or in English translation from Spanish. Weekly out-of-class discussion sections. Conducted primarily in Spanish. (101-Fa, 102-Fa, Sp)

- **SPA102: Elementary Spanish II (4 hours)**
  A beginning course designed to introduce the student to the basic skills of understanding, speaking, reading and writing the Spanish language. Introduction to Hispanic cultures, politics, history, and literature through texts in English or in English translation from Spanish. Weekly out-of-class discussion sections. Conducted primarily in Spanish. (101-Fa, 102-Fa, Sp)

- **SPA201: Intermediate Spanish I (4 hours)**
  Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Introduction to Hispanic cultures. Weekly out-of-class discussion sections. Conducted in Spanish. (SP201-Fa; SP202-Sp) Prerequisites: SPA 102 or consent of the instructor.

- **SPA202: Intermediate Spanish II (4 hours)**
  Review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. Introduction to Hispanic cultures. Weekly out-of-class discussion sections. Conducted in Spanish. (SP201-Fa; SP202-Sp) Prerequisites: SPA 201 or consent of the instructor.

- **SPA290: Spanish for Health and Human Services (2 hours)**
  Focus on health and human service vocabulary, language skills for professional communication, and cross-cultural awareness in order to communicate effectively, both formally and informally. Students participate in hands-on, experiential learning opportunities in the community. Conducted in Spanish. (Sp) Prerequisites: SPA 202 or consent of instructor.

- **SPA298: Independent Studies in Spanish (4 hours)**
  Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

- **SPA301: Conversation and Composition I (4 hours)**
  General Education H1. Practice in conversation and composition with emphasis on new and technical vocabulary. Functional grammar review. Reading, discussion and interpretation of more challenging literary texts. Reinforcement of basic linguistic elements such as phonetics and syntax as an aid to further refinement of the four language skills. Conducted in Spanish. (Fa) Prerequisites: SPA 202 or consent of instructor.

- **SPA302: Conversation & Composition II (4 hours)**
  This course strengthens skills already learned in Spanish courses by integrating elements of print journalism interviewing, writing and editing. It also expands the cultural knowledge of the students by focusing on their writing on themes of cultural relevance. Conducted in Spanish. (Sp) Prerequisite: SPA 301 or consent of instructor.

- **SPA305: Spanish for the Professions (4 hours)**
  This course introduces students to the vocabulary and discourse appropriate to the professions. It develops communicative skills for professional situations (speaking, listening, comprehension, reading, writing, translation, interpretation, and computer skills) and provides cultural and cross-cultural awareness. Students prepare oral and written reports. Conducted in Spanish. Not to be taken in conjunction with SPA325. (Sp) Prerequisites: SPA 202.

- **SPA307: Latin American Civilization (4 hours)**
  General Education H2. Lectures and discussion on Latin American cultural history and trends, particularly as they relate to the arts, political thought, and economics. Conducted in Spanish. (Fa, odd years) Prerequisites: SPA 202.

- **SPA308: Hispanic Civilization (4 hours)**
  General Education H2. Lectures and discussion on Hispanic cultural trends, particularly as they relate to the arts, political thought, and economic conditions. Topics will focus on social movements in Spain or Spain's impact on Latin America, the Caribbean, and the United States. Conducted in Spanish. (Fa, even years) Prerequisites: SPA 202.

- **SPA325: Spanish for the Professions (4 hours)**
  This upper-intermediate level course will allow students to explore the diverse career possibilities available to those proficient in Spanish. Building upon previous knowledge of the Spanish language, students will expand their communication, reading, videos, oral presentations, written reports, projects and a variety of interactive activities will expand cross-cultural awareness as well as increase familiarity with the language. During spring break, students will travel to Lima, Peru, to complete volunteer work related to their field(s) of interest. Both pre- and post-reflection will compliment reflection completed during the immersion experience. Not to be taken in conjunction with SPA305. Prerequisite SPA202.
- **SPA398: Independent Studies in Spanish (2 TO 4 hours)**
  Prerequisites: Junior standing and written consent of instructor required for registration. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp)

- **SPA401: Advanced Conversation (2 hours)**
  A panorama of customs, life styles, attitudes, and cultural achievements of the Spanish-speaking peoples today. Emphasis on informal conversation with individual interests and projects encouraged. Includes oral and written reports as well as grammar and syntax review. Conducted in Spanish. (Sp) Prerequisite: SPA 301 or 305 or 307 or 308 or 325 or consent of instructor. (May be taken twice.)

- **SPA480: Internship/Capstone Internship in Spanish (2 TO 4 hours)**
  Applications of foreign language and culture using language skills in professional settings. This course may also serve as a culminating capstone experience. Facilitates transition from university to career or graduate school through the creation of a resume and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. S/U graded. (Fa, Sp) Prerequisites: SPA 307 or 308, 318 and senior standing.

- **SPA498: Indep Directed/Capstone Study (2 TO 4 hours)**
  Intensive reading in a specific area of Spanish or Spanish-American literature or culture. Weekly conference conducted in Spanish. Eight credits maximum may apply toward degree. This course may also serve as a culminating capstone experience for seniors. Facilitates transition from university to career or graduate school through the creation of a resume and portfolio, as well as experience with employment interviews and/or submission of application to graduate school. Written proposals of projects must have the prior approval of the divisional dean and consent of the instructor prior to registration. (Fa, Sp) Prerequisites: SPA 307 or 308, 318.
Sport and Recreation Management

- **SRM315: Sport Management Practicum I (1 hours)**
  This course provides students with an opportunity to observe and apply skills learned in the Sport and Recreation Management program under the direction and supervision of Sport and Recreation Management faculty.

- **SRM405: Recreational Programming (4 hours)**
  This course will provide students with the skills to develop, administer and lead a variety of recreation programs. The course will also involve budgeting and marketing/promotion methods and strategies designed for various populations and settings.

- **SRM407: Facility Operation (2 hours)**
  This course is designed to bridge the gap between business administration theory and practical application in the fitness and recreation fields. Information provided in this course prepares students for their internship and first professional work experiences.

- **SRM409: Sports Promotion and Event Planning (2 hours)**
  The purpose of this course is to acquire an in-depth knowledge about the specialized field of "event management" and to become familiar with management techniques and strategies required for successful planning, promotion, implementation and evaluation of special events within a sport context. To the extent feasible, students will be provided opportunities for direct observation of and hands-on involvement in the planning and staging of one or more special events.

- **SRM410: Recreation Administration and Supervision (4 hours)**
  This course will introduce students to a variety of special topics in the field of Recreation with emphasis on recreation management and leadership components. Specifically, students will be exposed to the importance of building community partnerships, researching for grant-funding sources, elements of contractual services, identifying current trends in the field, and characteristics of Gold Medal agencies (what makes them successful).

- **SRM435: Sport Management Practicum II (1 hours)**
  This course provides students with an opportunity to observe and apply skills learned in the Sport and Recreation Management program under the direction and supervision of Sport and Recreation Management faculty.

- **SRM480: Capstone: Internship in Sport Management (12 hours)**
  The purpose of this course is to enhance and develop personal growth in recreation management knowledge, ethical behaviors, career development, interpersonal skills, problem solving abilities, and personal responsibilities through participation in an internship at a recreation facility. During a 15-week internship, students will spend 30 hours/per week (450 total hours) developing, implementing, and administering recreation and outdoor adventure programs in a college affiliated recreation program. During the 15-week internship, students participating in the internship will come together for seminars. (Su, Fa) Prerequisites: REC 405 and 410.
Theatre Arts

- **THE100: Theatre Participation (1 hours)**
  Participation in either Mainstage or Studio Season theatre productions as an actor or technician.
  Prerequisite: consent of instructor. (Fa, Sp)

- **THE101: Introduction to Theatre Arts (4 hours)**
  General Education F1. Survey course focusing on the development of theatre, as well as an investigation of
  the literature and the practitioners of the art form. Course activity includes theatre performance field trips,
  reading of plays and oral and/or written theatre criticism. (Required course fee) (Fa, Sp)

- **THE101L: Performance Field Trips**
  Laboratory component for THE101.

- **THE102: Oral Interpretation and Presentation (4 hours)**
  General Education F1. This course focuses on the interpretation, and presentation of various forms of
  dramatic and traditional literature. Students will become familiar with the basic principles of rhetorical and
  dramatic analysis and participate in the preparation and performance of many styles of texts, from prose
  to poetry as well as dramas and more formal literature. (Fa, Sp)

- **THE111: Introduction to World Dance (4 hours)**
  General Education F1. Examination of movements in dance within the context of world cultures. This
  course will include the analysis and practice of dance techniques from various cultures.

- **THE120: Theatre Crew (2 hours)**
  Student participation in running or preparing the technical aspects of Theatre Arts Program Mainstage or
  Studio productions. (Fa)

- **THE121: Theatre Crew (2 hours)**
  Student participation in running or preparing the technical aspects of Theatre Arts Program Mainstage or
  Studio productions. (Sp)

- **THE160: Introduction to Fine Arts Administration (4 hours)**
  An introduction to the theory and practice of arts administration. The course offers historical perspective
  for the position of the arts in the economy, education, and public policy in the United States and shares a
  basic framework for developing organizational vision, planning methods, fundraising, marketing
  approaches and fiscal management. Students are introduced to local arts organizations, their goals and
  challenges. (every other spring)

- **THE200: Theatre Workshops (1 TO 2 hours)**
  Intensive practical work in various specialized topics within the Theatre Arts. Course may be repeated as
  topics will vary. (Required course fee)

- **THE215: Theatre History and Literature I (4 hours)**
  General Education F2. The traditions of the Euro-American theatre are investigated in terms of theatre
  conventions and drama of the various periods. Prerequisite: THE 101 or consent of instructor. (Fa)

- **THE216: Theatre History and Literature II (4 hours)**
  General Education F2. Concentration upon North American and European drama, Asian, Latin American
  and African theatre conventions and drama are presented. Prerequisite: THE 101 or consent of instructor.
  (Sp)

- **THE291: Special Studies/Topics in Theatre (1 TO 4 hours)**
  Study of a selected topic not covered in regular course offerings. The topic will be announced prior to
  registration. Four credits maximum will apply toward degree.

- **THE296: Special Studies/Research in Theatre (1 TO 4 hours)**
  Advanced research allows individual students or groups of students to undertake special projects related to
  their program emphasis. Four credits maximum will apply toward degree. Prerequisite: Approval of the
  divisional dean, departmental chair, and consent of instructor.

- **THE298: Independent Study in Theatre (1 TO 4 hours)**
  Independent study of selected areas under the supervision of one or more members of the faculty.
  Required for program honors. (Fa, Sp) Prerequisite: Approval of the divisional dean, departmental chair,
  and consent of the instructor.

- **THE300: Theatre Practicum (1 hours)**
  Supervised production work in the areas of theatre administration, stage management, scenery, lighting,
  costuming, or performance. Prerequisite: Approval of the divisional dean, departmental chair, and consent of
  the instructor.

- **THE301: Contemporary Acting Styles (4 hours)**
  Explores advanced techniques of acting, voice, and movement for use in modern theatre genres.
  Prerequisites: THE 102 or consent of instructor.

- **THE302: Period Acting Styles (4 hours)**
  Explores advanced acting, voice, and movement techniques for use in classic theatre genres.
  Prerequisites: THE 102 or consent of instructor.

- **THE305: Principles of Production Management (4 hours)**
Exploration of theories and practices and further advancement of practical skills employed in the areas of production management and stage management. Prerequisites: THE 120/121 or consent of instructor.

- **THE306: Principles of Theatre Design (4 hours)**
  Exploration of theories and practices and the further advancement of practical skills in the areas of scenic, lighting, costume, and sound design. Prerequisites: THE 120/121 or consent of instructor.

- **THE307: Directing for the Stage (4 hours)**
  Practical course in directing for the stage, focusing on script analysis, script preparation, casting concerns, staging techniques, and design strategies, culminating in a directorial concept presentation based on a contemporary play. Prerequisites: THE 101 or consent of instructor.

- **THE308: Writing for the Stage (4 hours)**
  Practical course in writing for the stage, including a study of basic dramatic structures and the analysis of weekly writing assignments, focusing on structure, style, and imagination, and culminating in a final term project of a one-act play. Prerequisites: THE 101 or consent of instructor.

- **THE309: Theatre Projects (1 TO 4 hours)**
  Special theatre production or tour experiences established by the program. Announcements of specific projects to be offered are made as they are developed. Instructor consent required.

- **THE310: Special Studies/Topics in Theatre (1 TO 4 hours)**
  Study of a selected topic not covered in regular course offerings. The topic will be announced prior to registration. Four credits maximum will apply toward degree.

- **THE311: Special Studies/Research in Theatre (1 TO 4 hours)**
  Advanced research allows individual students or groups of students to undertake special projects related to their program emphasis. Four credits maximum will apply toward degree. Prerequisite: Approval of the divisional dean departmental chair, and consent of instructor.

- **THE312: Independent Study in Theatre (1 TO 4 hours)**
  Independent study of selected areas under the supervision of one or more members of the faculty. Required for program honors. (Fa, Sp) Prerequisite: Approval of the divisional dean departmental chair and consent of the instructor.

- **THE413: Applied Theatre - Capstone Experience (2 hours)**
  Under faculty supervision students will complete one or more projects in the areas of theatre management, directing, playwriting, dramaturgy, stage management, theatre design, technical direction, acting, theatre education and the business of theatre. Prerequisite: Senior standing as a Theatre Arts major. (Fa)

- **THE414: Applied Theatre - Capstone Experience (2 hours)**
  Under faculty supervision students will complete one or more projects in the areas of theatre management, directing, playwriting, dramaturgy, stage management, theatre design, technical direction, acting, theatre education and the business of theatre. Prerequisite: Senior standing as a Theatre Arts major. (Sp)

- **THE415: Internship in Theatre Arts (1 TO 4 hours)**
  Professional work experience under supervision of selected theatre faculty and professionals; written report required. Instructor approval required prior to registration. (Fa, Sp, Su)
Writing

- **WRI120: Introduction to Professional Writing (4 hours)**
  This course examines the field of professional writing and explores writing conventions (format, style, research documentation) in various organizational contexts. Students in the course will both produce and analyze documents tailored to real-world situations. (Sp)

- **WRI199: Reading and Writing in the Sciences (4 hours)**
  General Education H1. In this class, students will be introduced to a wide range of genres crucial for work in the health and natural sciences, which may include lab reports, literature reviews, abstracts, interview or observational notes, detailed instructions, business letters, and grant proposals. Assignments will help students sharpen their writing skills and develop their professional identities. (Spring)

- **WRI230: Grant Writing (4 hours)**
  Students will learn about the process of obtaining grant funding for nonprofit organizations, then participate in that process. Students will first practice each stage of grant writing. They will then further develop their skills by writing complete grants in real-life scenarios. Prerequisites: none. (fa, even).

- **WRI350: Literary Magazine Publishing (4 hours)**
  In this practicum, students will edit, produce, write for, and market Carroll's professional literary magazine. Prerequisites: two 200-level or above Humanities or Social Science courses (ART, COM, EDU, ENG, EUS, FAR, FRE, GER, GRC, HIS, MUS, PPE, POL, REL, SOC, SPA, THE, WRI, or consent of the instructor. (SP)

- **WRI380: Internship in Writing (4 hours)**
  Work experience under professional supervision with opportunities to participate in real-world professional writing. End-of-semester written report required. Prerequisite: 3.0 GPA or higher, or consent of the instructor.

- **WRI391: Topics in Professional Writing (4 hours)**
  This course provides students with an opportunity to focus on a specific topic not covered in regular course offerings. In the course, students will learn about research methods and develop writing skills germane to the selected topic. The use of long-form, research based writing assignments will help students develop the skills appropriate to upper level standing in the Professional Writing major.

- **WRI496: Writing Major Capstone (4 hours)**
  The writing major capstone requires students to propose and prepare a semester-long research and writing project. The capstone will have a central theme that students approach using the knowledge and research practices from their secondary major or minor. Class discussion will focus on research methodologies, rhetorical strategies, and the writing process. The final project will provide students with a substantial and polished written document that will facilitate their transition to work in a professional field or to higher education. (Fa)