

HS/NU 307 Evidenced Based Research in Health Science

Electives

A minimum of two courses (6/7 credits) from the following approved electives:

ENWR 303	Grant Writing
BI 102	Human Biology
CS 189	Intro to GIS
ES 121	Environmental Science
HPE 135	Intro to Wellness
HPE 214	School Health Programs
HPE 234	Sports Nutrition and Conditioning
HS 198	Exploration of Health/ Wellness Issues
HS 335	Health Policy, Management, & Issues: National & Global Perspectives
PHIL 206	Environmental Ethics
PHIL 208	Bioethics
PSY 308	Health Psychology
SO 291	Social Gerontology
SO 345	Gender, Health, & Medicine
SO 351	Medical Sociology
TH 222	Health Care Ethics

Admission to Community Health and Health Science Internship Program

All Community Health and Health Science majors must apply for admission to the internship program. Applicants must have a minimum of 2.5 GPA and a grade of "C" or better in all requirements for the major. Applications must be submitted to the internship director no later than April 1 of the junior year. Failure to do so may cancel the student's opportunity to participate in an internship during the fall and/or spring semesters of the following school year. It is the student's responsibility to seek admission to the internship program. The student's eligibility will be considered by the Community Health and Health Sciences faculty upon receipt of the appropriate forms and three recommendations from Carroll College faculty and staff.

COMPUTER SCIENCE

R. STEPHEN HARPER, M.S.
DAVID C. MARSHALL, M.S.
PHILIP B. ROSE, M.SC.

Statement of Goals:

The computer science program is designed to:

- Provide a challenging and appropriate curriculum that will prepare students for productive careers or further education in graduate school.
- Provide an atmosphere in which learning can develop into a life long commitment to learning.
- Teach students to apply their knowledge to solving practical problems by working individually and collaboratively.
- Teach students to communicate effectively orally and in writing.

The Computer Science program provides 3 main tracks to provide a solid foundation for students whose goals span a wide range of disciplines within the rapidly changing field of computer technologies. The basic Computer Science Degree offers opportunities for graduate school at premier institutions or jobs in the field (especially data administration, software development, network administration and security jobs). The Computer Information System Degree (CIS) combines applied Computer Science with Business, offering similar job opportunities to those above and opportunities for a management career and/or MBA degree in the future. Finally the "CS Degree - with an emphasis" is for

those wishing to pursue another discipline such as math, science, social sciences or another degree who also want to particularly emphasize analysis and research skills.

Since the tracks listed do not address every student's desired educational plan, students may design a custom area of concentration that better addresses their focus. This plan must be approved by the computer science faculty and the college registrar.

Check our web site to see where our graduates went from Carroll.

Computer Science (CS)

The primary Computer Science degree option, it is recommended for those who intend to pursue graduate studies in Computer Science, or wish to obtain employment in computer science related fields such as software development, network and security technologies, or as a database administrator. It emphasizes both the theory and practice of Computer Science and can be customized to a student's interest.

I. CS Program Requirements

CS 110	Introduction to Computer Science & Java Programming
CS 120	Data Structures and Program Design
CS 202	Web Development
CS 230	Software Engineering
CS 309	Computer Architecture
CS 310	Database Design & Implementation I
CS 330	Computer Networking I
CS 410	Operating Systems
CS 430	Senior Project

And any five (5) of the following:

CS 201	Web Design
CS 311	Database Design & Implementation II
CS 331	Networking II
CS/MA 403	Cryptography
CS 421	Computer and Network Security
CS 495	Computer Science Seminar
EC 203	Project Management Economics
GIS 110	Introduction to Geographic Information Systems
GIS 220	GIS Databases

II. Other Program Requirements

CO 206	Small Group Communications
ENWR 305	Technical Writing
or ENWR 301	Business Writing
MA 131	Calculus of Single Variable Functions
or MA 121-122	Differential and Integral Calculus
MA 328	Discrete Mathematics I
Recommended: PSY 200 Emotional Intelligence & Personal/ Professional Success	

Computer Science (CS) – with an emphasis (in science, math, engineering, social sciences or other discipline)

This option is recommended primarily for students interested in combining computer science with another discipline. Increasing use of technology for research, data analysis and new developments is common in almost all disciplines. This multidisciplinary option prepares students for new technologies, analysis techniques and research for the purposes of going to graduate school and/or pursuing a career in technology driven areas of their chosen discipline. The mathematics track shown below is an example and emphasizes theory and modeling in addition to traditional software and systems classes. Please see your advisor for options for other disciplines.

I. CS Program Requirements

CS110	Introduction to Computer Science & Java Programming
CS 120	Data Structures and Program Design
CS 202	Web Development
CS 230	Software Engineering
CS 309	Computer Architecture
CS 310	Database Design & Implementation I
CS410	Operating Systems
CS 430	Senior Project
CS 495	Computer Science Seminar

II. Other Program Requirements

CO 206	Small Group Communications
GIS 110	Introduction to GIS (Graphical Information Systems)

For Science and Engineering:

MA 131	Calculus of Single Variable Functions
or MA 121-122	Differential and Integral Calculus
MA 328	Discrete Mathematics I

For all other Majors:

MA 207	Statistics
MA 409	Operational Research
or BA 365	Advanced Spreadsheets
Recommended: PSY 200 Emotional Intelligence & Personal/Professional Success	

III. Advanced Mathematics Requirements

(In lieu of the advanced mathematics requirements, a student may focus on a science, engineering, social science or other discipline.)

MA 232	Differential Equations & Linear Algebra I
MA 233	Multivariable Calculus
MA 334	Differential Equations & Linear Algebra II
MA 336	Probability and Statistics I
MA 342	Numerical Computing
MA 403	Cryptography
or MA 421	Advanced Applications & Optimization

Minors:

I. Minor in Computer Science (CS)

24 credits in Computer Science (not including CS 101) including:	
CS 110	Introduction to Computer Science and Java Programming
CS 310	Database Design & Implementation I
CS 330	Computer Networking I
or CS 410	Operating Systems

II. Minor in Computer Science for Secondary Education

A. Minor Program Requirements

CS 110	Introduction to Computer Science and Java Programming
CS 120	Data Structures and Program Design
CS 213	Computer Applications in Business
CS 309	Computer Architecture
CS 330	Networking I
CS 495	Computer Science Seminar

B. Other Program Requirements

ED 418	Teaching Mathematics in the Secondary School
MA 131	Calculus of Single Variable Functions

or MA 121-122 Differential and Integral Calculus

MA 207	Elementary Statistics
MA 328	Discrete Mathematics

C. Professional Education Requirements. See "Department of Education" and "Secondary Education Requirements" for the professional education requirements.

Note: In order to be licensed to teach in a secondary school in Montana, a student is required to have a teaching major in a subject field acceptable for licensure endorsement as well as the teaching minor. All degree students should review requirements for graduation as described in this catalog.

Curriculum in Computer Science for the Associate of Arts Degree

Computer Science Course Requirements: Completion of the requirements for the minor in Computer Science.

Computer Information Systems (CIS) Major

CIS is a combination of computer science courses and business courses preparing a student to enter the workforce in any number of technical management and IT positions. It combines business classes with applied, hands-on computing classes to develop skills that are more immediately applicable to the job world.

I. CIS Program Requirements

CS 110	Introduction to Computer Science & Java Programming
CS 120	Data Structures and Program Design
CS 202	Web Development
CS 230	Software Engineering
CS 310	Database Design & Implementation I
CS 330	Networking I
CS 410	Operating Systems
CS 421	Network Security
CS 487	Internship (1 credit)

And any three (3) of the following:

CS 106	Programming with Excel/VB
CS 201	Web Design
CS 213	Computer Apps in Business
CS 311	Database Design & Implementation II
CS 331	Networking II
BA 360	Accounting IS Systems
BA 380	e-commerce
BA 365	Adv Spreadsheets
GIS 110	Introduction to Geographic Information Systems

II. Business Requirements

BA 203	Accounting I
BA 301	Business Law
BA 375	Fundamentals of Mgmt
EC2 03	Project Management

III. Other Program Requirements

CO 206	Small Group Communications
ENWR 305	Technical Writing
or ENWR 301	Business Writing
MA 207	Probability and Statistics

Minor in Computer Information Systems (CIS)

22 credits in Computer Information Systems including:	
CS 110	Introduction to Computer Science and Java Programming

- CS 202 Web Development
 - CS 310 Database Design & Implementation I
 - CS 330 Networking I
- Plus additional classes from the CIS major (section I or II) or any GIS class.

To earn a Bachelor of Arts degree with a major or minor in computer science or computer information systems, a student must earn a grade of “C” or better in all of the courses listed for the major or minor. A lesser grade in any of these courses must be replaced before the Bachelor of Arts degree will be granted. In addition, a “D” or “F” grade in any of these courses precludes taking subsequent courses for which the deficient course is a prerequisite.

ECONOMICS

JERRY E. POHLMAN, PH.D.

Mission and Goals

The Department of Business, Accounting, and Economics offers Bachelor of Arts degrees in Accounting, Public Administration, or Business Administration. Students selecting majors in Business Administration must choose a concentration in Economics, Finance, International Business or Management. Minors are available in Accounting, Economics, Business or Public Administration and an Associate of Arts Degree is offered in Business Administration. Students may combine majors, minors and emphases.

Consistent with Carroll Colleges, dual goals of vocation and enlightenment, the Department of Business, Accounting, and Economics also serves a dual mission. Students are provided a common body of knowledge necessary for entry into a business-related career. At the same time, the curriculum ensures that students receive a well-rounded liberal arts education. Value oriented discussions, including ethical dilemmas encountered in global business, are included in the curriculum.

The Public Administration major, which is a joint effort between the Business, Accounting and Economics Department and the Political Science Department, provides relevant courses in business and political science to prepare students for administrative careers in local, state and federal governments. In addition, students are prepared to pursue graduate work in public administration.

The Business Administration major prepares students for careers in marketing, finance, management or economics. Students completing the Accounting major are prepared for professional certification exams. They are also provided with skills necessary to perform in an accounting related career. Through the liberal arts education, students develop valuable communication and reasoning skills. Both the Business Administration major and the Accounting major are designed and evaluated to ensure students are prepared for entry directly into the workforce or for acceptance into graduate school.

Minor in Economics

Minor Program Requirements

- Twenty-one semester credits of economics courses, including:
 - EC 201-202 Principles of Economics
- And 5 upper-division economics courses, including:
 - BA 409 Operations Research

EDUCATION: TEACHER

GLORIA J. LAMBERTZ, ED.D.
 JONATHAN C. MATTHEWS, PH.D.
 ROBERT J. STANSBERRY, ED.D.
 RODERICK M. THRONSON, ED.D.
 LYNETTE E. ZUROFF, ED.D.

Mission

The teacher education unit’s mission is to prepare students for lifelong learning, developing future educators’ intellect, imagination, self-confidence, and motivation, while preparing them for the teaching profession. Students investigate, reflect, analyze, and judge reality and truth through inquiry and discussion. Committed to educating each student as a total human being, the teacher education unit helps students to receive, respond to, organize, and characterize values. Specifically, students develop values about teaching, society, health behaviors, moral issues, education, and political influences. We ask our students to think boldly about the opportunities and responsibilities presented to us by a rapidly changing world. Students within the department are encouraged to live Carroll College’s mission by participating in community service and by interacting with children and adults from diverse cultural, religious, economic, and intellectual backgrounds.

The teacher education unit advances this mission as it works within the conceptual framework of Carroll College’s teacher education unit. That framework is built upon a liberal arts education, structured by traditional educational philosophies, and embraced by an atmosphere of dignity, which values justice of all persons. Access the complete Teacher Education Conceptual Framework and the current Title II pass rates from Carroll College’s Education Homepage.

Goals and Objectives

The goal of Carroll College’s teacher education program is to assist students in developing teaching competencies in their chosen fields and help them become educational leaders capable of responding to their students’ individual needs. Teacher education graduates will demonstrate competence in the 10 INTASC standards, as well as an additional Montana standard. The following dispositions, skills, and knowledge are to be viewed in conjunction with specific goals and objectives established for the college and for each required professional education course.

DISPOSITIONS

1. Demonstrate an attitude of professionalism through
 - a. his/her behavior as a role model to students;
 - b. continuing self-development;
 - c. ethical behavior;
 - d. peer support;
 - e. contributions to the growth of the profession.
2. Maintain healthy student/teacher relationships.
3. Exhibit continued enthusiasm for teaching profession.
4. Have appropriate relationships with administrators, teachers, support personnel, parents, and other community members.
5. Be encouraged to participate in community service.
6. Project a positive self-image.
7. Appreciate the whole person by recognizing the uniqueness of each individual student.

SKILLS

1. Classroom management and coping
2. Classroom motivation and interaction
3. Planning and lesson design
4. Teaching strategies
5. Instructional decision making
6. Problem-solving inquiry
7. Student diagnosis