

Additional Requirements: At least 3 courses must be 300 or 400-level.

\*pending approval

## **GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE (GIS)**

### **Statement of Goals:**

The GIS Certification is designed to provide students with the technological tools and skills to use in their major program or other interest to:

- communicate about spatial locations and data
- visualize and understand spatial data and patterns
- do spatial analysis, modeling and trending for research and problem solving

GIS is a rapidly expanding research, problem solving and communication technique for spatial data. Often using GPS collected data or existing data from many online sources, GIS allows the making of maps as well as the application of statistics and other data analysis techniques for research in a wide variety of fields. At Carroll, programs using or exploring GIS techniques include Environmental Studies, Math, Engineering and Computer Science, Public Health and Sociology, although the research and analysis skills can be applied to any discipline that has spatial data analysis needs.

The GIS Certificate is designed, similar to a minor, to allow students from any background to add it to their degree and skill set. Unlike a minor, it does not require the students to get a major or degree to accompany it. The Introductory class or equivalent is required for the remaining 3 classes, but it is flexible in how students gain that knowledge and related skills. The final three classes, although they may be taken in any order, must be taken at Carroll and passed with at least a C. The required classes are:

GIS 110	Introduction to Geographic Information Systems
GIS 210	GIS Data and Databases
GIS 310	Advanced GIS
GIS 311	Raster GIS and Remote Sensing

For more information about the GIS classes or Certificate contact the Computer Science Program (Dave Marshall, dmarshall@carroll.edu).

## **HEALTH & PHYSICAL EDUCATION**

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### **Mission**

The Health and Physical Education program seeks to produce a well-rounded, entry-level professional, an aim expressed by Carroll's Mission Statement as well as by its liberal arts focus. In addition to preparing students for the demands of future employment, the faculty members of the Health and Physical Education program strongly believe in the importance of promoting a healthy lifestyle which will assist each member of the Carroll community to meet the demands of everyday life.

Graduates of the Health and Physical Education program must understand learners/clients, be knowledgeable of programs, be well-founded in the methods of delivering programs designed to meet the unique needs of learners/clients, and be capable of evaluating the effectiveness of their professional programs.

A common model for most Health and Physical Education programs includes five dimensions of optimal well being (physical, emotional, social, spiritual, and environmental). Within these five dimensions can be found the essence of the Carroll College Mission Statement, as well as that of the Health and Physical Education program. The Carroll College Mission Statement and the Carroll College goals and objectives guide and direct the development of the Health and Physical Education non-teaching major.

### **Goals and Objectives**

The Department of Education: Health and Physical offers a non-teaching degree with a concentration in Sport Management and a K-12 HPE degree. It also provides coursework essential to the Teacher Education curriculum, other Carroll College programs, and the promotion of healthy lifestyles.

The Health and Physical Education program works toward the following goals and objectives:

Objective #1: To prepare Health and Physical Education graduates with theoretical knowledge and skills necessary for careers in health and physical education-related fields (e.g., recreation, physical fitness, athletic coaching, pedagogy, sport management, and community health). Student Outcomes: Students who graduate from Carroll College's Department of Education: Health, Physical, and Teacher with a non-teaching degree in Health and Physical Education will demonstrate the following skills:

1. organization and management;
2. program planning, implementation, and evaluation;
3. educational strategies;
4. instructional decision making;
5. problem-solving inquiry;
6. learner/client diagnosis;
7. media and technology resource;
8. effective peer group interaction;
9. managing stress;
10. subject matter comprehension;
11. knowledge and application of law and ethics;
12. knowledge of referral systems;
13. oral and written communication competence;
14. critical thinking;
15. meeting the needs of diverse populations;
16. application of foundation knowledge in human development, learning styles, self concepts, philosophy of health and physical education, and;
17. comprehension, analysis, and evaluation of professional information.

Objective #2: To ensure that the Health and Physical Education graduate is a well-rounded individual who demonstrates the ability to integrate his/her field with the concepts, theories, and methodologies of other disciplines. Student Outcomes: Upon graduation the student will demonstrate the ability to: obtain, evaluate, and use new information to make health-promoting decisions; integrate and synthesize information from a variety of sources and disciplines; participate in multidisciplinary discussions of health and fitness.

Objective #3: To ensure that the Health and Physical Education graduate is conversant in the dimensions of optimal well being (physical, emotional, intellectual, social, spiritual, and environmental). Student Outcomes: Upon graduation the student will have documented his/her development and practice of attitudes, skills, and behaviors that enhance quality of life; development and practice of attitudes, skills, and behaviors that maximize personal and community potential; consistent participation in a personal wellness program; and study of the physical, emotional, intellectual, social, spiritual, and environmental aspects of health and well being.

Objective #4: To provide coursework for students seeking a certifiable teaching minor in Physical Education K-12. Student Outcomes: Students who successfully complete the Physical Education teaching minor will demonstrate the following abilities:

1. To identify, demonstrate, describe, and teach critical elements of motor skill performance in a variety of physical activities using skillful movement (e.g., fitness principle, game tactics, and skill improvement principles).
2. To describe and apply bioscience (anatomical, physiological, biomechanical) and psychological concepts to skillful movement, physical activity, and fitness.
3. To demonstrate knowledge and understanding of approved state and national content standards, current law including the Indian Education for All, and local program goals as related to health and physical education.
4. To identify, select, and implement appropriate learning/practice opportunities based on developmental needs and learning styles of students and apply that learning to produce a productive and safe learning environment inside and outside of the learning environment.
5. To develop and apply an effective classroom management plan and promote effective communication skills among students in physical activity settings.
6. To identify, develop, and implement appropriate program and instructional goals based on principles of effective instruction and goal planning.
7. To demonstrate knowledge and apply assessment techniques to assess student performance, provide feedback, and communicate student progress.
8. To design, develop, and implement student learning activities that integrate information technology, locate resources, and enhance continuing professional development.

Objective #5: To provide coursework necessary to meet specific teacher education requirements. Specific objectives for the Health and Physical Education required courses are included in each course syllabus.

Objective #6: To promote healthy lifestyles and enrich lifetime participation in activities of the general college population by providing a variety of physical activity courses. These courses include all of the HPE 101-102 Physical Activities courses, which emphasizes lifetime participation in a variety of individual, dual, and sport-related activities.

### Major in Health and Physical Education (K-12)

#### I. Major Program Requirements

HPE 103	Foundations of Health & Physical Education
HPE 109	Techniques of Basic Skills in Physical Education
HPE 135	Introduction to Wellness
HPE 214	The School Health Program
HPE 216	Methods of Teaching Health
HPE 234	Sports Nutrition & Conditioning
HPE 301-302	Methods and Techniques of Teaching Fall/Spring Activities
HPE 314	Physical Education and the Elementary School Teacher
HPE 325	Applied Anatomical Kinesiology
HPE 350	Responding to Emergencies
HPE 413	Exercise Physiology & Human Performance Testing

#### II. Other Program Requirements

BI 102	Human Biology
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#### III. Professional Education Program Requirements

AN/SO 218	Introduction to Native American Studies
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CS 103	Instructional Media and Technology
ED 102	Foundations of Education
ED 205	Classroom Management
ED/PSY 229	Educational Psychology
ED 245	Diversity Field Experience
ED 318	Content Area Reading and Secondary Methods
ED 405	Education Seminar
ED 410	Student Teaching
ED 412	Measurement and Assessment in Teaching
PSY 227	Child Psychology
and PSY 228	Adolescent Psychology
or PSY 105	General Psychology
and PSY 203	Developmental Psychology
SPED 300	Introduction to Exceptional Children

See page 47 for United States and contemporary world cultures courses.

Note: All students are required to meet the quantitative and qualitative requirements for graduation from Carroll College as listed in this catalog.

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 a teaching minor. All degree students should review requirements for graduation as described in this catalog.

### Admission to the HPE Internship Program in Sport Management

All Health and Physical Education majors must apply for admission to the internship program. Applicants must have a minimum 2.5 grade point average and a grade of "C" or better in HPE requirements and other program requirements. Applications must be submitted to the internship director no later than April 1 of the junior year. Failure to do so will cancel the student's opportunity to participate in an internship during the fall 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 Department of Education faculty upon receipt of the appropriate forms and 3 recommendations from Carroll College faculty and staff.

### Major in Health and Physical Education with an Area of Concentration in Sport Management

#### I. Major Program Requirements

Thirty-two credits, including:

Two HPE 101 or 102 Physical Education Activities Courses (Must be different activities)

HPE 103	Foundations of Health & Physical Education
HPE 135	Introduction to Wellness
HPE 200	Field Experience in HPE
HPE 234	Sports Nutrition & Conditioning
HPE 325	Applied Anatomical Kinesiology
HPE 350	Responding to Emergencies
HPE 405	Senior Seminar
HPE 410	Management of Health and Physical Education Programs
HPE 413	Exercise Physiology & Human Performance Testing
HPE 415	Internship (six credits)

#### II. Other Program Requirements

BI 102	Human Biology
ENWR 301	Business Writing
or ENWR 305	Technical Writing
or ENWR 306	Writing for the Media

### Sport Management Concentration

Twenty-four (24) credits, including:

- BA 203-204 Principles of Accounting
- BA 306 Marketing
- BA 313 Managerial Finance
- BA 375 Fundamentals of Management
- COXXX Advanced Communications
- EC 201 Principles of Economics or
- EC 202 Principles of Economics

Suggested electives for Sport Management:

- BA 301-302 Business Law I and II
- CO 108 Desktop Publishing
- CO 215 Intro to Public Relations
- CO 225 Professional Communications
- CO 280 Gender Communication
- CO 310 Mass Media
- CS 213 Computer Applications in Business
- HPE 340 Coaching Certification (ASEP) and Sport Management Techniques
- PHIL 207 Business Ethics
- ART 114 Photography

### Minor in Health & Physical Education (K-12)

#### I. Minor Program Requirements

Thirty-one semester hours of physical education courses, including:

- ED 408 Student Teaching in the Minor Area or ED 410 Student Teaching
- HPE 103 Foundations of Physical & Health Education
- HPE 109 Techniques of Basic Skills in Physical Education
- HPE 216 Methods of Teaching Health
- HPE 301-302 Methods and Techniques of Teaching Fall/Spring Activities
- HPE 314 Physical Education and the Elementary School Teacher
- HPE 325 Applied Anatomical Kinesiology
- HPE 350 Responding to Emergencies
- HPE 413 Exercise Physiology and Human Performance Testing

#### II. Other Program Requirements

- BI 102 Human Biology

#### Notes:

1. To teach health and physical education K-12 in Montana with only a minor, a student must either major in elementary education or pursue a secondary education major, which leads to teacher licensure.
2. Students in any level of teacher education must be accepted into the education program by the Department of Education: Health, Physical, and Teacher. Please see index for page numbers for teacher education

### Health and Physical Education (HPE) Advisory Board

The Health and Physical Education Advisory Board is a body of recognized health professionals, sport professionals, and concerned students who meet from time to time to formulate recommendations for the HPE program. The input received from this board contributes to the development of curriculum and instructional methods offered to students majoring in Health and Physical Education with concentration in Sport Management.

### Transportation

Transportation is not provided to or from classes, including those held off campus.

### HEALTH SCIENCE

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#### Mission

The Community Health (p. 42) and Health Science majors are designed for students seeking to enter the health professions. If the United States is to reverse the present trend of deteriorating health of its citizens, and do so within an affordable framework, the next generation of health professionals must be conversant with a new health promotion paradigm. The Community Health and Health Science majors introduce students to this new paradigm through an integrated biological, psychological, and sociological approach to promoting health that encourages a shift from reliance primarily on dollars and technology to informed citizen participation.

The Community Health major is designed for students interested in becoming health education specialists. Health education specialists primarily work for organizations in the community that focus on improving health. The Health Science major is designed for students seeking to pursue clinical fields such as physical therapy, physician's assistant, optometry, occupational therapy, and veterinary medicine.

#### Goals

1. To provide students with the specialized knowledge, skills, and global perspective they need to pursue their chosen health profession.
2. To provide students with practical experience that will supplement their academic work and facilitate their entry into a chosen health career.
3. To guide students in developing and articulating a personal and professional perspective that is relevant to improving the health of citizens locally, nationally, and globally.

### Major in Health Science (HS)

#### Common Program Requirements: (20 credits)

- HS 198 Exploration of Health/Wellness Issues
- HS 230 Introduction to Epidemiology
- HS 335 Health Policy, Management and Issues: National and Global Perspectives
- HS/NU 307 Evidence Based Research Methods in Nursing and Health Science
- MA 207 Statistics
- PHIL 208 Bioethics  
or PHIL 207 Environmental Ethics  
or TH 222 Health Care Ethics
- PSY 105 General Psychology

#### Required Courses: (20–22 credits)

- BI 171 & 172 Biological Principles I & II
- CH 101 & 102 General Chemistry  
or CH 111 & CH112 Essentials of Chemistry and Organic and Biochemistry (may be substituted for CH 101 & 102)
- HS/NU 208 Basic Nutrition
- HS 405 Senior Seminar
- HS 415 Internship or Integration Project (1-3)  
Natural Science Courses: (12 required credits)

Choose from these courses depending on pre-professional or graduate school interests (e.g. public health) and requirements:

- BI 201 & 202 Anatomy & Physiology