

## **Exercise Science Major**

The Exercise Science program at Montreat College is designed to prepare individuals for careers in fitness and health promotion, strength and conditioning, and wellness programs. Students in the program learn how to assess and evaluate fitness levels for individuals and groups, and, how to design, implement, manage, and evaluate fitness programs. Graduates of the program will find employment opportunities in both public and private health and fitness facilities, and worksite and health care settings. The program also provides appropriate preparation for individuals desiring to pursue graduate study in fitness, health, and exercise science programs.

### **The Exercise Science Discipline**

Exercise science deals with the study of immediate and long-term effects of physical activity on the human body. The field of study of exercise science is very diverse and includes several areas of inquiry. Two areas of inquiry for individuals interested in this field include sports performance and health-related components of physical activity. The health-related components of physical activity have been researched and the need for further research is prominent because of the obesity epidemic and the lack of physical activity of children. Sports performance of children, young adults and older adults involves biomechanical analysis, psycho/social analysis of sports as well as nutrition and physiological analysis. Exercise science is a non-teaching major that has emerged in response to concerns about the lack of physical activity, obesity, and increased risks of developing diseases. The exercise science field provides the opportunity to study the scientific basis of sport performance. The National Association for Sport and Physical Education (NASPE) provides guidelines for basic standard courses for the field. This field of study may also be entitled Movement Science, Fitness, or Kinesiology. Some individuals volunteer in a physical therapy setting as well as work in gyms to obtain experience in this area. It is suggested that students do volunteer work in order to gain experience in the field they are to specialize in.

### **Career Opportunities**

Undergraduate programs in Exercise Science prepare students to attend professional schools in physical therapy, medicine, chiropractic, occupational therapy, and exercise physiology. Exercise Science graduates are prepared for careers in corporate fitness, agency fitness (YMCA, YWCA, etc.), health clubs, managers of fitness facilities, personal trainers, and strength and conditioning coaches. Another career option is to attend graduate school. These positions require certification from organizations such as the American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA) or Aerobic and Fitness Association of America (AFAA). There is a diversity of career options in this field – from medicine to personal trainer.

## Why Study Exercise Science at Montreat College?

At Montreat College, the Exercise Science degree is designed to prepare individuals for careers in fitness and health promotion, strength and conditioning, and wellness programs. With this curricula, Montreat College is a Recognized Undergraduate Strength and Conditioning Program by the National Strength and Conditioning Association.

The program takes a Christ-centered approach in small, intimate classes. Within the department, the faculty is highly accessible and genuine in their approach to students. Students in the program learn how to assess and evaluate fitness levels for individuals and groups, design, implement, manage, and evaluate fitness programs. All students complete a mandatory internship in a local health/fitness facility.

## After Graduation

Students will find employment opportunities in both public and private health and fitness facilities, worksite and health care settings. The program also provides appropriate preparation for individuals desiring to pursue graduate study in fitness, health, and exercise science programs.

## Requirements for a Major in Exercise Science

- √ Degree Requirements
- \_\_\_ Completion of the General Education Core (56 credits)
  - BL 101 or 103 and BL 102 or 104 required in the Gen-Ed
  - CM 220 required in the Gen-Ed
  - MT 105 or MT 121 required in the Gen-Ed
- \_\_\_ Completion of the General Education Competencies
- \_\_\_ Completion of the Exercise Science Major Core (49 credits)
- \_\_\_ Completion of an Exercise Science Concentration (18-19 credits)
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- \_\_\_ Completion of 27 credits at the 300-level or above
- \_\_\_ Completion of 122-123 credit hours with a minimum GPA of 2.0 (two terms and 32 credit hours must be completed at Montreat College)
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## Required Major Courses (49 hours)

- BL 220 Medical Terminology (1)
- BL 206 Human Anatomy and Physiology I (4)
- BL 207 Human Anatomy and Physiology II (4)
- BL 301 Biometrics (3) or  
MT 114 Elementary Probability and Statistics (3)
- EX 102 Heartsaver First Aid w/ CPR & AED (1)
- EX 201 Introduction to Exercise Science (3)
- EX 202 Concepts of Fitness (2)
- EX 310 Physiology of Exercise (3)
- EX 320 Exercise Testing and Measurements (3)
- EX 330 Kinesiology and Biomechanics (3)

- EX 340 Exercise Prescription (3)
- EX 341 Practicum (3)
- EX 420 Scientific Principles of Strength and Conditioning (3)
- EX 424 Facility Planning for PE, Recreation, and Athletics (3)
- EX 490 Senior Seminar (3)
- HL 101 Health (3)
- HL 201 Human Nutrition (3)
- IS 310 Pre-internship (1)

**Choose from two Exercise Science Concentrations:**

- Pre-Professional (19 credits)
- Health and Fitness (18 credits)
- Special Emphasis (18 credits)

**Pre-Professional Concentration (19 credits)**

The Pre-professional concentration offers a wide range of courses designed to prepare students for careers in physical therapy, medicine, chiropractic, occupational therapy, and exercise physiology, and professional or graduate schools.

**Pre-Professional Courses**

- CH 101 General Chemistry I (4)
- CH 102 General Chemistry II (4)
- PC 131 College Physics I (4)
- PC 132 College Physics II (4)
- PY 201 Psychology Applied to Modern Life OR  
PY 202 General Psychology (3)

**Health and Fitness Concentration (18 credits)**

The Health and Fitness concentration offers courses designed to prepare students to be able to train others as a personal trainer, strength and conditioning coach, and many other career options. Graduates of this program will be able to perform fitness assessment procedures and interpret the results according to health-related and high physical fitness standards as well as provide fitness prescription for healthy and unhealthy populations.

The health and fitness concentration looks to turn students into instructors that will teach and guide others in ways to assess and develop fitness skills and change behavioral strategies for achieving higher levels of fitness.

During the course of this concentration, students will acquire an American Red Cross CPR certification, and the preparation to qualify to take occupational certification exams in order to be a personal trainer, strength and conditioning specialist, and/or exercise specialist from a nationally recognized organization.

**Health and Fitness Courses**

- EX 140 Beginning Weight Training (1)
- EX 111 Intro to Principles and Philosophy of Physical Education (3)
- EX 302 Methods and Materials of Coaching (2)
- EX 305 Introduction to Athletic Training (3)
- EX 350 Prevention and Treatment of Athletic Injuries (3)
- EX 450 Rehabilitation and Modalities in Sports Medicine (3)
- PH 301 Ethics (3)

**Special Emphasis Concentration (18 credits)**

Students may transfer a set of courses from other institutions or complete courses in other departments at Montreat College to fulfill the requirements of this emphasis. Students develop the special emphasis curriculum in consultation with their academic advisor. The advisor and the Departmental Review Committee must approve a formal proposal of emphasis requirements by the end of the students' sophomore year. For example, students may develop a concentration that incorporates coursework from Communications, Marketing, or Outdoor Education.

**Special Emphasis Courses**

18 credits and 5 course minimum

<b>Four Year Plan: Bachelor of Science in Exercise Science Pre-Professional Concentration</b>			
<b>Freshman Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
IS 102 Foundations of Faith and Learning	2	EX 201 Intro to Exercise Science	3
BB 101 Survey of Old Testament	3	BB 102 Survey of New Testament	3
EN 101 English Composition	3	EN 102 English Composition II	3
HS 101 History of World Civilization I	3	CM 220 Public Speech and Rhetorical Analysis	3
BL 103 Advanced Biology I	4	BL 104 Advanced Biology II	4
Physical Education Course	1		
	<b>16</b>		<b>16</b>
<b>Sophomore Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
CH 101 General Chemistry I	4	CH 102 General Chemistry II	4
BL 220 Medical Terminology	1	PE 201 Concepts of Fitness	2
BL 206 Human Anatomy and Physiology I	4	BL 207 Human Anatomy and Physiology II	4
CS 102 Computer Applications and Concepts	3	Gen-Ed Literature	3
HL 101 Health	3	HL 201 Human Nutrition	3
Physical Education Course	1		
	<b>16</b>		<b>16</b>
<b>Junior Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
EX 310 Physiology of Exercise	3	EX 102 Heartsaver First Aid w/ CPR & AED	1
EX 320 Exercise Testing & Measurements	3	EX 341 Practicum	3
IS 310 Pre-Internship	1	EX 330 Kinesiology and Biomechanics	3
HS 101 History of World Civilization I	3	HS 102 History of World Civilization II	3
Gen-Ed Humanities	3	EX 340 Exercise Prescription	3
		MT 114 Statistics or BL 301 Biometrics	3
	<b>13</b>		<b>16</b>
<i>Completion of the General Education competencies by the end of the junior year.</i>			
<b>Junior Summer</b>			
EX 441 Internship I			<b>3</b>
<b>Senior Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
PC 131 College Physics I (offered every other year)	4	IS 461 Seminar on Faith and Life	2
EX 490 Senior Seminar	3	EX 424 Facility Planning for Phys Ed, Rec, & Athletics	3
EX 420 Scientific Principles of Strength and Conditioning	3	Gen-Ed Social Science	3
PH 301 Ethics (Req Gen Ed Humanities)	3	PC 132 College Physics II	4
PC 131 College Physics	3	PY 201 Psych Applied to Modern Life	3
	<b>13</b>		<b>15</b>
<i>Completion of 27 credits at the 300-level or above.</i>			
Total hours required for degree:			<b>124</b>

\*See General Education for optional course offerings

<b>Four Year Plan: Bachelor of Science in Exercise Science Health &amp; Fitness Concentration</b>			
<b>Freshman Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
IS 102 Foundations of Faith and Learning	2	EX 201 Intro to Exercise Science	3
BB 101 Survey of Old Testament	3	BB 102 Survey of New Testament	3
EN 101 English Composition	3	EN 102 English Composition II	3
HS 101 History of World Civilization I	3	HS 102 History of World Civilization II	3
BL 103 Advanced Biology I (required)	4	BL 104 Advanced Biology II (required)	4
	<b>15</b>		<b>16</b>
<b>Sophomore Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
MT 105 Essen. of Algebra or MT 121 College Algebra	3	CM 220 Public Speech and Rhetorical Analysis	3
BL 220 Medical Terminology	1	EX 202 Concepts of Fitness	2
BL 206 Human Anatomy and Physiology I	4	BL 207 Human Anatomy and Physiology II	4
CS 102 Computer Applications and Concepts	3	HL 201 Human Nutrition	3
HL 101 Health	3	Gen-Ed Social Science	3
PE activity course	1	EX 140 Beginning Weight Training	1
	<b>15</b>		<b>16</b>
<b>Junior Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
EX 310 Physiology of Exercise	3	MT 114 Statistics or BL 301 Biometrics	3
EX 320 Exercise Testing and Measurements	3	EX 341 Practicum	3
IS 310 Pre-Internship	1	EX 330 Kinesiology and Biomechanics	3
EX 305 Introduction to Athletic Training	3	EX 111 Intro to Principles and Philosophy of PE	3
Gen-Ed Humanities	3	EX 340 Exercise Prescription	3
PE activity course	1	EX 102 Heartsaver First Aid w/ CPR & AED	1
	<b>14</b>		<b>16</b>
<i>Completion of the General Education competencies by the end of the junior year.</i>			
<b>Junior Summer</b>			
EX 441 Internship I			<b>3</b>
<b>Senior Year</b>			
<b>Fall Semester</b>		<b>Spring Semester</b>	
PH 301 Ethics (Req Gen Ed Humanities)	3	IS 461 Seminar on Faith and Life	2
EX 490 Senior Seminar	3	EX 424 Facility Planning for Phys Ed, Rec, & Athletics	3
EX 302 Methods and Materials of Coaching	2	Gen-Ed Literature	3
EX 420 Scientific Principles of Strength and Conditioning	3	EX 450 Rehab and Modalities in Sports Medicine	3
EX 350 Prevention and Treatment of Athletic Injuries	3	Gen-Ed Humanities	3
	<b>14</b>		<b>14</b>
<i>Completion of 27 credits at the 300-level or above.</i>			
Total hours required for degree:			<b>123</b>