

# EXERCISE PHYSIOLOGY MAJOR (M)

The Exercise Physiology major at Concordia University prepares students to understand how the body responds and adapts to the stress of physical exertion. A thorough knowledge of exercise physiology enables one to understand the physiological mechanisms responsible for the acute and chronic response to physical activity. This knowledge can be used by students as they enter the workforce in health and fitness industries, strength and conditioning programs, clinical exercise physiology settings or entry into professional/graduate studies such as Concordia's Doctorate of Physical Therapy program, Master of Occupational Therapy program, or master's/doctoral work in the exercise sciences.

Coursework in the Exercise Physiology major includes a strong foundation in the sciences plus significant hands-on laboratory work assessing cardiovascular, neuromuscular, and pulmonary responses in Concordia's Exercise Physiology Laboratory. Emphases in this major include both clinical exercise physiology and strength and conditioning. Students will be prepared to sit for nationally recognized certification exams offered through the American College of Sports Medicine and the National Strength and Conditioning Association. Opportunities are available to participate in developing and conducting research projects in the exercise physiology laboratory and/or to pursue internships to gain additional practical experiences in their preferred field.

## Program Learning Outcomes

Students will:

- Demonstrate knowledge of applied anatomy, physiology, and kinesiology in healthy populations.
- Demonstrate knowledge of applied anatomy, physiology, and kinesiology in clinical populations.
- Demonstrate the ability to advocate for healthy lifestyles in diverse populations (eg. culture, literacy, age, gender, disability) using physical activity and exercise.
- Demonstrate Exercise Physiology skills and abilities by providing clear and accurate written assessments of human performance
- Demonstrate Exercise Physiology skills and abilities by providing clear and accurate verbal assessments of human performance.
- Apply current movement science research to guide evidence based practice.
- Identify and utilize appropriate means of health screening and disease classification in exercise programming.
- Student will evaluate the integration of Christian faith and ethical practice.

## Curriculum

Code	Title	Hours
<b>Core Requirements (<a href="https://catalog.cuw.edu/undergraduate/university/acad-prog/trad/core/">https://catalog.cuw.edu/undergraduate/university/acad-prog/trad/core/</a>)</b>		<b>45</b>
<b>Major Requirements</b>		<b>48</b>
<b>Electives</b>		<b>27</b>
Minor: Optional		
<b>Total Hours</b>		<b>120</b>

## Major Requirements

Code	Title	Hours
<b>Required Core Courses</b>		
BIO 1801	Human Anatomy and Physiology I (Natural World)	
HHP 1520	Weight Training (Human Beings and Being Human) or HHP 1530 Advanced Weight Training	
MATH 2050	Statistics I (Natural World)	
PSY 1010	General Psychology (Human Beings and Being Human)	
<b>Required Courses</b>		
BIO 1802	Human Anatomy and Physiology II	4
BIO 2800	Pathophysiology	3
EXPH 2225	Introduction to Exercise Science	3
EXPH 3442	Exercise Testing and Prescription	4
EXPH 3470	Exercise Physiology	4
EXPH 3471	Advanced Exercise Physiology	4
EXPH 4475	Seminar in Exercise Physiology	2
EXPH 4480	Program Design and Application of Strength and Conditioning Principles	3
EXPH 4494	Exercise and Chronic Disease	3
EXPH 4995	Senior Seminar or EXPH 4960 Internship	3
HHP 2280	Psychology of Sport	3
HHP 3342	Nutrition for Wellness and Performance	3
HHP 3373	Motor Development	3
HHP 3375	Biomechanics	3
PHIL 3500	Bioethical Dilemmas in Contemporary Society (Human Beings and Being Human)	3
<b>Recommended Electives</b>		
BIO 1401	General Biology I	
BIO 1402	General Biology II	
BIO 4800	Human Physiology	
CHEM 1204	Elements of General and Biological Chemistry	
CHEM 1414	General Chemistry I <sup>1</sup>	
CHEM 1424	General Chemistry II <sup>1</sup>	
HHP 2260	School and Community Health	
HHP 2265	Healthy Lifestyles	
PHYS 1514	General Physics I <sup>1</sup>	
PHYS 1524	General Physics II <sup>1</sup>	
PSY 2300	Life Span Development	
PSY 4250	Abnormal Psychology	
RSC 3020	Advanced Anatomy	
<b>Total Hours</b>		<b>48</b>

<sup>1</sup> Although CHEM 1414 General Chemistry I/CHEM 1424 General Chemistry II, and PHYS 1514 General Physics I/PHYS 1524 General Physics II are recommended for all Exercise Physiology majors, only Pre Physical Therapy are required to take them for admittance into a Physical Therapy program. Students should check with their advisor for further information on options within the Exercise Physiology curriculum.

**Plan**

Course	Title	Hours
<b>Semester 1</b>		
CCE 1030	Western Thought & Worldview	3
PSY 1010	General Psychology	3
EXPH 2225	Introduction to Exercise Science	3
BIO 1801	Human Anatomy and Physiology I	4
COMM 1100 or COMM 2100	Public Speaking or Interpersonal Communication	3
<b>Hours</b>		<b>16</b>
<b>Semester 2</b>		
CCE 1010	Christian Citizen	3
MATH 2050	Statistics I	3
ENG 1040	Introduction to Writing	3
BIO 1802	Human Anatomy and Physiology II	4
HHP 1520 or HHP 1530	Weight Training or Advanced Weight Training	1
<b>Hours</b>		<b>14</b>
<b>Semester 3</b>		
CHEM 1414	General Chemistry I	4
HHP 3373	Motor Development	3
REL 1000	The Bible	3
CCE 1040	Science & Humanity	3
CCE 1020	Western Culture & Worldview	3
<b>Hours</b>		<b>16</b>
<b>Semester 4</b>		
CHEM 1424	General Chemistry II	4
HHP 3342	Nutrition for Wellness and Performance	3
HHP 2280	Psychology of Sport	3
BIO 2800	Pathophysiology	3
REL 1100	Christian Faith	3
<b>Hours</b>		<b>16</b>
<b>Semester 5</b>		
PHYS 1514	General Physics I ONLY IF PRE-PT	4
EXPH 3442	Exercise Testing and Prescription	4
EXPH 3470	Exercise Physiology	4
ELECTIVE		3
HHP 1100	Stewardship of the Body	1
<b>Hours</b>		<b>16</b>
<b>Semester 6</b>		
PHYS 1524	General Physics II ONLY IF PRE-PT	4
HHP 3375	Biomechanics	3
EXPH 3471	Advanced Exercise Physiology	4
EXPH 4494	Exercise and Chronic Disease	3
ELECTIVE		3
<b>Hours</b>		<b>17</b>
<b>Semester 7</b>		
PHIL 3500	Bioethical Dilemmas in Contemporary Society	3
ELECTIVE		3
EXPH 4475	Seminar in Exercise Physiology	2
EXPH 4480	Program Design and Application of Strength and Conditioning Principles	3
ELECTIVE		3
<b>Hours</b>		<b>14</b>
<b>Semester 8</b>		
EXPH 4995 or EXPH 4960	Senior Seminar or Internship	3
EXPH 4960	Internship	3-6
BIO 4800	Human Physiology	4

ELECTIVE	Hours
	3
<b>Total Hours</b>	<b>122-125</b>

Course options and schedule are subject to change.