

College of Arts and Sciences

# Exercise Science

## Overview

Few academic programs offer such diverse opportunities for employment and professional development upon graduation as Exercise Science. The Exercise Science curriculum prepares graduates with the knowledge and practical experience necessary for employment as strength and conditioning specialists; personal trainers; corporate, community and commercial fitness leaders; and provides a strong background for those interested in pursuing a masters or doctoral degree in exercise physiology. The Exercise Science major is also an attractive curricular option for those intending to apply to professional programs in medicine and other allied health programs such as physical therapy, occupational therapy, physician assistant, chiropractic, cardiac rehabilitation, dentistry, pharmacy, and accelerated nursing.

## Outstanding Faculty

Exercise Science faculty are uniquely qualified to provide excellent learning experiences to students. In addition to having distinguished academic degrees, each has earned one or more of the following nationally and internationally respected fitness credentials or levels of recognition:

American College of Sports Medicine (ACSM)

- Health/Fitness Instructor
- Exercise Specialist
- Exercise Test Technologist
- Program Director, Health/Fitness Instructor
- ACSM Fellow

American Association of Cardiovascular and Pulmonary Rehabilitation (FAACVPR)

- FAACVPR Fellow

National Strength and Conditioning Association (NSCA)

- NSCA Certified Personal Trainer (CPT)
- Certified Strength & Conditioning Specialist (CSCS)
- CSCS and NSCA CPT, Recertified with Distinction

Commission on Accreditation of Athletic Training Education (CAATE)

- Athletic Trainer Certified/Licensed (ATC/L)

## Program Recognition

The Exercise Science curriculum is recognized by the American College of Sports Medicine and the National Strength and Conditioning Association for successfully meeting established educational program criteria in exercise testing and prescription and strength and conditioning. The department's Athletic Training Education Program is also accredited by the Commission on Accreditation of Athletic Training Education.

## Areas of Emphasis

The Exercise Science major offers many areas of emphasis; some are designed to assist students who will be applying for admission to graduate and professional schools, others lead to jobs in the fitness profession, and still others prepare students for success in passing nationally respected certifications. Depending upon their particular areas of interest, students select specialized coursework and practical 'hands on' opportunities. All program options culminate in a 200-hour internship specific to each student's professional area of interest.

## Professional Options

### Professional School Preparation

Students interested in applying for admission to professional school in one of the allied health professions will find the science-based courses (e.g., Human Anatomy, Exercise Physiology, Human Physiology, Biomechanics, Nutrition ...) in the Exercise Science major to be of special interest because of their emphasis on the human body. Approximately 80% of Creighton's Exercise Science majors apply for acceptance into professional school.

### Corporate/Community/Commercial Fitness Leader

The interest in physical fitness and wellness has prompted an expansion of community (e.g., YMCA), corporate (e.g., Mutual of Omaha, Union Pacific), and commercial (e.g., Prairie Life Center, 24 Hour Fitness) facilities, and a need for qualified fitness professionals to direct them. This program emphasis has attracted students who are excited about an opportunity to develop and administer lifestyle improvement educational programs (i.e. stress management, smoking cessation) and to develop fitness training programs for the general public.

### Strength and Conditioning Specialist

Every NCAA Division I program, as well as many other college and high school athletic programs, have at least one strength and conditioning specialist; an individual who tests athletic performance capabilities, and designs and administers strength training and conditioning programs for athletes. Students who choose this program option have opportunities to work as teaching assistants in strength and conditioning classes, and assist in Creighton's varsity strength training and conditioning facility.

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**EXERCISE SCIENCE**

**Personal Trainer**

Professional athletes, business executives, factory workers, and people in all walks of life are seeking qualified personal trainers to help them design and adhere to a regular exercise program. Students choosing this program option will have opportunities to train individuals in a variety of settings including commercial and corporate sites, as well as in the Human Performance Fitness Testing Laboratory developing exercise programs for students and Creighton University employees.

**National Certification Preparation**

Acquiring national certification credentials as health-fitness professionals, personal trainers, and/or strength and conditioning specialists oftentimes enhances marketability for employment. Therefore, the major includes courses specifically designed to assist students in acquiring these additional credentials.

**Opportunities**

The focal point of activity for Exercise Science majors is the Human Performance Fitness Testing Laboratory where students learn underwater weighing and other body composition measurement techniques, treadmill and cycle ergometer testing protocols, instruction in proper exercise technique, and aerobic and anaerobic exercise prescription guidelines.

Exercise Science students are given the unique opportunity to participate in the department's major club, academic seminars, faculty research projects in the Human Performance Research or Exercise Biochemistry Laboratories, and professional meetings.

**Admission Requirements**

The following are requirements for acceptance into the Exercise Science major at the time of application:

An overall GPA of 2.75 in 30 or more hours of coursework at Creighton; and grades of "C" or better in General Chemistry 203/204 or 205/206 **AND** General Biology 211 or 212.

**Faculty**

Thomas R. Baechle, Ed.D. (Professor and Chair). Exercise Leadership and Program Administration; Internship Coordinator.

Anthony J. Bull, Ph.D. (Associate Professor; Co-Director, Human Performance Research Laboratory). Exercise Physiology, Basic Statistics and Research Design, Independent Research.

Joan M. Eckerson, Ph.D. (Professor; Co-Director, Human Performance Research Laboratory). Human Anatomy, Nutrition for Health and Sports Performance, Independent Research.

Pat Lambert, Ph.D. (Assistant Professor; Director – Exercise Biochemistry Laboratory). Human Physiology, Biomechanics, Independent Research.

Mary C. Mason, M.S. (Instructor). First Aid and CPR Responder.

Geri A. Moore, M.A. (Instructor; Director, Human Performance Fitness Testing Laboratory; Coordinator, Exercise Science major's Club). Laboratory Methods, Exercise Prescription.

Jennifer Yee, M.A. (Instructor; Laboratory Assistant, Human Performance Fitness Testing Laboratory). Designing A Personalized Fitness Program, Personalized Weight Training.

Mark A. Williams, Ph.D., (Professor of Medicine; Director, Cardiovascular Disease Prevention and Rehabilitation Program at the Creighton Cardiac Center). Lecturer in Exercise Science. Clinical Exercise Testing and Electrocardiogram Interpretation.

<b>FRESHMAN</b>	
<b>Fall Semester</b>	<b>Sem Hrs</b>
CHM 203/204 Gen Chemistry	4
EXS 142 Personalized Weight Training	1
<b>Spring Semester</b>	<b>Sem Hrs</b>
BIO 212 General Biology	4
EXS 144 Aerobics	2
EXS 195 Intro to Ath. Training	3
<b>SOPHOMORE</b>	
<b>Fall Semester</b>	<b>Sem Hrs</b>
EXS 125 First Aid	2
EXS 240 Designing a Pers. Fitness Program	3
EXS 331 Human Anatomy	4
<b>Spring Semester</b>	<b>Sem Hrs</b>
EXS 320 Human Physiology	4

<b>JUNIOR</b>	
<b>Fall Semester</b>	<b>Sem Hrs</b>
EXS 334 Biomechanics	3
EXS 335 Exercise Physiology	4
<b>Spring Semester</b>	<b>Sem Hrs</b>
EXS 350 Nutrition	3
EXS 401 Exercise Prescription	3
EXS 491 Exer Leadership Adm	3
<b>SENIOR</b>	
<b>Fall Semester</b>	<b>Sem Hrs</b>
EXS 489 Lab Methods & Procedures	4
EXS 407 Basic Statistics & Research Design	3
<b>Spring Semester</b>	<b>Sem Hrs</b>
EXS 492 Exercise Science Internship	3

**For more information contact:**

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