

Exercise Science

Bachelor of Science

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Goals and Objectives

A Bachelor of Science degree in Exercise Science provides exciting opportunities for individuals who are interested in pursuing careers in any of the diverse fields of the discipline. The curriculum is designed to provide academic content and hands-on training relating to the science of movement, exercise testing and prescription, kinesiology, health promotion, and research in allied health. The curriculum is delivered through classroom and laboratory instruction, as well as applied practical experiences. Community interaction may occur in various settings, including health and sports medicine clinics, corporations and industrial settings, fitness centers, rehabilitation facilities, and other nontraditional settings.

Objectives for the Exercise Science degree program include the following:

1. Prepare graduates to work in a variety of health, fitness, and rehabilitation settings
2. Educate students to work with diverse populations and various health and fitness backgrounds
3. Foster strong interpersonal and communication skills that promotes professional and personal citizenship in students
4. Develop scientific and practical skills that enable graduates to pursue post-baccalaureate degrees
5. Provide graduates for the Illinois allied health workforce, especially in central Illinois

The Bachelor's Degree

- Health and Fitness Track
- Physical Therapy Track

Advising

Students may declare an Exercise Science major at any time. Students are encouraged to have frequent consultation with their advisors to make sure they are on track for graduation. Freshmen and undeclared students interested in Exercise Science will be advised by the Office of Advising Services, Information, and Support in the Center for Academic Success. All other students will be advised by faculty and college advisors.

Grading Policy

Students are expected to earn at least a C- in each core and required course for Exercise Science and maintain an overall cumulative GPA of 2.0.

Courses

EXR 101. Healthcare and Science Careers. 2 Hours.

This course is designed to introduce students to the various careers of the healthcare industry. Students will gain knowledge in educational requirements, employment settings, common duties and responsibilities, and career development options.

EXR 201. Introduction to Exercise Science. 3 Hours.

This is an introductory course to the field of exercise science. This course will define the field of Exercise Science and the many associated sub-disciplines. Students will also learn about research, as well as career opportunities and paths related to exercise science.

EXR 212. Medical Terminology. 3 Hours.

Introduces students to the specialized language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the body as a whole. Utilizing a systems-approach, the student will define, interpret, and pronounce medical terms relating to structure and function, pathology, diagnosis, clinical procedures, oncology and pharmacology. In addition to medical terms, common abbreviations applicable to each system will be interpreted.

EXR 222. Musculoskeletal Anatomy and Physiology. 3 Hours.

This course provides an in depth study of the anatomy and physiology of the muscular and skeletal systems for students interested in careers focusing on physical activity. Students will learn how to navigate the body, identify common structures, and explore normal and pathophysiologic aspects of motion.

EXR 233. Personal Health and Wellness. 3 Hours.

This introductory course will provide an overview of topics and issues pertaining to the health and wellness of individuals. This course is designed to expose students to a broad range of issues and information relating to the various aspects of personal health, which include the physical, social, emotional, intellectual, spiritual and environmental aspects.

EXR 251. Prevention and Care of Athletic Injuries. 3 Hours.

Current methods in prevention, recognition, and management of physical activity and sport related injuries.

EXR 301. Motor Learning. 3 Hours.

Designed to provide students an overview of learning theories and practice in motor learning. Students will develop an understanding of the cognitive, behavioral, neurophysiological approaches to motor skill.

EXR 303. Group Exercise Leadership. 3 Hours.

This course is designed to provide students with leadership skills and experience that directly apply to group exercise programming. Topics include current trends in group exercise, program design and implementation, monitoring exercise, evaluation of existing programs, and administrative considerations.

EXR 313. Stress Management. 3 Hours.

Theories and principles of stress with an emphasis on interventions and techniques to manage stress. Application and practice of various stress management techniques to lifestyle, occupational, personal, and age-related issues.

EXR 325. Evidence-Based Research Concepts. 3 Hours.

This course will focus on outlining the foundation of evidence-based practice in health sciences. The students will gain a basic understanding of principles in evidence-based practice and how to incorporate those principles into clinical practice. Course Information: Same as MLS 325.

EXR 329. Kinesiology and Biomechanics. 3 Hours.

An applied study of human performance, including musculoskeletal actions, analysis of sports skills, and training and conditioning techniques, with application of mechanical laws and principles to basic performance patterns. Course Information: Prerequisites: BIO 201 and BIO 202 or equivalent.

EXR 331. Physiology of Exercise and Sport. 4 Hours.

This course provides an understanding of the acute responses and chronic adaptations of the body to the stresses of exercise. Topics include bioenergetics, circulatory, respiratory and neuromuscular responses to exercise and sport. Emphasis will be placed upon the practical application of exercise physiology principles to coaching, education and other physical training practices. Basic laboratory procedures/tests in the field of exercise physiology are designed to complement the lecture. Course Information: Prerequisites: BIO 201 and BIO 202 or equivalent.

EXR 352. Health Promotion and Disease Prevention. 3 Hours.

The purpose of this course is to provide an overview of the major issues in health promotion and disease prevention throughout the lifecourse. This includes strategies for promoting health and wellness, understanding mortality and morbidity, in addition to various epidemiological terminology. Behavioral and environmental contributions to illness and injury, as well as strategies for risk reduction will also be discussed. Course information: Prerequisites: EXR 233.

EXR 363. Exercise and Sport Psychology. 3 Hours.

This course allows students to be exposed to sport/physical activity from the standpoint of psychological aspects contributing to and outcomes of participation. Theories of motivation and exercise behavior will be examined in relation to the increasing problems of exercise adherence and physical inactivity. Various techniques will be discussed in relation to motivating exercise behaviors and special attention to the needs of athletes.

EXR 375. Principles of Strength and Conditioning. 4 Hours.

The purpose of this course is to introduce students to the science and physiology behind strength training. Through lecture and lab, students will acquire a knowledge of the neuromuscular, biomechanical, and metabolic aspects of muscular strength and conditioning programs for various athletic and non-athletic populations. Students who complete this course will have sufficient knowledge to pursue certifications as a personal trainer or strength and conditioning specialist. Course Information: Prerequisites: EXR 329 and EXR 331.

EXR 412. Exercise Management for Special Populations. 3 Hours.

This course helps students understand the special needs of individuals with chronic disease, disabilities, or special health issues. It includes a review of basic principles of exercise testing and prescription, and builds on that foundation. Various conditions will be examined to provide valuable insight on management of these health needs, including diabetes, pregnancy, heart disease, asthma, and many more. Course Information: Prerequisites: EXR 331.

EXR 451. Exercise Testing and Prescription. 3 Hours.

This course is designed to give students additional fitness testing and exercise prescription experience inside and outside of the classroom. The application of both laboratory and field-based tests (fitness assessments) will be covered in lectures and practice sessions. Students will demonstrate proficiency in assessment techniques and implement prescriptions of skills and health-related fitness components. Course Information: Prerequisites: EXR 375. (Note: students may be required to travel to off-campus sites to complete course experiences.)

EXR 480. Topics in Exercise Science. 3 Hours.

Selected topics of special interest in Exercise Science. Interdisciplinary topic is reflected in class title in each semester scheduled. Description of topics will be available in Department office. May be repeated if topics vary.

EXR 483. Seminar in Exercise Science. 3 Hours.

A capstone course providing an overview of contemporary and often controversial health issues with analysis of selected problems of current concern in Exercise Science. Course information: Prerequisites: Senior EXR major; or permission of instructor.