

EXERCISE MOVEMENT SCIENCE (EXM)

EXM-2208 Intro to Ex & Mvment Sci/Kinesiology (3 Credits)

Requisite(s): BIO-1140 & BIO-1141 OR BIO-1201 & BIO-1202

This course provides an introduction to the domains of exercise and movement science including physiological systems, exercise physiology, clinical assessment, and exercise and sports nutrition.

Typically offered: Fall Only

EXM-2209 Measurement and Evaluation (3 Credits)

Requisite(s): BIO-1140 & BIO-1141 OR BIO-1201 & BIO-1202

This course is designed to provide students with the basic concepts in statistics, measurement and evaluation in exercise and movement science. The course incorporates the application and interpretation of descriptive and inferential statistics for quantitative research and fitness evaluation. Students will utilize computer based statistical programs for statistics analysis.

Typically offered: Fall Only

EXM-3200 Biomechanics (3 Credits)

Requisite(s): EXM-3308, BIO-1140 & BIO-1141 OR BIO-1201 & BIO-1202

This course introduces students to concepts of mechanics as they apply to human movement, particularly those pertaining to exercise, sport, and physical activity. The student should gain an understanding of the mechanical and anatomical principles that govern human motion and develop the ability to link the structure of the human body with its function from a mechanical perspective.

EXM-3304 Organization and Administration of Physical Education (3 Credits)

Requisite(s): EXM-2208

Emphasis on organization and administrative policies and procedures; purchase and care of equipment and supplies; public and professional relations; structural and functional aspects of a school program in physical education, athletics, and intramurals.

Typically offered: Fall Only

EXM-3305 Physiology of Exercise (3 Credits)

This course provides students with an overview of how physical training affects the human body. Topics include weight training, principles of training, as well as aerobic and anaerobic changes that occur from a training stimulus.

Typically offered: Fall Only

EXM-3306 Exercise and Sport Nutrition (3 Credits)

Requisite(s): EXM-2208

This course introduces students to appropriate nutrition practices in relation to exercise or sport training to promote health, energy and adaptations.

Typically offered: Spring Only

EXM-3307 Strength and Conditioning (3 Credits)

Requisite(s): EXM-2208

This course provides an introduction to the foundational concepts of strength and conditioning. Topics covered include strength and conditioning terminology and foundations, strength and conditioning exercises, warmup strategies, and program design.

Typically offered: Spring Only

EXM-3308 Motor Learning (3 Credits)

Requisite(s): EXM-2208

introduction to teaching and learning sport skills from a motor learning perspective. Open and closed loop information processing systems are used to describe and explain sports skill, reaction time, and motor skills. Theory and concepts learned will be applied to the everyday practical aspects of teaching and coaching sport.

Typically offered: Spring Only

EXM-3309 Fit Assessment & Exercise Prescription (3 Credits)

Requisite(s): EXM-2208

This course provides students with a foundation in exercise testing and prescription. Students will investigate the many parameters of fitness, including their measurement, interpretation of results, and application toward recommendations for exercise programs. Topics will include cardiorespiratory fitness, muscular strength and endurance, flexibility, body composition, and performance/athletic components.

Typically offered: Spring Only

EXM-3310 Bus, Entre & Innov in Exer & Movement (3 Credits)

Requisite(s): EXM-2208, PHI-2342

This course explores the interfaces between human resource management, operations, marketing, and entrepreneurship within the context of entrepreneurial, for-profit, and nonprofit fitness and health promotion ventures.

Typically offered: Spring Only

EXM-3322 Introduction to Legal Issues (3 Credits)

Requisite(s): EXM-2208

Relates basic legal concepts to sport and physical education environments. Includes torts, contract law, constitutional law, negligence, and Title IX issues.

Typically offered: Fall Only

EXM-4302 Special Topics in Exercise Science Special Needs Special Topics in Exercise Science (3 Credits)

Requisite(s): EXM-2208

The study of emerging topics or inquiries not fully covered in other courses. This includes an examination of evidence-based approaches to exercise and movement science.

Typically offered: Spring Only

EXM-4616 Behavior Change Strategies (3 Credits)

Requisite(s): Course open to Exercise Science and Physical Education, students with 60 or more credits

This course introduces students to exercise and sport psychology theories, mediators, and behavior change strategies applied to sport, leisure, and exercise settings and provides knowledge and opportunities to develop skills to promote adoption and adherence to physical activity.

Typically offered: Spring Only

EXM-4990 Exercise & Movement Science Practicum (1-4 Credits)

This course offers students an opportunity to obtain practical experience in community health work. Students will contract for 50-100 hours at an internship placement and participate in a weekly seminar to discuss their fieldwork and apply academic theory to practice. Students will work in settings that familiarize them with concrete examples of the core competencies in the Exercise Health concentration. Students will also gain an understanding of industry and organizational structures, cultures, and ethics, and will strengthen their critical thinking, research, and problem-solving skills. They will keep logs of their activities and complete other written assignments for class.

Typically offered: All Sessions

EXM-4995 Independent Study in Exercise Science (1-4 Credits)

Independent study under the direction of a faculty member. For Exercise Science majors only.

Typically offered: All Sessions

EXM-4998 Exercise and Movement Science Capstone (1-4 Credits)

The senior capstone course integrates the knowledge, concepts and professional skills gained from prior coursework in exercise science. Students choose between two different options: (1) an applied project in which the student develops a hypothetical applied case and intervention program for a client or team in order to synthesize and demonstrate the ability to understand, develop, and advance the principles of exercise science, or (2) conduct a research project in which the student displays the development of research techniques, including the ability to define a research problem, write hypotheses, review the literature, apply a research design, collect and analyze data, and interpret the results.

Typically offered: All Sessions

EXM-6010 Exercise and Sports Science (3 Credits)

In this course, students will gain the knowledge and skills necessary to find and evaluate scholarly and academic research resources generally employed by exercise and health scientists. Through an emphasis on general statistics, interpretation and analysis of data, research ethics, scientific writing, and database use, students develop proficiency in the essential steps of the scientific method of inquiry. By engaging with course discussions, writing assignments, and an independent research project, students synthesize theories and data in order to apply integrated knowledge to practice across exercise and sport science settings. In establishing a community of inquiry, sustained and active participation with other course participants are requisites to fulfill participation requirements.

Typically offered: Fall Only

EXM-6020 Exercise and Sports Nutrition (3 Credits)

In this course, students will explore how nutrition supports physical performance and the relationships between nutrition, energy metabolism, and exercise and sport performance. The course features in-depth analysis of dietary and nutritional supplementation. Emphasis is placed on applying evidence-based strategies in examining case studies, including topics of student interest.

Typically offered: Fall Only

EXM-6030 Leadership: Theory and Practice (3 Credits)

This course explores the interfaces between human resource management, operations, marketing, and entrepreneurship within the context of entrepreneurial, for-profit and nonprofit fitness and health promotion ventures. Students will develop a business plan for potential funding.

Typically offered: All Sessions

EXM-6120 Principles of Strength and Conditioning (3 Credits)

Explore the foundations of strength and conditioning as established by the National Strength and Conditioning Association (NSCA). Design and critique strength and conditioning programs based on NSCA guidelines. Designed to prepare students interested in becoming a Certified Strength and Conditioning Specialist (CSCS) through the NSCA

Typically offered: Fall and Spring

EXM-6130 Analytics in High Performance (3 Credits)

This course develops skills for the selection, development, and implementation of various types of instruments and techniques for measuring and evaluating health and human performance interventions. Evaluation of these interventions includes general health behaviors, health related fitness, nutritional and dietary intake, body composition, and other areas related to an individual's quality of life.

Typically offered: Fall Only

EXM-6140 Applied Foundation in High Performance (3 Credits)

During this course students will examine a systematic approach to integrated performance training using the National Academy of Sports Medicine's Optimum Performance Training model. This course is designed to prepare students interested in becoming a Performance Enhancement Specialist through the National Academy of Sports Medicine.

Typically offered: Fall Only

EXM-6150 Psychological Aspects: Sport & Exercise (3 Credits)

During this course students will examine a systematic approach to integrated performance training using the National Academy of Sports Medicine's Optimum Performance Training model. This course is designed to prepare students interested in becoming a Performance Enhancement Specialist through the National Academy of Sports Medicine.

Typically offered: Fall and Spring

EXM-6151 Grp Dynamics Exercise Sport (3 Credits)

Requisite(s): EXM-6150

This course prepares students to develop programs and services that enhance the health, fitness, and well-being of diverse groups. Through the study of group dynamics, students explore the psychological processes that appear in group sport, exercise, and recreational activity. Topics include anxiety, self-confidence, motivation and goal setting, leadership, the self in groups, and other elements of sport psychology related to group dynamics.

Typically offered: Fall and Spring

EXM-6210 Sports Injury Prevention (3 Credits)

This course will explore program design principles for corrective exercise training, with an emphasis on the National Academy of Sports Medicine's Corrective Exercise Continuum, but additional program/assessment strategies will be discussed.

Typically offered: Fall Only

EXM-6220 Program Design: Strength & Conditioning (3 Credits)

Explore the foundations of strength and conditioning as established by the National Strength and Conditioning Association (NSCA). Design and critique strength and conditioning programs based on NSCA guidelines. Designed to prepare students interested in becoming a Certified Strength and Conditioning Specialist (CSCS) through the NSCA. Explore the principles of resistance training and periodization. Develop periodized programs based on foundational and current literature. Critique and justify programming selections.

Typically offered: Fall Only

EXM-6230 Functional Movement Assessment (3 Credits)

Application of mechanical principles to development of human movement, with emphasis on kinematics and kinetics.

Typically offered: Fall Only

EXM-6250 Spec Topics: Adv Strength & Conditioning (3 Credits)

Examines fundamental concepts in bioenergetics, biomechanics, cardiopulmonary responses, and skeletal muscle function & adaptation. Includes evidence-based program design and practical skills necessary for success in fire and rescue, law enforcement, and military careers. Content will help prepare students to sit for the NSCA Tactical Strength and Conditioning Facilitator certification.

Typically offered: Fall Only

EXM-6330 Applied Motor Learning (3 Credits)

An evaluation of the physical, physiological, and psychological factors that affect motor skill acquisition, performance, retention, and transfer. With a focus on voluntary movement, topics include nervous system control of movement, sensory and perceptual contributions to motor learning, information processing, optimal conditions for learning motor skills, preferred modes of feedback delivery during learning, and individual variability in motor skill acquisition. Students will apply the principles of motor learning to coaching, fitness, and rehabilitation settings. Additionally, they will analyze motor learning settings and determine adjustments to be made in those settings to foster motor skill acquisition for a variety of populations.

Typically offered: Fall Only

EXM-6340 Current Topics in Sports Psychology (3 Credits)

This course covers current topics in sport psychology. Emphasizes theory and research on personality, motivation, arousal, cognition, attributions, attitudes, self-efficacy, leadership effectiveness, and group dynamics.

Typically offered: Fall Only

EXM-6350 Sport in Society (3 Credits)

Are sports an avenue for personal empowerment or a path to exploitation? What do sports mean in American society? Study the ways in which sports are embedded in social systems such as the economy, government, and education. Themes include race, class and gender issues, crime and violence in sport, and the economic impact of sport.

Typically offered: Fall Only

EXM-6990 Practicum in Exercise and Sport Science (3 Credits)

Development and implementation of a strength and conditioning program through a case study with a member of the community. Justify your programming selections and assess program success

Typically offered: Fall Only

EXM-6995 Independent Study in Exercise Science (1-4 Credits)

Graduate students only. Independent research and study in a topic in Exercise Science. Prerequisites: graduate standing and approval of the department chairperson.

Typically offered: On Demand

EXM-6998 Master's Capstone: Human Movement (6 Credits)

In-depth study of selected advanced topics in human movement science.

Typically offered: Fall Only