EXERCISE SCIENCE (EXS)

College of Health Sciences

Courses

EXS 572. Advanced Motor Learning. 3 Credits.
An investigation of the theories, research, and practical applications of the processes and conditions involved in the teaching and learning of physical skills. Typically offered in Fall.

EXS 585. Biomechanics. 3 Credits.
A review of, or introduction to, the basic principles of biomechanics and the application of those principles to research and teaching. Typically offered in Fall.

EXS 587. Environmental Physiology. 3 Credits.
A survey course investigating the multidisciplinary nature of environmental physiology. It will explore the impact of different environments on the physiology of humans while at work and play. This course will examine the thermal environments (hot, cold, humidity), barophysiology (altitude and depth), microgravity and space, air pollution, and chronobiological rhythms. Laboratory experiences, both computer simulation and "hands-on", will be included in the course. EXS 681 recommended. Pre / Co requisites: EXS 380 or BIO 468 or BIO 469. EXS 681 is recommended.

EXS 600. Research Methods In Hlth, Phys Ed, Recreat. 3 Credits.
Techniques of research applied to the field of health, physical education, and recreation. Typically offered in Fall.

EXS 640. Applied Sport and Exercise Psychology. 3 Credits.
This course aims to cover psychological influences on sport performance and exercise behaviors in a diverse population. Additionally, it will cover how sport and exercise performance and behaviors impact psychological processes. Students will use existing theory in developing best practices for working directly with the population. They will begin to employ sport and exercise consulting techniques and strategies in a classroom setting with their peers.

EXS 641. Group Dynamics in Sport and Exercise. 3 Credits.
EXS 641 is a graduate course designed to acquaint students with theory, research and practical issues associated with group dynamics and team cohesion in a sport and exercise setting. The course will address leadership, group/team processes, and team building. Students will learn about the impact of roles, communication, accountability and diversity on team function and dysfunction. Students will engage in both theoretical and practical lessons associated with team dynamics to ensure they leave with a more complete understanding of what is both effective and ineffective in building a united team and achieving a successful outcome.

EXS 645. Sport & Exercise Psychology Practicum. 3 Credits.
This course will be a mentored experience in the organization, delivery and evaluation of applied psychological skills training and behavioral interventions with sport and/or exercise participants.

EXS 680. Scientific Principles Of Coaching. 3 Credits.
Recent trends in theories and techniques of teaching sports. Mechanical principles of efficient movement. Research related to competitive performance. Specialists serve as guest panelists.

EXS 681. Advanced Exercise Physiology. 3 Credits.
Clinical and laboratory use of exercise in evaluating, maintaining, and modifying human physiological processes: growth development, metabolism, and weight control; cardiovascular and respiratory functions in health and disease; and neuromuscular integration and performance. Stress physiology, and training and conditioning. Typically offered in Spring.

EXS 687. Applied Muscular Physiology. 3 Credits.
This course is designed to provide an in-depth understanding of the structure and function of skeletal muscle and its responses and adaptations to exercise. Typically offered in Spring.

EXS 688. Applied Cardiovascular Physiology. 3 Credits.
This course is designed to provide an in-depth understanding of the mechanisms underlying cardiovascular function and the effects of acute and chronic exercise on these mechanisms. Typically offered in Spring.

EXS 691. Adv Clinical Exercise Testing & Prescrip. 3 Credits.
An in-depth study of how exercise is used in clinical settings for diagnostic, rehabilitative, and preventive purposes. ACSM guidelines will be emphasized. Designed to prepare the student for the ACSM certification exam (exercise specialist).

EXS 692. Clinical Practicum in Exercise Science. 3 Credits.
The course provides experience in a clinical setting under the supervision of qualified medical staff. Experience will include exercise prescription and supervision of exercise of patients in settings such as hospitals and outpatient clinics. Consent: Permission of the Department required to add.

EXS 698. Research I. 3 Credits.
This course along with the subsequent EXS 699, is the culminating experience in the program curriculum. It includes development of hypothesis and methods under the direction of a faculty advisor. If taken to theses, this course should culminate in the acceptance of the thesis proposal by an appropriate committee of faculty. If taken as either a report or theses, the course results in the writing of the first three chapters (Introduction, Review of Literature and Methods) and IRB approval. Typically offered in Fall & Spring.

EXS 699. Research II. 3 Credits.
This course includes data collection, statistical analysis, and the writing of the last three chapters of the report/thesis. Reports are submitted to the faculty research advisor for grade. Thesis must be defended and approved by the committee. After approval by the examining committee, thesis must be typed in accordance with specifications contained in the "Guide to the Preparation of the Master's Thesis", a copy of which may be obtained from departmental offices or online. After the Dean of Graduate Studies and extended education has approved the thesis, the student is responsible for transmitting all required copies to the library for binding. Pre / Co requisites: EXS 699 requires a prerequisite of EXS 698. Typically offered in Fall & Spring.

EXS 699. Exercise and Older Adults. 3 Credits.
A course designed to prepare professionals to assess fitness levels of persons over the age of 50 and scientifically design exercise and fitness programs to meet the specific needs of the older participant. Distance education offering may be available.

EXS 691. Adv Clinical Exercise Testing & Prescrip. 3 Credits.
An in-depth study of how exercise is used in clinical settings for diagnostic, rehabilitative, and preventive purposes. ACSM guidelines will be emphasized. Designed to prepare the student for the ACSM certification exam (exercise specialist).

EXS 692. Clinical Practicum in Exercise Science. 3 Credits.
The course provides experience in a clinical setting under the supervision of qualified medical staff. Experience will include exercise prescription and supervision of exercise of patients in settings such as hospitals and outpatient clinics. Consent: Permission of the Department required to add.