EXERCISE SCIENCE (EXS)

EXS-5010 Research Methods in Exercise and Sport (3 semester hours)
This course reviews research methods, designs, data collection, statistical analysis, and data interpretation as it relates to sport and exercise settings. Emphasis will be placed on process of becoming an educated and critical consumer of published research. Students will also develop their ability to present research in area of exercise science via written and oral methods.

EXS-5020 Nutrition for Sports Performance (3 semester hours)
This course is designed to provide an advanced overview of the role of nutrient selection and timing in health, exercise, and sport performance. Specific focus will be placed on macronutrients, micronutrients, water requirements, nutritional supplements, and ergogenic aids

EXS-5030 Applied Sports and Exercise Psychology (3 semester hours)
This course will focus on the implementation and application of psychological techniques within sport and exercise settings. Emphasis will be placed on current literature and emerging topics within the field that could change semester to semester based on current circumstances.

EXS-5040 Management in Exercise and Sport (3 semester hours)
This course focuses on the analysis and application key organizational, administrative and managerial concepts as it applies to exercise settings. Students will explore topics related to human resources, facility management, finance, marketing, risk management, and legal issues.

EXS-5100 Advanced Exercise Physiology (3 semester hours)
The course is an advanced analysis of the physiological responses and adaptations to acute and chronic exercise training and how they impact health and performance. Focus will be placed on energy metabolism, neuromuscular, cardiovascular, and pulmonary factors affecting aerobic and anaerobic performance in various environmental conditions.

EXS-5110 Advanced Exercise Physiology Lab (3 semester hours)
This course focuses on assessment and evaluation of physiological and sport function through a variety of testing techniques. Topics include cardiovascular and pulmonary function, body composition, muscular strength and endurance, speed and agility, power, and balance.
Corequisite(s): PED-6100, EXS-6100 or EXS-5100.

EXS-5250 Advanced Methods of Strength and Conditioning (3 semester hours)
This course is designed to provide a comprehensive and extensive analysis of strength and conditioning principles. Emphasis will be placed on the integration of various disciplines, such as exercise physiology, biomechanics, and nutrition as it applies to sports performance.

EXS-5260 Program Evaluation and Analysis (3 semester hours)
This course will focus on the applying evidence-based principles in the development of programs to improve athletic performance. Emphasis will be placed on evidenced-based practice in the areas of resistance training, endurance training, flexibility, reaction time, speed, and agility.

EXS-5270 Applied Biomechanical Principles (3 semester hours)
The course is focused on using biomechanical methods to analyze and critic human movement. Specific focus will be placed on the laws and principles that govern human motion in sports and exercise settings. Students will be exposed to a variety of qualitative and quantitative methods and technologies used to evaluate and improve performance and reduce injury risk.

EXS-5350 Advanced Exercise Assessment and Prescription (3 semester hours)
This course focuses on advanced principles of exercise assessment and prescription for normal, healthy individuals and special populations. Emphasis is placed on evidence-based practice and guidelines established by the American College of Sports Medicine (ASCM).
Prerequisite(s): PED-6100 or EXS-6100 or EXS-5100.

EXS-5360 Advanced Cardiovascular Physiology and ECG Interpretation (3 semester hours)
This course is designed to provide an in-depth understanding of normal and pathological cardiovascular physiology. Emphasis will be placed on cardiac physiology and electrocardiography as it relates to exercise and physical activity, as well as resting and exercising ECG interpretation.
Prerequisite(s): PED-6100 or EXS-6100.

EXS-5370 Advanced Clinical Exercise Physiology (3 semester hours)
This course is designed to provide current and evidence-based recommendations in the area of prevention, management, and treatment of chronic diseases. Specific focus will be placed on the pathophysiology of disease states and the acute and chronic responses to exercise in those patients with cardiac, pulmonary, and metabolic diseases.
Prerequisite(s): PED-6100 or EXS-6100 or EXS-5100.

EXS-5400 Exercise Physiology Graduate Internship (3 semester hours)
The capstone/internship is a culminating experience that allows students to apply knowledge and skills attained during their academic training through the completion of a comprehensive project or extensive work under the supervision of certified clinical or sports performance professional. Focus will be spent on building professional behaviors and attributes necessary in their chosen field. Must apply one term in advance through the exercise science program coordinator for site placement. Permission of instructor required. Students must complete a criminal background check and TB test. Additional requirements may be needed based on the clinical site requirements. (Cost incurred by student.)
Grading Type: Credit/No Credit

EXS-5490 Excersice Physiology Graduate Internship (3 semester hours)
The capstone/internship is a culminating experience that allows students to apply knowledge and skills attained during their academic training through the completion of a comprehensive project or extensive work under the supervision of certified clinical or sports performance professional. Focus will be spent on building professional behaviors and attributes necessary in their chosen field. Must apply one term in advance through the exercise science program coordinator for site placement. Permission of instructor required. Students must complete a criminal background check and TB test. Additional requirements may be needed based on the clinical site requirements. (Cost incurred by student.)
Grading Type: Credit/No Credit