EXS - EXERCISE SCIENCE

EXS 101 Introduction to Exercise Science (1 Credit Hours)
This course is designed to introduce students to aspects of the exercise science profession including areas of study, career opportunities, professional organizations, certifications, graduate and professional school opportunities, and technology. Students will develop an understanding of the history of the field as well as future trends.
Academic Level: Undergraduate
Enrollment is limited to students with a major in Applied Exercise Science.

EXS 120 Personal Health And Wellness (3 Credit Hours)
This course introduces lifetime personal development, health and wellness concepts and applications. Students are introduced to five components of wellness: emotional health, social health, spiritual health, mental health, and physical fitness. Specific topics include: cardiovascular disease and risk factors, nutrition, weight management, relaxation techniques, sexually transmitted disease, substance abuse, and exercise. Activities include the development and implementation of a personal wellness program.
May be repeated for credit. *Equivalent to SPT 120.*
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science, Athletic Training, Athletic Training 3 Year, Health Sci-Athletic Train 3+2, Health Sciences 3+2, Hlth Wellns Occupatnal Studies, Nutrition, Occupational Studies, Occupational Studies 3+2, Public Health, Social Work or Social Work.

EXS 155 Fundamentals of Dance (3 Credit Hours)
This course is designed as an introduction to the world of performing arts for those individuals who intend to work in the fields of exercise science, performance medicine, and/or rehabilitation. Students will learn through active participation about the importance of muscular strength, balance, coordination, timing, and concentration on artistic performance.
Academic Level: Undergraduate

EXS 180 Motor Learning & Performance (3 Credit Hours)
This course investigates the principles of human performance and the acquisition of motor skills. Emphasis is placed on the learning theories, transfer, massed and distributed practice schedules, closed and open environment, motivation, feedback, reinforcement, arousal and retention of motor skills. Students learn to improve their problem-solving ability by incorporating factors within individual, environment, and task that can influence motor learning and skill acquisition.
Equivalent to EXS 130.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science, Athletic Training 3 Year, Health Sci-Athletic Train 3+2, Coaching, Health Sciences 3+2, Hlth Wellns Occupatnal Studies, Occupational Studies or Occupational Studies 3+2.

EXS 190 Independent Study in EXS (1-9 Credit Hours)
May be repeated for credit.
Academic Level: Undergraduate

EXS 205 Sport Youth Physiology (3 Credit Hours)
This course is designed for individuals interested in the coaching profession to become acquainted with improving a youth athlete's performance through an applied approach to exercise and sport physiology. The course identifies important principles of exercise metabolism, muscular fitness, environmental concerns, nutritional considerations, and others, in the pursuit of program design for improved performance. Students will create and assess a variety of conditioning programs for the enhancement of sport specific performance.
Academic Level: Undergraduate

EXS 310 Kinesiology & Biomechanics (3 Credit Hours)
This course focuses on the science of human movement. Skeletal and muscular systems and mechanical analysis of basic motor patterns and sports skills are essential components of this course.
May be repeated for credit.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science, Athletic Training, Athletic Training 3 Year, Health Sci-Athletic Train 3+2, Coaching or Health Sciences 3+2.

EXS 312 Foundations of Coaching (3 Credit Hours)
This course highlights the role of the coach and the coach's application of selected concepts and principles from psychology, sociology, philosophy and physiology toward the development of the individual and team for athletic competition in schools and colleges. Special attention is given to an awareness and understanding of the problems associated with motivation and emotion in sport; legal liability; the learning and improvement of motor skills; daily, weekly, and seasonal planning; training and conditioning methods; and the integration of the whole individual and team in preparation for contests.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science or Coaching.

EXS 315 Training the Endurance Athlete (3 Credit Hours)
This course will overview the theory and practice of training the endurance athlete. The course will cover the history/background of endurance sports as well as historical athletes and coaches and their accomplishments. The course will cover different testing methods, training theories, physical programming, nutritional strategies, injury prevention and recovery, and the role of psychological health/training in improving performance in endurance sport. Delivery of course content will be gained through peer-reviewed journal articles, guest speakers, laboratory session and in-class lecture.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science, Athletic Training, Athletic Training 3 Year, Health Sci-Athletic Train 3+2, Coaching or Health Sciences 3+2.

EXS 320 Exercise Physiology (3 Credit Hours)
This course is an examination of the acute and chronic physiological responses to exercise. Muscle, renal, endocrine and environmental physiology, energy metabolism, and cardiovascular function in response to exercise training will be emphasized and applied to laboratory activities.
May be repeated for credit.
Academic Level: Undergraduate
Enrollment is limited to students with a major in Applied Exercise Science, Athletic Training, Athletic Training 3 Year, Health Sci-Athletic Train 3+2 or Health Sciences 3+2.

EXS 322 Metabolism/Bioenerg/Sp Nut (3 Credit Hours)
This course will discuss the role of nutrition in optimizing physical performance in active individuals. Recent research publications will be used to provide the latest information regarding these areas and to encourage critical evaluation of research. Students will practice translation of scientific information for the public through assignments and discussion. Students will be required to provide nutritional assessments and recommendations specific to optimizing athletic performance for a variety of athletic populations. The major goal for this class is for students to understand the scientific underpinnings of these areas and also to be able to have the practical skills required to become a professional in the area of Nutrition and Sport Performance.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science, Coaching or Nutrition.

EXS 330 Fitness Eval & Prescription (3 Credit Hours)
Classroom lectures and Practicum in exercise testing, fitness prescription, measurement and evaluation skills are developed. Topics include: medical/health screening, exercise test administration and interpretation, body composition, nutritional assessment, metabolic calculations and exercise program development. ACSM standards are followed.
Academic Level: Undergraduate
Corequisites: EXS 330L
Enrollment is limited to students with a program in Applied Exercise Science.

EXS 330L Fitness Evaluation Lab
Academic Level: Undergraduate
Corequisites: EXS 330

EXS 335 Orthopedic Evaluation for Exercise Science (3 Credit Hours)
This course focuses on the analysis of common athletic orthopedic injury mechanisms and their manifestations throughout the human body. Students will be introduced to orthopedic and athletic injury theory and evaluation techniques as they relate to the human body. Special attention will be given to injury mechanisms, and differential orthopedic diagnosis. Practical laboratory experience will focus on the introduction of orthopedic evaluation for the injured.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science.

EXS 340 Concepts of Strength&Condition (3 Credit Hours)
This course is designed to provide students with the knowledge, skills and abilities needed to design and implement a comprehensive strength and conditioning program. Emphasis is placed on the assessment of sport specific performance components and the design of speed, agility and resistance strength training programs to enhance performance and reduce the risk of injury. This course will assist those students who desirer to take National Strength and Conditioning Association's Certified Strength and Conditioning Specialist Exam, this course is not a preparation course for exam.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science or Coaching.

EXS 351 Pharmacology for Health Scienc (3 Credit Hours)
Essential concepts of pharmacology are discussed, based on their influence on athletic performance. Specific classifications of medications are identified and organized according to their therapeutic use in treating common diseases. Benefits and limitations of pharmacotherapy are identified, and the risks of performance enhancing drugs are investigated. Legislative issues including the storage, dispensation, and documentation of medications will also be explored.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science, Hlth Wellns Occupatnal Studies or Occupational Studies.

EXS 360 Coaching Internship (3-6 Credit Hours)
This coaching internship experience provides students with an opportunity to implement knowledge gained from courses taken in the minor. The student will serve as a Student Assistant Coach under the direct supervision of a Head Coach at a local high school, college or organization. Students enrolled in this course must complete a minimum of 135 hours in coaching and related responsibilities as specified in the learning contract. Student must recieve a minimum grade of a 'C' for the course to meet graduation requirements.
May be repeated for credit.
Academic Level: Undergraduate
Enrollment is limited to students with a minor in Coaching.

EXS 380 12 Lead ECG Interpretation (3 Credit Hours)
Course emphasis is placed on the basic understanding of reading a 12 lead electrocardiogram in respect to recognition and interpretation of normal and abnormal resting and exercise EKG's. Areas of study will include rate, rhythm, axis, hypertrophy and ischemia/infarction as it pertains to a clinical exercise physiologist. Includes lab experience in resting and exercise EKG monitoring.
Academic Level: Undergraduate
Corequisites: EXS 380L
Enrollment is limited to students with a program in Applied Exercise Science.

EXS 380L 12 Lead ECG Interpretation
Academic Level: Undergraduate
Corequisites: EXS 380

EXS 390 Independent Study in EXS (1-9 Credit Hours)
Permission of Department Chair/Program Director and Instructor Required.
May be repeated for credit.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science.

EXS 392 Clinical Exer Testing/Prescrip (3 Credit Hours)
Course in theory and methods of administering graded exercise testing using different modes of exercise and the development and understanding of a comprehensive exercise prescription for the purpose of promoting health and cardiovascular fitness in healthy and diseased populations. Includes classroom and practical experience.
Academic Level: Undergraduate
Corequisites: EXS 392L
Enrollment is limited to students with a major in Applied Exercise Science.

EXS 392L Clinical Exer Test/Prescr Lab
Academic Level: Undergraduate
Corequisites: EXS 392

EXS 429 High Altitude Exploration (3 Credit Hours)
Students will learn the fundamentals of human physiology as it pertains to exposure to altitude; acutely and chronically. After developing a general knowledge of altitude physiology, students will assess the literature in the field and design a research study with IRB approval that compares acute physiological and/or psychological adaptations from sea level to altitude. Student's will focus on the design, coordination, delivery, and management of the trip to Colorado (this will include everything from research equipment transport, travel, clothing, housing, food, etc.). In addition to the logistical aspects, student's will also need to lead a team building/trust activity for the group.
Academic Level: Undergraduate
Corequisites: SRM 360

EXS 432 Exercise Management for Chronic Disease & Disability (3 Credit Hours)
Course emphasis is on theory and methods of developing a comprehensive exercise prescription for management of chronic disease and disability. Includes classroom and practical experience.
Academic Level: Undergraduate
Enrollment is limited to students with a major in Applied Exercise Science.

EXS 444 Applied Clinical Gross Anatomy (3 Credit Hours)
This course merges the disciplines of gross anatomy, pathophysiology, and exercise science through clinical applications utilizing cadaveric models. Students learn gross anatomy (central nervous system and the cardiovascular, pulmonary, gastrointestinal, renal systems) and the pathophysiology of disease states within these systems. Clinical case studies and scholarly evidence are both used to apply the gross anatomy clinically and work through clinical decision making, diagnosis, and potential treatments, to include but not limited to exercise management of discussed diseased states.
Academic Level: Undergraduate
Enrollment is limited to students with a major in Applied Exercise Science, Athletic Training, Athletic Training 3 Year, Health Sci-Athletic Train 3+2 or Health Sciences 3+2.

Enrollment limited to students in the Exercise Sport Performance department.

EXS 495 Seminar in Exercise Science (1 Credit Hours)
This course is designed for junior and senior level students. The objective is to prepare students for the transition to the post undergraduate experience, including; employment search, graduate school search/ application process, interview preparation, professional organization membership/affiliation, professional certifications and continuing education resources.
May be repeated for credit.
Academic Level: Undergraduate
Enrollment is limited to students with a program in Applied Exercise Science.

EXS 499 Exercise Science Clinical Internship II (1-12 Credit Hours)
This clinical experience provides students with opportunities for practical application of Applied Exercise Science knowledge in a one-on-one setting under the direct supervision of an exercise/specialist or clinician. These placements are with organizations that utilize physical activity programs as a means of performance enhancement, disease and risk factor control modification, e.g., cardiac and/or pulmonary rehabilitation, sports medicine clinic, etc. Fourth-year Applied Exercise Science majors in good standing (see Applied Exercise Science GPA requirements) and permission of ESP Fieldwork Coordinator.
May be repeated for credit.
Academic Level: Undergraduate
Enrollment is limited to students with a major in Applied Exercise Science.