

EXERCISE PHYSIOLOGY COURSES (EXPH)

EXPH 100 PHYSIOLOGICAL ASSESSMENTS IN EXERCISE PHYSIOLOGY (3) This hands-on course is designed to teach the exercise physiology major about tests used to assess health and skill related physical fitness. Students will learn how to conduct and participate in various assessments of physical fitness.

EXPH 200 EXPLORATION IN EXERCISE PHYSIOLOGY (3) *Pre or corequisite: EXPH 100.* This course will examine the numerous career opportunities that exist in the field of Exercise Physiology, how they relate to the field of study, and what are the qualifications and certifications needed to pursue a career in the specific sub-disciplines of Exercise Physiology. This course will also focus on techniques regarding reading and locating research as well as incorporate scientific writing techniques about different topics within exercise physiology.

EXPH 225 BASIC EMERGENCY AND INJURY CARE MANAGEMENT (3) This course is designed to introduce students to basic orthopedic injuries, conditions, and disorders. In addition, students will learn basic emergency management. Course fee required.

EXPH 325 PHYSIOLOGY OF EXERCISE (3) *Prerequisites: BIOL 214, 215.* This course studies the human body's short term and long term adjustments to exercise. Topics include: musculoskeletal function, energy metabolism, respiratory adjustments, heart and circulatory adjustment, neural control, temperature regulation, environmental effects, and conditioning principles.

EXPH 326 ADVANCED PHYSIOLOGY OF EXERCISE (3) *Prerequisite: EXPH 325.* This course is designed to provide students with an in-depth study of physiological and biochemical alterations occurring in the human body as a result of exercise. Topics will include control of bioenergetics, exercise metabolism, acute and chronic adaptations to aerobic and resistance training programs, physiology of performance, environmental effects, hormonal responses, and temperature regulation.

EXPH 330 ASSESSMENT AND TREATMENT OF GENERAL MEDICAL CONDITIONS (3) *Prerequisite: EXPH 325.* This course is designed to provide students with the knowledge and skill necessary to recognize and treat a variety of systemic pathologies.

EXPH 342 LABORATORY TECHNIQUES IN EXERCISE PHYSIOLOGY (3) *Prerequisite: EXPH 325.* This course provides students with the opportunity to learn the techniques used in laboratories to test the physiological changes in response to acute and chronic exercise. Students will be required to utilize their knowledge of the underlying physiology and the responses to exercise in order to accurately examine and explain the observations.

EXPH 355 SCIENTIFIC PRINCIPLES OF STRENGTH AND CONDITIONING (3) *Prerequisites: BIOL 214, 215, EXPH 325.* This course provides students with the scientific principles and practical skills to develop and adjust conditioning programs. Students learn how to design conditioning programs to address strength, power, speed, agility, and endurance needs. Students also learn how to adjust programs for those with special needs (e.g. injuries) so programs can be safe and effective.

EXPH 370 SPORTS NUTRITION (3) *Prerequisite: EXPH 325.* This course will discuss macronutrient and micronutrient needs in relation to physical activity. Additional topics include ergogenic aids and the timing of food and fluids before, during, and after physical activity for optimal performance.

EXPH 380 KINESIOLOGY (3) *Recommended: BIOL 214, 215.* This course is a study of the origin, mechanics, and effectiveness of human motion.

EXPH 382 EXERCISE PHYSIOLOGY OF SPECIAL POPULATIONS (3) *Prerequisites: EXPH 325, 326, 342.* This course is designed to discuss physiological differences in populations such as children and youth, older adults, pregnant women as well as populations with diseases such as heart disease, pulmonary disease, obesity, and diabetes and the modifications required for exercise testing and prescription of these populations.

EXPH 397 INDEPENDENT STUDY IN EXERCISE PHYSIOLOGY (1-3) *Prerequisites: Approval of faculty sponsor and school dean; junior or senior standing.* This course provides students the

opportunity to pursue individual study of topics not covered in other available courses. The area for investigation is developed in consultation with a faculty sponsor and credit is dependent on the nature of the work. May be repeated for no more than six credits.

EXPH 398 SPECIAL TOPICS IN EXERCISE PHYSIOLOGY (1-3) [credit depends on topic] *Prerequisite: A background of work in the discipline.* This course will focus on an aspect of the discipline not otherwise covered by the regularly offered courses. The topic will vary according to professor and term; consequently, more than one may be taken by a student during his/her matriculation.

EXPH 415 INTERNSHIP IN EXERCISE PHYSIOLOGY (1-12) *Prerequisites: Juniors or seniors with a 2.25 minimum QPA; EXPH 325, 326, 342; approval of written proposal by internship coordinator, and supervising faculty prior to registration.* This course offers a professional internship with an appropriate health fitness organization/program. The student and faculty sponsor agree on the location and responsibilities of the intern. The number of credits depends on the number of hours involved. (See "Internships.")

EXPH 425 ADVANCED HEALTH AND FITNESS EVALUATION AND PROGRAMMING (3) *Prerequisites: EXPH 325, 326, 342.* This course provides the student with the knowledge and skills necessary for risk stratification, physiological assessment, interpretation of test results, and design of health and activity programs for apparently healthy populations. Emphasis on developing competency in following ACSM guidelines for exercise testing and prescription will be stressed.

EXPH 450 RESEARCH METHODS IN EXERCISE PHYSIOLOGY: THE PROPOSAL PROCESS (3) *Prerequisites: EXPH 326, 342, MATH 222.* This course is the first course in a two-part capstone series designed to teach students the research process as it pertains specifically to exercise physiology. Students will be expected to integrate their knowledge of exercise physiology to create and develop a research project from research idea inception through the written proposal stage. The writing process will include multiple drafts of an introduction and review of literature, methods, and proposal forms for the Institutional Review Board (IRB), with the appropriate forms submitted to the IRB until the research study is approved. Students must complete this course with a C- or better and have IRB approval of their research proposal in order to proceed to EXPH 451.

EXPH 451 RESEARCH METHODS IN EXERCISE PHYSIOLOGY: DATA COLLECTION AND FINAL MANUSCRIPT (2) *Prerequisite: EXPH 450 (C- or better).* This course is the second course in a two-part capstone series designed for students to complete a research project that was proposed AND approved by the Institutional Review Board in EXPH 450. Students will be expected to integrate their knowledge of exercise physiology as well as their skills and mastery at performing a myriad of fitness tests as they are used to collect data, analyze results, and write a final manuscript according to professional guidelines. The course will culminate with the student presenting their research at the Student Scholar Showcase or an equivalent forum approved by the instructor.