EXERCISE SCIENCE (EXSC)

EXSC 1001 Introduction to Exercise Science (3 Credits)
This course is designed to be an introduction to the professional field of Exercise Science and the five components of physical fitness. This course relates the human anatomy and physiology, an understanding of exercise and lifestyle to improve one's overall wellness.
Prerequisite or corequisite: ENG 1010
Previous: Legacy Equivalent(s): HPE* 105, EXS* 101

EXSC 2010 Sports Nutrition (3 Credits)
This course explores concepts related to nutrition and conditioning for physically active individuals. The nutrition component of the course will include such topics as: micro and macro nutrients, dietary planning (pre/post competition meals/ appropriate caloric intake), body composition and endurance/strength training, as well as designing individualized fitness programs.
Prerequisites: BIO 1011
Previous: Legacy Equivalent(s): HPE* 210

EXSC 2030 Exercise Testing and Program Design (4 Credits)
Students will be introduced to the general theories and fundamentals of exercise testing and prescription. This course will allow students to administer safe and efficient health risk assessments and test procedures for the health-related components of fitness (aerobic, strength, flexibility, and body composition). Students will also be able to interpret test data and apply it to safe and effective exercise prescription.
Prerequisites: EXSC 1001 or by permission of program coordinator
Additional fees may apply
Previous: Legacy Equivalent(s): EXS* 227, HPE* 245

EXSC 2031 Exercise Programming for Clinical Populations (3 Credits)
This course is designed to introduce students to theories and techniques of exercise prescription for a variety of special populations (obese, diabetic, arthritic, pregnant, elderly, and the widely symptomatic). Guidelines for appropriate cardiovascular and resistance training for these groups will be discussed in detail. Protocols for prevention, diagnosis, treatment and rehabilitation will be stressed.
Prerequisites: EXSC 2030
Previous: Legacy Equivalent(s): EXS* 230, HPE* 246

EXSC 2032 Aspects of Strength and Conditioning (3 Credits)
This course will offer the student an understanding of physiological adaptations seen with functional resistance and anaerobic exercise to improve daily function and skill-related health components (power, speed, agility, coordination and balance). Students will be exposed to a variety of scientific principles associated with resistance training design, periodization and functional training. New training methods and equipment will also be discussed as part of the special topics' component of this course.
Prerequisites: Completion of EXSC 2030 or permission of the program coordinator
Previous: Legacy Equivalent(s): EXS* 225, HPE* 247

EXSC 2040 Exercise Physiology with Lab (4 Credits)
The purpose of this course is to increase the student's knowledge and understanding about exercise physiology and the adaptations that occur during exercise. An understanding of how multiple systems of the body respond to acute and chronic exercise. Emphasis is placed on bioenergetics as well as the circulatory, respiratory, endocrine, metabolic and neuromuscular responses of exercise.
Prerequisites: EXSC 2030 and BIO 2111
Additional fees may apply
Previous: Legacy Equivalent(s): EXS* 235, HPE* 241

EXSC 2050 Kinesiology with Lab (4 Credits)
This course is designed to give the student a broader understanding of the study of human movement, through application. Students will explore the anatomical structure of each muscle and joint of the body as well as positioning variables, range of motion, and kinematics.
Prerequisites: EXSC 1001, BIO 2111
Additional fees may apply
Previous: Legacy Equivalent(s): EXS* 229, HPE* 243

EXSC 2095 Field Placement in Exercise Science (3 Credits)
This course is designed to combine classroom seminar with student experiences in a fitness setting within the community. Students will learn and experience facility management, assessments, individual and group training sessions, and exercise prescription during clinical hours. The seminar session will cover work-related problem solving, career development, administrative issues and other career related issues in the health fitness industry.
Prerequisites: EXSC 2030 - Exercise Testing and Program Design
Previous: Legacy Equivalent(s): EXS*212, HPE* 295