# Exercise Science (EXSC)

## EXSC 2500
### Sports Medicine

**3:3:0**  
* Fall, Spring, Summer  
* Prerequisite(s): EXSC Majors: ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055).  
PETE Majors: ZOOL 1090 and Pre or Co-requisite PETE 2700 both with a C- or higher and (MATH 1050 or MATH 1055).  

Explores the term Sports Medicine and the field it covers. Instruction on injury management, including record keeping, assessment, and steps to recovery. Teaches an understanding of different tissues’ response to injury. Investigates different imaging techniques used in assessment. Gives an understanding of surgical considerations for specific injuries.

### EXSC 2510
#### Sports Medicine Lab

**1:0:3**  
* Corequisite(s): EXSC 2500  

Teaches taping and wrapping techniques for prevention/treatment of sports related injuries. Teaches evaluation techniques for the major joints of the body. Course fee of $32 for supplies, lab applies.

## EXSC 270G
### Foundations of Exercise Science

**3:3:0**  
* Fall, Spring, Summer  
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L) all with a C- or higher, and (MATH 1050 or MATH 1055)  

Introduces the study of the Exercise Sciences and discusses the global influence on the development of the field. Studies the national and international history and philosophy of the field of Exercise and sport science. Analyzes problems in areas covered under the umbrella of Exercise Science and Physical Education. Explores related career and employment opportunities in this area.

## EXSC 3270
### Exercise Testing and Prescription

**3:3:0**  
* Fall, Spring, Summer  
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher, and (MATH 1050 or MATH 1055), and University Advanced Standing  

Teaches key concepts related to exercise testing and program design for healthy populations and populations with controlled disease. Explores concepts in team, group, and individualized assessment and programming. Emphasizes principles in anatomy, exercise physiology, behavior modification, motivation, health promotion, fitness assessment and prescription. Encourages students to sit for the ACE, IDEA, ACSM HFY, NSCA CPT, or similar certification exams upon course completion. Course fee of $20 for supplies, lab applies.

## EXSC 3400
### Statistical Analysis in Exercise Science

**3:3:0**  
* Prerequisite(s): (MATH 1050 or higher) and University Advanced Standing  

Provides an introduction to statistics, as well as the role of statistics in experimental design that is necessary to evaluate data collected from measurements commonly used in exercise science, health, physical education and recreation.

## EXSC 3700 (Cross-listed with: ZOOL 3700)
### Exercise Physiology

**3:3:0**  
* Prerequisite(s): EXSC Majors: ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055). PETE Majors: PETE 2700 and ZOOL 1090 with a C- or higher and (MATH 1050 or MATH 1055).  

Examines motor and cognitive characteristics of individuals involved in learning or performing motor skills. Examines conditions that influence learning. Analyzes how humans learn complex movement skills and control voluntary, coordinated movement. Analyses the basic psychological processes involved in learning and control of movement and their effect on instruction and practice conditions for the learner. Studies motor development and its effect on skill acquisition. Course fee of $14 for equipment, software applies.

## EXSC 3705 (Cross-listed with: ZOOL 3705)
### Exercise Physiology Laboratory

**1:0:3**  
* Corequisite(s): University Advanced Standing  
* Corequisite(s): EXSC 3700  

Studies acute and chronic physiological responses to exercise, as well as nutritional and environmental effects on these responses. Requires separate weekly laboratory. Canvas Course Mats $78/McGraw applies.
EXSC 3730 Biomechanics
2:2:2 Fall, Spring
* Prerequisite(s): EXSC Majors: ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055). PETE Majors: ZOOL 1090 and Pre or Co-requisite PETE 2700 both with a C- or higher and (MATH 1050 or MATH 1055). All: University Advanced Standing.

EXSC 3750 Psychosocial Aspects of Human Performance
3:3:0 Fall, Spring, Summer
* Prerequisite(s): EXSC Majors: ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055). PETE Majors: ZOOL 1090 and Pre or Co-requisite REC 2200 both with a C- or higher and (MATH 1050 or MATH 1055). REC Majors: ZOOL 1090 and Pre or Co-requisite REC 2200 both with a C- or higher and (STAT 1040 or STAT 1045 or MATH 1050 or MATH 1055). All: University Advanced Standing.

EXSC 3850 Ethical Concerns in Exercise Science
3:3:0 Fall, Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055) and University Advanced Standing

EXSC 3870 Exercise Science
2:2:2 Fall, Spring, Summer
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055) and University Advanced Standing

* Prerequisite(s): EXSC Majors: ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055) and University Advanced Standing.

EXSC 3900 Exercise Testing and Prescription
3:3:0 Fall, Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), Pre or Co-requisite EXSC 270G, and EXSC 3270 all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing.

EXSC 4000 Clinical Exercise Physiology
3:2:2 Fall, Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G, and EXSC 3270 all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing.

EXSC 4050 Obesity Physiology and Physical Activity
3:3:0 Fall, Spring
* Prerequisite(s): EXSC 270G

EXSC 4100 Exercise Metabolism
3:3:0 Fall, Spring
* Prerequisite(s): EXSC 270G

EXSC 4200 Exercise Metabolism
3:3:0 Fall, Spring
* Prerequisite(s): EXSC 270G

EXSC 4300 Research Methods in Exercise Science and Outdoor Recreation
3:3:0 Fall, Spring, Summer
* Prerequisite(s): EXSC Majors: ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing.

EXSC 4400 Advanced Sports Nutrition
3:3:0 Fall, Spring
* Prerequisite(s): EXSC Majors: ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G and Pre or Co-requisite EXSC 3700 and 3705 all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing.

EXSC 4410 Physical Activity Promotion in the Community
3:3:0 Fall, Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing.

EXSC 4410 Professional Field Experience
1:0:4 Fall, Spring
* Prerequisite(s): University Advanced Standing
* Corequisite(s): EXSC 4100

EXSC 4500 Clinical Exercise Physiology
EXSC 4550
Principles of Strength and Conditioning
3:3:0  Fall, Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G, EXSC 3500 and EXSC 3700 and EXSC 3705 all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing

Emphasizes knowledge of physiological principles and training techniques used in strength and conditioning. Teaches guidelines from the National Strength and Conditioning Association (NSCA). Prepares students for several sections of the NSCA Certified Strength and Conditioning Specialist exam.

EXSC 4600
Advanced Biomechanics
3:3:0  Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G and EXSC 3730 all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing

Teaches the application of mechanical principles to the development of motor skills, including research and technology utilized in the field of biomechanics.

EXSC 4700
Advanced Gross Motor Assessment
3:3:0  Fall, Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G, EXSC 2500 and EXSC 3500 all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing

Provides the students with advanced instruction on and the development of knowledge, skills and abilities to be able to safely and effectively evaluate and interpret / qualify gross motor function. Includes but is not limited to surface anatomy, boney and soft tissue palpation, Range of Motion (ROM), muscular strength, neurologic enervation and stress tests of supportive structures.

EXSC 481R
Internship in Exercise Science
1 to 8:0:5 to 40  Fall, Spring, Summer
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing

Provides students with hands-on professional experience in the field of exercise science. May be repeated for a maximum of 8 credits toward graduation. Graded credit/no credit.

EXSC 489R
Undergraduate Research for Exercise Science
1 to 4:0:5 to 20  Fall, Spring, Summer
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing

Provides students the opportunity to conduct research under the mentorship of a faculty member. Students will put in practice the theoretical knowledge gained in prior major courses. Students will create a significant intellectual or creative product that is characteristic of the Exercise Science discipline and worthy of communication to a broader audience. May be repeated for a maximum of 8 credits toward graduation.

EXSC 4950
Senior Seminar
2:2:0  Fall, Spring
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055), and University Advanced Standing

Emphasizes critical evaluation of classic and current research in Exercise Science. Promotes research and writing skills within the discipline of Exercise Science. Promotes student centered learning and supports specialization within the field of Exercise Science.