

MAJOR IN EXERCISE SCIENCE

The major in Exercise Science is intended to examine the relationship between exercise and human performance and the role of physical activity in the promotion of healthy lifestyles. Exercise Science consists of several overlapping disciplines, including biomechanics, exercise physiology and biochemistry, growth and development, exercise nutrition, measurement and evaluation, and exercise psychology. The program of study is designed to provide an effective blend of classroom instruction and practical experience. The program is intended to prepare qualified individuals for careers in clinical, corporate, commercial, and/or community exercise/wellness settings as well as to prepare students for graduate study in related fields.

Program Requirements

The requirements for the major in Exercise Science include a minimum of 39 units of KNES courses and 26-27 units of courses outside of KNES. The specific requirements for the major in Exercise Science are as follows:

Code	Title	Units
Required Exercise Science Courses		
KNES 265	FUNDAMENTALS IN HEALTH AND PHYSICAL FITNESS ASSESSMENT	3
KNES 297	FOUNDATIONS OF EXERCISE SCIENCE	3
KNES 313	PHYSIOLOGY OF EXERCISE	3
KNES 361	EXERCISE PSYCHOLOGY	3
or KNES 355	PSYCHOLOGY OF SPORT	
KNES 364	CLINICAL EXERCISE ASSESSMENT AND PRESCRIPTION	3
KNES 367	QUANTITATIVE RESEARCH METHODS	3
KNES 469	ADVANCED WRITING FOR RESEARCH IN EXERCISE SCIENCE	3
Select one of the following courses:		3
KNES 311	BIOMECHANICS	
KNES 341	CONCEPTS OF MOTOR LEARNING	
KNES 217	FUNCTIONAL ANATOMY FOR EXERCISE SCIENCE	
Electives		
15 units of coursework (cannot be a course counted elsewhere in the curriculum):		15
KNES 217	FUNCTIONAL ANATOMY FOR EXERCISE SCIENCE	
KNES 299	RESISTANCE TRAINING: TECHNIQUES AND PRINCIPLES	
KNES 311	BIOMECHANICS	
KNES 315	CARE AND PREVENTION OF ATHLETIC INJURIES	
KNES 318	SCIENTIFIC FOUNDATIONS OF STRENGTH TRAINING AND CONDITIONING	
KNES 321	SCIENCE OF SPORT SUCCESS: CONTRIBUTIONS OF GENETICS AND PRACTICE	
KNES 328	TESTS AND ASSESSMENTS FOR FITNESS AND ATHLETIC PERFORMANCE	
KNES 341	CONCEPTS OF MOTOR LEARNING	
KNES 355	PSYCHOLOGY OF SPORT	
KNES 359	PSYCHOLOGY OF SPORT INJURY	
KNES 361	EXERCISE PSYCHOLOGY	
KNES 363	NUTRITION FOR EXERCISE AND SPORT	

KNES 369	CLINICAL COMPETENCIES AND FIELDWORK IN EXERCISE SCIENCE	
KNES 371	FIELD EXPERIENCE IN EXERCISE SCIENCE ¹	
KNES 372	PRACTICAL AND INSTRUCTIONAL SKILLS IN EXERCISE LEADERSHIP	
KNES 396	INDEPENDENT STUDY ¹	
KNES 398	INTERNSHIP IN EXERCISE SCIENCE ¹	
KNES 406	EXERCISE PRESCRIPTIONS AND PROGRAMMING FOR SPECIAL POPULATIONS	
KNES 407	ADVANCED PRINCIPLES OF STRENGTH AND CONDITIONING: PROGRAM DESIGN	
KNES 409	STRESS MANAGEMENT, TENSION CONTROL AND HUMAN PERFORMANCE	
KNES 420	ADVANCED EXERCISE PHYSIOLOGY	
KNES 426	MOTOR DEVELOPMENT: INFANTS TO ADULTS	
KNES 433	APPLIED SPORT AND EXERCISE PSYCHOLOGY	
KNES 455	PHYSICAL ACTIVITY PROGRAMMING FOR THE OLDER ADULT	
KNES 457	PHYSIOLOGY OF AGING	
Additional Required Courses		
BIOL 191 & 191L	INTRODUCTORY BIOLOGY FOR HEALTH PROFESSIONS [LECTURE] and INTRODUCTORY BIOLOGY FOR HEALTH PROFESSIONS [LAB]	4
BIOL 221 & 221L	HUMAN ANATOMY & PHYSIOLOGY I [LECTURE] and HUMAN ANATOMY & PHYSIOLOGY I [LAB]	4
BIOL 222 & 222L	HUMAN ANATOMY & PHYSIOLOGY II [LECTURE] and HUMAN ANATOMY & PHYSIOLOGY II [LAB]	4
Select one of the following:		4
CHEM 121 & 121L	ALLIED HEALTH CHEMISTRY I LECTURE and ALLIED HEALTH CHEMISTRY I LABORATORY	
CHEM 131 & 131L	GENERAL CHEMISTRY I LECTURE and GENERAL CHEMISTRY I LABORATORY	
HLTH 101	WELLNESS FOR A DIVERSE SOCIETY	3
PHYS 202 or PHYS 211	GENERAL PHYSICS FOR THE HEALTH SCIENCES or GENERAL PHYSICS I; NON CALCULUS-BASED	4-5
PSYC 101	INTRODUCTION TO PSYCHOLOGY	3
Total Units		65-66

¹ No more than 9 units total of KNES 371, KNES 396, and KNES 398 can be taken toward the 15 units of elective coursework.

Suggested Four-Year Plan

Based on course availability and student needs and preferences, the selected sequences will probably vary from those presented below. Students should consult with their adviser to make the most appropriate elective choices.

Freshman		
Term 1	Units Term 2	Units
PSYC 101	3 HLTH 101	3
ENGL 102 (Core 2)	3 TSEM 102 (Core 1)	3
Core	3 MATH 115 (core 3)	3
Core	3 KNES 297	3
Select one of the following	4 Core	3

BIOL 191 & 191L			
BIOL 200 & 200L			
	16		15
Sophomore			
Term 1		Units Term 2	Units
BIOL 221 & 221L		4 BIOL 222 & 222L	4
KNES 361 or 355		3 KNES 265	3
KNES 367		3 Core	3
Core		3 Select on of the following:	3
Core		3 KNES 217	
		KNES 311	
		KNES 341	
	16		13
Junior			
Term 1		Units Term 2	Units
KNES 313		3 KNES 364	3
EXSC Elective		3 EXSC Elective	3
EXSC Elective		3 EXSC Elective	3
PHYS 202 or 211		5 EXSC Elective	3
		Elective	3
	14		15
Senior			
Term 1		Units Term 2	Units
Elective		3 KNES 469 (Core 9)	3
Elective		3 Elective	3
Elective		3 Elective	3
Elective		3 Elective	3
Select one of the following:		4 Elective	3
CHEM 121 & 121L			
CHEM 131 & 131L			
	16		15

Total Units 120

1. Demonstrate extensive content knowledge from across the discipline of Exercise Science, including exercise psychology, biomechanics and exercise physiology (Information Literacy Competency).
2. Demonstrate skill in using technology necessary for conducting fitness assessments, interpreting fitness data, and developing appropriate exercise prescriptions (Technological Competency).
3. Demonstrate skill in leading individual and group exercise programs.
4. Demonstrate skill in educating and/or counseling patients/clients regarding physical activity and lifestyle changes.
5. Demonstrate discipline-specific competencies in critical thinking/ problem solving.