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.

Requirements

The requirements for the Exercise Science major include a minimum of 39 units of KNES courses and 26-27 units of courses outside of KNES for a total of 65-66 units. A minimum of 21 units of Kinesiology courses (KNES), out of the 39 KNES units required for the Exercise Science major, must be completed at Towson University.

Code	Title	Units
Requirements		
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 217	FUNCTIONAL ANATOMY	
KNES 311	BIOMECHANICS	
KNES 341	CONCEPTS OF MOTOR LEARNING	
Electives, Select from the following: [1]		15
KNES 217	FUNCTIONAL ANATOMY	
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 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 [2]	
KNES 372	ORGANIZATION AND ADMINISTRATION OF PHYSICAL ACTIVITY PROGRAMS	
KNES 396	INDEPENDENT STUDY [2]	
KNES 398	INTERNSHIP IN EXERCISE SCIENCE [2]	
KNES 406	EXERCISE PRESCRIPTIONS AND PROGRAMMING FOR SPECIAL POPULATIONS	
KNES 407	ADVANCED PRINCIPLES OF STRENGTH AND CONDITIONING: PROGRAM DESIGN	
KNES 410	CARDIOVASCULAR PHYSIOLOGY, DISEASE PREVENTION AND REHABILITATION	
KNES 420	ADVANCED EXERCISE PHYSIOLOGY	
KNES 426	MOTOR DEVELOPMENT: INFANTS TO ADULTS	
KNES 457	PHYSIOLOGY OF AGING	
KNES 471	SELECTED TOPICS IN EXERCISE SCIENCE	
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	GENERAL PHYSICS FOR THE HEALTH SCIENCES	4-5
or PHYS 211	GENERAL PHYSICS I; NON CALCULUS-BASED	
PSYC 101	INTRODUCTION TO PSYCHOLOGY	3
Total Units		**65-66**

[1] Electives cannot be satisfied by courses counted elsewhere in the curriculum.

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

Four-Year Plan of Study

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
BIOL 191 & 191L (Core 7)	4	BIOL 221 & 221L	4
PSYC 101 (Core 6)	3	HLTH 101 (Core 11)	3
Core 1 (or Core 2)	3	KNES 297	3
Core 4	3	MATH 115 (Suggested Core 3)	3
Core 5	3	Core 2 (or Core 1)	3
	16		**16**

Sophomore

Term 1	Units	Term 2	Units
BIOL 222 & 222L	4	Select one of the following:	4
KNES 265	3	CHEM 121 & 121L	
Core 12	3	CHEM 131 & 131L	
Core 13	3	KNES 355 or 361	3
Elective	3	Core 14	3
		Elective	3
	16		**13**

Junior

Term 1	Units	Term 2	Units
EXSC Elective	3	Select one of the following:	3
KNES 313	3	KNES 217	
PHYS 202 or 211 (Core 8)	5	KNES 311	
Elective	3	KNES 341	
		EXSC Elective	3
		Core 10	3
		Elective	3
		Elective	3
	14		**15**

Senior

Term 1	Units	Term 2	Units
EXSC Elective	3	EXSC Elective	3
KNES 364	3	EXSC Elective	3
KNES 367	3	KNES 469 (Core 9)	3
Elective	3	Elective	3
Elective	3	Elective	3
	15		**15**

Total Units 120

Learning Outcomes

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