

BS in Exercise Science (663435) MAP Sheet

Life Sciences, Exercise Sciences

For students entering the degree program during the 2024 - 2025 curricular year.



University Core and Graduation Requirements	Suggested Sequence of Courses	
University Core Requirements:		
Requirements	#Classes	Hours
Religion Cornerstones		Classes
Teachings and Doctrine of The Book of Mormon	1	2.0 REL A 275
Jesus Christ and the Everlasting Gospel	1	2.0 REL A 250
Foundations of the Restoration	1	2.0 REL C 225
The Eternal Family	1	2.0 REL C 200
The Individual and Society		
American Heritage	1-2	3-6.0 from approved list
Global and Cultural Awareness	1	3.0 from approved list
Skills		
First Year Writing	1	3.0 from approved list
Advanced Written and Oral Communications	1	3.0 WRTG 316 recommended
Quantitative Reasoning	1	3-4.0 MATH 110, 111, 112*, 118 or 119*
Languages of Learning (Math or Language)	1	3-4.0 MATH 112*, 118 or 119* or STAT 121*
Arts, Letters, and Sciences		
Civilization 1	1	3.0 from approved list
Civilization 2	1	3.0 from approved list
Arts	1	3.0 from approved list
Letters	1	3.0 from approved list
Biological Science	1	3.0 CELL 120* or NDFS 100*
Physical Science	1	3.0 CHEM 105* & PHSCS 105*
Social Science	1	3.0 PSYCH 111*, SOC 111* or 112*
Core Enrichment: Electives		
Religion Electives	3-4	6.0 from approved list
Open Electives	Variable	Variable personal choice
*THESE COURSES FILL UNIVERSITY CORE AND PROGRAM REQUIREMENTS		
Graduation Requirements:		
Minimum residence hours required		30.0
Minimum hours needed to graduate		120.0
FRESHMAN YEAR		
<u>1st Semester</u>		
First-year Writing or American Heritage		3.0
Religion cornerstone course		2.0
CELL 120 (Biological Science)		3.0
Civilization 1 elective		3.0
CHEM 105		4.0
Quantitative Reasoning (if required)**		0-3.0
Total Hours		15-18.0
**If the student needs to complete this requirement, it is strongly suggested they do so before the first semester of the freshman year.		
<u>2nd Semester</u>		
First-year Writing or American Heritage		3.0
Arts or Letters elective		3.0
CHEM 106 & 107		4.0
STAT 121		3.0
Religion Cornerstone course		2.0
Total Hours		15.0
SOPHOMORE YEAR		
<u>3rd Semester</u>		
Civilization 2 elective		3.0
PHSCS 105 & 107		4.0
NDFS 100		3.0
Social Science elective		3.0
Religion Cornerstone course		2.0
Total Hours		15.0
<u>4th Semester</u>		
Arts or Letters elective		3.0
Global & Cultural Awareness elective		3.0
MMBIO 240		3.0
CELL 220		4.0
Religion Cornerstone course		2.0
Total Hours		15.0
Please check with departments for current availability of all courses.		
Note: Students are encouraged to complete an average of 15–16 credit hours each semester or 30–32 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.		
JUNIOR YEAR		
<u>5th Semester</u>		
CELL 305 or 362 and 363		4.0
EXSC 362		3.0
General Education courses, and/or general electives		3.0
Adv. Written & Oral Communication		3.0
Religion elective		2.0
Total Hours		15.0
<u>6th Semester</u>		
EXSC 463		3.0
EXSC 464		0.5
Major elective (from Requirement 2)		3.0
EXSC 440		4.0
Religion elective		2.0
General Electives		4.0
Total Hours		16.5
SENIOR YEAR		
<u>7th Semester</u>		
Major Elective (from Requirement 2)		3.0
Major Elective (from Requirement 5)		3.0
General Electives		7.0
Religion Elective		2.0
Total Hours		15.0
<u>8th Semester</u>		
Major Elective (from Requirement 2)		3.0
Major Elective (from Requirement 2)		3.0
Major Elective (from Requirement 5)		3.0
General Electives		6.0
Total Hours		15.0

BS in Exercise Science (663435)
2024 - 2025 Program Requirements
(60.5 Credit Hours)

REQUIREMENT 1 Complete These Major Required Courses (11.5 Credits)		REQUIREMENT 6 Complete at Least 3 Non-Major Elective Credits Note: <i>SOME OF THESE ELECTIVES HAVE REQUIRED PREREQUISITES.</i>		<i>Note to Students Desiring to Pursue Master of Athletic Training (MAT) degree: In order to prepare for acceptance into the MAT graduate degree program, you must take the following courses during your BS Exercise Science major: EXSC 320, 321, 387, 501, 516, 517, 518, 601, and PSYCH 111. Contact Life Sciences Advisement (2060 LSB) for additional information (Isa.byu.edu; 801-422-3042; lifesciences@byu.edu). See MAT website for details. Some elective courses may be offered only in Spring term.</i>
EXSC 151 - Intro to Exercise Sciences	1.0	CELL 320 - Dissection Techniques in Human Anatomy	1.0	<i>Note to Premed Students: Professional schools and graduate programs may require additional courses not required for this major. Contact the programs to which you may apply to determine specific courses that meet their entrance requirements. Students considering professional or graduate degrees should take at least two semesters of mathematical courses. The following required or elective courses are strongly recommended for students considering professional or graduate degrees in the exercise sciences: MMBio 241; CELL 360, 362, 363; Chem 351, 352, 353, 481; Math 119; Stat 121. For more information contact the Preprofessional Advisement Center, 3328 WSC, (801) 422-3044. Contact potential schools of choice for a complete list of entrance requirements.</i>
EXSC 362 - Kinesiology and Biomechanics	3.0	CELL 325 - Tissue Biology (with lab)	3.0	THE DISCIPLINE
EXSC 440 - Advanced Musculoskeletal Human Anatomy (includes lab)	4.0	CELL 360 - Cell Biology	3.0	The exercise science program is designed to prepare students for entry into graduate school in one of the disciplines related to exercise science or one of the healthcare professional schools.
EXSC 463 - Exercise Physiology	3.0	CELL 363 - Advanced Physiology Laboratory	1.0	Students majoring in exercise science explore how the body functions during physical activity and exercise. Principles and concepts taught in human anatomy and physiology, exercise physiology, biomechanics, neurophysiology, chemistry, physics, and nutrition are mastered to help understand how the body responds to acute bouts of exercise and how it adapts to chronic physical activity and exercise. The impact that physical activity and exercise have on one's capacity to do work, physical performance, as well as its impact on health and disease makes study of this discipline rewarding.
EXSC 464 - Exercise Physiology Lab	0.5	CELL 365 - Pathophysiology	4.0	
REQUIREMENT 2 Complete at Least 2.0 Experiential Learning Credits		CELL 484 - Human Embryology	3.0	
EXSC 399R - Exercise Science Internship	3.0v	CELL 561 - Physiology of Drug Mechanisms	3.0	
EXSC 399R - Huntsman World Senior Games Internship	3.0v	CELL 565 - Endocrinology	3.0	
EXSC 497R - Undergraduate Research and Study	3.0v	CHEM 285 - Introductory Bio-organic Chemistry	4.0	
REQUIREMENT 3 Complete at Least 12 Major Elective Credits		CHEM 351 - Organic Chemistry 1	3.0	
EXSC 221 - Science of Wellness	3.0	CHEM 351M - Organic Chemistry 1 - Majors	3.0	
EXSC 320 - Basic Athletic Training	3.0	CHEM 352 - Organic Chemistry 2	3.0	
EXSC 321 - Basic Athletic Training Lab	0.5	CHEM 352M - Organic Chemistry 2 - Majors	3.0	
EXSC 360 - Exercise is Medicine	3.0	CHEM 353 - Organic Chemistry Laboratory - Nonmajors	2.0v	
EXSC 387 - Lifestyle and Chronic Disease Prevention	3.0	CHEM 481 - Biochemistry	3.0	
EXSC 460 - Orthopaedic Impairments and Therapeutic Exercise	3.0	HLTH 320 - Advanced First Aid and Safety	3.0	
EXSC 462 - Clinical Biomechanics	3.0	HLTH 335 - Health Behavior Change	3.0	
EXSC 466 - Introduction to Electrocardiograms	2.0	*MATH 112 - Calculus 1	4.0	
EXSC 468 - Problems in Exercise Prescription	2.0	MATH 119 - Introduction to Calculus	4.0	
EXSC 470 - Functional Neuroanatomy	3.0	MMBIO 221 - General Microbiology	3.0	
EXSC 488 - Motor Control	3.0	MMBIO 222 - General Microbiology Laboratory	1.0	
EXSC 501 - Pathophysiology for the Athletic Trainer	3.0	MMBIO 241 - Molecular and Cellular Biology Laboratory	1.0	
EXSC 516 - Orthopedic Evaluation 1: Lower Extremities	3.0	NDFS 200 - Nutrient Metabolism	3.0	
EXSC 517 - Orthopedic Evaluation 2: Upper Extremities and Trunk	3.0	NDFS 201 - Society, Nutrition, and Chronic Disease	3.0	
EXSC 518 - Therapeutic Interventions 2, Rehabilitation	3.0	NDFS 305 - Nutritional Implications of Disease	4.0	
REQUIREMENT 4 Complete the Following Non-Major Required Courses (28.0 credits)		NDFS 310 - Nutrition and Metabolism in Sports and Exercise	3.0	
CELL 120 - Science of Biology	3.0	PHSCS 106 - General Physics 2	3.0	
CELL 220 - Human Anatomy (with lab)	4.0	PHSCS 108 - General Physics Lab 2	1.0	
CHEM 105 - General College Chemistry 1 with Lab (Integrated)	4.0	*PSYCH 111 - Introduction to Psychological Science	3.0	
CHEM 106 - General College Chemistry 2	3.0	PSYCH 220 - Human Development: Life Span	3.0	
CHEM 107 - General College Chemistry Laboratory	1.0	PSYCH 342 - Abnormal Psychology	3.0	
MMBIO 240 - Molecular Biology	3.0	PWS 340 - Genetics	3.0	
NDFS 100 - Essentials of Human Nutrition	3.0	SOC 111 - Introductory Sociology	3.0	
PHSCS 105 - General Physics 1	3.0	SOC 112 - Current Social Problems	3.0	
PHSCS 107 - General Physics Lab 1	1.0	STDEV 170 - Introduction to Health Professions	1.0	
STAT 121 - Principles of Statistics	3.0	STDEV 317 - Career Strategies	2.0	
REQUIREMENT 5 Complete 1 Physiology Option (4.0 Credits)				
OPTION 5.1 Complete 1 course				
CELL 305 - Human Physiology	4.0			
OPTION 5.2 Complete 2 courses				
CELL 362 - Advanced Physiology	3.0			
CELL 363 - Advanced Physiology Laboratory	1.0			

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2024 - 2025

Note to students who plan to pursue postgraduate education in various health care fields: The following required or elective courses are strongly recommended for students considering postgraduate professional degrees or graduate degrees in exercise sciences, but are not required for this program: MMBio 241; CELL 360, 362, 363; CHEM 351, 352, 353, 481; MATH 112; PHSCS 106 & 108; PWS 340. Contact potential schools of choice for a complete list of entrance requirements. Professional schools and graduate programs may require other additional courses not required for this major. Contact the postgraduate programs to which you may apply to determine specific courses that meet their entrance requirements. Students considering professional or graduate degrees should take at least two semesters of mathematical courses.

For more information, contact the Preprofessional Advisement Center, 3328 WSC, 801-422-3044.

CAREER OPPORTUNITIES

The exercise science degree provides excellent preparation for students interested in graduate work in exercise science fields (e.g., exercise physiology MS or PhD) or those desiring to pursue training in medicine, physical therapy, cardiac rehabilitation, podiatry, chiropractic, and other health care professions. Graduates with this major may find opportunities in community, corporate or hospital wellness or fitness centers, and health promotion programs.

The major is designed to prepare students to enter graduate programs in several health related professions; specifically exercise science master and doctoral programs. Those who complete graduate work in exercise science are most likely to be employed as a professor/ researcher in a university setting. In addition to graduate studies in exercise science, students are also prepared to attend medical school, dental school, osteopathy school, physician assistant and nursing programs, and chiropractic school.

Salary varies with the terminal degree sought, the choice of career specialty, and geographic location of employment or practice. Earnings for those with certain medical and dental specialties are potentially lucrative.

MAP DISCLAIMER

While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

DEPARTMENT INFORMATION

Exercise Sciences Department

Brigham Young University
106 Smith Fieldhouse
Provo, UT 84602
Telephone: (801) 422-6507

ADVISEMENT CENTER INFORMATION

Life Sciences Advisement

Brigham Young University
2060 Life Sciences Building
Provo, UT 84602
Telephone: (801) 422-3042
lsa.byu.edu

Preprofessional Advisement Center

3328 WSC
(801) 422-3044