

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:				FRESHMAN YEAR			
Requirements	#Classes	Hours	Classes	<u>1st Semester</u>			
Religion Cornerstones				First-year Writing or American Heritage	3.0	<u>5th Semester</u>	
Teachings and Doctrine of The Book of Mormon	1	2.0	REL A 275	Religion cornerstone course	2.0	CELL 305 or 362 and 363	4.0
Jesus Christ and the Everlasting Gospel	1	2.0	REL A 250	CELL 120 (Biological Science)	3.0	EXSC 362	3.0
Foundations of the Restoration	1	2.0	REL C 225	Civilization 1 elective	3.0	General Education courses, and/or general electives	3.0
The Eternal Family	1	2.0	REL C 200	CHEM 105	4.0	Adv. Written & Oral Communication	3.0
The Individual and Society				Quantitative Reasoning (if required)**	0-3.0	Religion elective	2.0
American Heritage	1-2	3-6.0	from approved list	Total Hours	15-18.0	Total Hours	15.0
Global and Cultural Awareness	1	3.0	from approved list	**If the student needs to complete this requirement, it is strongly suggested they do so before the first semester of the freshman year.			
Skills				<u>2nd Semester</u>		<u>6th Semester</u>	
First Year Writing	1	3.0	from approved list	First-year Writing or American Heritage	3.0	EXSC 463	3.0
Advanced Written and Oral Communications	1	3.0	WRTG 316 recommended	Arts or Letters elective	3.0	EXSC 464	0.5
Quantitative Reasoning	1	3-4.0	MATH 110, 111, 112*, 118 or 119*	CHEM 106 & 107	4.0	Major elective (from Requirement 2)	3.0
Languages of Learning (Math or Language)	1	3-4.0	MATH112*, 118 or 119* or STAT 121*	STAT 121	3.0	EXSC 440	4.0
Arts, Letters, and Sciences				Religion Cornerstone course	2.0	Religion elective	2.0
Civilization 1	1	3.0	from approved list	Total Hours	15.0	Total Hours	16.5
Civilization 2	1	3.0	from approved list	SOPHOMORE YEAR			
Arts	1	3.0	from approved list	<u>3rd Semester</u>		<u>7th Semester</u>	
Letters	1	3.0	from approved list	Civilization 2 elective	3.0	Major Elective (from Requirement 2)	3.0
Biological Science	1	3.0	CELL 120* or NDFS 100*	PHSCS 105 & 107	4.0	Major Elective (from Requirement 5)	3.0
Physical Science	1	3.0	CHEM 105* & PHSCS 105*	NDFS 100	3.0	General Electives	7.0
Social Science	1	3.0	PSYCH 111*, SOC 111* or 112*	Social Science elective	3.0	Religion Elective	2.0
Core Enrichment: Electives				Religion Cornerstone course	2.0	Total Hours	15.0
Religion Electives	3-4	6.0	from approved list	<u>4th Semester</u>		<u>8th Semester</u>	
Open Electives	Variable	Variable	personal choice	Arts or Letters elective	3.0	Major Elective (from Requirement 2)	3.0
*THESE COURSES FILL UNIVERSITY CORE AND PROGRAM REQUIREMENTS				Global & Cultural Awareness elective	3.0	Major Elective (from Requirement 2)	3.0
Graduation Requirements:				MMBIO 240	3.0	Major Elective (from Requirement 5)	3.0
Minimum residence hours required		30.0		CELL 220	4.0	General Electives	6.0
Minimum hours needed to graduate		120.0		Religion Cornerstone course	2.0	Total Hours	15.0
				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.			

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2024 - 2025 Program Requirements (60.5 Credit Hours)

<p>REQUIREMENT 1 Complete These Major Required Courses (11.5 Credits)</p> <p>EXSC 151 - Intro to Exercise Sciences 1.0</p> <p>EXSC 362 - Kinesiology and Biomechanics 3.0</p> <p>EXSC 440 - Advanced Musculoskeletal Human Anatomy (includes lab) 4.0</p> <p>EXSC 463 - Exercise Physiology 3.0</p> <p>EXSC 464 - Exercise Physiology Lab 0.5</p> <p>REQUIREMENT 2 Complete at Least 2.0 Experiential Learning Credits</p> <p>EXSC 399R - Exercise Science Internship 3.0v</p> <p>EXSC 399R - Huntsman World Senior Games Internship 3.0v</p> <p>EXSC 497R - Undergraduate Research and Study 3.0v</p> <p>REQUIREMENT 3 Complete at Least 12 Major Elective Credits</p> <p>EXSC 221 - Science of Wellness 3.0</p> <p>EXSC 320 - Basic Athletic Training 3.0</p> <p>EXSC 321 - Basic Athletic Training Lab 0.5</p> <p>EXSC 350 - Research Methods and Evidence Based Practices 3.0</p> <p>EXSC 360 - Exercise is Medicine 3.0</p> <p>EXSC 387 - Lifestyle and Chronic Disease Prevention 3.0</p> <p>EXSC 460 - Orthopaedic Impairments and Therapeutic Exercise 3.0</p> <p>EXSC 462 - Clinical Biomechanics 3.0</p> <p>EXSC 466 - Introduction to Electrocardiograms 2.0</p> <p>EXSC 468 - Exercise Prescription 3.0</p> <p>EXSC 470 - Functional Neuroanatomy 3.0</p> <p>EXSC 488 - Motor Control 3.0</p> <p>EXSC 501 - Pathophysiology for the Athletic Trainer 3.0</p> <p>EXSC 516 - Orthopedic Evaluation 1: Lower Extremities 3.0</p> <p>EXSC 517 - Orthopedic Evaluation 2: Upper Extremities and Trunk 3.0</p> <p>EXSC 518 - Therapeutic Interventions 2, Rehabilitation 3.0</p> <p>REQUIREMENT 4 Complete the Following Non-Major Required Courses (28.0 credits)</p> <p>CELL 120 - Science of Biology 3.0</p> <p>CELL 220 - Human Anatomy (with lab) 4.0</p> <p>CHEM 105 - General College Chemistry 1 with Lab (Integrated) 4.0</p> <p>CHEM 106 - General College Chemistry 2 3.0</p> <p>CHEM 107 - General College Chemistry Laboratory 1.0</p> <p>MMBIO 240 - Molecular Biology 3.0</p> <p>NDFS 100 - Essentials of Human Nutrition 3.0</p> <p>PHSCS 105 - General Physics 1 3.0</p> <p>PHSCS 107 - General Physics Lab 1 1.0</p> <p>STAT 121 - Principles of Statistics 3.0</p> <p>REQUIREMENT 5 Complete 1 Physiology Option (4.0 Credits)</p> <p>OPTION 5.1 Complete 1 course</p> <p>CELL 305 - Human Physiology 4.0</p> <p>OPTION 5.2 Complete 2 courses</p> <p>CELL 362 - Advanced Physiology 3.0</p> <p>CELL 363 - Advanced Physiology Laboratory 1.0</p>	<p>REQUIREMENT 6 Complete at Least 3 Non-Major Elective Credits</p> <p>Note: <i>SOME OF THESE ELECTIVES HAVE REQUIRED PREREQUISITES.</i></p> <p>CELL 320 - Dissection Techniques in Human Anatomy 1.0</p> <p>CELL 325 - Tissue Biology (with lab) 3.0</p> <p>CELL 360 - Cell Biology 3.0</p> <p>CELL 363 - Advanced Physiology Laboratory 1.0</p> <p>CELL 365 - Pathophysiology 4.0</p> <p>CELL 484 - Human Embryology 3.0</p> <p>CELL 561 - Physiology of Drug Mechanisms 3.0</p> <p>CELL 565 - Endocrinology 3.0</p> <p>CHEM 285 - Introductory Bio-organic Chemistry 4.0</p> <p>CHEM 351 - Organic Chemistry 1 3.0</p> <p>CHEM 351M - Organic Chemistry 1 - Majors 3.0</p> <p>CHEM 352 - Organic Chemistry 2 3.0</p> <p>CHEM 352M - Organic Chemistry 2 - Majors 3.0</p> <p>CHEM 353 - Organic Chemistry Laboratory - Nonmajors 2.0v</p> <p>CHEM 481 - Biochemistry 3.0</p> <p>HLTH 320 - Advanced First Aid and Safety 3.0</p> <p>HLTH 335 - Health Behavior Change 3.0</p> <p>*MATH 112 - Calculus 1 4.0</p> <p>MATH 119 - Introduction to Calculus 4.0</p> <p>MMBIO 221 - General Microbiology 3.0</p> <p>MMBIO 222 - General Microbiology Laboratory 1.0</p> <p>MMBIO 241 - Molecular and Cellular Biology Laboratory 1.0</p> <p>NDFS 200 - Nutrient Metabolism 3.0</p> <p>NDFS 201 - Society, Nutrition, and Chronic Disease 3.0</p> <p>NDFS 305 - Nutritional Implications of Disease 4.0</p> <p>NDFS 310 - Nutrition and Metabolism in Sports and Exercise 3.0</p> <p>PHSCS 106 - General Physics 2 3.0</p> <p>PHSCS 108 - General Physics Lab 2 1.0</p> <p>*PSYCH 111 - Introduction to Psychological Science 3.0</p> <p>PSYCH 220 - Human Development: Life Span 3.0</p> <p>PSYCH 342 - Abnormal Psychology 3.0</p> <p>PWS 340 - Genetics 3.0</p> <p>SOC 111 - Introductory Sociology 3.0</p> <p>SOC 112 - Current Social Problems 3.0</p> <p>STDEV 170 - Introduction to Health Professions 1.0</p> <p>STDEV 317 - Career Strategies 2.0</p>	<p><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></p> <p><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></p> <p>THE DISCIPLINE</p> <p>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.</p> <p>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.</p>
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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