

# BS in Exercise Science (663435) MAP Sheet

Life Sciences, Exercise Sciences

For students entering the degree program during the 2017-2018 curricular year.



University Core and Graduation Requirements	Suggested Sequence of Courses	
<b>University Core Requirements:</b>		
<b>Requirements</b>	<b>#Classes</b>	<b>Hours</b>
<b>Religion Cornerstones</b>	<b>Classes</b>	
Teachings and Doctrine of The Book of Mormon	1	2.0
Jesus Christ and the Everlasting Gospel	1	2.0
Foundations of the Restoration	1	2.0
The Eternal Family	1	2.0
<b>The Individual and Society</b>		
American Heritage	1-2	3-6.0
Global and Cultural Awareness	1	3.0
<b>Skills</b>		
First Year Writing	1	3.0
Advanced Written and Oral Communications	1	3.0
Quantitative Reasoning	1	3-4.0
Languages of Learning (Math or Language)	1	3-4.0
<b>Arts, Letters, and Sciences</b>		
Civilization 1	1	3.0
Civilization 2	1	3.0
Arts	1	3.0
Letters	1	3.0
Biological Science	1	3.0
Physical Science	1	3.0
Social Science	1	3.0
<b>Core Enrichment: Electives</b>		
Religion Electives	3-4	6.0
Open Electives	Variable	Variable
*THESE COURSES FILL UNIVERSITY CORE AND PROGRAM REQUIREMENTS		
<b>Graduation Requirements:</b>		
Minimum residence hours required		30.0
Minimum hours needed to graduate		120.0
<b>FRESHMAN YEAR</b>		
<u>1st Semester</u>		
First-year Writing or American Heritage	3.0	
Religion cornerstone course	2.0	
PDBIO 120 (Biological Science)	3.0	
Civilization 1 elective	3.0	
CHEM 105	4.0	
Quantitative Reasoning (if required)	0-3.0	
<b>Total Hours</b>	<b>15-18.0</b>	
<u>2nd Semester</u>		
First-year Writing or American Heritage	3.0	
Arts or Letters elective	3.0	
MMBIO 240	3.0	
CHEM 106 & 107	4.0	
Religion Cornerstone course	2.0	
<b>Total Hours</b>	<b>15.0</b>	
<b>SOPHOMORE YEAR</b>		
<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	
<b>Total Hours</b>	<b>15.0</b>	
<u>4th Semester</u>		
PHSCS 106 & 108	4.0	
Arts or Letters elective	3.0	
Global & Cultural Awareness elective	3.0	
PDBIO 220	3.0	
Religion Cornerstone course	2.0	
<b>Total Hours</b>	<b>15.0</b>	
Please check with departments for current availability of all courses.		
<b>Note:</b> 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.		
This handout is NOT a contract between Brigham Young University and present or prospective students. Although the University makes every effort to ensure the accuracy of this information, it reserves the right to make changes as university business may require. Students should regularly consult their department or college advisement center.		
<b>JUNIOR YEAR</b>		
<u>5th Semester</u>		
PDBIO 305 or 362 and 363	4.0	
EXSC 302	1.0	
EXSC 320	3.0	
General Education courses, and/or general electives	3.0	
Languages of Learning elective	3.0	
Religion elective	2.0	
<b>Total Hours</b>	<b>16.0</b>	
<u>6th Semester</u>		
EXSC 463	3.0	
EXSC 464	0.5	
Major elective	4.0	
Religion elective	2.0	
General electives	5.0	
<b>Total Hours</b>	<b>14.5</b>	
<b>SENIOR YEAR</b>		
<u>7th Semester</u>		
Adv. Written & Oral Communication	3.0	
EXSC 362	3.0	
EXSC 387	3.0	
EXSC 390	4.0	
Religion Elective	2.0	
<b>Total Hours</b>	<b>15.0</b>	
<u>8th Semester</u>		
EXSC 460	3.0	
Major elective	3.0	
General Electives	9.0	
<b>Total Hours</b>	<b>15.0</b>	

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### 2017-2018 Program Requirements (59.5 Credit Hours)

<p><b>Complete a senior exit interview.</b></p> <p><b>REQUIREMENT 1</b> Complete 11 courses</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>*PDBIO 120 - Science of Biology 3.0</p> <p>PDBIO 220 - Human Anatomy (with lab) 3.0</p> <p>PHSCS 105 - General Physics 1 3.0</p> <p>PHSCS 106 - General Physics 2 3.0</p> <p>PHSCS 107 - General Physics Lab 1 1.0</p> <p>PHSCS 108 - General Physics Lab 2 1.0</p> <p><b>REQUIREMENT 2</b> Complete 1 option</p> <p><b>OPTION 2.1</b> Complete 1 course</p> <p>PDBIO 305 - Human Physiology 4.0</p> <p><b>OPTION 2.2</b> Complete 2 courses</p> <p>PDBIO 362 - Advanced Physiology 3.0</p> <p>PDBIO 363 - Advanced Physiology Laboratory 1.0</p> <p><b>REQUIREMENT 3</b> Complete 8 courses</p> <p><b>MAJOR COURSES:</b></p> <p>EXSC 302 - Philosophical and Ethical Issues in Exercise Sciences 1.0</p> <p>EXSC 320 - Basic Athletic Training 3.0</p> <p>EXSC 362 - Kinesiology and Biomechanics 3.0</p> <p>EXSC 387 - Lifestyle and Chronic Disease Prevention 3.0</p> <p>EXSC 440 - Advanced Musculoskeletal Human Anatomy (includes lab) 4.0</p> <p>EXSC 460 - Orthopaedic Impairments and Therapeutic Exercise 3.0</p> <p>EXSC 463 - Exercise Physiology 3.0</p> <p>EXSC 464 - Exercise Physiology Lab 0.5</p> <p><b>REQUIREMENT 4</b> Complete 8.0 hours from the following course(s)</p> <p><b>SOME OF THESE ELECTIVES HAVE REQUIRED PREREQUISITES.</b></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>CHEM 481M - Biochemistry--Majors 3.0</p> <p>EXSC 221 - Science of Wellness 3.0</p> <p>EXSC 321 - Basic Athletic Training Lab 0.5</p> <p>EXSC 455 - Worksite Health Promotion 3.0</p> <p>EXSC 468 - Problems in Exercise Prescription 2.0</p>	<p>EXSC 470 - Functional Neuroanatomy 3.0</p> <p>EXSC 497R - Undergraduate Research and Study 4.0v</p> <p style="text-align: center;"><i>You may take this course up to 1 time.</i></p> <p>HLTH 310 - Chronic Diseases: Prevention and Control 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 2.0</p> <p>NDFS 305 - Nutritional Implications of Disease 4.0</p> <p>NDFS 310 - Nutrition and Metabolism in Sports and Exercise 2.0</p> <p>PDBIO 320 - Dissection Techniques in Human Anatomy 1.0</p> <p>PDBIO 325 - Tissue Biology (with lab) 3.0</p> <p>PDBIO 360 - Cell Biology 3.0</p> <p>PDBIO 363 - Advanced Physiology Laboratory 1.0</p> <p>PDBIO 365 - Pathophysiology 4.0</p> <p>PDBIO 484 - Human Embryology 3.0</p> <p>PDBIO 561 - Physiology of Drug Mechanisms 3.0</p> <p>PDBIO 565 - Endocrinology 3.0</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>STAT 121 - Principles of Statistics 3.0</p> <p>STDEV 170 - Introduction to Health Professions 1.0</p> <p>STDEV 399R - Health Professions Internship 3.0v</p> <p style="text-align: center;"><i>You may take this course up to 1 time.</i></p> <p><b>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; PDBio 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.</b></p>	<p><b>THE DISCIPLINE:</b></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, motor learning, 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> <p><b>CAREER OPPORTUNITIES:</b></p> <p>The exercise science degree provides excellent preparation for students interested in graduate work in exercise physiology (MS, 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 also find opportunities in community, corporate or hospital wellness or fitness centers, and health promotion programs.</p> <p>The major is designed to prepare students to enter graduate programs in several health related professions; specifically exercise science master's 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.</p> <p>Salary varies with the terminal degree sought, the choice of career speciality, and geographic location of employment or practice. Earnings for those with certain medical and dental specialties</p>
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**2017-2018**

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 84602-2216  
Telephone: (801) 422-6507

### **ADVISEMENT CENTER INFORMATION**

#### **Life Science Student Services**

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

Preprofessional Advisement Center  
3328 WSC  
(801) 422-3044