BS in Exercise Science (663435) MAP Sheet
Life Sciences, Exercise Sciences
For students entering the degree program during the 2018-2019 curricular year.

<table>
<thead>
<tr>
<th>University Core and Graduation Requirements</th>
<th>Suggested Sequence of Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>University Core Requirements:</strong></td>
<td><strong>FRESHMAN YEAR</strong></td>
</tr>
<tr>
<td><strong>Requirements</strong></td>
<td>1st Semester</td>
</tr>
<tr>
<td></td>
<td>First-year Writing or American Heritage 3.0</td>
</tr>
<tr>
<td><strong>#Classes</strong></td>
<td>Religion cornerstone course 2.0</td>
</tr>
<tr>
<td><strong>Hours</strong></td>
<td>PDBIO 120 (Biological Science) 3.0</td>
</tr>
<tr>
<td><strong>Classes</strong></td>
<td>Civilization 1 elective 3.0</td>
</tr>
<tr>
<td><strong>Religion Cornerstones</strong></td>
<td>CHEM 105 4.0</td>
</tr>
<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
<td>Quantitative Reasoning (if required)** 0-3.0</td>
</tr>
<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
<td>Total Hours 15-18.0</td>
</tr>
<tr>
<td>Foundations of the Restoration</td>
<td>If the student needs to complete this requirement, it is strongly suggested they do so before the first semester of the freshman year.</td>
</tr>
<tr>
<td>The Eternal Family</td>
<td><strong>2nd Semester</strong></td>
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<td></td>
<td>First-year Writing or American Heritage 3.0</td>
</tr>
<tr>
<td><strong>The Individual and Society</strong></td>
<td>Arts or Letters elective 3.0</td>
</tr>
<tr>
<td>American Heritage</td>
<td>CHEM 106 &amp; 107 4.0</td>
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<tr>
<td>Global and Cultural Awareness</td>
<td>STAT 121 3.0</td>
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<td></td>
<td>Religion Cornerstone course 2.0</td>
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<tr>
<td><strong>Skills</strong></td>
<td>Total Hours 15.0</td>
</tr>
<tr>
<td>First Year Writing</td>
<td><strong>SOPHOMORE YEAR</strong></td>
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<tr>
<td>Advanced Written and Oral Communications</td>
<td>Civilization 2 elective 3.0</td>
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<tr>
<td></td>
<td>PHYSICS 105 &amp; 107 4.0</td>
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<tr>
<td>Quantitative Reasoning</td>
<td>NDFS 100 3.0</td>
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<tr>
<td>Languages of Learning (Math or Language)</td>
<td>Social Science elective 3.0</td>
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<tr>
<td></td>
<td>Religion Cornerstone course 2.0</td>
</tr>
<tr>
<td><strong>Arts, Letters, and Sciences</strong></td>
<td>Total Hours 15.0</td>
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<tr>
<td>Civilization 1</td>
<td><strong>4th Semester</strong></td>
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<td></td>
<td>Arts or Letters elective 3.0</td>
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<tr>
<td>Civilization 2</td>
<td>Global &amp; Cultural Awareness elective 3.0</td>
</tr>
<tr>
<td><strong>#Classes</strong></td>
<td>MMIBIO 240 3.0</td>
</tr>
<tr>
<td><strong>Hours</strong></td>
<td>MMBIO 240 3.0</td>
</tr>
<tr>
<td><strong>Classes</strong></td>
<td>PDBIO 220 3.0</td>
</tr>
<tr>
<td><strong>Religion Electives</strong></td>
<td>Religion Cornerstone course 2.0</td>
</tr>
<tr>
<td>Open Electives</td>
<td>Total Hours 14.0</td>
</tr>
<tr>
<td></td>
<td>*These courses fill University Core and Program Requirements</td>
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</tbody>
</table>

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.

Minimum residence hours required 30.0
Minimum hours needed to graduate 120.0
BS in Exercise Science (663435)
2018-2019 Program Requirements (59.5 Credit Hours)

**Complete a senior exit interview.**

**REQUIREMENT 1** Complete 4 courses

**MAJOR COURSES:**

- EXSC 362 - Kinesiology and Biomechanics 3.0
- EXSC 440 - Advanced Musculoskeletal Human Anatomy (includes lab) 4.0
- EXSC 463 - Exercise Physiology 3.0
- EXSC 464 - Exercise Physiology Lab 0.5

**REQUIREMENT 2** Complete 12.0 hours from the following course(s)

- EXSC 221 - Science of Wellness 3.0
- EXSC 320 - Basic Athletic Training 3.0
- EXSC 321 - Basic Athletic Training Lab 0.5
- EXSC 387 - Lifestyle and Chronic Disease Prevention 3.0
- EXSC 416 - Injury Evaluation: Lower Extremities 3.0
- EXSC 417 - Injury Evaluation: Upper Extremities and Trunk 3.0
- EXSC 418 - Rehabilitation of Orthopedic Injuries 3.0
- EXSC 460 - Orthopaedic Impairments and Therapeutic Exercise 3.0
- EXSC 466 - Introduction to Electrocardiograms 2.0
- EXSC 468 - Problems in Exercise Prescription 2.0
- EXSC 470 - Functional Neuroanatomy 3.0
- EXSC 497R - Undergraduate Research and Study 4.0

You may take this course up to 1 time.

- EXSC 501 - Sports Medicine Pathology and Pharmacology 3.0

**REQUIREMENT 3** Complete 10 courses

- CHEM 105 - General College Chemistry 1 with Lab (Integrated) 4.0
- CHEM 106 - General College Chemistry 2 3.0
- CHEM 107 - General College Chemistry Laboratory 1.0
- MMBIO 240 - Molecular Biology 3.0
- NDFS 100 - Essentials of Human Nutrition 3.0
- PBIO 120 - Science of Biology 3.0
- PBIO 220 - Human Anatomy (with lab) 3.0
- PHSCS 105 - General Physics 1 3.0
- PHSCS 107 - General Physics Lab 1 1.0
- STAT 101 - Principles of Statistics 3.0

**REQUIREMENT 4** Complete 1 option

**OPTION 4.1** Complete 1 course

- PBIO 305 - Human Physiology 4.0

**OPTION 4.2** Complete 2 courses

- PBIO 362 - Advanced Physiology 3.0
- PBIO 363 - Advanced Physiology Laboratory 1.0

**REQUIREMENT 5** Complete 6.0 hours from the following course(s)

**SOME OF THESE ELECTIVES HAVE REQUIRED PREREQUISITES.**

- CHEM 285 - Introductory Bio-organic Chemistry 4.0
- CHEM 351 - Organic Chemistry 1 3.0
- CHEM 351M - Organic Chemistry 1 - Majors 3.0
- CHEM 352 - Organic Chemistry 2 3.0
- CHEM 352M - Organic Chemistry 2 - Majors 3.0
- CHEM 353 - Organic Chemistry Laboratory--Nonmajors 2.0v
- CHEM 481 - Biochemistry 3.0
- CHEM 481M - Biochemistry--Majors 3.0
- HLTH 310 - Not (currently offered) 3.0
- HLTH 320 - Advanced First Aid and Safety 3.0
- HLTH 335 - Health Behavior Change 3.0
- *MATH 112 - Calculus 1 4.0
- MATH 119 - Introduction to Calculus 4.0
- MMBIO 221 - General Microbiology 3.0
- MMBIO 222 - General Microbiology Laboratory 1.0
- MMBIO 241 - Molecular and Cellular Biology Laboratory 1.0
- NDFS 200 - Nutrient Metabolism 3.0
- NDFS 201 - Society, Nutrition, and Chronic Disease 2.0
- NDFS 305 - Nutritional Implications of Disease 4.0
- NDFS 310 - Nutrition and Metabolism in Sports and Exercise 2.0
- PBIO 320 - Dissection Techniques in Human Anatomy 1.0
- PBIO 325 - Tissue Biology (with lab) 3.0
- PBIO 360 - Cell Biology 3.0
- PBIO 363 - Advanced Physiology Laboratory 1.0
- PBIO 365 - Pathophysiology 4.0
- PBIO 484 - Human Embryology 3.0
- PBIO 561 - Physiology of Drug Mechanisms 3.0
- PBIO 565 - Endocrinology 3.0
- PHSCS 106 - General Physics 2 3.0
- PHSCS 108 - General Physics Lab 2 1.0
- *PSYCH 111 - Introduction to Psychological Science 3.0
- PSYCH 220 - Human Development: Life Span 3.0
- PSYCH 342 - Abnormal Psychology 3.0
- PWS 340 - Genetics 3.0
- SOC 111 - Introductory Sociology 3.0
- SOC 112 - Current Social Problems 3.0
- STEDEV 170 - Introduction to Health Professions 1.0
- STEDEV 317 - Career Strategies for Employment and Internships 2.0
- STEDEV 399R - Health Professions Internship 3.0v

**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; PBIO 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.**

**THE DISCIPLINE**

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.

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.

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; PBIO 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