

BS in Biology (282022) MAP Sheet

Life Sciences, Biology

For students entering the degree program during the 2018-2019 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
Jesus Christ and the Everlasting Gospel	1	2.0
Foundations of the Restoration	1	2.0
The Eternal Family	1	2.0
The Individual and Society		
American Heritage	1-2	3-6.0
Global and Cultural Awareness	1	3.0
Skills		
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	4.0
Arts, Letters, and Sciences		
Civilization 1	1	3.0
Civilization 2	1	3.0
Arts	1	3.0
Letters	1	3.0
Biological Science	1	4.0
Physical Science	2	7.0
Social Science	1	3.0
Core Enrichment: Electives		
Religion Electives	3-4	6.0
Open Electives	Variable	Variable
*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (15 hours overlap)		
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
BIO 130		4.0
CHEM 105		4.0
Quantitative Reasoning		3.0
Religion Cornerstone course		2.0
Total Hours		16.0
<u>2nd Semester</u>		
CHEM 106, 107		4.0
MATH 112		4.0
A HTG or First-Year Writing		3.0
General Elective		3.0
Religion Cornerstone course		2.0
Total Hours		16.0
SOPHOMORE YEAR		
<u>3rd Semester</u>		
BIO 220 or 230		4.0
PHSCS 105 & 107		4.0
MMBIO 240		3.0
Civilization 1 elective		3.0
Religion Cornerstone course		2.0
Total Hours		16.0
<u>4th Semester</u>		
PHSCS 106 & 108		4.0
Biology elective		3.0
Civilization 2 elective		3.0
Arts or Letters Elective		3.0
Religion Cornerstone course		2.0
Total Hours		15.0
Note: This degree program requires a minimum of 120.0 hours for graduation. Students are encouraged to complete an average of 15 credit hours each semester or 30 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>		
BIO 350		3.0
PWS 340		3.0
Biology elective		3.0
Arts or Letters elective		3.0
Religion elective		2.0
Total Hours		14.0
<u>6th Semester</u>		
Biology elective		4.0
Biology elective		3.0
Adv. Written & Oral Communication		3.0
Religion elective		2.0
General electives		3.0
Total Hours		15.0
SENIOR YEAR		
<u>7th Semester</u>		
Biology electives		5.0
General electives		4.0
Social Science elective		3.0
Religion elective		2.0
Total Hours		14.0
<u>8th Semester</u>		
BIO 420 & 421		3.0
Biology elective		3.0
Global & Cultural Awareness elective		3.0
General electives		5.0
Total Hours		14.0

BS in Biology (282022)
2018-2019 Program Requirements (60 Credit Hours)

<p>REQUIREMENT 1 Complete 5 courses</p> <p>*BIO 130 - Biology 4.0</p> <p>BIO 350 - Ecology 3.0</p> <p>BIO 420 - Evolutionary Biology 4.0</p> <p>MMBIO 240 - Molecular Biology 3.0</p> <p>PWS 340 - Genetics 3.0</p> <p>REQUIREMENT 2 Complete 1 course</p> <p>BIO 220 - Biological Diversity: Animals 4.0</p> <p>BIO 230 - Biological Diversity: Plants 4.0</p> <p>REQUIREMENT 3 Complete 8 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>*MATH 112 - Calculus 1 4.0</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>REQUIREMENT 4 Complete 19.0 hours from the following course(s)</p> <p>ELECTIVES (NOTE: BIO 220 AND BIO 230, IF TAKEN FOR REQUIREMENT 2, DO NOT DOUBLE COUNT HERE):</p> <p>BIO 194 - Introduction to Mentored Research 0.5</p> <p>BIO 220 - Biological Diversity: Animals 4.0</p> <p>BIO 230 - Biological Diversity: Plants 4.0</p> <p>BIO 370 - Bioethics 2.0</p> <p>BIO 380 - Comparative Animal Physiology and Anatomy 4.0</p> <p>BIO 430 - Plant Classification and Identification 4.0</p> <p>BIO 441 - Entomology 3.0</p> <p>BIO 443 - Ichthyology 3.0</p> <p>BIO 445 - Herpetology 4.0</p> <p>BIO 447 - Mammalogy 3.0</p> <p>BIO 450 - Capstone in Biodiversity and Conservation 3.0</p> <p>BIO 452 - Marine Biology 4.0</p> <p>BIO 455 - Plant Ecology 3.0</p> <p>BIO 463 - Genetics of Human Disease 3.0</p> <p>BIO 465 - Capstone in Bioinformatics 3.0</p> <p>BIO 470 - History and Philosophy of Biology 3.0</p> <p>BIO 475 - Plant Developmental Biology 3.0</p> <p>BIO 494R - Fungal Biology 6.0v</p> <p><i>You may take up to 2 credit hours.</i></p>	<p>BIO 510 - Biological Systematics and Curation 3.0</p> <p>BIO 511 - Lichenology 3.0</p> <p>BIO 512 - Angiosperm Phylogeny 3.0</p> <p>BIO 525 - Animal Disease, Biosecurity, and Zoonoses 3.0</p> <p>BIO 541 - Aquatic Entomology 4.0</p> <p>BIO 556 - Limnology 3.0</p> <p>BIO 557 - Stream and Wetland Ecology 4.0</p> <p>BIO 560 - Population Genetics 4.0</p> <p>CHEM 285 - Introductory Bio-organic Chemistry 4.0</p> <p>CHEM 351 - Organic Chemistry 1 3.0</p> <p>CHEM 352 - Organic Chemistry 2 3.0</p> <p>CHEM 353 - Organic Chemistry Laboratory--Nonmajors 2.0v</p> <p>CHEM 481 - Biochemistry 3.0</p> <p>MMBIO 461 - Advanced Bacterial Physiology 3.0</p> <p>MMBIO 465 - Virology 3.0</p> <p>PDBIO 220 - (Not currently offered) 4.0</p> <p>PDBIO 305 - Human Physiology 3.0</p> <p>PDBIO 360 - Cell Biology 3.0</p> <p>PDBIO 362 - Advanced Physiology 1.0</p> <p>PDBIO 363 - Advanced Physiology Laboratory 3.0</p> <p>PWS 440 - Plant Physiology 3.0</p> <p>PWS 446 - Ornithology 3.0</p> <p>STAT 201 - Statistics for Engineers and Scientists 3.0</p> <p>REQUIREMENT 5</p> <p>Complete an exit interview.</p> <p>See catalog for recommended courses for career options in Botany, Preveterinary Medicine, and/or Premedical and Predental.</p> <p>THE DISCIPLINE:</p> <p>The biology degree provides students with current, practical knowledge of plants and animals, emphasizing whole organism biology in both ecological and evolutionary contexts. Broad, synthetic training, from molecular to community levels of organization, equips students to address critical issues and contemporary biological problems associated with the long-term preservation of earth's biodiversity. Elective flexibility allows students to emphasize the botanical or zoological fields, or create a combined program of study. Undergraduate research opportunities may include internships, museum collections curation, bioinventory and databasing activities, applied molecular genetics, and field and laboratory research in ecology, conservation biology, and evolutionary biology.</p>	<p>RESEARCH OPPORTUNITIES:</p> <p>One objective of this program is to provide solid preparation for post graduate studies. For that reason students should take advantage of research opportunities. Department faculty conduct field and laboratory research on diverse topics (including genetics of human diseases, conservation biology, molecular systematics, evolution of life history strategies, biogeographical ecology, bioinventories, aquatic ecology, and bioassessment).</p> <p>Undergraduates have studied black bears in Utah, mouse systematics in Mexico, stonefly and trout biogeography in the western U.S. , turtles in Amazonia, insects in Borneo, and fish predation in the Provo River. The mentoring option allows up to 2 hours of Bio 494R research credit.</p> <p>PROFESSIONAL TRAINING, INTERNSHIPS, CO-OP ED, ETC.</p> <p>Undergraduates can seek paid positions in research laboratories. Cooperative programs with the U.S. Forest Service and the U. S. Fish and Wildlife Service may be available, as is summer employment with state and federal agencies. This can lead to permanent employment. Completing Bio 430, PWS 330 and 355 can increase summer employment options with government agencies.</p> <p>CAREERS:</p> <p>Post-graduate study in a wide-variety of sub disciplines in biology (molecular biology, genetics, ecology, evolutionary biology, conservation biology, etc.), as well as preparation for medical or dental school. Students may also pursue employment as a biologist in state and federal agencies, nongovernment organizations, and research laboratories.</p> <p>FINANCING:</p> <p>Students in this major may apply for university, college, and departmental scholarships. A number of research or teaching assistant positions for undergraduate students also exist.</p> <p>MAP DISCLAIMER</p> <p>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.</p>
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2018-2019

DEPARTMENT INFORMATION

Department of Biology

Brigham Young University
4101 Life Sciences Building
Provo, UT 84602
Telephone: (801) 422-2582

ADVISEMENT CENTER INFORMATION

Life Sciences Advisement

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