

# BS in Biodiversity & Conservation (282025) MAP Sheet

Life Sciences, Biology

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	3.0
<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	4.0
Physical Science	2	7.0
Social Science	1	3.0
<b>Core Enrichment: Electives</b>		
Religion Electives	3-4	6.0
Open Electives	Variable	Variable
*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (12 hours overlap)		
<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	
PHSCS 105	3.0	
BIO 130	4.0	
Quantitative Reasoning	3.0	
Religion Cornerstone course	2.0	
<b>Total Hours</b>	<b>15.0</b>	
<u>2nd Semester</u>		
A HTG 100 or 1st Year Writing	3.0	
Civilization 1 elective	3.0	
CHEM 105	4.0	
STAT 121	3.0	
Religion Cornerstone course	2.0	
<b>Total Hours</b>	<b>15.0</b>	
<b>SOPHOMORE YEAR</b>		
<u>3rd Semester</u>		
BIO 220	4.0	
MMBIO 240	3.0	
Civilization 2 elective	3.0	
Religion cornerstone course	2.0	
General Electives	3.0	
<b>Total Hours</b>	<b>15.0</b>	
<u>4th Semester</u>		
BIO 230	4.0	
General Elective	4.0	
Arts or Letters elective	3.0	
Religion Cornerstone course	2.0	
Social Science elective	3.0	
<b>Total Hours</b>	<b>16.0</b>	
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.		
<b>JUNIOR YEAR</b>		
<u>5th Semester</u>		
Physical Sci elective	3.0	
PWS 340	3.0	
BIO 350	3.0	
Religion elective	2.0	
Adv. Written & Oral Communication elective	3.0	
Mentored Research	2.0	
<b>Total Hours</b>	<b>16.0</b>	
<u>6th Semester</u>		
Major Electives	3.0	
Religion Elective	2.0	
Biodiversity & Cons. Courses	6.0	
Languages of Learning Elective	4.0	
<b>Total Hours</b>	<b>15.0</b>	
<b>SENIOR YEAR</b>		
<u>7th Semester</u>		
BIO 420	2.0	
BIO 421	1.0	
Biology electives	3.0	
Biodiversity & Cons. Courses	6.0	
Religion Elective	2.0	
<b>Total Hours</b>	<b>14.0</b>	
<u>8th Semester</u>		
Religion elective	2.0	
Biology elective	6.0	
Global & Cultural Awareness elective	3.0	
Arts or Letters elective	3.0	
<b>Total Hours</b>	<b>14.0</b>	

## BS in Biodiversity & Conservation (282025)

### 2017-2018 Program Requirements (60 Credit Hours)

<p><b>REQUIREMENT 1</b> Complete 11 courses</p> <ul style="list-style-type: none"> <li>*BIO 130 - Biology 4.0</li> <li>BIO 220 - Biological Diversity: Animals 4.0</li> <li>BIO 230 - Biological Diversity: Plants 4.0</li> <li>BIO 350 - Ecology 3.0</li> <li>BIO 420 - Evolutionary Biology 2.0</li> <li>BIO 421 - Evolutionary Biology Laboratory 1.0</li> <li>CHEM 105 - General College Chemistry 1 with Lab (Integrated) 4.0</li> <li>MMBIO 240 - Molecular Biology 3.0</li> <li>PHSCS 105 - General Physics 1 3.0</li> <li>PWS 340 - Genetics 3.0</li> <li>*STAT 121 - Principles of Statistics 3.0</li> </ul> <p><b>REQUIREMENT 2</b> Complete 2.0 hours from the following course(s)  <b>COMPLETE AT LEAST 2.0 CREDIT HOURS. MORE MAY BE TAKEN IF DESIRED BUT WILL NOT COUNT TOWARD THE MAJOR CREDITS.</b></p> <ul style="list-style-type: none"> <li>BIO 494R - Mentored Research 6.0v  <i>You may take up to 2 credit hours.</i></li> </ul> <p><b>REQUIREMENT 3</b> Complete 12.0 hours from the following course(s)  <b>BIODIVERSITY AND CONSERVATION COURSES:</b></p> <ul style="list-style-type: none"> <li>BIO 235 - Field Botany 3.0</li> <li>BIO 430 - Plant Classification and Identification 4.0</li> <li>BIO 441 - Entomology 3.0</li> <li>BIO 443 - Ichthyology 3.0</li> <li>BIO 445 - Herpetology 4.0</li> <li>BIO 446 - (Bio - PWS) Ornithology 3.0</li> <li>BIO 447 - Mammalogy 3.0</li> <li>BIO 450 - Conservation Biology 3.0</li> <li>BIO 452 - Marine Biology 4.0</li> <li>BIO 455 - Plant Ecology 3.0</li> </ul> <p><b>REQUIREMENT 4</b> Complete 12.0 hours from the following course(s)  <b>ELECTIVE COURSES - COMPLETE AT LEAST 12.0 HOURS:</b></p> <ul style="list-style-type: none"> <li>BIO 165 - Introduction to Bioinformatics 3.0</li> <li>BIO 370 - Bioethics 2.0</li> <li>BIO 380 - Comparative Animal Physiology and Anatomy 4.0</li> <li>BIO 470 - History and Philosophy of Biology 3.0</li> <li>BIO 510 - Biological Systematics and Curation 3.0</li> <li>BIO 511 - Lichenology 3.0</li> <li>BIO 555 - Evolutionary and Ecological Modeling 2.0</li> <li>BIO 557 - Stream and Wetland Ecology 4.0</li> <li>BIO 560 - Population Genetics 4.0</li> </ul>	<ul style="list-style-type: none"> <li>ECON 440 - Natural Resources and Environmental Economics 3.0</li> <li>GEOG 211 - Map Use and Interpretation 4.0</li> <li>GEOG 212 - Introduction to Geographic Information Systems 3.0</li> <li>GEOG 303 - Biogeography 3.0</li> <li>MATH 112 - Calculus 1 4.0</li> <li>PWS 282 - Soil Science 3.0</li> <li>PWS 411 - Watershed Management 3.0</li> <li>PWS 419 - Forest Management and Ecology 3.0</li> <li>PWS 440 - Plant Physiology 3.0</li> </ul> <p><b>REQUIREMENT 5</b>          Complete an exit interview.</p> <p><b>THE DISCIPLINE</b></p> <p>We all depend on the diversity of life for personal and societal survival. We need all forms of life for the beauty it holds, the food it gives, the life-saving drugs it provides, the clean water we use, or any number of other valid and important reasons. The services that healthy ecosystems perform, if only from our human perspective, are immense and irreplaceable. Conservation Biology deals with identification, protection, maintenance, development, and restoration of the earth's biological diversity (biodiversity), including genetic diversity within species, species richness in different regions, and the diversity of ecological communities. This focus differs substantially from traditional wildlife management and forestry-range programs in two fundamental ways: (1) it seeks to protect all life on earth; and (2) it seeks to preserve biological processes (ecological and evolutionary interactions) that generate and maintain biodiversity over the long-term. Our program offers a large number of natural history courses (botany, mammalogy, entomology, etc.) and includes courses relevant to policy, management, ethical, and socioeconomic factors.</p> <p><b>SUPPORTING MINORS</b></p> <p>Students majoring in conservation biology should consider completing a minor to strengthen their technical or applied sociological skills. Possible minors in anthropology, geography (geography; geographic information systems; urban and environmental planning), international development, management (global management), political science, recreation management and youth leadership (nonprofit management), sociology, women's studies.</p>	<p><b>RESEARCH OPPORTUNITIES</b></p> <p>Students in this program conduct research projects with professors in many departments and with expertise at all scales of modern conservation biology. Projects range from those focusing on genetic variation within key species of concern to inventorying species, communities, and ecosystems locally, regionally, and around the world. Others carefully examine interactions between species and their environments. Our students provide scientific information to aid government and private institutions in making decisions of how best to maintain, develop, and restore biodiversity resources at all these levels, while others work to improve biological science education curricula in local public schools. We have great museum and data-basing resources, and links with communities worldwide to gather, store, and use information on distribution of many kinds of living organisms. Many students choose to study conservation biology simply for the intrinsic joy and beauty it brings to their lives. Our students participate in all these efforts.</p> <p><b>INTERNSHIPS, CO-OP ED, PRACTICAL EDUCATION:</b></p> <p>Common experiences for our students include participating in extended field trips with faculty, assisting with long-term research and museum curation or education projects, participating in international exchange programs, working as volunteer interns and performing community outreach education. Many of our students planning on medical and dental careers use these opportunities to enhance their knowledge of key conservation issues and involvement in programs combining the "natural" world with their interests in human health and well-being. As a result of participation in research projects, many students present papers or posters with faculty sponsors at scientific meetings, and co-author papers in peerreviewed journals.</p> <p><b>MAP DISCLAIMER</b></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> <p><b>DEPARTMENT INFORMATION</b></p> <p><b>Department of Biology</b>          Brigham Young University          4101 Life Sciences Building</p>
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## **BS in Biodiversity & Conservation (282025)**

**2017-2018**

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### **ADVISEMENT CENTER INFORMATION**

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

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