# University Core and Graduation Requirements

## University Core Requirements:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>#Classes</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion Cornerstones</td>
<td>1</td>
<td>2.0</td>
<td>REL A 275</td>
</tr>
<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
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<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
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<td>Foundations of the Restoration</td>
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<td>REL C 225</td>
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<tr>
<td>The Eternal Family</td>
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<td>REL C 200</td>
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<td>The Individual and Society</td>
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<tr>
<td>American Heritage</td>
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<td>3-6.0</td>
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</tr>
<tr>
<td>Global and Cultural Awareness</td>
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<td>Skills</td>
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<td>First Year Writing</td>
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<td>Advanced Written and Oral Communications</td>
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<td>Languages of Learning (Math or Language)</td>
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<td>Arts, Letters, and Sciences</td>
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<tr>
<td>Civilization 1</td>
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<tr>
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<tr>
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<td>Core Enrichment: Electives</td>
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<td>Religion Electives</td>
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<td>Open Electives</td>
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<td>personal choice</td>
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</table>

## Graduation Requirements:

- Minimum residence hours required: 30.0
- Minimum hours needed to graduate: 120.0

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**Minor in Environmental Science (285802) MAP Sheet**

Life Sciences, Plant and Wildlife Sciences
For students entering the degree program during the 2021-2022 curricular year.
## Minor in Environmental Science (285802)
### 2021-2022 Program Requirements (17 Credit Hours)

### REQUIREMENT 1 Complete 2 courses

#### ENVIRONMENTAL SCIENCE CORE COURSES:
- GEOL 111 - Physical Geology 4.0
- GEOL 435 - Introduction to Groundwater 3.0
- MATH 112 - Calculus 1 4.0
- MATH 119 - Introduction to Calculus 4.0
- MATH 302 - Mathematics for Engineering 1 4.0
- MATH 303 - Mathematics for Engineering 2 4.0
- MMBIO 221 - General Microbiology 3.0
- MMBIO 240 - Molecular Biology 3.0
- MMBIO 241 - Molecular and Cellular Biology Laboratory 1.0
- PHIL 205 - Introduction to Logic and Critical Thinking 3.0
- PHSC 105 - General Physics 1 3.0
- PHSC 106 - General Physics 2 3.0
- PHSC 107 - General Physics Lab 1 1.0
- PHSC 108 - General Physics Lab 2 1.0
- PHSC 121 - Introduction to Newtonian Mechanics 3.0
- PHSC 123 - Introduction to Waves, Optics, and Thermodynamics 3.0
- PWS 100 - Plants in the Environment 3.0
- PWS 103 - Residential Landscape Design 3.0
- PWS 215 - Principles of Range Management 3.0
- PWS 225 - Principles of Wildlife and Fisheries Management 3.0
- PWS 282 - Soil Science 3.0
- PWS 283 - Soil Science Laboratory 1.0
- PWS 288 - Molecular Genetics Laboratory 3.0
- PWS 303 - Soils Conservation and Resources 3.0
- PWS 305 - Watershed Ecology 3.0
- PWS 306 - Watershed Ecology Laboratory 1.0
- PWS 330 - Rangeland Plant Identification and Ecology 3.0
- PWS 331 - Science of Pest Control 3.0
- PWS 340 - Genetics 3.0
- PWS 355 - Rangeland Vegetation Measurements and Analysis 3.0
- PWS 365 - Biogeochemistry 3.0
- PWS 366 - Biogeochemistry Laboratory 1.0
- PWS 390R - Mentored Learning Experience 6.0v

### REQUIREMENT 2 Complete 6.0 hours from the following course(s)

#### PWS SUPPORTING CORE COURSES:
- PWS 282 - Soil Science 3.0
- PWS 283 - Soil Science Laboratory 1.0
- PWS 305 - Watershed Ecology 3.0
- PWS 365 - Biogeochemistry 3.0
- PWS 419 - Advanced Geographic Information Systems 3.0
- PWS 420 - Landscape Ecology 3.0
- PWS 421 - Advanced Geographic Information Systems 3.0
- PWS 490 - Complex Systems - Major's 2.0
- PWS 494R - Mentored Learning Experience 6.0v

### REQUIREMENT 3 Complete 5.0 hours from the following course(s)

#### OTHER AND PWS SUPPORTING CORE COURSES:
- BIB 220 - Biological Diversity: Animals 4.0
- BIB 370 - Bioethics 2.0
- BIO 441 - Entomology 3.0
- CELL 360 - Cell Biology 3.0
- CHEM 101 - Introductory General Chemistry 3.0
- 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
- CHEM 223 - Quantitative and Qualitative Analysis 4.0
- CHEM 227 - Principles of Chemical Analysis 4.0
- CHEM 255 - Introductory Organic Chemistry 4.0
- CHEM 351M - Organic Chemistry 1 - Majors 3.0
- CHEM 352M - Organic Chemistry 2 - Majors 3.0
- CHEM 353 - Organic Chemistry Laboratory--Nonmajors 2.0v
- CHEM 481M - Biochemistry--Majors 3.0
- ECON 440 - Natural Resources and Environmental Economics 3.0
- GEOL 101 - Introduction to Geology 3.0
- GEOL 212 - Introduction to Geographic Information Systems 3.0
- GEOL 303 - Biogeography 3.0
- GEOL 305 - Geography of Landforms 3.0
- GEOL 306 - Global Conservation Designations 3.0
- GEOL 307 - Landscape Ecology 3.0
- GEOL 310 - Introduction to Urban and Regional Planning 3.0
- GEOL 311 - Intermediate Geographic Information Systems 3.0
- GEOL 331 - Economic Geography 3.0
- GEOL 412 - Advanced Geographic Information Systems 3.0
- GEOL 435 - Introduction to Groundwater 3.0
- GEOL 436 - Environmental Geology 3.0
- MATH 112 - Calculus 1 4.0
- MATH 119 - Introduction to Calculus 4.0
- MATH 302 - Mathematics for Engineering 1 4.0
- MATH 303 - Mathematics for Engineering 2 4.0
- MMBIO 221 - General Microbiology 3.0
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- PWS 365 - Biogeochemistry 3.0
- PWS 366 - Biogeochemistry Laboratory 1.0
- PWS 390R - Mentored Learning Experience 6.0v

### 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
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Brigham Young University
4105 Life Sciences Building
Provo, UT 84602
Telephone: (801) 422-3527

### ADVISEMENT CENTER INFORMATION
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2060 Life Sciences Building
Provo, UT 84602
Telephone: (801) 422-3042
lifesciences@byu.edu