

BIOLOGY (SCIENCE EDUCATION), B.S.

This program is designed for students interested in science education and certification to teach secondary science.

Requirements for a Major in Biology (Science Education)

Code **Title** **Hours**

Thirty-one semester hours including the following: ¹

Required Courses

| | | |
|--|---|----|
| BIO 1305 & BIO 1105 | Modern Concepts of Bioscience and Modern Concepts of Bioscience Laboratory | 4 |
| or BIO 1405 | Investigations of Modern Biology Concepts I | |
| BIO 1306 & BIO 1106 | Modern Concepts of Bioscience, continued and Modern Concepts of Bioscience Laboratory | 4 |
| or BIO 1406 | Investigations of Modern Biology Concepts II | |
| BIO 2306 & BIO 2106 | Genetics and Genetics Laboratory | 4 |
| BIO 3366 | Foundations of Evolutionary Biology | 3 |
| or BIO 4365 | Topics in Evolution | |
| BIO 4333 | Science Leadership: Improvement of Science Education | 3 |
| BIO 3V9R | Research | 1 |
| BIO 4001 | Achievement Test | 0 |
| Select four hours from each group (a course may not be used to fulfill more than one group): | | 12 |

Group 1

| | | |
|------------------------|--|--|
| BIO 3324 & BIO 3124 | Entomology and Laboratory for Entomology | |
| BIO 3429 | Comparative Chordate Anatomy | |
| BIO 4308 & BIO 4108 | Genes and Development and Genes and Development Laboratory | |
| BIO 4426 | Vertebrate Histology | |
| BIO 4432 | General Human Anatomy | |

Group 2

| | | |
|------------------------|--|--|
| BIO 3322 & BIO 3122 | Human Physiology and Human Physiology Lab | |
| BIO 4306 & BIO 4106 | Molecular Genetics and Genomics and Molecular Genetics and Genomics Laboratory | |
| BIO 4431 | | |

Group 3

| | | |
|------------------------|--|--|
| BIO 3303 & BIO 3103 | Ecology and Ecology Laboratory | |
| BIO 3324 & BIO 3124 | Entomology and Laboratory for Entomology | |
| BIO 4405 | Limnology | |
| BIO 4406 | Aquatic Biology | |
| BIO 4418 | Biology of Wetland and Aquatic Vascular Plants | |

| | | |
|---|--|-----------|
| BIO 4422 | Ichthyology | |
| BIO 4427 | | |
| Subtotal | | 31 |
| Required Courses in Other Fields ² | | |
| CHE 1301 & CHE 1101 | Basic Principles of Modern Chemistry I and General Chemistry Laboratory I | 4 |
| CHE 1302 & CHE 1102 | Basic Principles of Modern Chemistry II and General Chemistry Laboratory II | 4 |
| CHE 3331 | Organic Chemistry I | 3 |
| CHE 3332 | Organic Chemistry II | 3 |
| CHE 3238 | Organic Chemistry Laboratory | 2 |
| GEO 1306 & GEO 1106 | The Earth Through Time and The Earth Through Time, Laboratory | 4 |
| or GEO 1307 & GEO 1106 | Evolution and Extinction and The Earth Through Time, Laboratory | |
| GEO 1408 | Earth Science | 4 |
| or PHY 1455 | Descriptive Astronomy | |
| MTH 1321 | Calculus I | 3 |
| MTH 1322 | Calculus II | 3 |
| or STA 2381 | Introductory Statistical Methods | |
| Select one of the following sequences: | | 8 |
| PHY 1408 & PHY 1409 | General Physics for Natural and Behavioral Sciences I and General Physics for Natural and Behavioral Sciences II | |
| PHY 1420 & PHY 1430 | General Physics I and General Physics II | |
| PHY 1420 & PHY 1409 | General Physics I and General Physics for Natural and Behavioral Sciences II | |
| Completion of the Minor in Science Education ³ | | |
| Total Hours | | 69 |

¹ A grade of "C" or better in 31 hours of biology courses used in the major and a GPA of 2.0 or higher on all BIO courses.

² A grade of "C" or better in all courses required in other fields.

³ School of Education - contact the advising department in the School of Education - Office of Student and Information Services, located in Draper 100.