

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 or BIO 4365 | Foundations of Evolutionary Biology Topics in Evolution | 3 |
| BIO 4333 | Science Leadership: Improvement of Science Education | 3 |
| BIO 3V9R | Research ⁴ | 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

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|---------------------|--|
| 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

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|---------------------|--|
| 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 4332 | Comparative Vertebrate Physiology |

Group 3

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| 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 4327 | Biology of Mammals | |
| 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 or GEO 1307 & GEO 1106 | The Earth Through Time and The Earth Through Time, Laboratory Evolution and Extinction and The Earth Through Time, Laboratory | 4 |
| GEO 1408 or PHY 1455 | Earth Science Descriptive Astronomy | 4 |
| MTH 1321 | Calculus I | 3 |
| MTH 1322 or STA 2381 | Calculus II Introductory Statistical Methods | 3 |
| 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.

⁴ A maximum of 3 hours total from 3V9R and 3V90 may be used for elective credit.

⁵ A maximum of 2 credit hours of BIO 3111 may be used towards major.