

Department of

Biology**John Zenger, Department Chair**

Gary Baird, Lanning Baker, Tate Carter, Steven Christenson, Van Christman, Robert Coleman, Kent Davis, Mark Dewall, Clair Eckersell, Lynn Firestone, John Griffith, Michael Groesbeck, Holden Hugginbotham, Alan Holyoak, Jason Hunt, Todd Kelson, Sidney Palmer, Seth Ririe, Jerry Scrivner, Jason Shaw, Dave Stricklan, Russell Thurston, Travis Wall, Gene Weller, Dwight Wray, John Zenger
Lark Hillier, Secretary (208) 496-4600
<http://www.byui.edu/biology/>

Department Description

The Department of Biology provides a variety of classes for students seeking a degree in biology and many biology courses servicing a number of non-biology majors such as nursing, exercise science and health science. Bachelor of Science degrees are offered in Biology, Ecology/Wildlife/Fisheries, and Biology Education. Minors can be earned in Biology, Natural Resources and Biology Education.

Program Description**B.S. in Biology (700)**

The biology degree provides a solid foundation in biology. It is designed to prepare students for professional programs in medicine, dentistry, optometry, podiatry, physical/occupational therapy, etc., or graduate programs in botany, ecology, natural resources, biotechnology, microbiology, neurobiology, etc. In addition, the degree provides preparation for those students seeking employment after completing a bachelors degree. Students majoring in Biology select one of the following emphases depending on their interests and career goals.

Microbiology (700-55)

The Microbiology emphasis is designed to prepare students for career opportunities and graduate work in microbiology and related fields such as bacteriology, immunology, medical microbiology, and virology. Although this emphasis does not give students the depth that a degree in microbiology does, it will give students sufficient background and training to work in laboratories using basic microbiological techniques and to pursue further study in the field.

Zoology (700-170)

The zoology emphasis is designed to prepare students for career opportunities and graduate work in zoology and related areas. This emphasis will provide students with opportunities to study the structure, function, diversity, ecology, and evolution with an appropriate minor or clusters, this emphasis can qualify students for entry-level positions in industry or government agencies, as well as for further study at the graduate level.

Neuroscience (700-62)

Neuroscience is a multi-disciplinary program that focuses on the development, structure and function of the nervous system and its regulation of body systems and behavior. The neuroscience emphasis examines topics such as molecular and cellular neurobiology, neuroanatomy, the neural basis of behavior, learning, memory, cognition and perception, neuroendocrinology, neurophysiology, neuronpharmacology, and neurological disorders. Students will be prepared to pursue advanced degrees in biology, psychology, and neuroscience or to enter into the pharmaceutical and biotechnology workforce. Neuroscience is an excellent pre-professional field of study for those interested in health professions, law, or business.

Environmental Biology (700-68)

The Environmental Biology emphasis is designed to prepare students for careers and graduate studies in the biology-related fields of environmental science. Students selecting this emphasis complete all core courses for the Biology Major, as well as specified coursework designed to prepare them for work as environmental biologists. This sector of environmental science is expected to undergo significant increases in employment opportunities for the foreseeable future, and career paths for people trained in this field are found in education, government, industry, and non-governmental organizations.

Human Biology (700-69)

The Human Biology emphasis is designed for students planning on careers centered on human health and well-being, such as medicine, dentistry, optometry, podiatry, physical/occupational therapy, etc., and for students desiring to pursue graduate degrees in anatomy and physiology. The courses were chosen to prepare students for further study in these professional schools as well as for students interested in continuing their education in graduate school.

Biotechnology (700-70)

Biotechnology is the application of biological information and techniques to meet medical, agricultural, and environmental needs. Students selecting this emphasis will be well prepared to pursue graduate studies in genetics, molecular biology, cellular biology, biochemistry and physiology. The emphasis will also prepare students for immediate employment as entry level technicians in one of hundreds of different biotechnology companies and university research labs. The emphasis will also serve pre-professional students interested in one of the medical professions.

B.S. in Plant and Wildlife Ecology (488)

This degree provides a powerful foundation for most ecological and natural resource related fields. It offers five separate areas of specialization, with course work requirements designed to meet State and Federal hiring prerequisites, and to prepare students for graduate studies.

Range Emphasis (488-179)

The Range emphasis prepares students for careers in rangeland conservation, rangeland ecology, rangeland/livestock production consulting, wildlife and livestock production in a rangeland setting, or for post-baccalaureate studies in rangeland ecology related fields.

Ecology Emphasis (488-180)

The Ecology emphasis is designed to be somewhat broader than the other emphases in the 487 series and should be taken by students interested in careers in conservation biology, natural history education/interpretation, natural resource policy/law, as park rangers, or as a foundation for post baccalaureate studies in ecology related fields.

Wildlife Emphasis (488-176)

The Wildlife emphasis prepares students for careers as wildlife biologists, conservation officers, natural resource managers, park rangers, natural resource policy/administration officers, and for legal careers and post-baccalaureate studies in wildlife related fields.

Fisheries Emphasis (488-177)

The Fisheries emphasis prepares students for careers as fisheries biologists, conservation officers, natural resource managers, park rangers, natural resource policy/administration officers and for legal careers and post-baccalaureate studies in fisheries related fields.

Plant Biology Emphasis (488-178)

The Plant Biology emphasis prepares students for careers as botanists. The degree also provides a strong foundation for post-baccalaureate studies in plant ecology, physiology, systematic, pathology, or other related fields.

B.S. in Biology Education (800)

The Biology Education Major at BYU–Idaho requires completion of specific coursework in Biology, BYU–Idaho Foundations classes, and Education classes needed for certification as a secondary education teacher in the state of Idaho (Idaho certification qualifies graduates to teach in 44 states). The Biology Education major at BYU–Idaho also requires the completion of an Education Minor. Students who graduate from this program are eligible for teacher certification in biology and in their chosen education minor.

For a listing of approved Secondary Education majors and minors, see the Teacher Education section of this catalog.

B.S. in Biology Education Composite (805)

A second pathway to the Biology Education Major at BYU–Idaho requires completion of specific coursework in Biology, BYU–Idaho Foundation classes, and Secondary Education classes needed for certification as a teacher in the State of Idaho. The Composite Biology Education major at BYU–Idaho does not require a minor, but gives more emphasis to preparation in the various biological sciences. Students who graduate from this program are eligible for teacher certification in biology but do not receive any other teaching endorsements.

Biology

Brigham Young University-Idaho 2013-2014

BS in Biology Microbiology Emphasis (700-55)

Take Required Foundation Courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

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| BIO 180 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 199 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 106 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATH 221B | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 398 | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 497 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 498R | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 181 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 377 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 321 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 410 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 411 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 412 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 376 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 481 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HS 370 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Total Major Credits=52

Additional Elective Credits Required for Graduation - 28

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

BS in Biology Neuroscience Emphasis (700-62)

Take Required Foundation Courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

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| BIO 180 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 199 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 106 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATH 221B | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 398 | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 497 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 498R | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 181 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 377 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 240 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 461 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 485 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 376 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 380 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 460 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 462 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSYCH 342 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSYCH 370 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PSYCH 384 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Total Major Credits=52

Additional Elective Credits Required for Graduation - 28

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Biology

Brigham Young University-Idaho 2013-2014

BS in Biology Environmental Biology Emphasis (700-68)

Take Required Foundation Courses (40 credits)

Major Requirements

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| <p><i>Take these courses during your first 2 semesters:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 180</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 199</td><td style="text-align: right;">1</td></tr> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 106</td><td style="text-align: right;">4</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">13</td></tr> </table> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td>MATH 221B</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">9</td></tr> </table> | BIO 180 | 4 | BIO 199 | 1 | CHEM 105 | 4 | CHEM 106 | 4 | | 13 | BIO 375 | 3 | BIO 475 | 3 | MATH 221B | 3 | | 9 | <p><i>Take one course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 398</td><td style="text-align: right;">1-4</td></tr> <tr><td>BIO 497</td><td style="text-align: right;">1</td></tr> <tr><td>BIO 498R</td><td style="text-align: right;">1-4</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">1</td></tr> </table> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 181</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 379</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">7</td></tr> </table> | BIO 398 | 1-4 | BIO 497 | 1 | BIO 498R | 1-4 | | 1 | BIO 181 | 4 | BIO 379 | 3 | | 7 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 250</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 423</td><td style="text-align: right;">3</td></tr> <tr><td>CHEM 220</td><td style="text-align: right;">5</td></tr> <tr><td>GEOG 230</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">19</td></tr> </table> <p><i>Take 6 credits:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 314</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 351</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 352</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 362</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 390</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 391</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 392</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 393</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 420</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">6</td></tr> </table> | BIO 250 | 4 | BIO 302 | 4 | BIO 423 | 3 | CHEM 220 | 5 | GEOG 230 | 3 | | 19 | BIO 314 | 3 | BIO 351 | 3 | BIO 352 | 3 | BIO 362 | 3 | BIO 390 | 2 | BIO 391 | 2 | BIO 392 | 2 | BIO 393 | 4 | BIO 420 | 3 | | 6 | <p><i>Program Notes:</i></p> |
| BIO 180 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 199 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 106 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATH 221B | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 398 | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 497 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 498R | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 181 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 379 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 250 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 423 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 220 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GEOG 230 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 314 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 351 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 352 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 362 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 390 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 391 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 392 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 393 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 420 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Total Major Credits=55

Additional Elective Credits Required for Graduation - 25

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

BS in Biology Human Biology Emphasis (700-69)

Take Required Foundation Courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p><i>Take these courses during your first 2 semesters:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 180</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 199</td><td style="text-align: right;">1</td></tr> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 106</td><td style="text-align: right;">4</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">13</td></tr> </table> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td>MATH 221B</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">9</td></tr> </table> | BIO 180 | 4 | BIO 199 | 1 | CHEM 105 | 4 | CHEM 106 | 4 | | 13 | BIO 375 | 3 | BIO 475 | 3 | MATH 221B | 3 | | 9 | <p><i>Take one course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 398</td><td style="text-align: right;">1-4</td></tr> <tr><td>BIO 497</td><td style="text-align: right;">1</td></tr> <tr><td>BIO 498R</td><td style="text-align: right;">1-4</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">1</td></tr> </table> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 181</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 377</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">7</td></tr> </table> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 460</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 461</td><td style="text-align: right;">5</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">9</td></tr> </table> | BIO 398 | 1-4 | BIO 497 | 1 | BIO 498R | 1-4 | | 1 | BIO 181 | 4 | BIO 377 | 3 | | 7 | BIO 460 | 4 | BIO 461 | 5 | | 9 | <p><i>Take 10 credits:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 240</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 321</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 376</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 380</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 381</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 383</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 386</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 410</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 411</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 462</td><td style="text-align: right;">2</td></tr> <tr><td>CHEM 481</td><td style="text-align: right;">3</td></tr> <tr><td>ESS 375</td><td style="text-align: right;">3</td></tr> <tr><td>HRHP 359</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">10</td></tr> </table> | BIO 240 | 4 | BIO 321 | 4 | BIO 376 | 3 | BIO 380 | 4 | BIO 381 | 3 | BIO 383 | 3 | BIO 386 | 3 | BIO 410 | 4 | BIO 411 | 4 | BIO 462 | 2 | CHEM 481 | 3 | ESS 375 | 3 | HRHP 359 | 3 | | 10 | <p><i>Take 3 credits of any 400 level Biology Course</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 4XX</td><td style="text-align: right;">3</td></tr> <tr><td style="border-top: 1px solid black;"></td><td style="text-align: right; border-top: 1px solid black;">3</td></tr> </table> | BIO 4XX | 3 | | 3 | <p><i>Program Notes:</i></p> |
| BIO 180 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 199 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 106 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATH 221B | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 398 | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 497 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 498R | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 181 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 377 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 460 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 461 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 240 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 321 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 376 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 380 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 381 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 383 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 386 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 410 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 411 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 462 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 481 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ESS 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HRHP 359 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 4XX | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Total Major Credits=52

Additional Elective Credits Required for Graduation - 28

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Biology

Brigham Young University-Idaho 2013-2014

| BS in Biology | | | |
|--|---|---|-----------------------|
| Biotechnology Emphasis (700-70) | | | |
| Take Required Foundation Courses (40 credits) | | | |
| Major Requirements | | | |
| <i>No Double Counting of Major Courses - No Grade Less Than C- in Major Courses</i> | | | |
| <i>Take these courses during your first 2 semesters:</i> BIO 180 4 BIO 199 1 CHEM 105 4 CHEM 106 4 <hr style="width: 100%;"/> 13 <i>Take these courses:</i> BIO 375 3 BIO 475 3 MATH 221B 3 <hr style="width: 100%;"/> 9 | <i>Take one course:</i> BIO 398 1-4 BIO 497 1 BIO 498R 1-4 <hr style="width: 100%;"/> 1 <i>Take these courses:</i> BIO 181 4 BIO 377 3 <hr style="width: 100%;"/> 7 | <i>Take these courses:</i> BIO 321 4 BIO 376 3 CHEM 351 4 CHEM 481 3 <hr style="width: 100%;"/> 14 <i>Take 8 credits:</i> BIO 410 4 BIO 411 4 BIO 412 4 BIO 461 5 CHEM 220 5 <hr style="width: 100%;"/> 8 | <i>Program Notes:</i> |
| Total Major Credits=52 | | | |
| Additional Elective Credits Required for Graduation - 28 | | | |
| This major is available on the following tracks: | | | |
| Fall-Winter---- YES | Winter-Spring---- YES | Spring-Fall---- YES | |

| BS in Biology | | | |
|---|---|--|---|
| Zoology Emphasis (700-170) | | | |
| Take Required Foundation Courses (40 credits) | | | |
| Major Requirements | | | |
| <i>No Double Counting of Major Courses - No Grade Less Than C- in Major Courses</i> | | | |
| Introduction to Biology Module <i>Take these courses during your first 2 semesters:</i> BIO 180 4 BIO 181 4 BIO 199 1 MATH 221B 3 <hr style="width: 100%;"/> 12 Science Module <i>Take these courses:</i> BIO 375 3 BIO 377 3 BIO 475 3 CHEM 105 4 CHEM 106 4 <hr style="width: 100%;"/> 17 | Animal Diversity Module <i>Take this course:</i> BIO 204 4 <hr style="width: 100%;"/> 4 <i>Take 9 credits:</i> BIO 312 4 BIO 331 3 BIO 445 3 BIO 446 3 BIO 447 3 BIO 448 3 <hr style="width: 100%;"/> 9 | Enrichment Module <i>Take 9 credits:</i> BIO 208 4 BIO 209 4 BIO 302 4 BIO 312 4 BIO 314 3 BIO 331 3 BIO 362 3 BIO 380 4 BIO 381 3 BIO 383 3 BIO 401R 1 BIO 420 3 BIO 445 3 BIO 446 3 BIO 447 3 BIO 448 3 BIO 460 4 BIO 461 5 BIO 499R 5 <hr style="width: 100%;"/> 1-6 9 | Internship <i>Take 1 course:</i> BIO 398 1-4 BIO 497 1 BIO 498R 1-4 <hr style="width: 100%;"/> 1 |
| Total Major Credits=52 | | | |
| Additional Elective Credits Required for Graduation - 28 | | | |
| This major is available on the following tracks: | | | |
| Fall-Winter---- YES | Winter-Spring---- YES | Spring-Fall---- YES | |

Biology

Brigham Young University-Idaho 2013-2014

BS in Plant and Wildlife Ecology Range Emphasis(488-179)

Take required Foundations courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | |
|--|---|--|-----------------------|
| <i>Take these courses during your first 2 semesters:</i> BIO 199 1 BIO 208 4 CHEM 105 4 CHEM 106 4 <hr style="width: 50%; margin-left: 0;"/> 13 | <i>Take these courses:</i> AGTEC 286 3 AGTEC 486 3 BIO 225 3 BIO 302 4 BIO 303 2 BIO 352 3 BIO 362 3 BIO 375 3 BIO 379 3 BIO 423 3 BIO 475 3 MATH 221B 3 <hr style="width: 50%; margin-left: 0;"/> 36 <i>Take 1 course:</i> BIO 398 1-4 BIO 498R 1-4 <hr style="width: 50%; margin-left: 0;"/> 1 | <i>Take these courses:</i> AGRON 220 3 AGRON 425 3 AS 220 3 AS 360 4 BIO 210 3 BIO 325 3 BIO 351 3 BIO 455 3 BIO 466 3 <hr style="width: 50%; margin-left: 0;"/> 28 <i>Take 1 course:</i> BIO 390 2 BIO 392 2 <hr style="width: 50%; margin-left: 0;"/> 2 | <i>Program Notes:</i> |
|--|---|--|-----------------------|

Total Major Credits=80

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

BS in Plant and Wildlife Ecology Ecology Emphasis (488-180)

Take required Foundations courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | |
|--|---|---|-----------------------|
| <i>Take these courses during your first 2 semesters:</i> BIO 199 1 BIO 208 4 CHEM 105 4 CHEM 106 4 <hr style="width: 50%; margin-left: 0;"/> 13 | <i>Take these courses:</i> AGTEC 286 3 AGTEC 486 3 BIO 225 3 BIO 302 4 BIO 303 2 BIO 352 3 BIO 362 3 BIO 375 3 BIO 379 3 BIO 423 3 BIO 475 3 MATH 221B 3 <hr style="width: 50%; margin-left: 0;"/> 36 <i>Take 1 course:</i> BIO 398 1-4 BIO 498R 1-4 <hr style="width: 50%; margin-left: 0;"/> 1 | <i>Take 1 course:</i> BIO 445 3 BIO 446 3 BIO 447 3 BIO 448 3 <hr style="width: 50%; margin-left: 0;"/> 3 <i>Take these courses:</i> AGRON 220 3 AGRON 220L 1 BIO 210 3 BIO 351 3 BIO 392 2 BIO 393 4 BIO 408 4 BIO 420 3 CHEM 351 4 <hr style="width: 50%; margin-left: 0;"/> 27 | <i>Program Notes:</i> |
|--|---|---|-----------------------|

Total Major Credits=80

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Biology

Brigham Young University-Idaho 2013-2014

BS in Plant and Wildlife Ecology Wildlife Emphasis (488-176)

Take required Foundations courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------|---|---------|---|----------|---|----------|---|--|----|--|-----------|---|-----------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|-----------|---|--|----|---------|-----|----------|-----|--|---|---|--------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|--|----|------------------------------|
| <p><i>Take these courses during your first 2 semesters:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 199</td><td style="text-align: right;">1</td></tr> <tr><td>BIO 208</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 106</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">13</td></tr> </table> | BIO 199 | 1 | BIO 208 | 4 | CHEM 105 | 4 | CHEM 106 | 4 | | 13 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>AGTEC 286</td><td style="text-align: right;">3</td></tr> <tr><td>AGTEC 486</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 225</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 303</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 352</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 362</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 379</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 423</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td>MATH 221B</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">36</td></tr> </table> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 398</td><td style="text-align: right;">1-4</td></tr> <tr><td>BIO 498R</td><td style="text-align: right;">1-4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">1</td></tr> </table> | AGTEC 286 | 3 | AGTEC 486 | 3 | BIO 225 | 3 | BIO 302 | 4 | BIO 303 | 2 | BIO 352 | 3 | BIO 362 | 3 | BIO 375 | 3 | BIO 379 | 3 | BIO 423 | 3 | BIO 475 | 3 | MATH 221B | 3 | | 36 | BIO 398 | 1-4 | BIO 498R | 1-4 | | 1 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>AS 215</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 307</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 312</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 351</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 360</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 390</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 392</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 445</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 446</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 447</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">30</td></tr> </table> | AS 215 | 4 | BIO 307 | 3 | BIO 312 | 4 | BIO 351 | 3 | BIO 360 | 3 | BIO 390 | 2 | BIO 392 | 2 | BIO 445 | 3 | BIO 446 | 3 | BIO 447 | 3 | | 30 | <p><i>Program Notes:</i></p> |
| BIO 199 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 208 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 106 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGTEC 286 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGTEC 486 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 225 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 303 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 352 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 362 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 379 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 423 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATH 221B | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 398 | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 498R | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AS 215 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 307 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 312 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 351 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 360 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 390 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 392 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 445 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 446 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 447 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Total Major Credits=80

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

BS in Plant and Wildlife Ecology Fisheries Emphasis (488-177)

Take required Foundations courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------|---|---------|---|----------|---|----------|---|--|----|--|-----------|---|-----------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|-----------|---|--|----|---------|-----|----------|-----|--|---|--|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|--|----|---------|---|---------|---|--|---|------------------------------|
| <p><i>Take these courses during your first 2 semesters:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 199</td><td style="text-align: right;">1</td></tr> <tr><td>BIO 208</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 106</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">13</td></tr> </table> | BIO 199 | 1 | BIO 208 | 4 | CHEM 105 | 4 | CHEM 106 | 4 | | 13 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>AGTEC 286</td><td style="text-align: right;">3</td></tr> <tr><td>AGTEC 486</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 225</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 303</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 352</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 362</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 379</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 423</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td>MATH 221B</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">36</td></tr> </table> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 398</td><td style="text-align: right;">1-4</td></tr> <tr><td>BIO 498R</td><td style="text-align: right;">1-4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">1</td></tr> </table> | AGTEC 286 | 3 | AGTEC 486 | 3 | BIO 225 | 3 | BIO 302 | 4 | BIO 303 | 2 | BIO 352 | 3 | BIO 362 | 3 | BIO 375 | 3 | BIO 379 | 3 | BIO 423 | 3 | BIO 475 | 3 | MATH 221B | 3 | | 36 | BIO 398 | 1-4 | BIO 498R | 1-4 | | 1 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 307</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 312</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 314</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 331</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 351</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 360</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 420</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 445</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 446</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">28</td></tr> </table> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 390</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 392</td><td style="text-align: right;">2</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">2</td></tr> </table> | BIO 307 | 3 | BIO 312 | 4 | BIO 314 | 3 | BIO 331 | 3 | BIO 351 | 3 | BIO 360 | 3 | BIO 420 | 3 | BIO 445 | 3 | BIO 446 | 3 | | 28 | BIO 390 | 2 | BIO 392 | 2 | | 2 | <p><i>Program Notes:</i></p> |
| BIO 199 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 208 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 106 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGTEC 286 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGTEC 486 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 225 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 303 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 352 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 362 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 379 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 423 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATH 221B | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 398 | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 498R | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 307 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 312 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 314 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 331 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 351 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 360 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 420 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 445 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 446 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 390 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 392 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Total Major Credits=80

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Biology

Brigham Young University-Idaho 2013-2014

BS in Plant and Wildlife Ecology Plant Bio Emphasis (488-178)

Take required Foundations courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------|---|---------|---|----------|---|----------|---|--|----|--|-----------|---|-----------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|-----------|---|--|----|---------|-----|----------|-----|--|---|---|-----------|---|------------|---|---------|---|---------|---|---------|---|---------|---|---------|---|----------|---|---------|---|----------|---|--|----|------------------------------|
| <p><i>Take these courses during your first 2 semesters:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 199</td><td style="text-align: right;">1</td></tr> <tr><td>BIO 208</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 106</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">13</td></tr> </table> | BIO 199 | 1 | BIO 208 | 4 | CHEM 105 | 4 | CHEM 106 | 4 | | 13 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>AGTEC 286</td><td style="text-align: right;">3</td></tr> <tr><td>AGTEC 486</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 225</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 303</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 352</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 362</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 379</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 423</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td>MATH 221B</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">36</td></tr> </table> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 398</td><td style="text-align: right;">1-4</td></tr> <tr><td>BIO 498R</td><td style="text-align: right;">1-4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">1</td></tr> </table> | AGTEC 286 | 3 | AGTEC 486 | 3 | BIO 225 | 3 | BIO 302 | 4 | BIO 303 | 2 | BIO 352 | 3 | BIO 362 | 3 | BIO 375 | 3 | BIO 379 | 3 | BIO 423 | 3 | BIO 475 | 3 | MATH 221B | 3 | | 36 | BIO 398 | 1-4 | BIO 498R | 1-4 | | 1 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>AGRON 220</td><td style="text-align: right;">3</td></tr> <tr><td>AGRON 220L</td><td style="text-align: right;">1</td></tr> <tr><td>APS 413</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 209</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 210</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 392</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 393</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 401R</td><td style="text-align: right;">1</td></tr> <tr><td>BIO 408</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 351</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">28</td></tr> </table> | AGRON 220 | 3 | AGRON 220L | 1 | APS 413 | 2 | BIO 209 | 4 | BIO 210 | 3 | BIO 392 | 2 | BIO 393 | 4 | BIO 401R | 1 | BIO 408 | 4 | CHEM 351 | 4 | | 28 | <p><i>Program Notes:</i></p> |
| BIO 199 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 208 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 106 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGTEC 286 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGTEC 486 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 225 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 303 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 352 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 362 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 379 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 423 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATH 221B | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 398 | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 498R | 1-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGRON 220 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AGRON 220L | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APS 413 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 209 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 210 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 392 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 393 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 401R | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 408 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 351 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Total Major Credits=78

Additional Elective Credits Required for Graduation=2

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

BS in Biology Education (800)

Take Required Foundation Courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>Education Core</p> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>ED 200</td><td style="text-align: right;">2</td></tr> <tr><td>ED 304</td><td style="text-align: right;">3</td></tr> <tr><td>ED 361</td><td style="text-align: right;">3</td></tr> <tr><td>ED 461</td><td style="text-align: right;">3</td></tr> <tr><td>ED 492</td><td style="text-align: right;">10</td></tr> <tr><td>SPEED 360</td><td style="text-align: right;">2</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">23</td></tr> </table> | ED 200 | 2 | ED 304 | 3 | ED 361 | 3 | ED 461 | 3 | ED 492 | 10 | SPEED 360 | 2 | | 23 | <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 204</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 208</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 221</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 305</td><td style="text-align: right;">1</td></tr> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 405</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">25</td></tr> </table> | BIO 204 | 4 | BIO 208 | 4 | BIO 221 | 3 | BIO 305 | 1 | BIO 375 | 3 | BIO 405 | 3 | BIO 475 | 3 | CHEM 105 | 4 | | 25 | <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 209</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 210</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">3</td></tr> </table> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 250</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">4</td></tr> </table> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 377</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 378</td><td style="text-align: right;">2</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">2</td></tr> </table> | BIO 209 | 4 | BIO 210 | 3 | | 3 | BIO 250 | 4 | BIO 302 | 4 | | 4 | BIO 377 | 3 | BIO 378 | 2 | | 2 | <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 312</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 331</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 446</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 447</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">3</td></tr> </table> | BIO 312 | 4 | BIO 331 | 3 | BIO 446 | 3 | BIO 447 | 3 | | 3 | <p><i>Program Notes:</i></p> |
| ED 200 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ED 304 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ED 361 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ED 461 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ED 492 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPEED 360 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 204 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 208 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 221 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 305 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 405 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 209 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 210 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 250 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 377 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 378 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| BIO 312 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 331 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 446 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 447 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Total Major Credits=37

Education Core Credits=23

Education Majors Require an Education Minor for Graduation

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Biology

Brigham Young University-Idaho 2013-2014

BS in Biology Education Composite (805)

Take Required Foundation Courses (40 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

| | | | | |
|----------------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| Education Core | <i>Take these courses:</i> | <i>Take 1 course:</i> | <i>Take 1 course:</i> | <i>Take 1 course:</i> |
| <i>Take these courses:</i> | BIO 181 4 | BIO 377 3 | BIO 312 4 | BIO 312 4 |
| ED 200 2 | BIO 204 4 | BIO 378 <u>2</u> | BIO 331 3 | BIO 331 3 |
| ED 304 3 | BIO 208 4 | | BIO 446 3 | BIO 376 3 |
| ED 361 3 | BIO 221 3 | | BIO 447 <u>3</u> | BIO 380 4 |
| ED 461 3 | BIO 222 1 | <i>Take 1 course:</i> | | BIO 408 4 |
| ED 492 10 | BIO 305 1 | BIO 250 4 | | BIO 446 3 |
| SPED 360 <u>2</u> | BIO 375 3 | BIO 302 <u>4</u> | <i>Take 1 course:</i> | BIO 447 3 |
| 23 | BIO 405 3 | | CHEM 106 4 | BIO 460 4 |
| <i>Program Notes:</i> | BIO 475 3 | <i>Take 1 course:</i> | MATH 221B <u>3</u> | BIO 461 5 |
| | CHEM 105 4 | BIO 209 4 | | CHEM 481 <u>4</u> |
| | PH 101 <u>4</u> | BIO 210 <u>3</u> | | 3 |
| | 34 | | | |

Total Major Credits=52

Education Core Credits=23

Additional Elective Credits Required for Graduation - 5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Natural Resources Minor (141)

Minor Requirements

No Double Counting of Minor Courses - No Grade Less Than C- in Major Courses

| | | | |
|----------------------------|------------------------------|-------------------|-----------------------|
| <i>Take these courses:</i> | <i>Take 6 credits:</i> | | <i>Program Notes:</i> |
| BIO 302 4 | AGRON 220 3 | BIO 379 3 | |
| BIO 351 3 | AGRON 220L 1 | BIO 390 2 | |
| BIO 352 3 | BIO 208 4 | BIO 391 2 | |
| BIO 362 3 | BIO 209 4 | BIO 392 2 | |
| BIO 423 <u>3</u> | BIO 210 3 | BIO 393 4 | |
| 16 | BIO 307 3 | BIO 408 4 | |
| | BIO 312 4 | BIO 420 3 | |
| | BIO 314 3 | BIO 446 3 | |
| | BIO 331 3 | BIO 447 3 | |
| | <i>continued next column</i> | GEOG 230 <u>3</u> | |
| | | 6 | |

Total Minor Credits=22

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Biology

Brigham Young University-Idaho 2013-2014

Minor in Biology (143)

Minor Requirements

No Double Counting of Minor Courses - No Grade Less Than C- in Minor Courses

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------------------|---|---------|---|--|---|---------|---|---------|---|--|---|----------|---|-----------|---|----|--|----------|---|--|---|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|--|------------------------------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|---------|---|--|------------------------------|--|---------|---|---------|---|---------|---|---------|---|---------|---|----------|---|--|---|------------------------------|
| <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 208</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">8</td></tr> </table> <p>OR</p> <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 180</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 181</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">8</td></tr> </table> <p><i>Take 4 credits:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CHEM 101</td><td style="text-align: right;">3</td></tr> <tr><td>CHEM 101L</td><td style="text-align: right;">1</td></tr> <tr><td>OR</td><td></td></tr> <tr><td>CHEM 105</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">4</td></tr> </table> | BIO 208 | 4 | BIO 302 | 4 | | 8 | BIO 180 | 4 | BIO 181 | 4 | | 8 | CHEM 101 | 3 | CHEM 101L | 1 | OR | | CHEM 105 | 4 | | 4 | <p><i>Take 8 credits:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 312</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 314</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 321</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 331</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 351</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 352</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 362</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 376</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 377</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 379</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right;"><i>continued next column</i></td></tr> </table> | BIO 302 | 4 | BIO 312 | 4 | BIO 314 | 3 | BIO 321 | 4 | BIO 331 | 3 | BIO 351 | 3 | BIO 352 | 3 | BIO 362 | 3 | BIO 375 | 3 | BIO 376 | 3 | BIO 377 | 3 | BIO 379 | 3 | | <i>continued next column</i> | <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 380</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 390</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 391</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 392</td><td style="text-align: right;">2</td></tr> <tr><td>BIO 393</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 408</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 410</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 411</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 412</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 420</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 423</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 446</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right;"><i>continued next column</i></td></tr> </table> | BIO 380 | 4 | BIO 390 | 2 | BIO 391 | 2 | BIO 392 | 2 | BIO 393 | 4 | BIO 408 | 4 | BIO 410 | 4 | BIO 411 | 4 | BIO 412 | 4 | BIO 420 | 3 | BIO 423 | 3 | BIO 446 | 3 | | <i>continued next column</i> | <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 447</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 460</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 461</td><td style="text-align: right;">5</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 485</td><td style="text-align: right;">4</td></tr> <tr><td>CHEM 481</td><td style="text-align: right;">4</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">8</td></tr> </table> | BIO 447 | 3 | BIO 460 | 4 | BIO 461 | 5 | BIO 475 | 3 | BIO 485 | 4 | CHEM 481 | 4 | | 8 | <p><i>Program Notes:</i></p> |
| BIO 208 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 180 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 181 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 101 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 101L | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 105 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 312 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 314 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 321 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 331 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 351 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 352 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 362 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 376 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 377 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 379 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>continued next column</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 380 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 390 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 391 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 392 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 393 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 408 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 410 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 411 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 412 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 420 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 423 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 446 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>continued next column</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 447 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 460 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 461 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 485 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHEM 481 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Total Minor Credits=20

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Minor in Biology Education (173)

Minor Requirements

No Double Counting of Minor Courses - No Grade Less Than C- in Minor Courses

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|--|---------|---|---------|---|---------|---|--|----|---------|---|---------|---|--|---|--|---------|---|---------|---|---------|---|---------|---|--|---|--|---------|---|---------|---|--|---|---|
| <p><i>Take these courses:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 204</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 208</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 375</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">11</td></tr> </table> <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 209</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 210</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">3</td></tr> </table> | BIO 204 | 4 | BIO 208 | 4 | BIO 375 | 3 | | 11 | BIO 209 | 4 | BIO 210 | 3 | | 3 | <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 312</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 331</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 446</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 447</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">3</td></tr> </table> | BIO 312 | 4 | BIO 331 | 3 | BIO 446 | 3 | BIO 447 | 3 | | 3 | <p><i>Take 1 course:</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>BIO 302</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 475</td><td style="text-align: right;">3</td></tr> <tr><td></td><td style="text-align: right; border-top: 1px solid black;">3</td></tr> </table> | BIO 302 | 4 | BIO 475 | 3 | | 3 | <p><i>Program Notes:</i></p> <p><i>Education majors require an education minor for graduation</i></p> |
| BIO 204 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 208 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 375 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 209 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 210 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 312 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 331 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 446 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 447 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 302 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIO 475 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Total Minor Credits=20

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Biology

Brigham Young University-Idaho 2013-2014

Biology Pre-approved Clusters

Pre-Veterinary 1100

| | |
|----------------------------|----------------------------------|
| <i>Take these courses:</i> | |
| BIO 221 | Microbiology 3 |
| BIO 222 | Microbiology Lab 1 |
| BIO 375 | Genetics and Molecular Biology 3 |
| PH 105 | Applied Physics 1 4 |
| <i>Take one course:</i> | |
| BIO 180 | General Biology 4 |
| BIO 208 | General Botany 4 |
| | <u>Total Credits</u> 15 |

Recreation Therapy (Recreation Management Majors) 1101

| | |
|----------------------------|--------------------------------|
| <i>Take these courses:</i> | |
| BIO 264 | Anatomy and Physiology 1 3 |
| BIO 264L | Anatomy and Physiology Lab 1 1 |
| BIO 265 | Anatomy and Physiology 2 3 |
| BIO 265L | Anatomy and Physiology Lab 2 1 |
| <i>Take 4 credits:</i> | |
| BIO 240 | Neurobiology 4 |
| HS 280 | Medical Terminology 2 |
| HS 349 | Sports Medicine 3 |
| HS 349L | Sports Medicine Lab 1 |
| HS 351 | Gerontology 2 |
| | <u>Total Credits</u> 12 |

Natural Resource (Recreation Management Majors) 1102

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|--------------------------|-------------------------------------|
| <i>Take this course:</i> | |
| BIO 202 | Natural Resource Management 4 |
| <i>Take 9 credits:</i> | |
| BIO 225 | Range Ecology 3 |
| BIO 307 | Wildlife Law 3 |
| BIO 351 | Wildlife Management 3 |
| BIO 423 | Natural Resource Policy 3 |
| GEOG 230 | Introduction to GIS 3 |
| GEOG 240 | Maps and Remote Sensing 3 |
| GEOG 340 | Advanced GIS and Spatial Analysis 3 |
| GEOL 440R | Applied GIS (Fall classes only) 3 |
| | <u>Total Credits</u> 13 |

Neuroscience (Psychology Majors) 1103

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|----------------------------|--------------------------------|
| <i>Take these courses:</i> | |
| BIO 240 | Neurobiology 4 |
| BIO 485 | Advanced Neuroscience 4 |
| <i>Take 4 credits:</i> | |
| BIO 180 | General Biology 4 |
| BIO 264 | Anatomy and Physiology 1 3 |
| BIO 264L | Anatomy and Physiology Lab 1 1 |
| BIO 265 | Anatomy and Physiology 2 3 |
| BIO 265L | Anatomy and Physiology Lab 2 1 |
| | <u>Total Credits</u> 12 |

Biological Illustrations (Art Majors) 1104

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|----------------------------|--|
| <i>Take these courses:</i> | |
| BIO 208 | General Botany 4 |
| BIO 460 | Human Anatomy 4 |
| <i>Take 7 credits:</i> | |
| BIO 204 | Vertebrate and Invertebrate Strategies 4 |
| BIO 209 | An Evolutionary Survey of Plants 4 |
| BIO 210 | Plant Systematics 3 |
| BIO 221 | General Microbiology 3 |
| BIO 331 | General Entomology 3 |
| BIO 380 | Histology 4 |
| BIO 445 | Ichthyology 3 |
| BIO 446 | Ornithology 3 |
| BIO 447 | Mammalogy 3 |
| | <u>Total Credits</u> 15 |

Microbiology 1105

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|----------------------------|----------------------------|
| <i>Take these courses:</i> | |
| BIO 221 | General Microbiology 3 |
| BIO 222 | General Microbiology Lab 1 |
| OR | |
| BIO 321 | Microbiology 4 |
| <i>Take 8-11 credits:</i> | |
| BIO 410 | Immunology 4 |
| BIO 411 | Medical Microbiology 4 |
| BIO 412 | Virology 4 |
| HS 370 | Epidemiology 3 |
| | <u>Total Credits</u> 12 |

Biotechnology/Forensics 1106

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| <i>Take these courses:</i> | |
| BIO 180 | Introduction to Biology 4 |
| BIO 375 | Genetics 3 |
| BIO 377 | Techniques in Biochemistry and Molecular Biology 3 |
| <i>Take one course:</i> | |
| BIO 376 | Cell and Molecular Biology 3 |
| CHEM 481 | Biochemistry 4 |
| | <u>Total Credits</u> 13 |

Health Professions Prerequisites 1107

| | |
|----------------------------|-------------------------------------|
| <i>Take 12-15 credits:</i> | |
| BIO 180 | Introduction to Biology 1 4 |
| BIO 181 | Introduction to Biology 2 4 |
| BIO 221 | General Microbiology 3 |
| BIO 222 | General Microbiology Lab 1 |
| BIO 321 | Biology of Microorganisms 4 |
| CHEM 105 | General Chemistry 1 4 |
| CHEM 106 | General Chemistry 2 4 |
| CHEM 351 | Organic Chemistry 1 4 |
| CHEM 352 | Organic Chemistry 2 4 |
| PH 105 | Introduction to Applied Physics 1 4 |
| PH 106 | Introduction to Applied Physics 2 4 |
| | <u>Total Credits</u> 12 |

Pre-Profession 1200

| | |
|----------------------------|------------------------------|
| <i>Take these courses:</i> | |
| BIO 180 | Introduction to Biology 1 4 |
| BIO 181 | Introduction to Biology 2 4 |
| <i>Take 5-7 credits:</i> | |
| BIO 375 | Genetics 3 |
| BIO 376 | Cell and Molecular Biology 3 |
| BIO 460 | Advanced Anatomy 4 |
| BIO 461 | Principles of Physiology 5 |
| CHEM 481 | Biochemistry 4 |
| | <u>Total Credits</u> 13 |

Biology

Brigham Young University–Idaho 2013-2014

Course Descriptions

Credits*

| | |
|---|----------------|
| BIO 180 Introduction to Biology 1 | (4:3:2) |
| Biology 180 is the first half of a two-semester intensive introduction to biology designed for majors in the life sciences. An emphasis is placed on learning the vocabulary, principles, and concepts of biological chemistry, molecular biology, and cellular biology. (Fall, Winter, Spring) | |
| BIO 181 Introduction to Biology 2 | (4:3:2) |
| Prerequisites: BIO 180; Biology 181 is the second half of a two-semester intensive introduction to biology designed for majors in life sciences. An emphasis is placed on learning the vocabulary, principles, and concepts of genetics, evolution, and ecology. (Fall, Winter, Spring) | |
| BIO 199 Biology Orientation | (1:1:0) |
| The course will be divided into 6 modules as follows: 1: General Overview *Required for all students* 2: Ecology/Wildlife 3: Graduate Programs / Academic Careers 4: Pre-Professional Careers (med, dent, opt, vet, etc.) 5: Industry Careers (lab, pharmaceutical reps, etc.) 6: Allied Health (chiropractics, PA, OP, PT, etc.) Each student will be expected to attend all of Module 1: General Overview, then select three of the remaining five modules. Modules may be taught by different faculty members. Each module will have its own unique information pertinent to the topics covered and a set of requirements for those students who attend that module. These requirements may include reading assignments, reports, summary sheets or written papers. (Fall, Winter, Spring) | |
| BIO 202 Natural Resource Management | (4:3:3) |
| Total Course Fees: \$25.00 The management of natural resources such as wildlife, fisheries, forests, range, and recreational lands. The orientation of the course will be ecological with emphasis on economic principles, ecosystem interrelationships and current National Natural Resource Policy. (Fall, Winter) | |
| BIO 204 Invert/Vertebrate Zoology | (4:3:3) |
| Total Course Fees: \$10.00 Comparative organization and evolutionary significance of adaptive morphological, physiological, behavioral, reproductive and ecological differences in vertebrates and invertebrates. | |
| BIO 208 General Botany | (4:3:2) |
| Total Course Fees: \$10.00 An introduction to Botany including cell structure, plant anatomy, physiology, reproduction, heredity, evolution and ecology. Lab is required. (Fall, Winter, Spring) | |
| BIO 209 An Evolutionary Survey of Plants | (4:3:2) |
| Total Course Fees: \$10.00 Prerequisites: BIO 208 An introduction and overview to the evolution, phylogeny, morphology, anatomy, and life history of various photosynthetic organisms, including cyanobacteria, archaea, protists, algae, and land plants, but also including some non-photosynthetic organisms traditionally considered plants, such as fungi, slime molds, and water molds. (Spring) | |
| BIO 210 Plant Systematics | (3:2:3) |
| Total Course Fees: \$20.00 Prerequisites: BIO 208 A basic course in vascular plant classification, systematics, and nomenclature, including a survey of common or important vascular plant families, with emphasis on flowering plants and the local flora. Students will also learn the skills necessary for plant identification. (Fall, Spring) | |
| BIO 221 General Microbiology | (3:3:0) |
| In this course, students will study the microorganisms (especially bacteria and viruses), their metabolism and requirements for growth, the methods used to grow and study them, the disease processes caused by them, methods used to control their growth, and the immune response to infection and disease. (Fall, Winter, Spring) | |

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| BIO 222 General Microbiology Lab | (1:0:2) |
| Total Course Fees: \$5.00 Prerequisites: BIO 221 In this course, students use the microscope to study different types of microorganisms and learn the methods used to grow, identify, and characterize them. (Fall, Winter, Spring) | |
| BIO 225 Range Ecology 1 | (3:3:0) |
| Subject material will focus on: rangeland management history, physical characteristics, descriptions of rangelands, rangeland plant physiology, ecology, inventory, monitoring, stocking rates, grazing methods, wildlife livestock distribution, animal nutrition, multiple use management, livestock production on rangelands, rangeland, wildlife and manipulation of range vegetation. (Fall, Winter, Spring) | |
| BIO 230 Human Biology | (4:3:2) |
| Total Course Fees: \$10.00 An introductory course in human anatomy and physiology for non-science and non-health professions majors. | |
| BIO 240 Neurobiology | (4:3:2) |
| This is an introductory course in Neuroscience. It covers the elements of Neurobiology by providing an introduction to the nervous system; examines cellular communication, sensory, motor and integrating systems, such as, the neural basis of behavior; and explores the plasticity of neural systems in learning, during development and via hormonal influences. (Every other semester) | |
| BIO 250 Environmental Biology with Lab | (4:3:2) |
| Basic ecological principles in relationship to environmental issues. The environmental issues range from local to global and include direct and indirect human impact on ecosystems. This class includes a 2 hour lab to allow hands on understanding of what is covered in lecture. (Fall, Winter, Spring) | |
| BIO 250L Environmental Biology Lab | (1:0:2) |
| Selected experiments dealing with possible human impact on the ecosystems. | |
| BIO 264 Human Anatomy and Physiology 1 | (3:3:0) |
| Co-requisites: BIO 264L First part of a two semester course to prepare students for further study in the health and medical fields. Specifically designed for students of nursing and the allied health professions. Includes basic biochemistry, structure and function of the cell, tissues, skeleton, muscles and nervous systems of the body. Not acceptable for biology major credit. (Fall, Winter, Spring) | |
| BIO 264L Human Anatomy and Physiology 1 Lab | (1:0:2) |
| Total Course Fees: \$10.00 Co-requisites: BIO 264 (Fall, Winter, Spring) | |
| BIO 265 Human Anatomy and Physiology 2 | (3:3:0) |
| Prerequisites: BIO 264 Co-requisites: BIO 265L Second part of a two-semester course to prepare students for further study in the health and medical fields. Specifically designed for students of nursing and the allied health professions. Includes structure and function of the senses, circulatory, lymphatic, respiratory, urinary, digestive, endocrine and reproductive systems. Not acceptable for biology major credit. (Fall, Winter, Spring) | |
| BIO 265L Human Anatomy and Physiology 2 Lab | (1:0:2) |
| Total Course Fees: \$10.00 Co-requisites: BIO 265 (Fall, Winter, Spring) | |
| BIO 302 Ecology 1 | (4:3:3) |
| Total Course Fees: \$25.00 Prerequisites: BIO 208 or BIO 181 Interrelationships between plants and animals characteristics of aquatic, mountain, and deserts ecosystems with emphasis on structure and function. (Fall, Winter, Spring) | |

Biology

Brigham Young University–Idaho 2013-2014

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| BIO 303 Ecology 2 Prerequisites: BIO 302 Second part of introductory ecology classes. This class will cover the topics of community ecology, ecosystems energetics, nutrient cycling and the major terrestrial biomes of the planet. (Fall, Winter, Spring) | (2:2:0) | BIO 352 Wildland Ecology and Range Plants Total Course Fees: \$50.00 This course introduces students to the principle ecoregions and plant communities of western North America, with emphasis on the main features and dominant plants of each biome. Characteristics of major plant families in this region are discussed. An emphasis is placed on range plants, and their importance to both livestock and wildlife. Identification of about 200 range plants is required. Extended field trip included. (Rotating schedule) | (3:2:2) |
| BIO 305 Biology Teaching Practicum Prerequisites: ED 200; ED 304; BIO 208 This class is designed to be taken in the 1st semester of the junior year. Students in this class receive experience in lesson preparation and teaching of general biology topics to non-majors biology students. This class is based on a mix of classroom discussion on various aspects of science teaching, and preparation and execution of mentor-directed teaching experiences. (Fall, Winter, Spring) | (1:0:2) | BIO 360 Principles of Fish Management Total Course Fees: \$10.00 Introduces students to the science of fisheries management and demonstrate how fishery biology principles and methods are applied to management of recreational and commercial fisheries. | (3:3:0) |
| BIO 307 Wildlife Law and Enforcement In-depth analysis of legal mandates, (Federal and State) from a resource protection paradigm. Review of environmental law and evidence collection in relation to the atmosphere associated with the judicial system. Description of field techniques for evidence collection, case investigation and arrest. (Winter, Spring) | (3:3:0) | BIO 362 Stream Ecology Total Course Fees: \$25.00 Prerequisites: BIO 181 or BIO 302 An in-depth examination of riparian ecology. Emphasis is placed on the structure and function of running waters. Links to terrestrial and riparian components of applicable ecosystems will be investigated. The political issues that impinge on water issues are explored. (Fall, Spring) | (3:2:2) |
| BIO 311 Professional School Preparation The goal of this class is to familiarize students with the principles of effective scientific communication. We will cover areas of scientific communication that students will need to know to be successful in their careers. Students will learn the basic rules of word, grammar, and punctuation usage; as well as an approach to the style of writing. They will then apply these principles when writing papers, reports, resumes; and when preparing scientific presentations and posters. (Fall, Winter) | (1:1:0) | BIO 375 Genetics and Molecular Biology Prerequisites: BIO 208; BIO 181 An investigation of the transmission of heritable material in prokaryotes and eukaryotes. Topics include classical genetics (patterns of inheritance, linkage and chromosome mapping), molecular biology (DNA structure and function, gene expression, biotechnology), and population genetics. (Fall, Winter, Spring) | (3:3:0) |
| BIO 312 Invertebrate Zoology Total Course Fees: \$10.00 Prerequisites: BIO 181 or BIO 204 or BIO 302 An introduction to the diversity, anatomy, physiology, ecology, and evolution of invertebrate animals. (Winter) | (4:3:3) | BIO 376 Cell and Molecular Biology Prerequisites: BIO 181 Principles, processes and methodology of molecular and cell biology. Interactions at the cellular level including: structure and function of membranes, organelles and cytoskeletal elements, energy metabolism, signal transduction, cell cycle, cell-cell communication and cellular movement. (Fall, Winter, Spring) | (3:3:0) |
| BIO 314 Marine Biology Prerequisites: BIO 302 or BIO 181 An introduction to the ecology, diversity, structure, and function of marine communities. (Spring) | (3:3:0) | BIO 377 Biochemistry and Molecular Biology Total Course Fees: \$50.00 Prerequisites: BIO 208 or BIO 181 Biology 377 is a comprehensive laboratory course designed to familiarize students with essential laboratory techniques in molecular biology, cellular biology, genetics, and biochemistry. The course topics demand a rigorous but rewarding schedule that enables students to follow several multi-session projects from start to finish. Students successfully completing the course will find they have most of the skills necessary to work as an entry level laboratory technician. (Fall, Winter, Spring) | (3:0:6) |
| BIO 321 Biology of Microorganisms Total Course Fees: \$10.00 Prerequisites: BIO 208 or BIO 181 The topics covered will include microbial diversity, the methods used to study microorganisms, microbial metabolism and genetics, the role of microorganism in causing disease, the immune response, the methods used to control microorganisms, and the use of microorganisms by man. (Fall, Winter, Spring) | (4:3:2) | BIO 378 Techniques in Biochemistry and Molecular Biology Total Course Fees: \$50.00 Prerequisites: BIO 208 or BIO 181 Biology 378 is a 10 week comprehensive laboratory course designed to familiarize students with essential laboratory techniques in molecular biology, genetics, and biochemistry. The course topics demand a rigorous but rewarding schedule that enables students to follow several multi-session projects from start to finish. (Fall, Winter, Spring) | (2:0:6) |
| BIO 325 Range Ecology Systems Management Areas of discussion include pasture lay out, fence design, water systems, herding effect, grazing systems, leasing, permits, BLM, state ground, private ground, lease ground, forage estimates, photosynthesis, energy store, tools of land management, drought management. (Fall, Spring) | (3:3:0) | BIO 379 Ecological and Wildlife Techniques Total Course Fees: \$40.00 Prerequisites: BIO 302, MATH 221B Laboratory course designed to familiarize students with essential laboratory and field techniques in ecology and natural resource based fields. (Fall, Spring) | (3:0:6) |
| BIO 331 General Entomology Total Course Fees: \$10.00 An introduction to Entomology with lectures and laboratories on insect structure, development, classification, behavior and control. An insect collection and fieldwork are required. (Fall, Spring) | (3:2:3) | BIO 380 Histology with Lab Total Course Fees: \$50.00 Prerequisites: (BIO 264 and BIO 265) or BIO 181 Microscopic anatomy of cells and tissues and their relationship to the function of the cell. (Fall, Winter, Spring) | (4:3:3) |
| BIO 351 Principles Wildlife Management Total Course Fees: \$25.00 Introduces students to the art and science of wildlife management. This course will provide a foundation course from which students who major in Ecology and Wildlife may build a successful collegiate experience and professional career. It will also provide insight into the wildlife discipline for non-wildlife majors. (Fall, Winter, Spring) | (3:3:0) | | |

Biology

Brigham Young University–Idaho 2013-2014

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| BIO 381 Pathophysiology (3:3:0) Prerequisites: BIO 264 and BIO 265 OR Bio 461; AND CHEM 101 This course gives students an opportunity to apply their knowledge of normal physiology in analyzing the consequences of pathophysiological processes and apply this analysis to basic diagnostic and treatment principles. Students will also have the opportunity to evaluate and analyze current medical advances using the scientific process. (Fall, Winter) | BIO 405 Biology Teaching Methods (3:2:3) Total Course Fees: \$10.00 Prerequisites: BIO 305; ED 304; ED 361 General science teaching methods needed for certification in secondary education in the field of biology are taught. The course focuses on classroom and laboratory techniques specific to science teaching. Practical experience in teaching laboratories, lectures and demonstrations will be emphasized. Students will build a science unit which demonstrates their understanding and application of inquiry and the use of a multitude of other teaching, learning, and assessment strategies. (Fall, Spring) |
| BIO 383 Human Embryology (3:3:0) Prerequisites: BIO 265 or BIO 180 This course is intended to provide a foundation of understanding for the processes involved in creating gametes and their participation in the process of conception. A discussion will then continue to discover the processes important in the development of a fully formed and functional fetus. This course will examine the cellular and morphological development of most of the major human body systems. The study of human embryology is important to provide a logical framework for understanding structure and function in the study of anatomy and physiology. (Fall, Winter, Spring) | BIO 408 Advanced Botany (4:3:3) Total Course Fees: \$15.00 Prerequisites: BIO 208 This course covers advanced topics in plant structure and function. Advanced concepts in plant morphology, anatomy, and physiology. Previous or concurrent enrollment in organic chemistry is required. (Fall) |
| BIO 386 Pharmacology (3:3:0) Prerequisites: BIO 264; BIO 265; BIO 461 This course is designed to help Biology students understand the basic principles of pharmacokinetics, pharmacodynamics and the clinical application of drugs. The mechanisms of drug action are emphasized to correlate physiological and pharmacological principles. (Fall, Winter) | BIO 410 Immunology (4:3:2) Total Course Fees: \$25.00 Prerequisites: BIO 321 This introductory immunology course will focus on fundamental and clinical principles of immunology. Special attention will be given to landmark experiments that have led to the underlying theoretical framework of immunology. (Fall, Winter, Spring) |
| BIO 390 Fire Ecology (2:2:0) Prerequisites: BIO 302 This course will focus on fire history, safety, terms, behavior, current and past policies, general effects of fire on soils, watersheds, and animal and plant communities. (Fall, Winter, Spring) | BIO 411 Medical Microbiology (4:3:2) Total Course Fees: \$25.00 Prerequisites: BIO 321 Medical microbiology includes the study of bacteriology, mycology, and virology. The major areas of emphasis will focus on host-parasitic interactions between humans and bacteria. Paradigms in bacterial virulence factors will be stressed. The accompanying lab will center on providing experience and insight into the processes of specimen handling, isolation, identification, and sensitivity testing of pathogenic microorganisms. Aseptic techniques are stressed throughout the course. (Fall, Winter, Spring) |
| BIO 391 Weed Ecology (2:2:0) Prerequisites: BIO 302 Evaluate the ecological and economic impacts of invasive species in a variety of habitats. What governs their invasions and treatment feasibility. | BIO 412 Virology (4:3:2) Total Course Fees: \$25.00 Prerequisites: BIO 321 An introductory course on viruses that explores the characteristics common to all viruses. Particular emphasis will be placed on the replication strategies used by various animal viruses as well as the interactions between these viruses and the host cells they infect. The accompanying lab will focus on developing proficiency in bacterial and animal host cell culturing methods as well as developing the ability to analyze the replication potential and pathogenic effects of viruses within host cells. |
| BIO 392 Restoration Ecology (2:2:0) Prerequisites: BIO 302 Restoration ecology is the study of the restoration of degraded and damaged ecosystems. This class will examine the current state of knowledge in this area through case studies and project design/implementation. (Fall, Winter, Spring) | BIO 420 Principles of Limnology (3:3:0) Prerequisites: BIO 181 or BIO 302 An introduction to the physical, chemical, and biological aspects of inland water systems, with a particular focus on lakes, ponds, and reservoirs. (Fall) |
| BIO 393 Plant Ecology (4:3:2) Prerequisites: BIO 302 The purpose of this course is to elaborate on information gained in ecology (Bio 302). We will explore plants' complex interactions with their environments, looking often to adaptations which enable species to exploit particular ecological niches. Understanding such interactions will require the incorporation of concepts drawn from various other fields including: geology, chemistry, climatology, and mathematics. (Winter, Spring) | BIO 423 Natural Resource Policy (3:3:0) Total Course Fees: \$10.00 Introduction to theory, processes, and techniques for the management of natural resources. Emphasis on ecological processes and public policy issues. (Fall, Winter, Spring) |
| BIO 398 Natural Resource Internship (1-4-0:0) This course is designed to award university credit for occupational training-based internships in any biomedical or ecological field. This course is meant for students engaged in operational duties of a facility. Students wishing to engage in research-based internship training are encouraged to enroll in the department's research internship (Bio 498R). (Fall, Winter, Spring) | BIO 445 Ichthyology (3:2:2) Total Course Fees: \$25.00 Prerequisites: BIO 302 or BIO 181 A study of the biology of fishes. (Spring) |
| BIO 401R Readings in Biology (1:1:0) Repeatable Course: may earn maximum of 3 credits Selected readings in biology. (Fall, Winter, Spring) | BIO 446 Ornithology (3:2:2) Total Course Fees: \$25.00 Prerequisites: BIO 208 or BIO 181 In-depth study of avian (bird) biology systematics, distribution, evolution and natural history. At least one field trip required. (Winter, Spring) |

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| BIO 447 Mammalogy Total Course Fees: \$25.00 Prerequisites: BIO 208 or BIO 181 A study of mammalian diversity, systematics, evolution, morphology, distribution, and natural history. At least one field trip is required. | (3:2:2) | BIO 497 Senior Seminar Prerequisites: BIO 302, BIO 181 A capstone course in which participants discuss topics related to the practice of scientific writing. Each participant produces a written review paper or research proposal, and other relevant support documents such as a letter of application and a curriculum vitae. (Fall, Winter, Spring) | (1:1:0) |
| BIO 448 Insect Systematics Prerequisites: BIO 331 This is an advanced course that will cover the diversity of insect biology and structure with an emphasis on the identification of adults. It will include coverage of speciation, evolutionary relationships, approaches to classification, nomenclature, zoogeography and techniques of collection. One extended camping field trip is required. (Spring, even years) | (3:2:3) | BIO 498R Research/Occupational Internship Repeatable Course: may earn maximum of 8 credits This course is designed to award university credit for research-based internships in any biomedical or ecological field. This course is meant for students engaged in laboratory or field research. Students wishing to engage in occupational training (ie. working in a doctor's office) are encouraged to enroll in the department's occupational internship (Bio 398). (Fall, Winter, Spring) | (1-4:0:0) |
| BIO 455 Rangeland Inventory and Analysis Lab Total Course Fees: \$20.00 Prerequisites: BIO 225 Rangeland ecology and vegetation measurements including condition, trend, utilization, suitability and production. (Fall, Spring) | (3:2:2) | BIO 499R Undergraduate Research Undergraduate Research. | (1-6:0:0) |
| BIO 460 Human Anatomy with Lab Prerequisites: BIO 181 Regional and human anatomy for Biology Majors. Comprehensive regional study of gross human anatomy with emphasis on the limbs, and the thoracic, abdominal and pelvic cavities. (Fall, Winter, Spring) | (4:3:2) | | |
| BIO 461 Principles of Physiology Total Course Fees: \$15.00 Prerequisites: BIO 180 or BIO 208 and BIO 181 In-depth coverage of general physiologic principles and homeostatic mechanisms regulating human organ system function. (Fall, Winter, Spring) | (5:4:3) | | |
| BIO 462 Head and Neck Anatomy Total Course Fees: \$20.00 Prerequisites: BIO 264; BIO 460 Anatomy of the human head and neck for Biology Majors. Comprehensive, in depth study of the development, organization and relationships of the anatomical structures of the head and neck. The lecture component of the course introduces the content, while the lab allows the opportunity to study the regions of interest from models, atlases and from dissected cadavers. (Fall, Winter, Spring) | (2:1:3) | | |
| BIO 466 Rangeland Vegetation Improvement Prerequisites: BIO 225 Rangeland habitat improvement by manipulating plant communities. Techniques include: prescribed fire, biological control, herbicide treatments, mechanical treatments and manipulation by herbivory. Economic considerations of these techniques are investigated. (Fall, Winter, Spring) | (3:3:0) | | |
| BIO 475 Evolutionary Science Prerequisites: (BIO 181 and BIO 375) or (BIO 208 and BIO 375) Basic Darwinian evolution and the history of evolutionary thought is presented. Includes the study of the scientific processes through with both microevolution and macroevolution occur, the history of life on earth, phylogenetics, cladistics, molecular evolution, sexual selection, population genetics, and rates of evolution. (Fall, Winter, Spring) | (3:2:2) | | |
| BIO 485 Advanced Neuroscience Total Course Fees: \$20.00 Prerequisites: BIO 240 Fundamentals of Neuroscience covering neuroanatomy, cellular and molecular neuroscience, development of the nervous system, sensory systems, motor systems, regulatory systems and behavioral and cognitive neuroscience. The associated lab offers students the chance to perform hands-on experiments involving modern neuroscience techniques using state-of-the-art equipment and protocols. (Fall, Winter, Spring) | (4:3:3) | | |
| BIO 490 Special Problems Repeatable Course: may earn maximum of 6 credits Determined by consultation with a faculty mentor. (Fall, Winter, Spring) | (1-3:0:0) | | |

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Biology Course Rotation Schedule

Some classes will not appear in this rotation schedule
because they are offered **every** semester.

| Class | Fall 13 | Win 14 | Spr 14 | Fall 14 | Win 15 | Spr 15 | Fall 15 |
|---------|---------|--------|--------|---------|--------|--------|---------|
| Bio 204 | X | | X | | X | | X |
| Bio 209 | X | X | | X | X | | X |
| Bio 210 | | | X | | | X | |
| Bio 230 | | X | | X | | X | |
| Bio 240 | | X | | X | | X | |
| Bio 250 | X | | X | | X | | X |
| Bio 302 | X | | X | X | | X | X |
| Bio 303 | | X | | X | | X | |
| Bio 307 | X | X | X | X | X | | X |
| Bio 311 | | X | | X | | X | |
| Bio 312 | | X | | | X | | |
| Bio 314 | | | X | | | X | |
| Bio 325 | | X | | X | | X | |
| Bio 331 | X | | X | X | | X | X |
| Bio 351 | X | | X | | X | | X |
| Bio 352 | X | | X | | X | | X |
| Bio 360 | X | | | X | | | X |
| Bio 362 | X | | X | | X | | X |
| Bio 376 | | X | | X | | X | |
| Bio 379 | X | | X | X | | X | X |
| Bio 380 | X | | X | | X | | X |
| Bio 381 | X | X | | X | X | | X |
| Bio 383 | | X | | X | | X | |
| Bio 386 | | X | | X | | X | |
| Bio 390 | | | X | | | | X |
| Bio 391 | | X | | | X | | |
| Bio 392 | | X | | | X | | |
| Bio 393 | | X | | X | | X | |
| Bio 405 | X | X | | X | X | | X |
| Bio 408 | | | X | | | | X |
| Bio 410 | | X | | X | | X | X |
| Bio 411 | X | X | | X | X | | X |
| Bio 412 | X | | X | | X | X | |
| Bio 420 | X | | | X | | | X |
| Bio 423 | X | | X | | X | | X |
| Bio 445 | | | X | | | X | |
| Bio 446 | X | | X | | X | | X |
| Bio 447 | | X | | X | | X | |
| Bio 448 | | | X | | | | X |
| Bio 455 | X | | X | X | | X | X |
| Bio 462 | X | | X | | X | | X |
| Bio 466 | | X | | X | | X | |
| Bio 485 | X | | X | | X | | X |

Although unforeseen circumstances may result in occasional changes to
this schedule, we will make every attempt to adhere to it.