Upper Division Biology Lists 2015-2016

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| Counter for Integration content for more that content content would be required. Counter for the content of | Biology Course Lists | | | | | | | | | | |
| Requirements Soc. 200 can be asked only toward in a Bloogy Core requirement Soc. 200 can be asked broad Effect Soc. 200 can be asked broad Effect Soc. 200 can be asked broad Effect 200 can be asked broad 200 can be ask | a | | | ee Ke | quir | emer | nts | | | | |
| BIOL 301(3011X) Fossi Record Since S | requirements. BIOL 300 can be used only toward the Biology Core requirement. BIOL 304 may be used toward EITHER the Biology Core requirement. OR List B. "BIOL 351 is not part of the Core requirements in catalogs prior to 2010-2012, and is part of the upper division biology course requirements in some concentrations. BIOL 351 is part of the Core requirements in 2010 catalog forward. NOTE: students following catalogs PRIOR to fall 2015 may NOT use BIOL 499 toward the biology upper division requirement. ONE credit of BIOL 492, 493 and 496 may count toward the upper division biology requirement for any concentration for catalogs prior to fall 2015. | | | CREDITS | List A: Ecology & Evolutionary Biology (formerly "EEB") | ä | List C: Anatomical & Morphological Biology (formerly "IOB/Anatomy") | List D: Physiological Biology (formerly "IOB/Physiology") | List E: Systematics (formerly "IOB/Taxonomy") | Additional ONE (1) credit May be used toward Biology upper division credits required by the major | |
| BIOL 302 Evolutionary Survey of Vascular Plants 4 | _ | | <u> </u> | 2 | | | | | | | |
| BIOL 304 Molecular Genetics 4 X X BIOL 305 Introduction to Conservation Biology 3 X X BIOL 320 Invertebrate Zoology 4 X X BIOL 321 Molecular English of Ecology 3 X X BIOL 3461 Molecular English of Ecology 3 X X BIOL 3461 Molecular English of Ecology 3 X X X BIOL 3461 Molecular English of Ecology 3 X X X BIOL 351" Molecular English of Ecology 3 X X X X BIOL 361 Biomathematics 3 X X X X X BIOL 361 Biomathematics 3 X X X X X BIOL 402X Genomics Proteomics, Bioinformatics 3 X X X X BIOL 403X Biological Discoveries 3 X X X X BIOL 403X Biological Discoveries 3 X X X X BIOL 403X Biological Discoveries 3 X X X X BIOL 407X Bioriformatics 3 X X X X BIOL 407X Bioriformatics 3 X X X X BIOL 409 Virology 3 X X X X BIOL 409 Virology 3 X X X X BIOL 4194 English of Ecology 3 X X X X BIOL 4194 English of Ecology 3 X X X X BIOL 4194 English of Ecology 3 X X X X BIOL 4194 English of Ecology 3 X X X X BIOL 4194 English of Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 3 X X X BIOL 420X Introduction to Restoration Ecology 4 X X BIOL 423 Herpetology 4 X X BIOL 424 Herpetology 4 X X BIOL 425 H | | | | | | | | | | | |
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| BIOL 320 Invertebrate Zoology | | | | _ | Y | ^ | | | | | |
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| BIOL 360 Biomathematics | | | | _ | | Х | | | | | |
| BIOL | | | | | Х | | | Х | | | |
| BIOL 403X Biological Discoveries 3 | BIOL | | | | | | | | | | |
| BIOL 405 Molecular Biology 3 | BIOL | 402X | Genomics, Proteomics, & Bioinfomatics | 3 | | Χ | | | | | |
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| BIOL | BIOL | 409 | Virology | 3 | | Χ | | | | | |
| BIOL 417(417X) Biochemical Adaptations 3 X X X | BIOL | 412 | Molecular Evolution | 3 | Χ | Χ | | | | | |
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| BIOL 496 Advanced Topics in Modern Biology 1 | | 494 | Biology Colloquium | | | Se | e note abo | ove | | degree | |
| BIOL 499 Undergraduate Teaching Assistant 1 | | 496 | Advanced Topics in Modern Biology | 1 | | | | | | requirements! | |
| | BIOL | 499 | Undergraduate Teaching Assistant | 1 | | | | | | | |

NSHE Transfers

Only credits transfer to UNLV from other institutions; grades do not transfer and do not affect GPA at UNLV (this includes other Nevada institutions).

If you receive a passing grade at UNLV and you choose to retake the class, you must do so at UNLV, NOT at CCSN or other NSHE institutions; if you fail a class at UNLV, you may retake the class at CSN or other NSHE institutions.

BIOL 251G (Honors Microbiology) from CSN may fill a requirement for BIOL 351 (BS Biology) at UNLV.

Credit Load

The university considers 12 semester credits as the *minimum* full-time undergraduate credit load. The maximum credits allowed during a regular semester are 17 for freshmen level, and 18 for sophomore, junior, and senior levels.

Biomedicine or Graduate School

It is strongly recommended that students interested in biomedicine or graduate school take additional appropriate upper-division biology courses and research units to meet their elective credit requirements. Make an appointment to see the Pre-health Advisor. 702-895-2077

Four- and five-year degree plans can be found at http://sciences.unlv.edu/advising/degreeworksheets

B.S. Biology

To earn a Bachelor of Science degree in Biology, students must satisfy the general education core curriculum required by the university and the College of Sciences, plus the program requirements of the Department of Life Sciences. The departmental program includes courses in biology, chemistry, physics and mathematics. Biology majors choose one of eight areas of concentration: Biotechnology, Cell and Molecular Biology, Comprehensive, Ecology and Evolutionary Biology, Education, Integrative Physiology, Microbiology, and Preprofessional.

The **Biotechnology** concentration provides strong preparation for careers in biotechnology, biomedical science research and the pharmaceutical industry, as well as for transition to graduate or other advanced educational programs.

The **Cell & Molecular** concentration pro-vides Biological Sciences majors with the intellectual tools essential for careers in biotechnology and biomedical science research, as well as for transition to graduate PhD programs in Biology, and Cell and Molecular Biomedical research.

The **Comprehensive** concentration provides the educational background necessary for a career in modern life science, including all requirements for admission to graduate school or related postgraduate study. The concentration's curriculum provides a solid foundation in fundamental areas of biology while permitting wide choice in course selection, allowing majors to explore and develop their education.

The **Ecology & Evolution** concentration is recommended for those students who desire a strong foundation in evolution, and whose interests are at the interface between organisms and their environments.

The **Education** concentration is designed for students seeking exceptionally strong backgrounds for professional teaching careers that include biology as a first teaching field. Students also enroll in course work to satisfy the Minor in Secondary Science Education in the UNLV College of Education.

The Integrative Physiology concentration provides the biology major with the intellectual and technical tools essential for success in a broad array of life sciences careers including application to all the health care-related professional schools, graduate school, or related postgraduate study as well as biomedical science research. IP provides an in-depth examination of how animals and/or plants work from the molecular/cellular level of organization to a systems level under-standing and up to the integration of physiology with behavior and evolutionary processes.

The **Microbiology** concentration pro-vides the biology major with the intellectual and technical skills required for success in the broad area of microbiology which includes clinical, environmental, ecological, evolutionary, molecular, metabolic and physiological perspective of microbes, including aspects of virology and immunology.

The **Preprofessional** concentration provides Biological Sciences majors with the intellectual tools essential for application to health care-related professional schools, including medical, dental, veterinary, optometric and related programs.

Many of the eight areas of specialization provides an excellent and wellrounded background for those interested in applying for professional schools including medical, dental, veterinary. Most degrees in biology ensure the course work required for professional school is completed at the time of graduation.