

BIOLOGICAL SCIENCES

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE

The Baccalaureate Degree in Environmental Science provides excellent preparation for careers in federal, state, and local government, public utilities, and nonprofit sectors and industries. Additionally, this program will prepare students for graduate study in a variety of related fields such as ecology, and environmental science. Students completing this degree will gain practical skills in animal and plant taxonomy and geographic information systems, as well as, chemical and biological assessment of water resources. They will apply their skills in advanced courses in environmental assessment including studies of federal and state policies and regulations.

Students majoring in environmental science are required to complete sixty-one semester hours in core environmental science curriculum, two additional math courses (Group A: 6-7 semester hours), an additional physical science course with a lab (Group B: 4-5 semester hours), an additional physical science without a lab (Group C: 3 semester hours), two classes from GIS or research choices (Group D: 7-8 semester hours), two classes from life science choices (Group E: 7-8 semester hours), a capstone field biology course (Group F: 4 semester hours), and two courses in social or anthropogenic choices (Group G: 6 hours). Students have the option of tailoring the remaining semester hours to best meet their future education or career goals and meet the 120 total semester hour and 40 upper division institutional requirements.

Curriculum

The matrix below is a sample plan for all coursework required for this program.

Freshman

| Fall | Credits |
|---|-----------|
| ENGL 1013 Composition I ¹ | 3 |
| MATH 1113 College Algebra | 3 |
| BIOL 1004 Principles of Environmental Science/ENVS 1004 Principles of Environmental Science/PHSC 1004 Principles of Environmental Science | 4 |
| BIOL 1011 Orientation to the Biological Sciences | 1 |
| GEOL 1014 Physical Geology | 4 |
| Total Hours | 15 |

| Spring | Credits |
|--|-----------|
| ENGL 1023 Composition II ¹ | 3 |
| SOC 1003 Introductory Sociology | 3 |
| USHG 1XXX U S HISTORY & GOVERNMENT ¹ | 3 |
| BIOL 1114 Principles of Biology | 4 |
| STAT 2163 Introduction to Statistical Methods or SOC 2053 Statistics for the Behavioral Sciences/PSY 2053 Statistics for the Behavioral Sciences | 3 |
| Total Hours | 16 |

Sophomore

| Fall | Credits |
|---|---------|
| FAH 1XXX Fine Arts and Humanities Courses ¹ | 3 |
| ECON 2003 Principles of Economics I | 3 |
| CHEM 2124 General Chemistry I and CHEM 2120 General Chemistry I Lab | 4 |

| Fall | Credits |
|---------------------------------|-----------|
| BIOL 2124 Principles of Zoology | 4 |
| | |
| Total Hours | 14 |

| Spring | Credits |
|---|-----------|
| FAH 1XXX Fine Arts and Humanities Courses ¹ | |
| COMM 2003 Public Speaking | |
| CHEM 2134 General Chemistry II and CHEM 2130 General Chemistry II Lab | |
| BIOL 2134 Principles of Botany | |
| | |
| Total Hours | 14 |

Junior

| Fall | Credits |
|---|--------------|
| BIOL 3114 Principles of Ecology/FW 3114 Principles of Ecology | 4 |
| BIOL 3043 Conservation/ENVS 3043 Conservation | 3 |
| CHEM 3254 Fundamentals of Organic Chemistry | 4 |
| FW 3173 Biostatistics or MATH 2914 Calculus I | 3-4 |
| | |
| Total Hours | 14-15 |

| Spring | Credits |
|---|-----------|
| BIOL 3111 Environmental Seminar/CHEM 3111 Environmental Seminar/ENVS 3111 Environmental Seminar/GEOL 3111 Environmental Seminar | 1 |
| CHEM 3264 Mechanistic Organic Chemistry | 4 |
| PHYS 2014 Algebra-Based Physics I and PHYS 2000 Physics Laboratory I | 4 |
| Life Science ² | 4 |
| Physical Science Elective without Lab ³ or GIS and Research ^{4, 8} | 3 |
| Total Hours | 16 |

Senior

| Fall | Credits |
|--|---------|
| Life Science ² | 3-4 |
| Human Dimensions ^{7, 8} | 3 |
| Physical Science Elective with Lab ^{5, 8} or Field Biology ⁶ | 4-5 |

| Fall | Credits |
|---|--------------|
| Physical Science Elective without Lab ³ or GIS and Research ^{4,8} | 3-4 |
| Elective ⁸ | 0-4 |
| Total Hours | 13-16 |

| Spring | Credits |
|---|--------------|
| ENVS 4133 Environmental Policy or FW 3053 Fisheries and Wildlife Administration | 3 |
| Human Dimensions ^{7, 8} | 3 |
| Field Biology ⁶ or Physical Science Elective with Lab ^{5,8} | 4 |
| GIS and Research ^{4,8} | 4 |
| Elective ⁸ | 0-4 |
| Total Hours | 14-18 |

¹See appropriate alternatives or substitutions in "General Education Requirements".

²Take two Life Science Elective courses from the following: BIOL 4043 Conservation Genetics, BIOL 3004 Plant Taxonomy, BIOL 3034 Genetics, BIOL 3054 Microbiology, BIOL 3064 Parasitology, BIOL 3084 Ichthyology/FW 3084 Ichthyology, BIOL 3104 Introduction to Entomology/AGPM 3104 Introduction to Entomology, BIOL 3134 Invertebrate Zoology, BIOL 3144 Ornithology/FW 3144 Ornithology, BIOL 3174 Physiological Ecology, BIOL 3224 Herpetology/FW 3224 Herpetology, BIOL 4043 Conservation Genetics, BIOL 4064 Evolutionary Biology, BIOL 4163 Biodiversity and Conservation Biology/FW 4163 Biodiversity and Conservation Biology.

³Take one Physical Science without Laboratory Elective course from the following: BIOL 3353 Fundamentals of Toxicology/CHEM 3353 Fundamentals of Toxicology, CHEM 3313 Environmental Chemistry, GEOL 3083 Hydrogeology, GEOL 3153 Environmental Geology, PHSC 3033 Meteorology.

⁴Take two GIS and Research courses from the following: BIOL 3033 Bioinformatics, ENVS 4114 Environmental Science Internship, ENVS 4884 Advanced Topics in Environmental Science, ENVS 4954 Undergraduate Research in Environmental Science, FW 2833 Introduction to Geographic Information Systems/GEOG 2833 Introduction to Geographic Information Systems, FW 3074 Habitat Evaluation, FW 4034 Advanced Geographic Information Systems Applications.

⁵Take one Physical SCIL 1XXX SCIENCE WITH LABORATORY Elective course from the following: CHEM 3245 Quantitative Analysis, CHEM 4414 Instrumental Analysis, PHYS 2024 Algebra-Based Physics II.

⁶Take one Field Biology course from the following: BIOL 4024 Limnology/FW 4024 Limnology, BIOL 4094 Coastal Ecology, ENVS 4124 Biological Assessment of Water Quality, FW 4014 Forest Ecology and Management, FW 4064 Wetland Ecology and Management.

⁷Take two Human Dimension courses from the following: ANTH 2003 Cultural Anthropology, ANTH 2103 Ozark-Ouachita Studies, ANTH 2303 Globalization, SOC 3033 Environment and Society, SOC 3113 Social Movements and Social Change, or FW 4103 Human Dimensions of Fisheries and Wildlife Management.

⁸At least 40 upper level hours are required for the 120 hours degree.