

# Bachelor of Science in Environmental Science

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The Bachelor of Science in Environmental Science degree program is designed for students interested in an interdisciplinary scientific perspective on environmental and sustainability issues, analysis, and management. The degree program provides the broad foundation in physical, life, and social sciences needed for a career or graduate study in environmental science and related fields such as climate change, ecology, and conservation. Students who complete the program successfully will be able to assess environmental issues critically from multiple perspectives; perform field, laboratory, and computer analyses; and conduct original research. The program is designed to prepare graduates for careers in local, state, and federal government laboratories and nonprofit agencies, environmental consulting firms, environmental education and outreach agencies, and universities and other research settings. The degree is offered by the Jackson School with a major in geological sciences, by the College of Liberal Arts with a major in geographical sciences, and by the College of Natural Sciences with a major in biological sciences. The degree programs share common prescribed work, but each major has its own specific requirements. Students may earn only one Bachelor of Science in Environmental Science degree from the University.

The Bachelor of Science in Environmental Science curriculum consists of 126 semester hours of coursework. All students must complete the University's core curriculum. The specific degree requirements consist of prescribed work, major requirements, and electives. In some cases, a course that is required for the degree may also be counted toward the core curriculum.

A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills any other requirement may also be used to fulfill a flag requirement unless otherwise specified.

In the process of fulfilling the core curriculum and other degree requirements, all students are expected to complete the following Skills and Experience flags:

- Writing: three flagged courses beyond Rhetoric and Writing 306 or its equivalent; students in the College of Natural Sciences and the Jackson School of Geosciences must complete only two flagged writing courses. For students in the College of Natural Sciences and the College of Liberal Arts, at least one writing flag must be from an upper-division course.
- Quantitative reasoning: one flagged course.
- Global cultures: one flagged course.
- Cultural diversity in the United States: one flagged course.
- Ethics: one flagged course.
- Independent inquiry: one flagged course.

## Prescribed Work Common to All Environmental Science Majors

- Mathematics: Mathematics 408C, or 408N and 408S, or 408K and 408L
- Chemistry: Chemistry 301 or CH 301H; Chemistry 302 or CH 302H; and Chemistry 204
- Physics: Physics 317K and 117M, Physics 303K and 103M, or Physics 301 and 101L
- Biological Sciences: Biology 311C and 311D, or 315H

- Ecology:
  - Biology 373 or Marine Science 320. Marine Science 320 may not be used to satisfy both requirement 5a and requirement 10c. Environmental Science majors in the College of Natural Sciences must choose Biology 373.
  - Biology 373L or Marine Science 120L. Environmental Science majors in the College of Natural Sciences must choose Biology 373L
- Geological Sciences: Geological Sciences 401 or 303 or Geography 401C; Geological Sciences 346C; and an approved geological sciences course in sustainability.
- Geography: Geography 335N
- Field experience and research methods: Environmental Science 311 and 121
  - Capstone Research Experience: one of the following pairs:
    - Environmental Science 271 and 371 or Environmental Science 171 and 471
    - Environmental Science 172C and 472D or Environmental Science 272C and 372D
  - Environmental Science 271 or Marine Science 370, and one of the following: Chemistry 320M, Geography 460G, 368C, 462K, Geological Sciences 327G, Mathematics 408D, 408M, Statistics and Data Sciences 321 or 320E. Note: Geography 460G, 462K, and Geological Sciences 327G may not be used to satisfy both requirement 9c and 10b. Statistics and Data Sciences 321 and 320E may not be used in this requirement by students in the College of Natural Sciences. Biology 377 may substitute for Environmental Science 271 with prior approval of the faculty advisor. Tutorial Course 660HA and 660HB may substitute for Environmental Science 271 and 371 with prior approval of the faculty advisor. Geological Sciences 172H, 173H and 379H may substitute for Environmental Science 271 and 371 with prior approval of the faculty advisor. Natural Sciences 323 and 371 may substitute for Environmental Science 271 and 371 with prior approval of the faculty advisor.
- Environmental and sustainability themes: One course in each of the following thematic areas:
  - Environmental and sustainability policy, ethics, and history: Geography 323K, 331K, 334, 336C, 339K, 340D, 342C, 344K, 356C, History 350R (Topic 7), Journalism 346F, Marine Science 367K, or Philosophy 325D. Biology 337, Geography 356, 356T, or Sociology 321K may be counted with prior approval of the faculty advisor.
  - Geographic information systems: Geography 460G, 462K, Geological Sciences 327G
  - Climates and oceans: Biology 456L, Geography 333K, Geological Sciences 338J, 347D, 347G, 377P, Marine Science 320, 440, 354Q, 354T, 356. Marine Science 320 may not be used to satisfy both requirement 5 and 10. Marine Science 356 may not be used to satisfy both requirement 10c and requirement 14 in Option 1. Marine Science 356 may not be used to satisfy both requirement 10c and requirement 18 in Option II. Biology 337, 437, Geography 356, 356T, Geological Sciences 371C, 371T, Marine Science 352 or 353 may count with prior approval of the faculty advisor.
  - Environmental economics, sustainability, and business: Economics 304K, 330T, Advanced Placement credit for Economics 304L may be used to satisfy this requirement.
- Environmental Science 141 and 151

## Major Requirements

### BS in Environmental Science: Geological Sciences

The following 36 semester hours of coursework are required; these hours must include at least 12 hours of approved upper-division work in geological sciences.

- a. Geological Sciences 405, 416K, 416M and 420K
- b. Mathematics 408D or 408M
- c. Four semester hours of physics in one of the following second semester sequences: Physics 317L and 117N, 303L and 103N, or 316 and 116L.
- d. One of the following courses on climate and water: Geological Sciences 338J, 347D, 347G, 376E, 476K, 476M, 376S, 377P. Geological Sciences 371T may count with prior approval of the faculty advisor. (Note: The same course may not be used to satisfy both requirement 4 of the major requirements and requirement 10c of the prescribed work).
- e. Nine additional semester hours of upper division elective coursework in geological sciences not otherwise used to satisfy either prescribed or other major requirements.
- f. Enough additional coursework to make a total of 126 semester hours.

### Special Requirements

Students must fulfill the University-wide General Requirements, the Special Requirements of the Jackson School, and the Requirements for All Geological Sciences Degree Plans given earlier in this section. They must also earn a grade of at least C- in each course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in the [General Information Catalog](#).

To graduate under the honors option, students must remain in good standing in the Dean's Scholars Honors Program, must submit an honors thesis approved by the program honors advisor, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum. More information about the Undergraduate Research Forum is available [online](#).