

## DOCUMENTS OF THE GENERAL FACULTY

**PROPOSED CHANGES TO THE BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCES IN THE JACKSON SCHOOL OF GEOSCIENCES IN THE *UNDERGRADUATE CATALOG 2016-2018***

Dean Sharon Mosher in the Jackson School of Geosciences has filed with the secretary of the Faculty Council the following changes to the Bachelor of Science in Environmental Sciences content common to Jackson School of Geoscience, College of Liberal Arts, and College of Natural Sciences in the *Undergraduate Catalog, 2016-2018*. The secretary has classified this proposal as legislation of *general* interest to more than one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the changes on November 5, 2015, and forwarded the proposal to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with UT System.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by January 26, 2016.



Hillary Hart, Secretary  
General Faculty and Faculty Council



offered in the fall and spring semesters and will remain in the major requirements. For major requirement #4, unnumbered topics course Geological Sciences 371C (approved topics) has been replaced with standalone courses that address climate and water that have been approved by EVS program faculty.

**3. THIS PROPOSAL INVOLVES (Please check all that apply)**

- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> Courses in other colleges                               | <input type="checkbox"/> Courses in proposer's college that are frequently taken by students in other colleges                                 | <input type="checkbox"/> Flags  |
| <input type="checkbox"/> Course in the core curriculum                                      | <input type="checkbox"/> Change in course sequencing for an existing program   | <input type="checkbox"/> Courses that have to be added to the inventory |
| <input checked="" type="checkbox"/> Change in admission requirements (external or internal) | <input type="checkbox"/> Requirements not explicit in the catalog language (e.g., lists of acceptable courses maintained by department office) |   |

**4. SCOPE OF PROPOSED CHANGE**

- Does this proposal impact other colleges/schools? Yes  No
- If yes, then how? This degree is jointly managed and awarded by 3 colleges: College of Natural Sciences, College of Liberal Arts, and Jackson School of Geosciences
- b. Do you anticipate a net change in the number of students in your college? Yes  No   
If yes, how many more (or fewer) students do you expect?
- c. Do you anticipate a net increase (or decrease) in the number of students from outside of your college taking classes in your college? Yes  No   
If yes, please indicate the number of students and/or class seats involved.
- d. Do you anticipate a net increase (or decrease) in the number of students from your college taking courses in other colleges? Yes  No   
If yes, please indicate the number of students and/or class seats involved.

**If 4 a, b, c, or d was answered with yes, please answer the following questions. If the proposal has potential budgetary impacts for another college/school, such as requiring new sections or a non-negligible increase in the number of seats offered, at least one contact must be at the college-level.**

How many students do you expect to be impacted? Approximately 160-180 environmental science majors across the College of Natural Science, the College of Liberal Arts, and the Jackson School of Geosciences.

Impacted schools must be contacted and their response(s) included:

Person communicated with: Dr. Carlos Ramos, Undergraduate Faculty Advisor, Liberal Arts  
Date of communication: May 6, 2015  
Response: Agreed

Person communicated with: Dr. Norma Fowler, Undergraduate Faculty Advisor, Natural Sciences  
Date of communication: May 6, 2015  
Response: Agreed

Person communicated with: Dr. Clark Wilson, Undergraduate Faculty Advisor, Geosciences  
Date of communication: May 6, 2015  
Response: Agreed

- e. Does this proposal involve changes to the core curriculum or other basic education requirements (42-hour core, signature courses, flags)? No If yes, explain:

**If yes, undergraduate studies must be informed of the proposed changes and their response included:**

Person communicated with:

Date of communication:

Response:

- f. Will this proposal change the number of hours required for degree completion? No If yes, explain:

**5. COLLEGE/SCHOOL APPROVAL PROCESS**

Program approval date: May 6, 2015

Dean's Scholars approval date (for changes to Option II): N/A

College approval date: May 6, 2015

**PROPOSED NEW CATALOG TEXT:**

**Admission to the Environmental Science Program**

All freshmen and external transfer students majoring in environmental science (EVS) are first admitted to the University as entry-level EVS majors in the Jackson School of Geosciences, the College of Liberal Arts, or the College of Natural Sciences. After completing a minimum of 24 hours in residence, students may select the EVS major that best suits their long-term interests and, if necessary, transfer to the appropriate college/school in accordance with the regulations and procedures set forth in the General Information Catalog.

**Freshman Admission**

Freshmen applicants seeking admission to the EVS major through the Jackson School of Geosciences, the College of Liberal Arts, or the College of Natural Sciences must meet the calculus readiness requirement by the official admissions application deadline. More information about the calculus readiness requirement is available through the University Admissions Office or online.

Freshmen applicants to the EVS major from all three colleges/schools are reviewed and admitted as a single cohort. Applicants should use the ApplyTexas online application and select the "Environmental Science, Entry-Level" major option listed in the Jackson School of Geosciences, the College of Liberal Arts, or the College of Natural Sciences as a first-choice major. Applicants should apply to the EVS program in the college that best suits their anticipated area of focus (geological sciences, geographical sciences, or biological sciences, respectively).

**External Transfer Admission**

Students who wish to transfer to the University from another college or University must apply to the Office of Admissions as described in General Information. External transfer applicants seeking admission to the Environmental Science (EVS) Degree Program through the Jackson School of Geosciences, the College of Liberal Arts, or the College of Natural Sciences must demonstrate calculus readiness by the official admissions application deadline. Details regarding transfer calculus readiness are available through the University Admissions Office or online.

External transfer applicants to the EVS major from all three colleges/schools are reviewed and admitted as a single cohort. Applicants should use the ApplyTexas online application and select the "Environmental Science, Entry-Level" major option listed in the Jackson School of Geosciences, the College of Liberal Arts, or the College of Natural Sciences as a first-choice major. Applicants should apply to the EVS program in the college that best suits their anticipated area of focus (geological sciences, geographical sciences, or biological sciences, respectively).

**Internal Transfer Admission**

Internal transfer, entry-level applications submitted to the EVS major through the Jackson School of Geosciences, the College of Liberal Arts, and the College of Natural Sciences are reviewed and admitted as a single cohort. All internal transfer applicants should use the online EVS Program Transfer Application and must meet the requirements for internal transfer given in the General Information Catalog.

To be competitive for admission, internal transfer applicants should have a grade point average of at least 3.0 in Biology 311C, Chemistry 301, Mathematics 408C or 408N or 408K, and Geological Sciences 401 or 303.

Additional Information for all internal transfer applicants:

- Application Deadline: March 1st for entry the following academic year.
- Only currently enrolled students in good academic standing with their college of residence may apply.
- Students may apply during the semester they are completing the minimum requirements to be eligible for consideration.
- Entry-level admission to all Environmental Science majors is offered as space is available to the students who are best qualified. Decisions are based on the student's grade point average in the introductory science and math courses listed above, University grade point average, and other factors including, but not limited to, difficulty of course load, course repetitions, proven mathematical ability, and interest in the field of Environmental Science.

Students should consult with an Academic Advisor for additional information on the application process and deadlines.

**THE BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE**

The Bachelor of Science in Environmental Science degree program (~~BSEnviroSci~~), ~~offered by the College of Liberal Arts, the College of Natural Sciences, and the Jackson School of Geoscience~~, 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.

~~Students must apply for admission to the degree program after completing prerequisite coursework. To be competitive for admission, students should have a grade point average of at least 2.75. More information about admission requirements is given in Admission to the Environmental Science Program.~~

The Bachelor of Science in Environmental Science ~~BSEnviroSci~~ 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 ~~if the course carries that flag~~, unless otherwise specified.

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

1. Writing: ~~two~~ 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, at least one writing flag must be from an upper-division course.
2. Quantitative reasoning: one flagged course
3. Global cultures: one flagged course
4. Cultural diversity in the United States: one flagged course
5. Ethics and leadership: one flagged course
6. Independent inquiry: one flagged course

#### **Prescribed Work Common to All Environmental Science Majors**

1. Mathematics: Mathematics 408C, or 408N and 408S, or 408K and 408L.
2. Chemistry: Chemistry 301 or 301H; 302 or 302H; and 204.
3. Physics: Physics 317K and 117M, or another four-hour calculus-based physics sequence.
4. Biological Sciences: Biology 311C and 311D, or 315H.
5. ~~Ecology: Biology 373 and 373L, or Marine Science 320 and 120L or 152T (Topic: Marine Ecology) (Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10.)~~
5. Ecology:
  - a. Biology 373 or Marine Science 320. Marine Science 320 may not be used to satisfy both requirement 5a and requirement 10c.
  - b. Biology 373L or Marine Science 120L. Environmental Science majors in the College of Natural Sciences must choose Biology 373L.
6. Geological Sciences: Geological Sciences 401 or 303, 346C, and an approved geological sciences course in sustainability.
7. Geography: Geography 335N.
8. ~~Field experience and research methods: One course from each of the following lists: Introductory field seminar: Environmental Science 311 and 121. Senior field/research experience: Environmental Science 371 or Biology 377 (with prior approval of the faculty adviser).~~
9. ~~[Research methods: Environmental Science 334]~~ Senior field/research experience: one of the following pairs:
  - a. Environmental Science 271 and 371 or Environmental Science 171 and 471.
  - b. Environmental Science 172C and 472D or Environmental Science 272C and 372D.
  - c. Environmental Science 271 or Marine Science 348, and one of the following: Chemistry 320M, Geography 360G, 368C, 462K, Geosciences 327G, Mathematics 408D or 408M.  
Note: Geography 360G, 462K, and Geosciences 327G may not be used to satisfy both requirement 9c and 10b. Biology 277 may substitute for Environmental Science 271 with prior approval of the faculty advisor.
10. Environmental and sustainability themes: One course in each of the following thematic areas:
  - a. Environmental and sustainability policy, ethics, and history: Geography 334, 336C, 340D, 342C, 356C, ~~[356T (approved topics)]~~, Journalism 346F, Marine Science 367K, and Philosophy 325C. Biology 337, Geography 356, 356T, or Sociology 321K may be counted with prior approval of the faculty advisor.
  - b. Geographic information systems: Geography 360G, 462K, Geological Sciences 327G
  - c. Climates and oceans: Biology 456L, Geography 333K, ~~[356T (approved topics)]~~, Geological Sciences 347D, 347G [371C (approved topics)], 377P, Marine Science 320, 440, 352, 354Q, 354T, 356. Marine Science 320 may not be used to satisfy both requirement 5 and 10. Geography 356T, Geological Sciences 371C, and Marine Science 352 may count with prior approval of the faculty advisor. [367K]
  - d. Environmental economics, sustainability, and business: Economics 304K, 330T. Advanced Placement credit for Economics 304L may be used to satisfy this requirement.
11. ~~Environmental Science 141 and 151 Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10c.~~

## Major Requirements

### BS EVS: Geological Sciences

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

1. Geological Sciences ~~404C~~ or 405, 416K, 416M and 420K
2. Mathematics 408D or 408M
3. Four semester hours of physics in one of the following second semester sequences: Physics 316 and 116L, 317L and 117N, or 303L and 103N
4. One of the following courses on climate and water: Geological Sciences ~~347D, 347G, 371C (approved topics)~~, 376E, 476K, 476M, 376S, 377P (The same course may not be used to satisfy both requirement 4 of the major requirements and requirement 10 of the prescribed work).
5. Nine additional semester hours of upper-division elective coursework in geological sciences not otherwise used to satisfy either prescribed or other major requirements.
6. Enough additional coursework to make a total of 126 semester hours.

### Special Requirements

Students must fulfill the University-wide General Requirements, ~~(p. 17)~~ and the Special Requirements ~~(p. 266)~~ 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 ~~mathematics and science~~ 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 *General Information Catalog*.

### Suggested Arrangement of Courses

#### BS Environmental Science: Geological Sciences

##### First Year

First Term	Hours	Second Term	Hours
UGS 303	3	EVS 311	3
GEO 401 or 303	3	BIO 311C	3
CH 301	3	CH 302	3
M 408C	4	M 408D	4
RHE 306	3	Visual/Perf Arts	3
	<b>16</b>		<b>16</b>

##### Second Year

First Term	Hours	Second Term	Hours
BIO 311D	3	GEO 405	4
PHY 317K	3	GEO346C	3
PHY 117M	1	GeoSci Sustainability	3
GOV 310L	3	EVS 121	1
E 316L, M, N or P	3	Env Eco & Bus	3
Social Science	3	CH 204	2
	<b>16</b>		<b>16</b>

##### Third Year

First Term	Hours	Second Term	Hours
GEO 416K	4	GEO 420K	4
GEO 416M	4	PHY 317L/117N	4
GRG 335N	3	EVS 271	2
GEO UD	3	GEO UD	3
Elective	2	History	3
	<b>16</b>		<b>16</b>

##### Fourth Year

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
EVS 141	1	EVS 151	1
EVS 371	3	Climate & Oceans	3
GIS	3	Env Policy & Politics	3
MNS 320	3	GOV 312L	3
MNS 120L	1	History	3
Climate & Water	3	GEO UD	3
	<b>14</b>		<b>16</b>
<hr/> <i>Total Credit Hours</i>		<hr/> <i>126</i>	