To be adopted:
Proposed change in course requirements for the Bachelor of Science (B.S) and Bachelor of Arts (B.A.) degree in Environmental Sciences and the Minor in Environmental Sciences.

**Major Requirements**

The major requirements for both the B.A. and the B.S. degrees in Environmental Sciences are as follows: Students must fulfill MATH 008B or MATH 009A; MATH 009B; CHEM 001A, CHEM 001B, CHEM 001C; BIOL 002 or BIOL 005A; BIOL 003 or BIOL 005A; ENSC 001, ENSC 002, ENSC 006, or ENSC 143A, ENSC 100, ENSC 101, and ENSC 102 with a grade point average of 2.0 or better and no grade lower than a C-. If a grade lower than a C- is received in 2 or more core courses required for the major, either in separate courses or repetitions of the same course, the student may be discontinued from the major. Students must, under such circumstances, petition the department to remain in the major. Students are also required to choose one of the options and satisfactorily complete the option requirements. Students in Environmental Sciences are required to demonstrate adequate progress towards earning the degree. Adequate progress is defined as completion of MATH 009B prior to the beginning of the Winter Quarter of the second year of residence or Junior standing (>90 units) and at least one course from ENSC 100, ENSC 101, or ENSC 102 must be completed prior to the end of the third year of residence or senior standing (>135 units).

**Core Requirements**

1. Lower-division requirements (41-42 units)
   a) ENSC 001, ENSC 002
   b) CHEM 001A, CHEM 001B, CHEM 001C, CHEM 01LA, CHEM 01LB, CHEM 01LC
   c) MATH 005 or MATH 008A, MATH 008B or

1. [no change]
   a) [no change]
   b) [no change]
   c) [no change]
d) POSC 010

2. Upper-division requirements (14 units): ENSC 100, ENSC 101, ENSC 102, ENSC 191

Environmental Toxicology Option (70-79 units)

1. BIOL 005A, BIOL 05LA, BIOL 005B
2. CHEM 005 or BIOL 005C; CHEM 112A, CHEM 112B, CHEM 112C
3. ENTX 101, ENTX 154
4. PHYS 002A, PHYS 002B, PHYS 002C
5. PHYS 02LA, PHYS 02LB, PHYS 02LC
   Are recommended
6. ENSC 006/ECON 006 or ENSC 143A/ECON 143A (ECON 003 prerequisite)
7. BCH 100 or both BCH 110A and BCH 110B; BIOL 102 or BIOL 121/MCBL 121; BCH 110C or BIOL 107A
8. STAT 100A and STAT 100B


Natural Science Option (65-71 units)

1. BIOL 005A, BIOL 05LA, BIOL 005B
2. PHYS 002A, PHYS 002B, PHYS 002C
3. PHYS 02LA, PHYS 02LB, PHYS 02LC are recommended
4. CHEM 112A, CHEM 112B
5. GEO 001 or GEO 002
6. ENSC 006/ECON 006 or ENSC 143A/
ECON 143A (ECON 003 prerequisite)

7. STAT 100A and STAT 100B

8. Elective Courses:
   a) At least one course from BIOL 005C, CHEM 005, CHEM 112C, MATH 009C
   b) A total of at least five courses from
      the following (at least three must be Environmental Sciences or Soil and Water Sciences)
      
      ENSC 120/NEM 120, ENSC 127, ENSC 133/MCBL 133/SWSC 133, ENSC 135/Chem 135/ENTX 135,
      ENSC 136/Chem 136/ENTX 136/SWSC 136/SWSC 140, ENSC 141/MCBL 141/SWSC 141,
      ENSC 142, ENSC 144/ENVE 144, ENSC 145/SWSC 145, ENSC 146/CHEM 146/ENTX 146,
      ENSC 147/SWSC 147, ENSC 148/GEO 148, ENSC 197, ENSC 198, BIOL 116/Biol 116/Biol 121/MCBL 121,
      BIOL 121L/MCBL 121L, BIOL 124/MCBL 124, BIOL 160, BiOL 163, BPSC 104/Biol 104,
      CHEM 109, ENTX 101, GEO 157, GEO 160, ENSC 104/SWSC 104, ENSC 107/SWSC 107,
      ENSC 138/GEO 138, ENSC 197, ENSC 198-I, BIO

Social Science Option (85-90 units)

1. BIOL 002, BIOL 003
2. GEO 001 or GEO 002
3. ECON 003
4. ENSC 143A/ECON 143A, ENSC 143B/CON
5. ECON 101 or ECON 107 or SOC 110
6. STAT 100A and STAT 100B
7. Elective Courses:
   a) At least one course from ENSC 133/MCBL 133
      ENSC 140/SWSC 140, ENSC 141/MCBL 141, ENSC 142, ENSC 144/ENVE 144, ENSC 145/SWSC 145,
      ENSC 146/CHEM 146/ENTX 146, ENSC 147/SWSC 147, ENSC 148/GEO 148, ENSC 197, ENSC 198-I

Social Science Option (85-90 units)

1. [no change]
2. [no change]
3. [no change]
4. [no change]
5. [no change]
6. [no change]
7. [no change]
b) A total of at least six courses from the following:

- **Economics:** ECON 102, ECON 103, ECON 104A, ECON 105A, ECON 116, ECON 129, ECON 146, ECON 148, ECON 156, ECON 160/BUS 160, ECON 181, ECON 182, ECON 183
- **Society and culture:** ANTH 110, ANTH 129, ANTH 132, ANTH 134, ANTH 135, ANTH 142, ANTH 170, ANTH 186/LNST 166, PHIL 117, PHIL 137, SOC 137, SOC 143/URST 143, SOC 182/URST 182, SOC 184
- **Regulation and law:** ECON 119, POSC 101, POSC 106S, POSC 127, POSC 166, POSC 181, POSC 182, POSC 183
- **Management/Analytics:** BUS 104/STAT 104, BUS 122, BUS/ECON 162, ECON 110, ECON 111, ECON 112, GEO 157, GEO 160, GEO 167, MATH 120, SOC 111

**Minor**

The minor in Environmental Sciences consists of the following.

1. **Lower-division requirements (23 units)**
   - a) ENSC 002 or ENSC 017; ENSC 006/ECON 006
   - b) CHEM 001A, CHEM 001B, CHEM 001C, CHEM 01LA, CHEM 01LB, CHEM 01LC

2. **Upper-division requirements (20 units)**
   - a) ENSC 100/SWSC 100, ENSC 101, ENSC 102
   - b) Eight (8) units of additional upper-division courses in Environmental Sciences, no more than 4 units of which are in courses numbered 190-198

Of the specified upper-division units, a minimum of 16 units must be unique to the minor and may not be used to satisfy major requirements.

See Minors under the College of Natural and Agricultural Sciences in the Colleges and Programs section of this catalog for additional information on minors.
Justification for Proposed Changes to Undergraduate ENSC Curriculum
Since the Soil and Water Science Graduate Program is in moratorium, the Environmental Sciences Department voted to remove all upper division SWSC courses from the catalog to reduce catalog clutter and avoid student confusion. All of the upper division courses listed under SWSC are cross listed with courses in ENSC and most students enroll in these courses using the ENSC listing. There was simply no reason to keep upper division SWSC courses in the catalog. Because the upper division SWSC courses are being removed from the catalog, all mentions of these courses in the catalog must be removed.

As part of a holistic review of the undergraduate curriculum in the Environmental Sciences major, the ENSC Faculty reviewed the upper division electives for the major with respect to: (i) regularity of recent offerings, as well likelihood of future offerings, (ii) barriers posed by additional prerequisites, and (iii) overall relevance to the major. Five courses, BIOL 117, BIOL 160, BIOL 163, GEO 162 and GOE 167 were removed from the electives because they are not regularly taught, they have unusual prerequisites that prevent all but a few ENSC majors to take the courses or they have low relevance to the current ENSC curriculum.

The ENSC Faculty also reviewed new course listings in BPSC, BIOL and GEO and decided to adopt four new upper division electives: BPSC 165, BPSC 166, BIOL 116 and GEO 160. Overall, the deleted and newly adopted electives should improve the availability of relevant electives in outside departments.

Approvals
Approved by the faculty of the Department of Environmental Sciences:  Feb 14th, 2013
Approved by the Executive Committee of the College of Natural and Agricultural Sciences: 3/12/13
Approved by the Committee on Educational Policy: 4/2/13