EXECUTIVE COMMITTEE
COLLEGE OF NATURAL AND AGRICULTURAL SCIENCE
REPORT TO RIVERSIDE DIVISION
MAY 24, 2016

To be adopted:

Proposed changes to the undergraduate major requirements in Environmental Sciences

PRESENT:

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 009B 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).

Note To gain maximum benefit from participating in the Undergraduate Research and Environmental Internship Programs, students intending to enroll in ENSC 197 and ENSC 198-I should contact their advisor during the quarter prior to enrollment in these courses.

PROPOSED:

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 009A; MATH 009B; CHEM 001A, CHEM 001B, CHEM 001C; BIOL 002 or BIOL 005A; BIOL 003 or BIOL 005B; 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).

Note To gain maximum benefit from participating in the Undergraduate Research and Environmental Internship Programs, students intending to enroll in ENSC 197 and ENSC 198-I should contact their advisor during the quarter prior to enrollment in these courses.
### 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 MATH 009A, MATH 009B
   - 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, PHYS02LC are recommended

6. ENSC 006/ECON 006 or ENSC 143A/ ECON143A (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


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### 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 009A, MATH 009B
   - 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 12A, CHEM 12B, CHEM 12C

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/ ECON143A (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
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)

Social Science Option (85-90 units)

1. BIOL 002, BIOL 003
2. GEO 001 or GEO 002
3. ECON 003

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
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)

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/ECON 143B, ENSC 143C/ECON 143C, ENSC 172, ENSC 174

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, ENSC 141/MCBL 141, ENSC 142, ENSC 144/ENVE 144, ENSC 155, ENSC 163, BPSC 134/ENSC 134, ENSC 104, ENSC 107, ENSC 138/GEO 138, ENSC 197, ENSC 198-I

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, MATH 120, SOC 111
Justification:
Changes in math requirements were made in response to the recent discontinuation of MATH 008A and MATH 008B by the Department of Mathematics. Changes in chemistry requirements were made in response to the reclassification of organic chemistry (CHEM 112 A, B &C) to lower division courses by the Department of Chemistry. ENSC 103, *Environmental Pollution and Health*, was recently approved for Spring 2016 and the ENSC Department would like to add it as elective for both the Environmental Toxicology and Natural Sciences tracks in the ENSC undergraduate major. A small change was made in the first paragraph of the Major Requirements to correct a typo: *BIOL 003 or BIOL 005B* are required for the major. *BIOL 003 is the equivalent of BIOL 005B – not BIOL 005A*. Additionally, Core Requirements should not be underlined (typo corrected), and the duplicate courses listed in error under the Natural Science Option 8b are being deleted.

Approvals:
Approved by the faculty of the Department of Environmental Sciences: December 1, 2015
Approved by the Executive Committee College of Natural and Agricultural Sciences: March 4, 2016
Approved by the Committee on Educational Policy: April 27, 2016