

**EXECUTIVE COMMITTEE
COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES
REPORT TO THE RIVERSIDE DIVISION
MAY 26, 2020**

To be adopted:

Proposed Changes to Environmental Sciences

PRESENT

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 007A or MATH 009A or MATH 09HA; MATH 007B or MATH 009B or MATH 09HB; CHEM 001A or CHEM 01HA, CHEM 001B or CHEM01HB, CHEM 001C or CHEM 01HC; BIOL 005A; BIOL 005B; BIOL 05LA or BIOL 020; ENSC 001, ENSC 002, ENSC 006, 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 in Environmental Sciences are required to demonstrate adequate progress towards earning the degree. Adequate progress is defined as completion of MATH 009B or MATH 09HB or MATH 007B 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).

(No Change)

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.

(No Change)

Core Requirements

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| 1. Lower-division requirements (72 or 73 units) | (No Change) |
| a) ENSC 001, ENSC 002, ENSC 006 or ECON 006 | |
| b) BIOL 005A, BIOL 05LA or BIOL 020, BIOL 005B | (No Change) |
| c) CHEM 001A or CHEM 01HA, CHEM 001B or CHEM 01HB, CHEM 001C or CHEM 01HC, CHEM 01LA or CHEM 1HLA, CHEM 01LB or CHEM 1HLB, CHEM 01LC or CHEM 1HLC | (No Change) |
| d) CHEM 008A and CHEM 08LA or CHEM 08HA and CHEM 08HLA; CHEM 008B and CHEM 08LB or CHEM 08HB and CHEM 08HLB | (No Change) |
| e) MATH 007A or MATH 009A or MATH 09HA; MATH 007B or MATH 009B or MATH 09HB | (No Change) |
| f) PHYS 002A or PHYS 02HA, PHYS 02LA or PHYS 02HLA, PHYS 002B or PHYS 02HB, PHYS 02LB or PHYS 02HLB, PHYS 002C or PHYS 02HC, PHYS 02LC or PHYS 02HLC | (No Change) |
| g) POSC 010 | (No Change) |
| 2. Upper-division requirements (24 units): | 2. Upper-division requirements (<u>23-24 units</u>): |
| a) ENSC 100, ENSC 101, ENSC 102, ENSC 191 | (No Change) |
| b) STAT 100A and STAT 100B | b) STAT 100A |
| | c) <u>ENSC 110 or STAT 100B</u> |

Electives

Students are free to choose from the lists below to fulfill their lower-division and upper-division elective requirements: (No Change)

1. Lower-division electives (8 units): (No Change)

At least two electives from BIOL 005C, CHEM 005, CHEM 008C and CHEM 08LC, CHEM 08HC and CHEM 08HLC, MATH 009C or MATH 09HC or MATH 010A, GEO 001 or GEO 002 (No Change)

2. Upper-division electives (20 units): (No Change)

At least ~~five~~ electives from the following list, with a minimum of ~~four~~ from Environmental Sciences or Environmental Toxicology:

At least 20 units of electives from the following list, with a minimum of 16 units from Environmental Sciences or Environmental Toxicology:

ENTX 101, ENTX 154, ENSC 103/ENTX 103, ENSC 104, ENSC 105, ENSC 107, ENSC 110, ENSC 120/NEM 120, ENSC 127, ENSC 130, ENSC 133/MCBL 133, ENSC 134/BPSC 134, ENSC135/CHEM 135/ENTX 135, ENSC 136/CHEM136, ENSC 138/GEO 138, ENSC 140, ~~ENSC 141/MCBL141~~, ENSC 144/ENVE 144, ENSC 153, ENSC 163, ENSC 165, ENSC 172, ENSC 174, ENSC 175, ENSC 177, ENSC 197, ENSC 198-I, BCH 100 or both BCH 110A or BCH 110HA and BCH 110B or BCH 110HB; BCH 110C or BCH 110HC or BIOL 107A; BIOL 102 or BIOL 121/MCBL 121; BIOL 116, BIOL 121L/MCBL 121L, BPSC 104/BIOL 104, BPSC 165, BPSC 166, CBNS 150/ENTX 150, CHEM 109, GEO 157, GEO 160

ENTX 101, ENTX 154, ENSC 103/ENTX 103, ENSC 104, ENSC 105, ENSC 107, ENSC 110, ENSC 120/NEM 120, ENSC 127, ENSC 130, ENSC 133/MCBL 133, ENSC 134/BPSC 134, ENSC135/CHEM 135/ENTX 135, ENSC 136/CHEM136, ENSC 138/GEO 138, ENSC 139/GEO 139, ENSC 140, ENSC 144/ENVE 144, ENSC 153, ENSC 163, ENSC 165, ENSC 172, ENSC 174, ENSC 175, ENSC 177, ENSC 197, ENSC 198-I, BCH 100 or both BCH 110A or BCH 110HA and BCH 110B or BCH 110HB; BCH 110C or BCH 110HC or BIOL 107A; BIOL 102 or BIOL 121/MCBL 121; BIOL 116, BIOL 121L/MCBL 121L, BPSC 104/BIOL 104, BPSC 146, BPSC 165, BPSC 166, CBNS 150/ENTX 150, CHEM 109, GEO 157, GEO 160

Suggested courses of study are also provided below for specialized areas in environmental sciences to assist students to meet minimum employment requirements for entry-level positions in government agencies, nongovernment organizations (NGO), and environmental consulting firms. Students are strongly encouraged to schedule a meeting with a Faculty in their specialization area of interest for curriculum and career advice. A list of core Faculty in each specialization area is available at envisci.ucr.edu/undergrad.

(No Change)

Soil Sciences:

Recommended to meet lower-division electives: BIOL 005C, GEO 001 or GEO 002, MATH 009C or MATH 09HC or MATH 010A; Recommended to meet upper-division electives: ENSC 104, ENSC 107, ENSC 110, ENSC 120, ENSC 127, ENSC 133/MCBL 133, ENSC 134/ BPSC134, ENSC 138/GEO 138, ENSC 144, ENSC 175, ENSC 177

Soil Sciences:

Recommended to meet lower-division electives: BIOL 005C, GEO 001 or GEO 002, MATH 009C or MATH 09HC or MATH 010A; Recommended to meet upper-division electives: ENSC 104, ENSC 107, ENSC 110, ENSC 120, ENSC 127, ENSC 133/MCBL 133, ENSC 134/ BPSC134, ENSC 138/GEO 138, ENSC 139/GEO 139, ENSC 144, ENSC 175, ENSC 177, BPSC 146

Hydrologic Sciences:

Recommended to meet lower-division electives: MATH 009C or MATH 09HC or MATH 010A, GEO 001 or GEO 002; Recommended to meet upper- division electives: ENSC 105, ENSC 107, ENSC 110, ENSC 127, ENSC 136/CHEM136, ENSC 140, ENSC 163, ENSC 165, ENSC 175, ENSC 177

(No Change)

Atmospheric Sciences:

Recommended to meet lower-division electives: (No Change)
CHEM 005, CHEM 08C and CHEM 08LC,
CHEM 08HC and CHEM 08HLC, MATH 009C
or MATH 09HC or MATH 010A; Recommended
to meet upper-division electives: ENSC
103/ENTX 103, ENSC 110, ENSC 130,
ENSC135/CHEM 135/ENTX 135, ENSC
136/CHEM 136, ENSC 175, ENSC 177, GEO
160

Environmental Toxicology:

Recommended to meet lower-division electives: (No Change)
BIOL 005C, CHEM 005, CHEM 008C and
CHEM 08LC or CHEM 08HC and CHEM 8HLC;
Recommended to meet upper- division electives:
ENTX 101 required + at least 3 electives from
ENSC or ENTX: ENSC 103/ENTX 103, ENSC
110, ENSC 135/CHEM 135/ENTX 135, ENSC
136/CHEM 136, ENSC 177, CBNS 150/ENTX
150, ENTX 154, BCH 100 or both BCH 110A or
BCH 110HA and BCH 110B or BCH 110HB,
BIOL 102 or BIOL 121, BCH 110C or BCH
110HC or BIOL 107A

Environmental Management:

Recommended to meet lower-division electives: (No Change)
BIOL 005C, GEO 001 or GEO 002, MATH 009C
or MATH 09HC or MATH 010A; Recommended
to meet upper division electives: ENSC
103/ENTX 103, ENSC 110, ENSC 144, ENSC
153, ENSC 172, ENSC 174, ENSC 175, ENSC
177

Justification:

1. ENSC 110 is a new course and the content of ENSC 110 is similar to STAT 100B and it is more appropriate for ENSC major.
2. To make the number of required electives more consistent and clear for the advisors and students, we defined the total number of required units rather than the number of courses.
3. ENSC 141/MCBL141 will no longer be offered as the faculty who was teaching this course is retired and we do not have the expertise in our department to teach this class.
4. ENSC 139/GEO139 is a new course and we want to add it to the list of ENSC electives.
5. BPSC 146 course content is useful for the ENSC major. The faculty voted to include this course as one of the ENSC electives.

Approvals:

Approved by the faculty of the Department of Environmental Sciences:	October 24, 2019
Approved by the Executive Committee of the College of Natural and Agricultural Sciences:	January 21, 2020
Approved by the Committee on Educational Policy:	April 17, 2020