

**College of Agriculture and Life Sciences – School of Plant and Environmental Sciences
Bachelor of Science: Environmental Science**

For students graduating in calendar year 2022 and for student date of entry under UG Catalog 2020-2021

Pathways to General Education (44-47 credits)

1. Discourse

- ___ (3, foundational) ENGL 1105: First-Year Writing – F, S
- ___ (3, foundational) ENGL 1106: First-Year Writing – F, S, SI, SII
- ___ (3, advanced/applied) * ENGL 3764: Technical Writing – F, S, W, SI, SII

2. Critical Thinking in the Humanities

- ___ (3) _____ - F, S, W, SI, SII
- ___ (3) _____ - F, S, W, SI, SII

3. Reasoning in the Social Sciences

- ___ (3) AAEC 1005: Econ Food Fiber Sys or ECON 2005: Principles of Economics – F, S
- ___ (3) AAEC 1006: Econ Food Fiber Sys or ECON 2006: Principles of Economics – F, S

4. Reasoning in the Natural Sciences

- ___ (3) CHEM 1035: General Chemistry – F, S, SI, SII
- ___ (1) CHEM 1045: General Chemistry Laboratory – F, S, SI, SII
- ___ (3) *CHEM 1036: General Chemistry – F, S, SI, SII
- ___ (1) *CHEM 1046: General Chemistry Laboratory – S, SI, SII

5. Quantitative and Computational Thinking

- ___ (3, foundational) - MATH 1025: Elementary Calculus – F, S, SI, SII
- ___ (3, foundational) - *MATH 1026: Elementary Calculus – F, S, SII
- ___ (3, advanced) - *STAT 3615: Biological Statistics – F, S, SI, SII

6. Critique and Practice in Design and the Arts

- ___ (3, design) _____ - F, S, W, SI, SII
- ___ (3, arts) _____ - F, S, W, SI, SII

7. Critical Analysis of Identity and Equity in the United States

- (may be double-counted with another core concept)
- ___ (3) _____ - F, S, W, SI, SII

Common Degree Core Requirements (21)

- ___ (1) ALS 1234: CALS First Year Seminar - F
- ___ (3) BIOL 1105: Principles of Biology – F, W, SI
- ___ (3) BIOL 1106: Principles of Biology – S, W, SII
- ___ (3) *CSES/ENSC 3114 or GEOS 3614: Soils – F
- ___ (1) CSES/ENSC 3124 or GEOS 3624: Soils Laboratory - F
- ___ (3) *ENSC 3604: Fund Environ Science - F
- ___ (3) GEOG 2084: Principles of GIS – F, S or GEOG/GEOS 4354: Introduction to Remote Sensing – F or FREC 4114: Info Tech for Natl Resrce Mgt – S
- ___ (3) GEOS 1004: Intro to Earth Science or GEOS 2104: Elements of Geology – F, S
- ___ (1) *ENSC 4864: Environmental Science Capstone – S

Specific Course Requirements for ENSC Major (27 credits)

- ___ (3) *CHEM 2535: Organic Chemistry – F, S, SI
- ___ (3) *CHEM 2114: Analytical Chemistry – F, S, SI
- ___ (1) *CHEM 2124: Analytical Chemistry Lab – F, S, SI
- ___ (3) *MATH 2024: Intermediate Calculus – F, S
- ___ (3) *PHYS 2205: General Physics – F, S, W, SI
- ___ (3) *CSES/ENSC 3634: Physics of Pollution – F
- ___ (3) *CSES/ENSC 4854: Wetlands Soils and Mitigation – F
- ___ (3) *GEOS 4804: Groundwater Hydrology – F, S
- ___ (3) *CSES/ENSC/CHEM 4734: Environmental Soil Chemistry – S
- ___ (2) *ENSC 4414: Monitoring & Analysis Environ – S

Major Specific Course Req. (Choose 12 credits from list below)

- ___ (3) *CSES/ENSC 3614: Soil Phys & Hydro Properties – S
- ___ (3) *CSES/ENSC 3644: Plant for Envir Rest – S
- ___ (3) *CSES/ENSC 4134: Soil Genesis & Class – S
- ___ (3) *CSES/ENSC/BIOL 4164: Environmental Microbiology – S
- ___ (3) *CSES/ENSC 4314: Water Quality - S
- ___ (3) *CSES/ENSC 4764: Bioremediation - F
- ___ (3) *CSES 4774: Reclamation of Disturbed Lands – F (even years)
- ___ (3) *FREC/WATR 3104: Prin of Watershed Hydrology – S
- ___ (3) *HORT 4064: Soil Microbiology – F
- ___ (3) ALS 3404: Ecological Agriculture – F

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Technical Electives (Choose at least 15 credits from list below – or approved by Program Director)

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| <p>___ (3) AAEC 3314: Environmental Law - S</p> <p>___ (3) *AAEC 3324: Environmental Sustain Dev Econ - S</p> <p>___ (2) ALS/WATR 4614: Watershed Assess Mgt Policy - S</p> <p>___ (3) *BIOL 2604: General Microbiology – F, S, SI</p> <p>___ (2) *BIOL 2614: General Microbiology Lab – F, S, SI – F, S, SI</p> <p>___ (3) *BIOL 2804: Ecology – F, S, SII</p> <p>___ (4) *BIOL 4004: Freshwater Ecology – F</p> <p>___ (1) CEE 2824: Civil Engr Drawings and CAD – F, S</p> <p>___ (3) *CEE 3104: Intro Environ Engr – F, S</p> <p>___ (3) *CEE 4134: Sustainable Systems - S</p> <p>___ (3) *CEE 4174: Solid & Haz Waste Mgt - F</p> <p>___ (3) *CHEM 2536: Organic Chemistry – S, SII</p> <p>___ (1) *CHEM 2545: Organic Chemistry Laboratory – S, SI</p> <p>___ (1) *CHEM 2546: Organic Chemistry Laboratory – S, SI</p> <p>___ (3) *CHEM 4514: Green Chemistry – S</p> <p>___ (3) *CHEM 4615: Phys Chem Life Sci - F</p> <p>___ (3) *CSES/GEOG/GEOS 3304: Geomorphology - S</p> <p>___ (3) *CSES 3144: Soil Description and Interp – F</p> <p>___ (1-3) CSES 4964, 4974, 4994, or 3954 : Field Study, Independent Study, Undergraduate Research, Study Abroad (only up to 3 credits total)</p> <p>___ (3) *CSES 4214: Soil Fertility and Management - F</p> <p>___ (3) *ENGR 3124: Green Engineering – F, S</p> | <p>___ (3) *ENGR 4134: Env Life Cycle Assessment - S</p> <p>___ (3) *FIW 4534: Ecol & Mgmt of Wetland Systems – F</p> <p>___ (3) *FIW 4624: Marine Ecology - S</p> <p>___ (2) *FREC 2314: Forest Biology and Dendrology - F</p> <p>___ (1) FREC 2324: Dendrology Laboratory – F, S</p> <p>___ (3) *FREC 3604: Climate Science - ?</p> <p>___ (3) *FREC/WATR 3754: Watersheds and Water Quality - F</p> <p>___ (3) FREC/CSSES 4334: Agroforestry - F</p> <p>___ (3) FREC 4354: Forest Soil and Watershed Mgmt - F</p> <p>___ (3) FREC 4374: Forested Wetlands – F</p> <p>___ (3) *FREC 4784: Wetland Hydro/Biogeochemistry - S</p> <p>___ (3) GEOG 3314: Cartography (Pathways 6d) – F, S</p> <p>___ (3) *GEOG/GEOS 4084: Modeling with GIS – F, S</p> <p>___ (3) *GEOG 4314: Analysis in GIS - S</p> <p>___ (3) GEOG/GEOS 4354: Introduction to Remote Sensing – F, SII</p> <p>___ (3) GEOS 3034: Oceanography - S</p> <p>___ (3) *GEOS 3404: Elements of Structural Geology - F</p> <p>___ (3) *GEOS 4634: Environmental Geochemistry - F</p> <p>___ (3) UAP/PSCI 3344: Global Environ Issues – F, S</p> <p>___ (3) UAP 3354: Environ Policy & Plan – F</p> <p>___ (3) UAP 4264: Environmental Ethics - S</p> <p>___ (3) UAP 4344: Law of Critical Envl Areas - S</p> <p>___ (3) UAP 4374: Land Use and Environ - F</p> |
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Total Hours Required: 120

*Some courses listed on the checksheet may have prerequisites; please consult the University Course Catalog or check with your advisor.

F (fall), S (spring), W (winter), SI (summer I), and SII (summer II) let students know the term the course is offered – when a course is offered is subject to change so always check the course catalog.

By the end of the academic year in which the student has attempted 60 credits (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" toward a B.S. degree in ENSC will include:

1. Declaring an option within the CSS major
2. Passing the following:
 - At least 24 credits that apply to the Pathways of General Education
 - BIOL 1105, 1106, ALS 1234, CSES/ENSC 3114, 3124, ENSC 3604, 12 credits of CHEM, 9 credits of MATH and/or STAT

GPA Requirements:

- Overall GPA: 2.0 (each semester in order to be in good academic standing)
- In-major GPA: 2.0 (by the time the student graduates)
 - Includes classes in: BIOL, CHEM, CSES, ENSC, FREC, GEOS, PHYS

Language Study Requirement: A sequence of two foreign language courses is required unless two years of the same high school foreign language or 6 transfer credits of the same foreign language are completed. These credits **do not** count toward graduation requirements.