College of Agriculture and Life Sciences – School of Plant and Environmental Sciences
Bachelor of Science in Environmental Science (ENSC)
For students entering under UG Catalog 2022-2023

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 (20)
__ (1) ALS 1234: CALS First Year Seminar *or* SPES 1004: 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 Natl Resource Mgt – S
__ (3) GEOS 1004: Intro to Earth Science *or* GEOS 2104: Elements of Geology – F, S

Specific Course Requirements for ENSC Major (24 credits)
__ (3) *CHEM 2514 Survey of Organic Chemistry *or* CHEM 2535: Organic Chemistry – F, S, S
__ (3) *CHEM 2114: Analytical Chemistry – F, S, SI
__ (1) *CHEM 2124: Analytical Chemistry Lab – F, S, SI
__ (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
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Major Specific Course Req. (*Choose* 12 credits from list below)
__ (3) ALS 3404: Ecological Agriculture – F
__ (3) *CSES/ENSC 3614: Soil Phys & Hydro Properties – S
__ (3) *CSES/ENSC 3644: Plant for Envir Rest – F
__ (3) *CSES 4064: Soil Microbiology – F
__ (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/ENSC 4774: Reclamation of Disturbed Lands – F (even years)
__ (3) *ENSC 4244: Ecological Restoration
__(3) *FREC/WATR 3104: Prin of Watershed Hydrology – S

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Technical Electives (*Choose* at least 16 credits from list below – or approved by Program Director)

__ (3) AAEC 3314: Environmental Law - S
__ (3) *AAEC 3324: Environmental Sustain Dev Econ - S
__ (2) ALS/WATR 4614: Watershed Assess Mgt Policy - S
__ (3) *BIOL 2604: General Microbiology – F, S, SI
__ (2) *BIOL 2614: General Microbiology Lab – F, S, SI – F, S, SI
__ (3) *BIOL 2804: Ecology – F, S, SII
__ (4) *BIOL 4004: Freshwater Ecology – F
__ (1) CEE 2824: Civil Engr Drawings and CAD – F, S
__ (3) *CEE 3104: Intro Environ Engr – F, S
__ (3) *CEE 4134: Sustainable Systems - S
__ (3) *CEE 4174: Solid & Haz Waste Mgt - F
___ (3) *CHEM 4514: Green Chemistry – S
__ (3) *CHEM 4615: Phys Chem Life Sci - F
__ (3) *CSES/GEOG/GEOS 3304: Geomorphology - S
__ (3) *CSES 3144: Soil Description and Interp – F
__ (1-3) CSES 4964, 4974, 4994, *or* 3954 : Field Study, Independent Study, Undergraduate Research, Study Abroad (only up to 3 credits total)
__ (3) *CSES 4214: Soil Fertility and Management - F
__ (3) *ENGR 3124: Green Engineering – F, S
__ (3) *ENGR 4134: Env Life Cycle Assessment - S
__ (3) *FIW 4534: Ecol & Mgmt of Wetland Systems – F
__ (3) FIW 4624: Marine Ecology - S
__ (2) *FREC 2314: Forest Biology and Dendrology - F
__ (1) FREC 2324: Dendrology Laboratory – F, S
__ (3) *FREC 3604: Climate Science - ?
__ (3) *FREC/WATR 3754: Watersheds and Water Quality - F
__ (3) FREC/CSES 4334: Agroforestry - F
__ (3) FREC 4354: Forest Soil and Watershed Mgmt - F
__ (3) *FREC 4374: Forested Wetlands – F
__ (3) FREC 4784: Wetland Hydro/Biogeochemistry - S
__ (3) GEOG 3314: Cartography (Pathways 6d) – F, S
__ (3) *GEOG/GEOS 4084: Modeling with GIS – F, S
__ (3) *GEOG 4314: Analysis in GIS - S
__ (3) GEOG/GEOS 4354: Introduction to Remote Sensing – F, SII
__ (3) GEOS 3034: Oceanography - S
__ (3) *GEOS 3404: Elements of Structural Geology - F
__ (3) *GEOS 4634: Environmental Geochemistry – F
__ (3) PHS 3014: Intro to Environmental Health – S
__ (3) *PHS 4054: Concepts in One Health - S
__ (3) *UAP/PSCI 3344: Global Environ Issues – F, S
__ (3) UAP 3354: Environ Policy & Plan – F
__ (3) *UAP 4264: Environmental Ethics - S
__ (3) UAP 4344: Law of Critical Envl Areas - S
__ (3) *UAP 4374: Land Use and Environ - F

Free Electives (to reach 120 Total Credit Hours)

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NOTES:

- Total Hours Required: 120
- *Some courses listed on the checksheet may have prerequisites or corequisites; please consult the University Course Catalog or check with your advisor.
- F (fall), S (spring), W (winter), SI (summer I), and SII (summer II) – key to 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:
  - Declaring an option within the CSS major
  - 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) with C- or Better in Chemistry 1035, 1036, CHEM 2514 or 2535, and CHEM 2114.
  - 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.