

**College of Agriculture and Life Sciences  
School of Plant and Environmental Sciences  
Bachelor of Science in Environmental Science  
Major in Ecological Restoration**

**For students entering under UG catalog 2021-2022**

**Pathways to General Education (44-47 credits)**

**Concept 1 – Discourse (9 credit hours)**

**1F – Foundational**

- \_\_\_ (3) ENGL 1105 First-Year Writing – F, S
- \_\_\_ (3) ENGL 1106 First-Year Writing – F, S, SI, SII

**1A – Advanced/Applied**

- \_\_\_ (3) – F, S, W, SI, SII

**Concept 2 – Critical Thinking in the Humanities (6 credits)**

- \_\_\_ (3) – F, S, W, SI, SII
- \_\_\_ (3) – F, S, W, SI, SII

**Concept 3 – Reasoning in the Social Sciences (6 credits)**

- \_\_\_ (3) AAEC 1005 Econ Food Fiber Sys  
or ECON 2005 Principles of Economics – F, S
- \_\_\_ (3) – F, S, W, SI, SII

**Concept 4 – Reasoning in the Natural Sciences (8 credits)**

- \_\_\_ (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\* – F, S, SI, SII

**Concept 5 – Quantitative and Computational Thinking (11 credits)**

**5f – Foundational (8 credits)**

- \_\_\_ (3) MATH 1025: Elementary Calculus – F, S, SI, SII
- \_\_\_ (3) MATH 1026: Elementary Calculus – F, S, SI, SII

**5a – Advanced/Applied (3 credits)**

- \_\_\_ (3) STAT 3615 Biological Statistics\* – F, S, SI, SII

**Concept 6 – Critique and Practice in Design and the Arts (6 credits)**

**6d – Design**

- \_\_\_ (3) – F, S, W, SI, SII

**6a – Arts**

- \_\_\_ (3) – F, S, W, SI, SII

**Concept 7 – Critical Analysis of Identity and Equity in the United States (3 credits)**

Edit “(may be double-counted with another core concept)” to read, “(may be double-counted with another Pathways concept)”

- \_\_\_ (3) – F, S, W, SI, SII

**Common Degree Core Requirements (21)**

- \_\_\_ (1) SPES 1004: First Year Seminar or 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: Fundamentals of Environmental Science\* - F
- \_\_\_ (3) GEOG 2084: Principles of GIS – F, S or GEOG 4354: Introduction to Remote Sensing or FREC 4114 Informational Technologies for Natural Resources Management\* – F
- \_\_\_ (3) GEOS 1004: Introduction to Earth Science  
or GEOS 2104 Elements of Geology - F
- \_\_\_ (1) ENSC 4864: Environmental Science Capstone\*

**Major Requirements for Ecological Restoration (21 credits)**

- \_\_\_ (3) BIOL/HORT 2304: Plant Biology\* – F, S
- \_\_\_ (3) BIOL 2804: Ecology\* – F, S, SII
- \_\_\_ (3) BIOL 3204: Plant Taxonomy\* - S
- \_\_\_ (3) ENSC 3244: Ecological Restoration\*
- \_\_\_ (3) CSES/ENSC 3644: Plant Materials for Environmental Restoration \* – S
- \_\_\_ (3) CSES/ENSC 4774: Reclamation of Disturbed Lands\* – F (even years)
- \_\_\_ (3) PPWS 4604: Biological Invasions\* - F

**Ecology Restricted Electives (choose 9 credits)**

- \_\_\_ (3) ALS 3404: Ecological Agriculture – F
- \_\_\_ (4) BIOL 4004: Freshwater Ecology\* – F
- \_\_\_ (3) BIOL 4114: Global Change Ecology\*
- \_\_\_ (3) CSES/FREC 4334: Agroforestry - F
- \_\_\_ (3) CSES/ENSC 4764: Bioremediation - F
- \_\_\_ (3) CSES 4554: Forage Crop Ecology- S
- \_\_\_ (3) HORT/FREC 2134: Plants & Greenspaces Urban Com – F,W

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**Plant and Soil Sciences Restricted Electives (choose 6 credits)**

- \_\_\_ (3) HORT 2244: Plant Propagation – S
- \_\_\_ (3) HORT 4064: Soil Microbiology\* – F
- \_\_\_ (3) HORT 3324: Herbaceous Landscape Plants\*
- \_\_\_ (3) CSES 4174: Soil Evaluation and Sampling\* – S
- \_\_\_ (3) CSES 4214: Soil Fertility and Management\* - F
- \_\_\_ (3) CSES/ENSC 4854: Wetlands Soils and Mitigation\* – F

**Human Dimensions Restricted Elective (choose 3 credits)**

- \_\_\_ (3) AAEC 3314: Environmental Law\*- S
- \_\_\_ (3) AAEC 3324: Environmental Sustain Dev Econ\* - S
- \_\_\_ (3) ALCE 4304: Community Education & Development\* - F
- \_\_\_ (3) UAP/PSCI 3344: Global Environ Issues\*– F, S
- \_\_\_ (3) UAP 3354: Environ Policy & Plan – F
- \_\_\_ (3) UAP 4344: Law of Critical Environmental Areas – S

**Restricted Electives (choose 12 credits)**

- \_\_\_ (3) BIOL 2504: General Zoology\* - S
- \_\_\_ (3) CSES/ENSC/BIOL 4164: Environmental Microbiology\* – S
- \_\_\_ (3) CSES/ENSC 3614: Soil Physical & Hydrological Properties\* – S
- \_\_\_ (3) CSES/ENSC/CHEM 4734: Environmental Soil Chemistry\*– S
- \_\_\_ (2) ENSC 4414: Monitoring & Analysis of the Environment\* – S
- \_\_\_ (3) CSES/ENSC 4314: Water Quality\* - S
- \_\_\_ (3) FIW 2314: Wildlife Biology\* - S
- \_\_\_ (3) FIW 2324: Wildlife Field Biology\* – F, S
- \_\_\_ (3) FIW 4534: Ecology & Management of Wetland Systems\* – F
- \_\_\_ (3) FIW 4114: Biodiversity Conservation\*
- \_\_\_ (3) GEOG/WATR 2004: Water, Environment & Society - F
- \_\_\_ (3) GEOG 3104: Environmental Problems Population and Development -S
- \_\_\_ (3) GEOG/GEOS 4084: Modeling with GIS\* – F, S
- \_\_\_ (3) GEOG 4314: Analysis in GIS\* – S
- \_\_\_ (3) HORT 2134: Plants & Greenspaces Urban Com – F, W
- \_\_\_ (3) HORT 3325: Woody Landscape Plants – F

- \_\_\_ (3) HORT 3326: Woody Landscape Plants - S
- \_\_\_ (3) UAP 4374: Land Use and Environ\* – F

**Free Electives (number needed to complete 120 credits)**

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**Note:**

Total Hours Required:120

- GPA requirements:
  - Overall GPA: 2.0 each semester
  - In major GPA: 2.0 by graduation
    - Includes classes in BIOL, CHEM, CSES, and ENSC
- Upon having attempted 60 semester credits (including transfer, advanced placement, advanced standing, and credit by examination) satisfactory progress towards a B.S. degree in ENSC will include passing the following:
  - At least 24 semester credits that meet the Pathways of General Education requirements,
  - BIOL 1105, 1106, CSES 3114, 3124, ENSC 3604, SPES 1004 or ALS 1234, and
  - 8 credits of CHEM, with 6 credits of MATH or STAT
- Language Study Requirement: Sequence of two foreign language courses or equivalent transfer/high school credit (6 cr.)
- \*Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

F – Fall, S – Spring, W – Winter, SI – Summer, Part I, SII – Summer, Part II indicate the term a course is offered. Course offerings are subject to change.