

**Ecosystems Specialization – BS (major code 865)****(for majors declared Fall 2021 onwards)**

- Courses can only be used to fulfill one requirement, even if the course is listed as an option for multiple requirements.
- Many upper level courses have prerequisites. Make sure you plan accordingly for the path you want to take.

| Requirement | Course Options | Credits |
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| A. ENVI 101 – Humans & Ecological Environment | <ul style="list-style-type: none"> - ENVI 101 - AP Envi Exam score of 3, 4, or 5 - ENVI 105 - People, Politics, & Environment (Source Project Students only) - PLSC 180A - People, Politics, & Environment (Source Project Students only) | 4 |
| B. ENVI 201 – Humans & Physical Environment | <ul style="list-style-type: none"> - ENVI 201 - or AP Envi Exam score of 5 (excludes AP test taken in 2020) | 4 |
| C. One lower-level environmental policy courses | <ul style="list-style-type: none"> - ENVI/PHIL 149 Environmental Ethics - ENVI 230 Intro to Environmental Policy - ENVI/GEOG 239 Envi Plng & Policy - ENVI 280B Intro Int'l Envi Policy (Starting in Fall 2024, this course will be renumbered to ENVI 225.) - PLSC 282 Intro to Environmental Policy | 4 |
| D. One lower-level economics courses | <ul style="list-style-type: none"> - ECON 160 Microeconomics - ECON 162 Macroeconomics | 4 |
| E. One introductory methods course | <ul style="list-style-type: none"> - GEOG 160 or 260 or 360 GIS/Spatial Analysis - MATH 147 Statistics - MATH 148 Statistics for Biologists <p>The following classes are only for FRI and Source Project students:</p> <ul style="list-style-type: none"> - BIOL 241 Ecological Genetics FRI - ENVI 205 People Politics & Environ II - PLSC ??? People Politics & Environ II - ENVI 206 Geospatial Sensing FRI - ENVI/GEOL 234 Biogeochemistry FRI | 4 |
| F. one lower-level chemistry requirement | <ul style="list-style-type: none"> - ENVI 140 Intro Enviro Chem (Lec) + CHEM 106 (Lab) - CHEM 104 General Chem I (Lec) + CHEM 106 (Lab) - CHEM 107 Intro to Chem Prin (Lec/Lab is for Chem/BChem majors) - CHEM 111 Chem Principles (Lec/Lab in Fall only) | 6 |
| G. One lower-level course related to environmental science | <p>Recommended as an important prerequisite for upper-level courses</p> <ul style="list-style-type: none"> - BIOL 113 Intro to Cell & Microbiol <p>Allowed:</p> <ul style="list-style-type: none"> - BIOL 105 Evol for Everyone - ENVI 250 Farm to Table - ENVI 236/ANTH 236 Farming Thru Time - GEOL 111 Planet Earth - GEOL 112 Oceanography - GEOL 115 Global Change: Geol Perspt - GEOL 116 Geological Hazards - ENVI/GEOL 170 Environmental Geology - GEOG 120 Weather & Climate - GEOG 221 Global Climate Change | 4 |

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| H. One lower-level science in ecosystem specialization area | - BIOL 114 Intro to Organisms & Population Bio | 4 |
| I. One upper-level course in ecology | - BIOL 355 Ecology - BIOL 373 Ecol Prin & Applications (Only one of these can count in the major. The other may not be used elsewhere.) | 4 |
| J. One additional lower-level chemistry course | Recommended as it is a prerequisite for some upper-level courses: - CHEM 105 General Chem II (Lec) Allowed: - CHEM 108 Intro Chem Prin II (Lec/Lab for Chem/BChem majors) - CHEM 221 Analytical Chem (Spring) - CHEM 231 Organic Chem I - ENVI 346 Envi Chem Community Water Syst - ENVI 347 Environ Pollution: Sci & Policy | 4 |
| K. Five upper-level courses in ecosystems that must total 20 credits (BIOL, GEOG, ENVI, or other related fields) | - ANTH 470 Paleoethnobotony - ANTH 479 Archeology of Domestication - BIOL 341 Ecological Genetics II FRI, if course topic is related to ecosystems - BIOL 351 Mechanisms of Evolution - BIOL 352 Marine Biology - BIOL 370 Botany - BIOL 371 Zoology - BIOL 375 Animal Behavior - BIOL 379/ENVI 357 Biol & Conserv of Birds - BIOL 421 Microbiol Lab - BIOL 441 Molecular Ecol Lab - BIOL 442 Mycology - BIOL 455 Prin of Ecosyst Eco - BIOL 459 Biogeography - BIOL 470/ENVI 430 Plant Ecology - BIOL 472 Tropical Ecol & Conserv - BIOL 473 Ecology Lab (** two credits) - BIOL 475 Entomology - BIOL 476 Population Ecol - BIOL 477 Conservation Biol - ENVI 306 Envi Visualizations FRI, if course topic is related to ecosystems - ENVI 322 Plants & People (** two credits) - ENVI 324 Urban Ecology - ENVI 325 Ecological Agriculture - ENVI 327 N'tl Hist Nature Preserve - ENVI 329 Ecology of Northeast - ENVI/GEOL 334 Biogeochem FRI, if course topic is related to ecosystems - ENVI 336 Sweet Harvests: Bees & Maples - ENVI 382G Ecosystems of Global Health - ENVI 382J Natural Resource Equity in Global South (Starting in Fall 2024, this course will be renumbered to ENVI 341 and renamed Intl Conservation & Development) | 20 |

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| | <ul style="list-style-type: none"> - ENVI 382U Food Energy Water Nexus - ENVI/GEOG 423 Soils - ENVI 435 Local & Global Agriculture - ENVI 438 AgriBiotech: Sci, Pol & Conflict - ENVI 454 ENVI applications in GIS, if student's course project is related to ecosystems - ENVI 481F Indigenous Knowledge Systems (Starting in Fall 2024, this course will be renumbered to ENVI 470) - ENVI 481D Forest Ecosystems & Conservation - ENVI 481H Climate Sustainability & Trauma - ENVI 481W Env Comm: Nat of People & Place | |
| L. One upper-level research, teaching, and /or applied course in Ecosystems | <ul style="list-style-type: none"> - BIOL 455 Prin of Ecosyst Ecol - BIOL 470/ENVI 430 Plant Ecology - BIOL 472 Tropical Ecol & Conserv - BIOL 476 Population Ecol - BIOL 477 Conservation Biol - ENVI 382U Food Energy Water Nexus - ENVI 481D Forest Ecosystems & Conservation <p>The following require department permission.</p> <ul style="list-style-type: none"> - ENVI 397 Independent Study - ENVI 491 Undergraduate Teaching - ENVI 495 Environ Internship | 4 |
| M. One upper-level capstone course | <ul style="list-style-type: none"> - ENVI 413 Environ Studies Capstone - ENVI 382F Integrating Sustain. Science & Innovation <p>The following require department permission.</p> <ul style="list-style-type: none"> - ENVI 498 Senior Thesis - ENVI 499 Honors Thesis | 4 |
| Total Credits: | | 70 |