

# Environmental Sciences - Environmental Sciences Option

| Freshman Year   | Credits |        |
|---|---------|--------|
|   | Fall    | Spring |
| ENSC 110 - Land Resources and Environmental Sciences  | 3       |        |
| BIOB 170IN - Principles of Biological Diversity   | 4       |        |
| CHMY 141 - College Chemistry I & CHMY 142 - College Chemistry I Lab                         | 4       |        |
| WRIT 101W - College Writing I   | 3       |        |
| BIOB 160 - Principles of Living Systems   |         | 4      |
| CHMY 143 - College Chemistry II & CHMY 144 - College Chemistry II Lab                       |         | 4      |
| M 161Q - Survey of Calculus   |         | 4      |
| US Core   |         | 3      |
| Year Total:   | 14      | 15     |
| Sophomore Year  | Credits |        |
|   | Fall    | Spring |
| ENSC 245IN - Soils  | 3       |        |
| GPHY 284 - Intro to GIS Science & Cartog  | 3       |        |
| Take one of the following:  | 3       |        |
| STAT 216Q - Introduction to Statistics  |         |        |
| BIOB 318 - Biometry   |         |        |
| STAT 332 - Statistics for Scientists and Engineers  |         |        |
| Univ. Core  | 6       |        |
| ENSC 210 - Role of Plants in the Environment  |         | 3      |
| ENSC 260 - Evolution for Env Scientists   |         | 3      |
| WRIT 201 - College Writing II or HONR 202IH - Texts and Critics: Knowledge & Imagination II |         | 3      |
| PHSX 205 - College Physics I  |         | 4      |
| Univ. Core  |         | 3      |
| Year Total:   | 15      | 16     |
| Junior Year   | Credits |        |
|   | Fall    | Spring |
| ENSC 353 - Environmental Biogeochemistry  | 3       |        |
| BIOE 370 - General Ecology  | 3       |        |
| Directed Electives  | 6       |        |
| Univ. Core  | 3       |        |
| ENSC 311 - Fundamentals of Environmental Data Analysis                                      |         | 3      |
| Directed Electives  |         | 12     |
| Year Total:   | 15      | 15     |
| Senior Year   | Credits |        |
|   | Fall    | Spring |
| ENSC 444 - Watershed Hydrology  | 3       |        |
| Take one of the following:  | 3       |        |
| ENSC 407 - Environmental Risk Assessment  |         |        |
| GPHY 329 - Environment and Society  |         |        |
| GPHY 402 - Water and Society  |         |        |
| PSCI 448 - The Politics of Climate Change   |         |        |

WILD 420 - Range & Wildlife Policy and Planning

|                               |    |            |
|-------------------------------|----|------------|
| Directed Electives            | 9  |            |
| ENSC 499R - LRES Capstone     |    | 3          |
| Directed Electives            |    | 12         |
| Year Total:                   | 15 | 15         |
| <b>Total Program Credits:</b> |    | <b>120</b> |

## Directed Electives

**Each student shall work closely with their faculty advisor to plan an integrated set of directed elective courses appropriate to their academic, professional and personal goals. Courses not on this list may be used IF considered appropriate to the student's goals AND approved by the faculty advisor as a curricular exception. Students choosing to take lower level courses (1xx/2xx) for directed electives should be sure they are meeting the university minimum requirement of 42 credits of upper level classes (3xx/4xx) for graduation.**

**Take 39 credits of directed electives from the following:**

|            |   |     |
|------------|---|-----|
| AGSC 341   | Field Crop Production   | 3   |
| AGSC 401   | Integrated Pest Management  | 3   |
| AGSC 428   | Cropping Systems and Sustainable Agriculture                                | 3   |
| BIOB 375   | General Genetics  | 3   |
| BIOE 375   | Ecological Responses to Climate Change                                      | 3   |
| BIOE 405   | Behavioral and Evolutionary Ecology   | 3   |
| BIOE 408   | Rocky Mountain Vegetation   | 3   |
| BIOE 416   | Alpine Ecology  | 3   |
| BIOE 421   | Yellowstone Wildlife Ecology  | 3   |
| BIOE 422   | Insect Ecology  | 3   |
| BIOE 427RN | Research in Freshwater Ecology  | 3   |
| BIOE 428   | Freshwater Ecology  | 3   |
| BIOE 445   | Macrosystems Ecology: Linking Plants, Animals, and Ecosystems Across Scales | 3   |
| BIOE 455   | Plant Ecology   | 3   |
| BIOM 210IN | Environmental Health Science  | 3   |
| BIOM 415   | Microbial Diversity, Ecology, and Evolution                                 | 3   |
| BIOM 421   | Concepts of Plant Pathology   | 3   |
| BIOM 423   | Mycology  | 3   |
| BIOM 452   | Soil & Environmental Microbiology   | 3   |
| BIOM 465   | Plant-Pathogen Interactions   | 3   |
| BIOO 262IN | Introduction to Entomology  | 3   |
| CHMY 311   | Fundamental Analytical Chem   | 4   |
| ENSC 407   | Environmental Risk Assessment   | 3   |
| ENSC 410R  | Biodiversity Survey and Monitoring Methods                                  | 3   |
| ENSC 443   | Weed Ecology and Management   | 3   |
| ENSC 445   | Watershed Analysis  | 3   |
| ENSC 448   | Stream Restoration Ecology  | 3   |
| ENSC 454   | Landscape Pedology  | 3   |
| ENSC 458   | Teaching Applications in LRES   | 1-3 |
| ENSC 460   | Soil Remediation  | 3   |
| ENSC 461   | Restoration Ecology   | 3   |
| ENSC 462   | Land Rehab Field Problem  | 2   |
| ENSC 468   | Ecosystem Biogeochem and Global Change                                      | 3   |

|            |   |   |
|------------|---|---|
| ERTH 101IN | Earth System Sciences   | 4 |
| ERTH 212RN | Yellowstone: Scientific Lab   | 4 |
| ERTH 303   | Weather and Climate   | 3 |
| ERTH 307   | Principles of Geomorphology   | 4 |
| GPHY 329   | Environment and Society   | 3 |
| GPHY 357   | GPS Fund/App in Mapping   | 3 |
| GPHY 358   | GPS Mapping Srvc Learning   | 1 |
| GPHY 384   | Adv GIS and Spatial Analysis  | 3 |
| GPHY 402   | Water and Society   | 3 |
| GPHY 411   | Biogeography  | 3 |
| GPHY 426   | Remote Sensing  | 3 |
| GPHY 429R  | Applied Remote Sensing  | 3 |
| GPHY 484R  | Applied GIS & Spatial Analysis  | 3 |
| M 172      | Calculus II   | 4 |
| NRSM 330   | Fire Ecology and Mgmt   | 3 |
| NRSM 421   | Holistic Thought/Mgmt   | 4 |
| NRSM 453   | Habitat Inventory and Analysis  | 3 |
| NRSM 455   | Riparian Ecology & Management   | 3 |
| STAT 337   | Intermediate Statistics with Introduction to<br>Statistical Computing | 3 |
| STAT 411   | Methods for Data Analysis I   | 3 |
| WILD 301   | Princ of Fish & Wildlife Mgmt   | 3 |
| WILD 420   | Range & Wildlife Policy and Planning                                  | 3 |
| WILD 426   | Wild Habitat Management   | 3 |
| WILD 438   | Wildlife Habitat Ecology  | 3 |

Because some of our courses are offered during alternate years, the proposed scheduling of courses in junior and senior years may need to be modified. Work with an advisor to determine an individual schedule.

**A minimum of 120 credits is required for graduation; at least 42 of these credits must be in courses numbered 300 and above.**

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