

# Geospatial and Environmental Analysis 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	
ERTH 101IN - Earth System Sciences	4	
GPHY 284 - Intro to GIS Science & Cartog	3	
STAT 216Q - Introduction to Statistics	3	
Univ. Core	3	
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
STAT 217 - Intermediate Statistical Concepts or STAT 337 - Intermediate Statistics with Introduction to Statistical Computing		3
Year Total:	16	16
Junior Year	Credits	
	Fall	Spring
ENSC 353 - Environmental Biogeochemistry	3	
Take one of the following:	3	
BIOE 370 - General Ecology		
NRSM 240 - Natural Resource Ecology		
GPHY 357 - GPS Fund/App in Mapping	3	
Univ. Core	3	
Directed Elective	3	
GPHY 384 - Adv GIS and Spatial Analysis		3
ENSC 311 - Fundamentals of Environmental Data Analysis		3
Univ. Core		3
Directed Electives		6
Year Total:	15	15
Senior Year	Credits	
	Fall	Spring
ENSC 444 - Watershed Hydrology	3	

ENSC 454 - Landscape Pedology	3	
Take one of the following:	3	
NRSM 430 - Natural Resource Law		
PSCI 362 - Natural Resource Policy		
Univ. Core	3	
Directed Elective	3	
GPHY 429R - Applied Remote Sensing		3
GPHY 484R - Applied GIS & Spatial Analysis		3
ENSC 499R - LRES Capstone		3
Directed Elective		5
Year Total:	15	14
<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 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.

## Choose 17 credits from the following:

AGSC 401	Integrated Pest Management	3
AGSC 428	Cropping Systems and Sustainable Agriculture	3
BIOE 375	Ecological Responses to Climate Change	3
BIOE 408	Rocky Mountain Vegetation	3
BIOE 416	Alpine Ecology	3
BIOE 421	Yellowstone Wildlife Ecology	3
BIOE 422	Insect Ecology	3
BIOE 424	Ecology of Fungi	4
BIOE 427RN	Research in Freshwater Ecology	3
BIOE 428	Freshwater Ecology	3
BIOE 439	Stream Ecology	3
BIOE 440R	Conservation Biology	3
BIOE 445	Macrosystems Ecology: Linking Plants, Animals, and Ecosystems Across Scales	3
BIOE 455	Plant Ecology	3
BIOM 415	Microbial Diversity, Ecology, and Evolution	3
BIOM 421	Concepts of Plant Pathology	3
BIOM 423	Mycology	3
BIOM 452	Soil & Environmntl Microbiology	3
BIOM 465	Plant-Pathogen Interactions	3
BIOO 433	Plant Physiology	3
BIOO 435	Plant Systematics	3
ECNS 332	Econ of Natural Resources	3
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 458	Teaching Applications in LRES	1-3
ENSC 460	Soil Remediation	3
ENSC 461	Restoration Ecology	3
ENSC 466	Chemical Ecology	3

ENSC 468	Ecosystem Biogeochem and Global Change	3
ERTH 303	Weather and Climate	3
ERTH 307	Principles of Geomorphology	4
ERTH 432R	Surface Water Resources	3
GPHY 121D	Human Geography	3
GPHY 329	Environment and Society	3
GPHY 358	GPS Mapping Srvc Learning	1
GPHY 402	Water and Society	3
GPHY 411	Biogeography	3
NRSM 330	Fire Ecology and Mgmt	3
NRSM 353	Grazing Ecology and Management	3
NRSM 421	Holistic Thought/Mgmt	4
NRSM 455	Riparian Ecology & Management	3
SOCI 470	Environmental Sociology	3
SRVY 230	Intro to Surveying for Engineers	3
SRVY 375	Analytic Photogrammetry and Remote Sensing	3
STAT 401	Applied Methods in Statistics	3
STAT 408	Statistical Computing and Graphical Analysis	3
STAT 411	Methods for Data Analysis I	3
STAT 412	Methods for Data Analysis II	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 your advisor for your 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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