

# ENVIRONMENTAL SCIENCE - BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE

The environmental science major is a multidisciplinary program based on a strong general science curriculum and an environmental curriculum that focuses on environmental problems and solutions. Although administered by the Department of Plant and Environmental Sciences, a multidisciplinary advisory committee recommends curriculum and other changes to the program. Graduates are very competitive for careers in industry and government and have excellent preparation for graduate programs in a variety of fields. A grade of C- or better must be earned in the Basic Background and Core Requirements.

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
<b>General Education</b>		
<i>Area I: Communications</i>		10
	<i>English Composition - Level 1</i> <sup>1</sup>	
	<i>English Composition - Level 2</i> <sup>1</sup>	
	<i>Oral Communication</i> <sup>1</sup>	
<i>Area II: Mathematics</i>		
MATH 1511G	Calculus and Analytic Geometry I <sup>2</sup>	4
	or MATH 1511H	Calculus and Analytic Geometry I Honors
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i>		11
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	
Area IV: Social & Behavioral Sciences Course (3 credits) <sup>1</sup>		
<i>Area V: Humanities</i> <sup>1</sup>		3
<i>Area VI: Creative and Fine Arts</i> <sup>1</sup>		3
<i>General Education Elective</i> <sup>3</sup>		
GEOL 1110G	Physical Geology	4
<b>Viewing A Wider World</b> <sup>4</sup>		6
<b>Departmental/College Requirements</b>		
<i>Basic Science and Math Requirements (42-43 credits including Area III and General Education Elective above)</i>		
BIOL 2110G	Principles of Biology: Cellular and Molecular Biology	3
BIOL 2610G	Principles of Biology: Biodiversity, Ecology, and Evolution (note: BIOL 2610L is NOT required for ES major)	3
BIOL 311	General Microbiology	3
A ST 311	Statistical Applications	3
MATH 1521G	Calculus and Analytic Geometry II	4
	or MATH 1430G	Applications of Calculus I
PHYS 1310G	Calculus -Based Physics I (note: the lab is NOT required for ES major)	3

SOIL 2110 & 2110L	Introduction to Soil Science and Introduction to Soil Science Laboratory	4
Select one of the following:		3-4
ANSC 1170	Introduction to Animal Metabolism	
CHEM 2120	Integrated Organic Chemistry and Biochemistry (CHEM 2120 must be taken with associated 1-cr CHEM lab)	
CHEM 313	Organic Chemistry I	
<i>Environmental Science Core Requirements</i>		
ENVS 1110G	Environmental Science I	4
ENVS 2111 & 2111L	Environmental Engineering and Science and Environmental Science Laboratory	4
ENVS 301	Principles of Ecology	3
ENVS 312	Emergency Response to Hazardous Material Incidents	2
ENVS 361	Basic Toxicology	3
ENVS 370	Environmental Soil Science	3
ENVS 391	Internship	3
ENVS 447	Seminar	1
ENVS 452	Geohydrology	4
ENVS 460	Introduction to Air Pollution	3
ENVS 462	Sampling and Analysis of Environmental Contaminants	3
ENVS 470	Environmental Impacts of Land Use and Contaminant Remediation	3
Select from one of the following:		3-4
ENVS 457	Water Measurement	
FWCE 434	Aquatic Contaminants and Toxicology	
FWCE 459	Aquatic Ecology	
Select one of the following:		3
ENVS 422	Environmental Chemistry	
GEOL 360	General Geochemistry	
SOIL 424	Soil Chemistry	
Select one of the following:		3-4
GEOG 381	Cartography and GIS	
GEOG 481	Fundamentals of GIS (any GIS course)	
GEOG 488	GIS for Water Resources	
GEOL 444	GIS for Geology	
<b>Second Language: (not required)</b>		
<b>Electives, to bring the total credits to 120</b> <sup>5</sup>		<b>8</b>
<b>Total Credits</b>		<b>120-123</b>

<sup>1</sup> See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) Section of the catalog for a full list of courses

<sup>2</sup> MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take prerequisites first.

<sup>3</sup> MATH 1511G, ENVS 1110G, and GEOL 1110G are all required for this major and will satisfy this category depending on which course is completed first.

<sup>4</sup> See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) Section of the catalog for a full list of courses; one course may be in the College of ACES but cannot be taught or cross-listed with AGRO, HORT, ENVS, SOIL, or GENE.

<sup>5</sup> Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However

students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.