

# B.S. Earth and Environmental Systems, Geospatial Systems Concentration

## Program Admissions Requirements

There are no program admission requirements for the BS Earth and Environment Systems, Geospatial Systems Concentration.

## General Education

The listing below includes program requirements that also fulfill General Education requirements.

Code	Title	Credits
Objective 1		6
Objective 2		3
Objective 3 - MATH 1160 or MATH 1170		3
Objective 4		6
Objective 5 - BIOL 1101, BIOL 1101L, and CHEM 1111		8
Objective 6		6
<b>Students must fulfill Objective 7 or Objective 8</b>		<b>3</b>
Objective 7		
Objective 8		
Objective 9		3
<b>Total Credits</b>		<b>38</b>

## Major Requirements

Code	Title	Credits
<b>Core Courses</b>		
The required Core Courses provide a solid background in Geosciences and other subjects. Environmental Systems include physical, biological and human systems; thus, the program incorporates course work in Biological Sciences, Physical and Social Sciences, and Mathematics. Some of these courses may satisfy General Education requirements.		
GEOL 2204	Fluid Earth	4
GEOL 2205	Solid Earth	4
GEOL 3392	Geosciences Careers Seminar	1
GEOL 3315	Evolution of the Earth's Surface	4
GEOL 4403	Principles of Geographic Information Systems	3
BIOL 1101 & 1101L	Biology I and Biology I Lab	4
BIOL 1102 & 1102L	Biology II and Biology II Lab	4
BIOL 2209 & 2209L	General Ecology and General Ecology Laboratory	4
CHEM 1111 & 1111L	General Chemistry I and General Chemistry I Lab	5
<b>Geospatial Systems Concentration</b>		

This concentration combines courses in Geospatial Sciences, Environmental Geosciences, and supporting fields. This emphasis track will train students interested in geotechnology-related careers with government agencies, private companies, and academic institutions.

MATH 1160 or MATH 1170	Survey of Calculus Calculus I	3-4
MATH 3350	Statistical Methods	3
GEOL 4404	Advanced Geographic Information Systems	3
GEOL 4407	GPS/GNSS Applications in Research	3
GEOL 4408	GeoTechnology Seminar	2
GEOL 4409	Remote Sensing	3
GEOL 4427	Information Technology for GIS	3
GEOL 4428	Programming for GIS	3
<b>Select two courses from the following:</b>		<b>6</b>
GEOL 3310	Geologic Field Methods	
GEOL 4410	Science in American Society	
GEOL/HIST 4471	Historical Geography of Idaho	
GEOL 4480	Special Topics in GIS	
GEOL 4481	GeoTechnology Internship	
GEOL 4482	Independent Problems and Studies in Geology	
HIST 4430	Global Environmental History	
HIST 4432	U.S. Environmental History	
POLS 4455	Environmental Politics and Policy	
PHIL 4455	Environmental Ethics	
SOC 4435	Environmental Sociology	
Or other approved course in related fields.		
<b>Total credits</b>		<b>62</b>

ENGL 3307 Professional and Technical Writing is recommended for all students.

## Degree Totals

Code	Title	Credits
	Program Admission Requirements	0
	General Education	38
	Major Requirements (Required General Education credits removed.)	54
	Upper Division Free Electives	3
	Free Electives	25
<b>Total Credits</b>		<b>120</b>

ISU Degree Requirements (<https://coursecat.isu.edu/undergraduate/degreerequirements/>)

ISU General Education (<https://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>)

Major Academic Plan (MAP)