GEOGRAPHY AND THE ENVIRONMENT

Office: Boettcher West, Room 120
Mail Code: 2050 E. Iliff Ave. Denver, CO 80208
Phone: 303-871-2513
Email: geog-info@du.edu
Web Site: http://www.du.edu/nsm/departments/geography

Geography is an academic discipline that focuses on the spatial distribution of human and physical features around the Earth and changes over time of those phenomena. Because geography bridges the boundary between the natural world and human societies, geographers often collaborate with colleagues in related disciplines in the natural and social sciences. Geographers are taught to think in spatial and chronological terms and to analyze landscapes for indications of physical and cultural features. Geographers also create maps to illustrate spatial relationships and use geographically based data sets to answer spatial questions and analyze spatial data. The field is often subdivided into physical geography, human geography, human-environment interaction and geographic information science (GISc). Our undergraduate majors are required to take introductory coursework in each of these subdisciplines, followed by more advanced courses in each of the main fields.

The central goal of the undergraduate curriculum in geography is to produce students with a solid foundation in geographic principles and perspectives, and the professional skills to put them into practice. More specifically, the program aims to provide students with skills and techniques that will allow them to apply what they learn in the classroom, laboratory and field. Students are provided with skills in problem identification and solution; training in geotechnical tools, including geographic information systems, cartography, remote sensing, geographic statistics and spatial analysis; and experience in field and laboratory techniques. The discipline of geography is, by nature, integrative and broadly based, so interdisciplinary approaches to problem solving are also emphasized. Our ultimate goal is to provide graduates with training and preparation for employment as professional geographers in government, private industry, education and nongovernmental agencies, and to prepare students for graduate school.

The environmental science program is an interdisciplinary program with the mission of preparing students with the knowledge and skills to identify, analyze and resolve environmental issues. Atmospheric pollution, water supply and quality, global climate change, waste management, species extinction—these are just a few of the better-known issues encompassed by environmental science, a field that addresses the totality of relationships between humans and the natural environment. Through a combination of small lecture, lab and field-oriented courses, students are given hands-on experience with environmental questions and problem solving. Extended field experiences, including alpine ecology at our field station at Mount Evans, are integrated into courses. Students also have the opportunity to participate in the field quarter, spending 10 weeks traveling throughout the western United States, Baja Mexico and other international destinations to study environmental problems and issues.

Geography

Bachelor of Arts Major Requirements

(183 credits required for the degree (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts))

Students majoring in geography may not also major in environmental science.

45 credits of geography. Requirements include the following:

Code	Title	Credits
GEOG 1410	People, Places & Landscapes	4
GEOG 2000	Geographic Statistics	4
GEOG 2020	Computer Cartography	4
GEOG 2100	Introduction to Geographic Information Systems (GIS)	4
GEOG 2990	Professional Development for Geography & Environmental Science [1]	0
Select one of the following sequences:		12
GEOG 1201 & GEOG 1202 & GEOG 1203	Environmental Systems: Weather and Environmental Systems: Hydrology and Environmental Systems: Landforms [2]	
GEOG 1216 & GEOG 1217 & GEOG 1218	Our Dynamic Earth I and Our Dynamic Earth II and Our Dynamic Earth III	
GEOG 1264 & GEOG 1265 & GEOG 1266	Global Environmental Change I and Global Environmental Change II and Global Environmental Change III	
Upper-division credits (2000- or 3000-level courses); at least one physical geography, one human geography and one GIScience course [3]		17
Total Credits		45

1 Must be completed during senior year.

2 GEOG 1264, 1265, 1266 are for Honors Program students only.

3 A list of acceptable courses is available from the Department of Geography and the Environment.

The student may choose one of the following tracks of emphasis:

- natural resource management
- atmosphere and climate
- cultural and regional geography
- earth processes
- geographic analyses
- land use or urban planning

Students preparing for entrance to graduate school or intending to use geography professionally should consult regularly with their departmental advisors.

Minor Requirements

20 credits of geography at the 2000- or 3000-level.

Geographic Information Science

Minor Requirements

20 credits of coursework. Requirements include the following:

Code	Title	Credits
Required courses:		
GEOG 2100	Introduction to Geographic Information Systems (GIS)	
GEOG 3200	Remote Sensing	

A list of acceptable elective courses is available from the geography department.

Note: As geography majors may emphasize GISc as part of their degree program, they are not eligible to complete the minor in GISc.

Prerequisites: Students are expected to have completed the Analytical Inquiry-Natural Science requirement or equivalent prior to enrolling in GEOG 2000 Geographic Statistics. Completion of an introductory course in geography such as GEOG 1410 People, Places & Landscapes; GEOG 1201 Environmental Systems: Weather; or GEOG 1216 Our Dynamic Earth I is encouraged but not required.

Geology

A minor in geology may be arranged by consultation with the faculty of the Department of Geography and the Environment.

Minor Requirements

Minimum of 20 credits of geology.

Environmental Science

Bachelor of Arts Major Requirements

(183 credits required for the degree (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofarts))

Students majoring in environmental science may not also major in geography.

75 credits. Requirements include:

Code	Title	Credits
GEOG 1201 & GEOG 1202 & GEOG 1203	Environmental Systems: Weather and Environmental Systems: Hydrology and Environmental Systems: Landforms	12
BIOL 1011 & BIOL 1021	Evolution, Heredity and Biodiversity and Evolution, Heredity and Biodiversity Lab	5

BIOL 1010 & BIOL 1020	Physiological Systems and Physiological Systems Lab	5
BIOL 2010 & BIOL 2011	General Ecology and General Ecology Lab	5
CHEM 1010 & CHEM 1240	General Chemistry I and General Chemistry I Laboratory	4
CHEM 1020 & CHEM 1250	General Chemistry II and General Chemistry II Laboratory	4
CHEM 2240	Introduction to Environmental Chemistry	4
GEOG 2990	Professional Development for Geography & Environmental Science [1]	0
Select one of the following:		4
BIOL 2090	Biostatistics	
GEOG 2000	Geographic Statistics	
PSYC 2300	Introduction to Statistics	
Environmental Science Electives [2]		
Biology		8
Geography/Geology/Envi		8
Additional Electives		16
Total Credits		75

1 Must be completed during senior year.

2 A list of acceptable courses is available from the Department of Geography and the Environment.

Additional Requirements

20 credits in a minor field of study

No more than five credits taken as independent study, internship or independent research may be counted toward the minimum hours required in the major.

Bachelor of Science Major Requirements

(183 credits required for the degree (http://bulletin.du.edu/undergraduate/undergraduateprograms/traditionalbachelorsprogram/bachelorofscience))

Students majoring in environmental science may not also major in geography.

94 credits. Requirements include:

Code	Title	Credits
Required Courses		
GEOG 1201 & GEOG 1202 & GEOG 1203	Environmental Systems: Weather and Environmental Systems: Hydrology and Environmental Systems: Landforms	12
BIOL 1010 & BIOL 1020	Physiological Systems and Physiological Systems Lab	5
BIOL 1011 & BIOL 1021	Evolution, Heredity and Biodiversity and Evolution, Heredity and Biodiversity Lab	5
BIOL 2010 & BIOL 2011	General Ecology and General Ecology Lab	5
CHEM 1010 & CHEM 1240	General Chemistry I and General Chemistry I Laboratory	4
CHEM 1020 & CHEM 1250	General Chemistry II and General Chemistry II Laboratory	4
CHEM 2240	Introduction to Environmental Chemistry	4
ENVI 3000	Environmental Law	4
GEOG 2700	Contemporary Environmental Issues	4
PHYS 1111 & PHYS 1112 & PHYS 1113	General Physics I and General Physics II and General Physics III	15

GEOG 2990	Professional Development for Geography & Environmental Science [1]	0
Select one of the following:		4
BIOL 2090	Biostatistics	
GEOG 2000	Geographic Statistics	
PSYC 2300	Introduction to Statistics	
Environmental Science Electives *		
Biology		8
Geography/Geology/Envi		8
Additional Electives		12
Total Credits		94

[1] Must be completed during senior year.

[2] A list of acceptable courses is available from the Department of Geography and the Environment.

Additional Requirements

Code	Title	Credits
Calculus		
MATH 1951	Calculus I	4
MATH 1952	Calculus II	4
or MATH 1962	Honors Calculus II	
Total Credits		8

No more than five credits taken as independent study, internship or independent research may be counted toward the minimum hours required in the major.

Minor Requirements

26 credits. Requirements include:

Code	Title	Credits
GEOG 1201 & GEOG 1202 & GEOG 1203	Environmental Systems: Weather and Environmental Systems: Hydrology and Environmental Systems: Landforms	12
BIOL 1011 & BIOL 1021	Evolution, Heredity and Biodiversity and Evolution, Heredity and Biodiversity Lab	5
BIOL 2010 & BIOL 2011	General Ecology and General Ecology Lab	5
GEOG 2700	Contemporary Environmental Issues	4
Total Credits		26

Students having completed the required courses as part of other degree program requirements complete the 26-credit requirement by taking courses from the approved list of courses available from the Department of Geography and the Environment.

Requirements for Distinction in the Major in Geography

- Minimum 3.4 cumulative GPA
- Minimum 3.6 major GPA
- Completion of a thesis

Requirements for Distinction in the Major in Environmental Science

- Minimum 3.4 cumulative GPA
- Minimum 3.6 major GPA
- Completion of a thesis

Bachelor of Arts in Geography

This course sequence is recommended, but not required.

First Year

Fall	Credits	Winter	Credits	Spring	Credits
FSEM 1111	4	WRIT 1122	4	WRIT 1133	4
GEOG 1201	4	GEOG 1202	4	GEOG 1203	4
GEOG 1410[1]	4	Scientific Inquiry: Society and Culture	4	MATH[2]	4
Foreign Language	4	Foreign Language	4	Foreign Language	4
	16		16		16

Second Year

Fall	Credits	Winter	Credits	Spring	Credits
GEOG 2020	4	GEOG 2100	4	GEOG 2000	4
Analytical Inquiry: Society and Culture	4	Analytical Inquiry: Society and Culture	4	Minor/General Electives	12
Minor/General Electives	8	Minor/General Electives	8		
	16		16		16

Third Year

Fall	Credits	Winter	Credits	Spring	Credits
Study Abroad	18	Major Electives	8	Major Electives	4
		Minor/General Electives	8	Minor/General Electives	12
	18		16		16

Fourth Year

Fall	Credits	Winter	Credits	Spring	Credits
Field Quarter	17	Major Elective	4	GEOG 2990	0
		Minor/General Electives	8	Major Elective	4
				Minor/General Electives	4
	17		12		8

Total Credits: 183

1 GEOG 1410 is offered Fall, Winter, and Spring quarters and only needs to be taken once. It is recommended that you complete GEOG 1410 by the end of your first year.

2 MATH 1200 or MATH 1951

Bachelor of Arts in Environmental Science

This course sequence is recommended but not required.

First Year

Fall	Credits	Winter	Credits	Spring	Credits
FSEM 1111	4	WRIT 1122	4	WRIT 1133	4
GEOG 1201	4	GEOG 1202	4	GEOG 1203	4
GEOG 1410[1]	4	BIOL 1011	4	BIOL 1010	4
Foreign Language	4	Foreign Language	4	Foreign Language	4
	16		16		16

Second Year

Fall	Credits	Winter	Credits	Spring	Credits
BIOL 2010	4	CHEM 1020	3	CHEM 2240	4
BIOL 2011	1	CHEM 1250	1	Major Elective or MATH[2]	4
CHEM 1010	3	Major Elective or MATH[2]	4	Statistics	4
CHEM 1240	1	Scientific Inquiry: Society and Culture	4	Minor/General Elective	4
Analytical Inquiry: Society and Culture	4	Analytical Inquiry: Society and Culture	4		
Major Elective	4				
	17		16		16

Third Year

Fall	Credits	Winter	Credits	Spring	Credits
Study Abroad	17	Major Electives	8	Major Electives	8
		Minor/General Electives	8	Minor/General Electives	8
	17		16		16

Fourth Year

Fall	Credits	Winter	Credits	Spring	Credits
Field Quarter	17	Advanced Seminar	4	GEOG 2990	0
		Major Elective	4	Major Elective	4

	Minor/General Elective	4	Minor/General Elective	4
	17		12	8

Total Credits: 183

1 Recommended as one of the Scientific Inquiry: Society and Culture Common Curriculum courses.

2 MATH 1200 or MATH 1951

Bachelor of Science in Environmental Science

This course sequence is recommended but not required.

First Year

Fall	Credits	Winter	Credits	Spring	Credits
FSEM 1111	4	WRIT 1122	4	WRIT 1133	4
GEOG 1201	4	GEOG 1202	4	GEOG 1203	4
GEOG 1410[1]	4	BIOL 1011	4	BIOL 1010	4
Foreign Language	4	BIOL 1021	1	BIOL 1020	1
		Foreign Language	4	Foreign Language	4
	16		17		17

Second Year

Fall	Credits	Winter	Credits	Spring	Credits
BIOL 2010	4	CHEM 1020	3	CHEM 2240	4
BIOL 2011	1	CHEM 1250	1	Major Elective	4
CHEM 1010	3	GEOG 2500 or 2700	4	Analytical Inquiry: Society and Culture	4
CHEM 1240	1	Major Elective	4	General Elective	4
Major Elective	4	Scientific Inquiry: Society and Culture	4		
Analytical Inquiry: Society and Culture	4				
	17		16		16

Third Year

Fall	Credits	Winter	Credits	Spring	Credits
Study Abroad or Field Quarter	17	MATH 1951	4	MATH 1952	4
		Major Electives	8	ENVI 3000	4
		Biology Elective	4	Major Elective	4
				Statistics	4
	17		16		16

Fourth Year

Fall	Credits	Winter	Credits	Spring	Credits
PHYS 1111	5	PHYS 1112	5	PHYS 1113	5
Advanced Seminar	4	Major Elective	4	GEOG 2990	0
Major Elective	4	Biology Elective	4	Major Elective	4
	13		13		9

Total Credits: 183

1 Recommended as one of the Scientific Inquiry: Society and Culture Common Curriculum courses.

2 Or GEOG 2500 Sustainability and Human Society.