Geography

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Students who major in geography develop skills in understanding the complex social, economic, political, and environmental processes that shape places around the world. The Department of Geography offers courses that span a broad array of subjects, such as food systems, tourism, the role of borders, climate change, river systems, and invasive species. The geographic perspective provides a critical look at social, environmental, and policy issues relevant in today's world. Students may also develop skills in geographic information systems (GIS), cartography, and spatial analysis that provide them with in-demand tools to apply in their postgraduate career.

Geography provides for varied perspectives about places to help students develop into critical thinkers, efficient communicators, and problem-solvers. Geography can often enhance other fields, including spatial data science and technology, history, public policy and management, earth sciences, political science, sociology, and environmental studies. For more information, visit https://geography.uoregon.edu/.

InfoGraphics Lab

James E. Meacham, Executive Director
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infographics.uoregon.edu

The InfoGraphics Lab is a mapping and geospatial technologies facility located in the Department of Geography (http://geography.uoregon.edu). The laboratory works on a variety of supported projects with faculty members, researchers, and government agencies. The application of cartographic design and geographic information science is its focus. It supports research, instruction, and public service activities at the university. Graduate and undergraduate students may be employed on lab projects.

Faculty

Patrick J. Bartlein, professor (climatology, paleoclimatology, data analysis and visualization). BA, 1972, MS, 1975, PhD, 1978, Wisconsin, Madison. (1982)

Christopher Bone, associate professor

Daniel P. Buck, associate professor (political economy, food geographies, East Asia). BA, 1987, California State, Chico; MA, 1996, PhD, 2002, California, Berkeley. (2008)

Shaul E. Cohen, associate professor (political, environmental, cultural; Middle East). BA, 1983, Clark; MA, 1987, PhD, 1991, Chicago. (1996)

Mark Fonstad, associate professor (geomorphology, remote sensing, hydrology). BA, 1995, Wisconsin, Madison; MA, 1997, Ohio; PhD, 2000, Arizona State. (2011)

Daniel Gavin, associate professor (biogeography, paleoecology, climate change). BA, 1992, Dartmouth; MS, 1997, PhD, 2000, Washington (Seattle). (2006)

Donald G. Holtgrieve, adjunct assistant professor (environmental planning, resource management, watershed issues). BA, 1963, San Diego State; MA, 1970, California State; PhD, 1972, Oregon (2002)

Leigh Johnson, courtesy assistant professor (political ecology, development, economic geography). BA, 2003, Columbia; PhD, 2011, California, Berkeley. (2016)

Nicholas P. Kohler, instructor (geographic information systems, cartography, human-environmental relations). BA, 1989, Princeton; MA, 1997, PhD, 2005, Oregon. (2006)

Amy K. Lobben, professor (geographic information system science, behavioral geography, data visualization). BA, 1991, MA, 1996, Georgia State; PhD, 1999, Michigan State. (2004)

W. Andrew Marcus, professor (hydrology, fluvial geomorphology, remote sensing); Tykeson Dean of Arts and Sciences. BS, 1978, Stanford; MA, 1983, Arizona State; PhD, 1987, Colorado. (2001)

Patricia F. McDowell, professor (geomorphology, river management and restoration, Quaternary environments). BA, 1971, MA, 1977, Illinois Institute of Technology; PhD, 1980, Wisconsin, Madison. (1982)

Leslie McLees, instructor pro tem (urban geography, urban agriculture, Africa); undergraduate advisor. BS, 1999, Washington State; MA, 2004, Hawaii, PhD, 2012, Oregon. (2014)

James E. Meacham, senior research associate (geographic information systems, cartography, atlas design and production); executive director, InfoGraphics Lab. BS, 1984, MA, 1992, Oregon. (1992)

Katharine Meehan, associate professor (urban political ecology, water policy, Mexico). BA, 1999, Oregon; MS, 2005, Oxford; PhD, 2010, Arizona. (2010)

Joanna Merson, research assistant (cartography, data-visualization, GIS). BSc, 2009, Victoria; MA, 2013, Arizona State. (2017)

Alexander B. Murphy, professor (political and cultural geography, Europe, law and geography); James F. and Shirley K. Rippey Chair in Liberal Arts and Sciences. BA, 1977, Yale; JD, 1981, Columbia; PhD, 1987, Chicago. (1987)

Laura Pulido, professor (critical ethnic studies, environmental justice, Chicano studies). See **Ethnic Studies**.

Hedda R. Schmidtke, assistant professor (geographic information science, scale). BS, 1999, PhD, 2005, Hamburg. (2015)

Lucas Silva, assistant professor (terrestrial ecology, biogeochemistry, biogeography). See **Environmental Studies**.

Lynn Songer, courtesy instructor (geography education). BS, 1993, MS, 1998, PhD, 2007, Oregon. (2007)

Alethea Y. Steingisser, research assistant (cartography and graphic design, geographic information systems); cartographic project manager, InfoGraphics Lab. BS, 2002, California State, Northridge; MS, 2006, Oregon. (2006)

Xiaobo Su, associate professor (cultural politics, tourism and urban conservation, China). BArch, 2000, Southeast University (Nanjing); MSc, 2003, Sun Yat-sen University; PhD, 2007, National University of Singapore. (2007)

Peter A. Walker, professor (cultural and political ecology, US West, Africa). BA, 1986, California, Berkeley; MS, 1990, Harvard; PhD, 1997, California, Berkeley. (1997)

Emeriti

Stanton A. Cook, professor emeritus. AB, 1951, Harvard; PhD, 1960, California, Berkeley. (1960)

Carl L. Johannessen, professor emeritus. BA, 1950, MA, 1953, PhD, 1959, California, Berkeley. (1959)

Clyde P. Patton, professor emeritus. AB, 1948, MA, 1950, PhD, 1953, California, Berkeley. (1958)

Alvin W. Urquhart, professor emeritus. AB, 1953, MA, 1958, PhD, 1962, California, Berkeley. (1960)

Ronald Wixman, professor emeritus. BA, 1968, Hunter; MA, 1972, Columbia; PhD, 1978, Chicago. (1975)

The date in parentheses at the end of each entry is the first year on the University of Oregon faculty.

- **Bachelor of Arts in Geography**
- **Bachelor of Science in Geography**
- **Bachelor of Arts in Spatial Data Science and Technology**
- **Bachelor of Science in Spatial Data Science and Technology**
- **Minor**

Undergraduate Studies

The Department of Geography offers bachelor of arts and bachelor of science degrees with majors in geography and spatial data science and technology. Undergraduate students in the department develop an awareness of the natural and cultural landscapes of several regions of the world and investigate the processes that form them. Lower-division courses are open to any student at the university. For students transferring to the university in their third year, preparation in introductory college geography courses is desirable.

Geography

An undergraduate major in geography follows a broadly based general degree program. Both bachelor of arts (BA) and bachelor of science (BS) degrees are offered in the department. To achieve depth in a particular subfield of geography, electives are chosen from one of six tracks:

1. environment, economy, and sustainability
2. geographic education
3. water science and policy
4. culture, politics, and place
5. environmental systems
6. geographic information system science

Although a degree in geography is a liberal arts degree, many graduates have found related vocational opportunities in government or private employment, principally in planning, environmental research, cartography, or geographic information system science.

Bachelor of Arts in Geography: Degree Requirements

Code	Title	Credits
Fundamentals: Introductory Core		
GEOG 141	The Natural Environment	4
GEOG 142	Human Geography	4
GEOG 181	Our Digital Earth	4
Fundamentals: Advanced Core		
GEOG 391	Social Science Inquiry and Research	4
Select one of the following:		4
GEOG 201	World Regional Geography	
GEOG 202	Geography of Europe	
GEOG 204	Geography of Russia and Neighbors	
GEOG 205	Geography of Pacific Asia	
GEOG 208	Geography of the United States and Canada	
GEOG 209	Geography of the Middle East and North Africa	
GEOG 214	Geography of Latin America	
GEOG 281	The World and Big Data	
GEOG 471	North American Historical Landscapes	
GEOG 475	Advanced Geography of Non-European-American Regions: [Topic]	
Breadth Requirements: Geographic Information System Science		4
Select one of the following:		
GEOG 481	GIScience I	
GEOG 482	GIScience II	
GEOG 485	Remote Sensing I	
GEOG 486	Remote Sensing II	
GEOG 490	GIScience: [Topic]	
GEOG 491	Advanced Geographic Information Systems	
GEOG 493	Advanced Cartography	
GEOG 494	Spatial Analysis	
GEOG 495	Geographic Data Analysis	
GEOG 496	Location-Aware Systems	
GEOG 497	Qualitative Methods in Geography	
GEOG 498	Geospatial Project Design	
Breadth Requirements: Biophysical Geography		4
Select one of the following:		
GEOG 321	Climatology	
GEOG 322	Geomorphology	
GEOG 323	Biogeography	
GEOG 360	Watershed Science and Policy	
GEOG 361	Global Environmental Change	
GEOG 421	Advanced Climatology: [Topic]	
GEOG 423	Advanced Biogeography: [Topic]	
GEOG 425	Hydrology and Water Resources	
GEOG 427	Fluvial Geomorphology	
GEOG 430	Long-Term Environmental Change	

GEOG 433	Fire and Natural Disturbances	
ENVS 477	Soil Science [1]	
Breadth Requirements: Human Geography		4
Select one of the following:		
GEOG 341	Population and Environment	
GEOG 342	Geography of Globalization	
GEOG 343	Society, Culture, and Place	
ASIA 425	Asian Foodways [1]	
GEOG 441	Political Geography	
GEOG 442	Urban Geography	
GEOG 444	Cultural Geography	
GEOG 448	Tourism and Development	
ENVS 450	Political Ecology [1]	
ENVS 455	Sustainability [1]	
GEOG 461	Environmental Alteration	
GEOG 463	Geography, Law, and the Environment	
GEOG 465	Environment and Development	
GEOG 466	Gender and Environment	
GEOG 467	International Water Policy	
GEOG 468	Contemporary Food Systems	
GEOG 471	North American Historical Landscapes	
GEOG 475	Advanced Geography of Non-European-American Regions: [Topic]	
ASIA 480	Chinese Economy: Transition, Development, Globalization [1]	
Electives		
Three courses from one specialization (see specialization lists) [2]		12
Additional Requirements		2
GEOG 401	Research: [Topic]	
GEOG 403	Thesis	
GEOG 406	Field Studies: [Topic]	
GEOG 409	Practicum: [Topic]	
GEOG 419	Professional Geographer	
Total Credits		**46**

[1] If taught by Peter Walker, Dan Buck, or Lucas Silva.

[2] Seminar: [Topic] (GEOG 407), Experimental Course: [Topic] (GEOG 410), and other upper-division courses approved by an advisor may be used to satisfy the elective requirement.

Environment, Economy, and Sustainability

Code	Title	Credits
Select three of the following:		
GEOG 321	Climatology	4
GEOG 322	Geomorphology	4
GEOG 323	Biogeography	4
GEOG 341	Population and Environment	4
GEOG 342	Geography of Globalization	4
GEOG 421	Advanced Climatology: [Topic]	4
GEOG 423	Advanced Biogeography: [Topic]	4
ASIA 425	Asian Foodways [1]	4
GEOG 425	Hydrology and Water Resources	4
GEOG 427	Fluvial Geomorphology	4
GEOG 430	Long-Term Environmental Change	4
GEOG 433	Fire and Natural Disturbances	4
ENVS 450	Political Ecology [1]	4
ENVS 455	Sustainability [1]	4
GEOG 461	Environmental Alteration	4
GEOG 463	Geography, Law, and the Environment	4
GEOG 465	Environment and Development	4
GEOG 466	Gender and Environment	4
GEOG 467	International Water Policy	4
GEOG 468	Contemporary Food Systems	4
ENVS 477	Soil Science	4

Geographic Education

Code	Title	Credits
Select three of the following:		
GEOG 341	Population and Environment	4
GEOG 342	Geography of Globalization	4
GEOG 343	Society, Culture, and Place	4
GEOG 441	Political Geography	4
GEOG 442	Urban Geography	4
GEOG 444	Cultural Geography	4
GEOG 471	North American Historical Landscapes	4
GEOG 475	Advanced Geography of Non-European-American Regions: [Topic]	4
Upper-division courses in geography (GEOG) [1]		4

[1] With approval of advisor.

Water Science and Policy

Code	Title	Credits
Select three of the following:		
GEOG 360	Watershed Science and Policy	4
GEOG 361	Global Environmental Change	4
GEOG 425	Hydrology and Water Resources	4
GEOG 427	Fluvial Geomorphology	4
GEOG 467	International Water Policy	4

Culture, Politics, and Place

GEOG 341	Population and Environment	4
GEOG 342	Geography of Globalization	4
GEOG 343	Society, Culture, and Place	4
ASIA 425	Asian Foodways [1]	4
GEOG 441	Political Geography	4
GEOG 442	Urban Geography	4
GEOG 444	Cultural Geography	4
GEOG 448	Tourism and Development	4
ENVS 450	Political Ecology [1]	4
ENVS 455	Sustainability [1]	4
GEOG 461	Environmental Alteration	4
GEOG 463	Geography, Law, and the Environment	4
GEOG 465	Environment and Development	4
GEOG 466	Gender and Environment	4

GEOG 467	International Water Policy	4
GEOG 468	Contemporary Food Systems	4
GEOG 471	North American Historical Landscapes	4
GEOG 475	Advanced Geography of Non-European-American Regions: [Topic]	4
ASIA 480	Chinese Economy: Transition, Development, Globalization [1]	4

At least eight geography courses must be taken for a letter grade. A grade of C– or better or P (pass) is required in each course, and a GPA of 2.25 or better is required in courses used to satisfy major requirements.

Geography majors seeking a BA degree must demonstrate proficiency in a second language by passing the third term of a second-year university language course with a grade of C– or better or by examination indicating an equivalent level of proficiency.

Bachelor of Science in Geography: Degree Requirements

Code	Title	Credits
Fundamentals: Introductory Core		
GEOG 141	The Natural Environment	4
GEOG 142	Human Geography	4
GEOG 181	Our Digital Earth	4
Fundamentals: Advanced Core		
GEOG 391	Social Science Inquiry and Research	4
Select one of the following:		4
GEOG 201	World Regional Geography	
GEOG 202	Geography of Europe	
GEOG 204	Geography of Russia and Neighbors	
GEOG 205	Geography of Pacific Asia	
GEOG 208	Geography of the United States and Canada	
GEOG 209	Geography of the Middle East and North Africa	
GEOG 214	Geography of Latin America	
GEOG 281	The World and Big Data	
GEOG 471	North American Historical Landscapes	
GEOG 475	Advanced Geography of Non-European-American Regions: [Topic]	
Breadth Requirements: Geographic Information System Science		4
Select one of the following:		
GEOG 481	GIScience I	
GEOG 482	GIScience II	
GEOG 485	Remote Sensing I	
GEOG 486	Remote Sensing II	
GEOG 490	GIScience: [Topic]	
GEOG 491	Advanced Geographic Information Systems	
GEOG 493	Advanced Cartography	
GEOG 494	Spatial Analysis	
GEOG 495	Geographic Data Analysis	
GEOG 496	Location-Aware Systems	
GEOG 497	Qualitative Methods in Geography	
GEOG 498	Geospatial Project Design	
Breadth Requirements: Biophysical Geography		4
Select one of the following:		
GEOG 321	Climatology	
GEOG 322	Geomorphology	
GEOG 323	Biogeography	
GEOG 360	Watershed Science and Policy	
GEOG 361	Global Environmental Change	
GEOG 421	Advanced Climatology: [Topic]	
GEOG 423	Advanced Biogeography: [Topic]	
GEOG 425	Hydrology and Water Resources	
GEOG 427	Fluvial Geomorphology	
GEOG 430	Long-Term Environmental Change	
GEOG 433	Fire and Natural Disturbances	
ENVS 477	Soil Science [1]	
Breadth Requirements: Human Geography		4
Select one of the following:		
GEOG 341	Population and Environment	
GEOG 342	Geography of Globalization	
GEOG 343	Society, Culture, and Place	
ASIA 425	Asian Foodways [1]	
GEOG 441	Political Geography	
GEOG 442	Urban Geography	
GEOG 444	Cultural Geography	
GEOG 448	Tourism and Development	
ENVS 450	Political Ecology [1]	
ENVS 455	Sustainability [1]	
GEOG 461	Environmental Alteration	
GEOG 463	Geography, Law, and the Environment	
GEOG 465	Environment and Development	
GEOG 466	Gender and Environment	
GEOG 467	International Water Policy	
GEOG 468	Contemporary Food Systems	
GEOG 471	North American Historical Landscapes	
GEOG 475	Advanced Geography of Non-European-American Regions: [Topic]	
ASIA 480	Chinese Economy: Transition, Development, Globalization [1]	
Electives		
Three courses from one specialization (see specialization lists) [2]		12
Additional Requirements		2
GEOG 401	Research: [Topic]	
GEOG 403	Thesis	
GEOG 406	Field Studies: [Topic]	
GEOG 409	Practicum: [Topic]	
GEOG 419	Professional Geographer	
Total Credits		**46**

1 If taught by Peter Walker, Dan Buck, or Lucas Silva.

2 Seminar: [Topic] (GEOG 407), Experimental Course: [Topic] (GEOG 410), and other upper-division courses approved by an advisor may be used to satisfy the elective requirement.

Environment, Economy, and Sustainability

Code	Title	Credits
Select three of the following:		
GEOG 321	Climatology	4
GEOG 322	Geomorphology	4
GEOG 323	Biogeography	4
GEOG 341	Population and Environment	4
GEOG 342	Geography of Globalization	4
GEOG 421	Advanced Climatology: [Topic]	4
GEOG 423	Advanced Biogeography: [Topic]	4
ASIA 425	Asian Foodways [1]	4
GEOG 425	Hydrology and Water Resources	4
GEOG 427	Fluvial Geomorphology	4
GEOG 430	Long-Term Environmental Change	4
GEOG 433	Fire and Natural Disturbances	4
ENVS 450	Political Ecology [1]	4
ENVS 455	Sustainability [1]	4
GEOG 461	Environmental Alteration	4
GEOG 463	Geography, Law, and the Environment	4
GEOG 465	Environment and Development	4
GEOG 466	Gender and Environment	4
GEOG 467	International Water Policy	4
GEOG 468	Contemporary Food Systems	4
ENVS 477	Soil Science	4

Geographic Education

Code	Title	Credits
Select three of the following:		
GEOG 341	Population and Environment	4
GEOG 342	Geography of Globalization	4
GEOG 343	Society, Culture, and Place	4
GEOG 441	Political Geography	4
GEOG 442	Urban Geography	4
GEOG 444	Cultural Geography	4
GEOG 471	North American Historical Landscapes	4
GEOG 475	Advanced Geography of Non-European-American Regions: [Topic]	4
Upper-division courses in geography (GEOG) [1]		4

[1] With approval of advisor.

Water Science and Policy

Code	Title	Credits
Select three of the following:		
GEOG 360	Watershed Science and Policy	4
GEOG 361	Global Environmental Change	4
GEOG 425	Hydrology and Water Resources	4
GEOG 427	Fluvial Geomorphology	4
GEOG 467	International Water Policy	4

Environmental Systems

GEOG 321	Climatology	4
GEOG 322	Geomorphology	4
GEOG 323	Biogeography	4
GEOG 341	Population and Environment	4
GEOG 342	Geography of Globalization	4
GEOG 343	Society, Culture, and Place	4
GEOG 360	Watershed Science and Policy	4
GEOG 361	Global Environmental Change	4
GEOG 421	Advanced Climatology: [Topic]	4
GEOG 423	Advanced Biogeography: [Topic]	4
GEOG 425	Hydrology and Water Resources	4
GEOG 427	Fluvial Geomorphology	4
GEOG 430	Long-Term Environmental Change	4
GEOG 433	Fire and Natural Disturbances	4

Geographic Information System Science

GEOG 481	GIScience I	4
GEOG 482	GIScience II	4
GEOG 485	Remote Sensing I	4
GEOG 486	Remote Sensing II	4
GEOG 490	GIScience: [Topic]	4
GEOG 491	Advanced Geographic Information Systems	4
GEOG 493	Advanced Cartography	4
GEOG 495	Geographic Data Analysis	4
GEOG 496	Location-Aware Systems	4
GEOG 498	Geospatial Project Design	4
GEOG 497	Qualitative Methods in Geography	4

Geography majors seeking a BS degree must complete a mathematics sequence that satisfies the university's mathematics requirement for a BS degree. Mathematics courses must be passed with a grade of at least C– or P. The optimal courses for the university's mathematics requirement depend on one's track and focus; consult with an advisor.

Students considering graduate school should complete both the mathematics and language requirements.

Spatial Data Science and Technology

The spatial data science and technology major requires a minimum of 48 credits, drawing on courses in geography and computer information science. The major requires four compulsory courses (16 credits) that provide foundational skills, concepts, and critical thinking abilities. An additional eight elective courses (32 credits) are required. Upon declaring the major, students meet with the geography undergraduate advisor to tailor a series of elective courses best suited to individual student needs and employment aspirations. At least nine courses used for the major must be taken for a letter grade. A grade of C– or better and a GPA of 2.25 or better is required in courses applied to the major.

For more information, e-mail the undergraduate advisor, Leslie McLees, at geogadvr@uoregon.edu, or schedule an advising appointment at https://geography.uoregon.edu/undergrad/advising/.

Bachelor of Arts in Spatial Data Science and Technology: Degree Requirements

Core courses provide foundational skills, concepts, and critical thinking abilities. Some of the introductory courses, such as GIScience I (GEOG 481), are prerequisites for more advanced courses. Students are

not required to complete these before moving to elective courses (except where prerequisites are required).

Electives. Rather than adopting a series of specializations, the electives component will remain flexible. Upon declaring the major, students should meet with the undergraduate advisor to work out a series of courses that best fit student needs and employment aspirations. A full list of elective courses can be found on the major page (https://geography.uoregon.edu/sdst) on the department website.

Core Courses		
GEOG 181	Our Digital Earth	4
GEOG 281	The World and Big Data	4
GEOG 481	GIScience I	4
CIS 122	Introduction to Programming and Problem Solving	4
Elective Courses		
Choose courses totaling 32 credits from the following:		32
GEOG 403	Thesis	
GEOG 482	GIScience II	
GEOG 485	Remote Sensing I	
GEOG 490	GIScience: [Topic] [1]	
GEOG 491	Advanced Geographic Information Systems	
GEOG 493	Advanced Cartography	
GEOG 494	Spatial Analysis	
GEOG 495	Geographic Data Analysis	
GEOG 496	Location-Aware Systems	
GEOG 498	Geospatial Project Design	
CIS 210	Computer Science I	
CIS 211	Computer Science II	
300- or 400-level course with a GEOG subject code not listed above [2]		
400-level course with a CIS subject code not listed above [2]		
Total Credits		**48**

1. Special topics include courses that are offered less frequently, but also qualify for credit when offered under the course number GIScience: [Topic] (GEOG 490). Topics include Web Mapping, Server GIS, Qualitative Spatial Reasoning, and Spatial Simulation.
2. Occasionally a course will be offered under the number 410, which denotes an experimental course. In the event that this course does count toward the major, it will be indicated as such on the course offerings sheet the term it is offered. Most courses will not count for the spatial data science and technology major, so please confirm with the undergraduate advisor before registering.

Bachelor of Science in Spatial Data Science and Technology: Degree Requirements

Core Courses		
GEOG 181	Our Digital Earth	4
GEOG 281	The World and Big Data	4
GEOG 481	GIScience I	4
CIS 122	Introduction to Programming and Problem Solving	4
Elective Courses		
Choose courses totaling 32 credits from the following:		32
GEOG 403	Thesis	
GEOG 482	GIScience II	
GEOG 485	Remote Sensing I	
GEOG 490	GIScience: [Topic] [1]	
GEOG 491	Advanced Geographic Information Systems	
GEOG 493	Advanced Cartography	
GEOG 494	Spatial Analysis	
GEOG 495	Geographic Data Analysis	
GEOG 496	Location-Aware Systems	
GEOG 498	Geospatial Project Design	
CIS 210	Computer Science I	
CIS 211	Computer Science II	
300- or 400-level course with a GEOG subject code not listed above [2]		
400-level course with a CIS subject code not listed above [2]		
Total Credits		**48**

1. Special topics include courses that are offered less frequently, but also qualify for credit when offered under the course number GIScience: [Topic] (GEOG 490). Topics include Web Mapping, Server GIS, Qualitative Spatial Reasoning, and Spatial Simulation.
2. Occasionally a course will be offered under the number 410, which denotes an experimental course. In the event that this course does count toward the major, it will be indicated as such on the course offerings sheet the term it is offered. Most courses will not count for the spatial data science and technology major, so please confirm with the undergraduate advisor before registering.

Honors Programs

The Department of Geography offers an honors option for its majors. More information is available on the department website (https://geography.uoregon.edu/undergrad/honors) or by contacting the undergraduate advisor, geogadvr@uoregon.edu.

Minor Requirements

Upper-division GIScience course	4
Upper-division biophysical geography course	4
Upper-division human geography course	4
Three geography courses	12
Total Credits	**24**

At least 16 credits must be taken for a letter grade and 12 credits must be upper division. Grades of C– or better or P must be earned in all geography courses applied to the minor.

Second Majors

Geography majors may also complete a second major in any field of the student's choice. Two of the most common are environmental studies or environmental science—an excellent combination with geography because they offer grounding in the physical and human systems within which environmental issues are situated in a larger global context. For details about adding a second major, visit the department's website.

Internships in Geography

Internships are unpaid off-campus work experiences. Students receive one credit for each three hours of participation as an intern; internships may be extended to a second term with prior departmental approval.

Interns apply geographic concepts in the service of government, private industry, or nongovernmental organizations. Internships are initiated by students or may come at the suggestion of a faculty member or the request of an employer. Past interns have worked in the Eugene Planning and Development Department, the US Department of Agriculture Forest Service, Lane County Soil Conservation District, and many other organizations and agencies.

Four-Year Degree Plan

The degree plan shown is only a sample of how students may complete their degrees in four years. There are alternative ways. Students should consult their advisor to determine the best path for them.

Bachelor of Arts in Geography

Course	Title	Credits Milestones
First Year		
Fall		
GEOG 142	Human Geography	4
WR 121	College Composition I	4
Group-satisfying course in arts and letters		4
First term of first-year second-language sequence		4
	Credits	**16**
Winter		
GEOG 141	The Natural Environment	4
WR 122	College Composition II	4
Group-satisfying course in science		4
Second term of first-year second-language sequence		4
	Credits	**16**
Spring		
GEOG 181	Our Digital Earth	4
Group-satisfying course in social science		4
Group-satisfying course in arts and letters		4
Third term of first-year second-language sequence		4
	Credits	**16**
	Total Credits	**48**

Course	Title	Credits Milestones
Second Year		
Fall		
GEOG Advanced Core elective (201-214)		4
Group-satisfying course in arts and letters		4
Group-satisfying course for social science		4
First term of second-year second-language sequence		4
	Credits	**16**
Winter		
GEOG Human Geography breadth course		4
Group-satisfying course in science		4
Group-satisfying course in arts and letters		4
Second term of second-year second-language sequence		4
	Credits	**16**
Spring		
GEOG Biophysical Geography breadth		4
Group-satisfying course in science		4
Group-satisfying course in social science		4
Third term of second-year second-language sequence		4
	Credits	**16**
	Total Credits	**48**

Course	Title	Credits Milestones
Third Year		
Fall		
GEOG 481	GIScience I	4
Group-satisfying course in social science		4
Upper-division elective courses		8
	Credits	**16**
Winter		
GEOG 391	Social Science Inquiry and Research	4
GEOG 419	Professional Geographer	2
Upper-division course with GEOG subject code		4
Upper-division elective course		4
	Credits	**14**
Spring		
Upper-division course with GEOG subject code		4
Upper-division elective course		4
Elective course		8
	Credits	**16**
	Total Credits	**46**

Course	Title	Credits Milestones
Fourth Year		
Fall		
Upper-division courses with GEOG subject code		8
Upper-division elective courses		8
	Credits	**16**
Winter		
Upper-division courses with GEOG subject code		8
Upper-division elective course		4
Elective course		4
	Credits	**16**
Spring		
Upper-division courses with GEOG subject code		8
Upper-division elective courses		8
	Credits	**16**
	Total Credits	**48**

Bachelor of Science in Geography

Course	Title	Credits Milestones
First Year		
Fall		
GEOG 142	Human Geography	4
WR 121	College Composition I	4
Group-satisfying course in arts and letters		4
Group-satisfying course in science		4
	Credits	**16**

Winter		
GEOG 141	The Natural Environment	4
WR 122	College Composition II	4
Mathematics course		4
Group-satisfying course in science		4
	Credits	**16**
Spring		
GEOG 181	Our Digital Earth	4
Mathematics course		4
Group-satisfying course in social science		4
Group-satisfying course in arts and letters		4
	Credits	**16**
	Total Credits	**48**

Course	Title	Credits Milestones
Second Year		
Fall		
GEOG Advanced Core elective (201-214)		4
Mathematics course		4
Group-satisfying course in social science		4
Elective course		4
	Credits	**16**
Winter		
GEOG physical geography breadth course		4
Group-satisfying course in science		4
Group-satisfying course in social science		4
Group-satisfying course in arts and letters		4
	Credits	**16**
Spring		
GEOG human geography breadth course		
Group-satisfying course in science		4
Group-satisfying course in social science		4
Group-satisfying course in social science		4
	Credits	**12**
	Total Credits	**44**

Course	Title	Credits Milestones
Third Year		
Fall		
GEOG 481	GIScience I	4
Upper-division elective courses		8
Elective course		4
	Credits	**16**
Winter		
GEOG 391	Social Science Inquiry and Research	4
GEOG 419	Professional Geographer	2
Upper-division elective course		4
Elective course		4
	Credits	**14**
Spring		
Upper-division course with GEOG subject code		4
Upper-division elective course		8
Elective course		4
	Credits	**16**
	Total Credits	**46**

Course	Title	Credits Milestones
Fourth Year		
Fall		
Upper-division courses with GEOG subject code		8
Upper-division elective courses		8
	Credits	**16**
Winter		
Upper-division coursed with GEOG subject code		8
Upper-division elective course		4
Elective course		4
	Credits	**16**
Spring		
Upper-division course with GEOG subject code		8
Upper-division elective course		4
Elective course		4
	Credits	**16**
	Total Credits	**48**

- **Master of Arts**
- **Master of Science**
- **Doctor of Philosophy**

Graduate Studies

Graduate work leading to the master of arts (MA), master of science (MS), and doctor of philosophy (PhD) degrees is offered.

The department's graduate programs emphasize the natural environment; the interactions of environment and society; culture, politics, and space; geographic information system science; and geographic education. The master's and PhD programs closely follow the research interests of the geography faculty. Students follow an individualized program that includes courses and seminars in related disciplines.

Although the department requires knowledge of the fundamentals of geography, it welcomes students whose undergraduate work has been in other disciplines and who can apply their training to geographic problems.

Admission

The Department of Geography only accepts applications for admission fall term. Application materials should arrive by January 15 to be considered the following fall term. The department notifies applicants of the admission decision around April 1. Graduate teaching fellowships typically are awarded once a year, in April.

The department's website has online application materials and information about the application process.

Applicants must submit scores from the Graduate Record Examinations general test. There is no minimum requirement for GRE scores.

International students whose native language is not English must submit results from the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) examination from within five years of the application date. The Department of Geography

requires a minimum score of 575 (paper-based) or 88 (Internet-based) for the TOEFL. The minimum overall band score on the academic module of the IELTS is 7.0. For more information about the TOEFL and IELTS examination, visit their respective websites.

For more information about the geography department graduate application process, visit geography.uoregon.edu/graduate/admissions.

General Requirements

In both the master's and the doctoral programs, students are expected to develop a broad background in the discipline of geography, in-depth knowledge in an area of emphasis, and the ability to conduct and report independent research, including the use of appropriate geographic techniques. The area of emphasis may combine more than one traditional subfield of geography. The PhD requires development of more in-depth knowledge in the area of emphasis and a substantial independent research project resulting in a dissertation.

Area of Emphasis	Course Topics
The Natural Environment	• Advanced biogeography • Advanced climatology • Advanced geomorphology • Hydrology and water resources • Fluvial geomorphology • Long-term environmental change • Climatological aspects of global change • Fire and natural disturbances
Environment and Society	• Environmental alteration • Geography, law, and the environment • Environment and development • Gender and environment • International water policy • North American historical landscapes • Political ecology
Culture, Politics, and Place	• Political geography • Urban geography • Global migration • Cultural geography • Tourism and development
Geographic Information System Science	• Geographic information system science • Remote sensing • Advanced geographic information systems • Advanced cartography • Geographic data analysis
Geographic Education	• Research in geographic education • Preparing to teach Advanced Placement human geography • Geospatial technology for educators • Geography education assessment

The department also offers course work and faculty expertise in the American West, Europe (both West and East), the Middle East, Latin America, Asia, and Africa.

Master's Degree Program

The master's degree in geography (MA or MS) emphasizes broad understanding of physical and human geography and basic geographic techniques. Students develop specialized research skills during work on the thesis.

The master of arts degree requires second-year university-level proficiency in a second language. Competency may be demonstrated by a standardized test or with adequate undergraduate course work. Competency in a foreign language or a computer language may be used to meet the departmental language requirement for the master of science degree.

The master's degree option in geographic education is designed for teachers who have K–12 teaching licensure or are working toward their initial or continuing licensure. Most graduate students who take the geographic education option also have several years of teaching experience.

A committee of two geography faculty members supervises the research and writing of a master's thesis that shows evidence of original research and writing.

Master of Arts in Geography

Code	Title	Credits
Core Courses [1]		
GEOG 595	Geographic Data Analysis	4
GEOG 608	Workshop: [Topic] (Thesis Writing) [2]	2-16
GEOG 611–612 & GEOG 613	Theory and Practice of Geography I-II and Research Design [3]	12
Breadth Requirement		
Five upper-division courses, with at least one and no more than two in each area of emphasis (physical geography, human geography, GIS science)		20
Total Credits		**38-52**

1. Core courses or their equivalents must be completed either during the program or prior to entering.
2. Must take course for 1 credit every winter and spring term the student is in residence.
3. Must be taken during the first year the graduate student is in residence.

Code	Title	Credits
Additional Master's Required Courses		
GEOG 507	Seminar: [Topic]	1-5

or GEOG 607	Seminar: [Topic]	
GEOG 507	Seminar: [Topic]	1-5
or GEOG 607	Seminar: [Topic]	
GEOG 503	Thesis [1]	9
Total Credits		**11-19**

1 At least 3 credits must be taken during the term the degree is granted. Every master's thesis must be presented at a public lecture.

Master of Science in Geography

Code	Title	Credits
Core Courses [1]		
GEOG 595	Geographic Data Analysis	4
GEOG 608	Workshop: [Topic] (Thesis Writing) [2]	2-16
GEOG 611–612 & GEOG 613	Theory and Practice of Geography I-II and Research Design [3]	12
Breadth Requirement		
Five upper-division courses, with at least one and no more than two in each area of emphasis (physical geography, human geography, GIS science)		20
Total Credits		**38-52**

1 Core courses or their equivalents must be completed either during the program or prior to entering.

2 Must take course for 1 credit every winter and spring term the student is in residence.

3 Must be taken during the first year the graduate student is in residence.

Code	Title	Credits
Additional Master's Required Courses		
GEOG 507	Seminar: [Topic]	1-5
or GEOG 607	Seminar: [Topic]	
GEOG 507	Seminar: [Topic]	1-5
or GEOG 607	Seminar: [Topic]	
GEOG 503	Thesis [1]	9
Total Credits		**11-19**

1 At least 3 credits must be taken during the term the degree is granted. Every master's thesis must be presented at a public lecture.

Doctoral Degree Program

The PhD program requires competent understanding of one of the systematic fields of geography and a broad understanding of geographic topics that enables the student to address and synthesize problems that cross the various fields of geography. While this program is designed to suit each individual's background and interests, prospective candidates should pay attention to the systematic specialization and regional interests of the department's faculty members before applying for admission.

The candidate may use Research: [Topic] (GEOG 601) and Reading and Conference: [Topic] (GEOG 605) to follow specific interests with individual members of the faculty. The PhD program, planned with faculty committee approval, is measured by achievement of the stated goals rather than by any specific number of credits.

PhD Requirements

Code	Title	Credits
Core Courses [1]		
GEOG 595	Geographic Data Analysis	4
GEOG 608	Workshop: [Topic] (Thesis Writing) [2]	2-16
GEOG 611–612 & GEOG 613	Theory and Practice of Geography I-II and Research Design [3]	12
Breadth Requirement		
Five upper-division courses, with at least one and no more than two in each area of emphasis (physical geography, human geography, GIS science)		20
Total Credits		**38-52**

1 Core courses or their equivalents must be completed either during the program or prior to entering.

2 Must take course for 1 credit every winter and spring term the student is in residence.

3 Must be taken during the first year the graduate student is in residence.

Additional Doctoral Required Courses		
GEOG 607	Seminar: [Topic]	1-5
GEOG 607	Seminar: [Topic]	1-5
GEOG 603	Dissertation [1]	1-16

1 At least 3 credits must be taken during the term the degree is granted. Every doctoral dissertation must be presented at a public lecture.

In addition, PhD students must complete a foreign language, programming, or skills requirement that entails completion of the foreign language or programming requirement for the master's degree in addition to one of the following:

1. Advanced knowledge of the foreign language used for the master's requirement as demonstrated by successful completion of a third-year, university-level course sequence in that language that deals with composition and conversation, or passing an approved test of third-year language skills (such as the New York University School of Professional Studies Foreign Language Proficiency Exam)
2. proficiency in a second foreign language at the level required for the master's degree
3. computer programming skills at the level required for the master's degree
4. completion of a research skills package typically consisting of four to five courses that cover a body of related methods and techniques useful in geographic research

PhD students must also complete a preparation in fields of specialization requirement that entails completion of courses and seminars recommended by the advisor or committee members.

After completing the appropriate course work, graduate seminars, and language or technical skills requirement, advancement to candidacy is achieved by passing a comprehensive written examination. The comprehensive exam is an opportunity to demonstrate that the student

- can articulate core areas of expertise and situate the student's overall research agenda in relation to these areas of expertise
- understands and can defend major theoretical and methodological issues in these core research and teaching areas
- has a sense of where those theories and methods stand in relation to major themes in contemporary and interdisciplinary scholarship

PhD students develop their own questions. These questions should focus on the three areas of expertise as identified in consultation between the student and advisor. At least three questions should be developed for each of the three areas. The committee may ask for more than three. At this point, the committee selects four examination questions. The committee may constrain, expand, or otherwise edit any of the student-written questions. The student has two weeks to write the responses (four to five pages to each question). Approximately one to three weeks after turning in the written responses, the student defends the responses orally. Please see the geography department's *Graduate Program Handbook* for additional details.

Within nine months of completing the comprehensive examination, the student must present a dissertation proposal for approval by the student's dissertation committee. The completed dissertation, the capstone of the doctoral program, presents the results of substantive and original research on a significant geographic problem. It is defended in a public oral presentation.