

APPLIED GEOGRAPHY & GEOSPATIAL SCIENCE, MA

Graduate School Policies and Procedures (<http://catalog.ucdenver.edu/cu-denver/graduate/graduate-school-policies-procedures/>) apply to this program.

Please click [here](#) to see Geography and Environmental Sciences department information.

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Introduction

In the United States and around the world, balancing the preservation of the natural environment with the imperatives of economic development along with concerns for social well-being has led to a growing demand for broadly trained individuals who can identify and understand pressing social and environmental issues, collect and analyze relevant data, and develop and implement innovative solutions. Graduates of the M.A program in Applied Geography and Geospatial Science will have the knowledge, training, and tools to become leaders in this rapidly growing field.

The program's research focus is human-environment interaction, a longstanding hallmark of the discipline of Geography. Within this area of critical geographic inquiry, the program emphasizes geospatial science, a federally recognized STEM subject area that includes geographic information systems (GIS) as well as computer cartography, remotely sensed image analysis, and spatial statistics. Students apply their geospatial research skills in the context of hands-on, faculty-led research projects that stress professional development through community engagement and interactive service learning.

Financial Aid

There are three types of financial aid available: teaching assistant student hourly positions; research assistantship positions funded by grants to specific program faculty; and the regular package of financial aid (primarily loans) available through the financial aid office on the Denver campus. Incoming students will be automatically considered for program-distributed assistance at the time of admission to the program. Continuing students will be regularly apprised of available aid and positions. All other aid should be requested through the

CU Denver Financial Aid Office
 Student Commons Building, 5th floor
 Campus Box 125
 P.O. Box 173364
 Denver, CO 80217-3364
 Telephone: 303-315-1850

Internships

Students in the Applied Geography & Geospatial Science MA program are strongly encouraged to contact the Experiential Learning Center for internships and paid positions related to geographical sciences. The Experiential Learning Center is located in the Tivoli Student Union, Suite

260. Telephone: 303-556-2250. Many students have had internships in federal agencies, such as the U.S. Environmental Protection Agency and the U.S. Geological Survey.

These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their program advisor and CLAS advisor to confirm the best plans of study before finalizing them.

Program Requirements

The program is offered by the faculty of the Department of Geography and Environmental Sciences in the College of Liberal Arts and Sciences.

Students undertake 36 credit hours over a two-year period. These 36 hours include required core classes (6-9 credit hours), a required service learning studio (3 credit hours), and required geo-spatial science coursework (12 credit hours). Students can elect to undertake either of two tracks: the first "coursework" track involves a further 15 hours of elective courses, whereas the second "thesis" track involves 9 hours of electives, and preparation of a written thesis (3 credits).

1. Students must complete a minimum of 36 credit hours.
2. Students must complete a minimum of 36 graduate (5000-level) or higher credit hours.
3. Students must earn a minimum grade of B (3.0) or better in all core courses, a B- (2.7) in all other courses taken at CU Denver and must achieve a minimum cumulative program GPA of 3.0. All graded attempts in required and elective courses are calculated in the program GPA. Students cannot complete program or ancillary course requirements as pass/fail.
4. Students must complete all coursework with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Many of the electives have prerequisites# students must have met these requirements in order to take the course.
2. Courses applied to either a certificate* or an MA degree may later be applied toward the other if all pertinent coursework is completed within a five year time period.
3. Students should fill out and submit all relevant department forms for their files. Importantly, all petitions for course substitutions and identification of where courses fit as electives, with the subsequent approval/denial, should be submitted to this file.
4. By the end of the first semester, each student should identify and declare whether or not s/he is pursuing the thesis or non-thesis option. If intending to pursue the thesis option, the student should identify and gain agreement from a content advisor for guiding the thesis, filling out and submitting the appropriate departmental form.
5. Many of the electives have pre-requisites; students must have met these requirements in order to take the course.
6. Students may transfer up to 9 hours of approved graduate-level credit into the program. These courses must be approved by the Graduate Director and they may not replace core courses.
7. Students may count up to 6-credit hours of independent, with a maximum of 3-credit hours per independent study towards elective credit in the major as approved by the Graduate Director. No more than 3 credit hours of independent study may be taken with the same instructor and they may not be taken in the same term.

8. Students may count up to 6-credit hours of internship in total, but 3-credit hours per internship and per entity (sponsorship may be with same professor sponsor)
9. Students may not count 4000-level courses towards electives in the program; this may be petitioned to the Graduate Committee in exceptional cases.
10. Students may take a maximum of 2 online courses, or petition to the GES Graduate Committee beyond two.
11. Students may enroll in thesis preparation and writing hours only after submission of signed committee form, which requires approval of the thesis proposal.
12. Students will not receive a grade for thesis preparation and writing hours until the thesis is successfully defended.
13. Students must follow the graduate school deadlines for submission of paperwork for the graduation application, comprehensive exam, and any other deadlines. Links to these can be found on the GES/MS website.
14. Work submitted for the environmental sciences options must have a grade of B (3.0) or better.
15. GES offers Geospatial, Environmental Education, and Urban Agriculture independent graduate certificates. These certificates may be earned without entrance into the MS in environmental sciences program. (See the Geographic Information Science Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/geography-environmental-sciences/geographic-information-science-graduate-certificate/>), Sustainable Urban Agriculture Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/geography-environmental-sciences/sustainable-urban-agriculture-graduate-certificate/>), and Environmental Science Education Graduate Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/college-liberal-arts-sciences/geography-environmental-sciences/environmental-science-education-graduate-certificate/>) descriptions.)

Required Courses

Code	Title	Hours
<i>Take all of the following:</i>		9
GEOG 5050	Applied Spatial Statistics	3
GEOG 6300	Foundations Seminar in Human-Environmental Interaction	3
GEOG 6800	Community-Based Research Practicum	3

Geospatial Science and Methods Courses

Code	Title	Hours
<i>Take 12 credit hours of the following</i>		12
CSCI 5559	Database Systems	3
CVEN 5382	Geospatial Data Development	3
CVEN 5383	GIS Analysis – Theory and Practice	3
CVEN 5385	GIS Relational Database Systems	3
ENVS 6200	Risk Assessment	3
ENVS 6220	Toxicology	3
ENVS 6230	Environmental Epidemiology	3
GEOG 5060	Remote Sensing I: Introduction to Environmental Remote Sensing	3
GEOG 5070	Remote Sensing II: Advanced Remote Sensing	3

GEOG 5081	Cartography and Computer Mapping	3
GEOG 5085	GIS Applications for the Urban Environment	3
GEOG 5090	Environmental Modeling with Geographic Information Systems	3
GEOG 5091	Open Source Software for Geospatial Applications	3
GEOG 5092	GIS Programming and Automation	3
GEOG 5095	Deploying GIS Functionality on the Web	3
GEOG 5235	GIS Applications in the Health Sciences	3

Electives

Code	Title	Hours
<i>Take 9 credit hours of Elective courses (up to 6 hours can be taken outside the Department of Geography & Environmental Sciences, as approved by advisor)</i>		9

Take a minimum of one course from each list below.

Human Geography

Code	Title	Hours
ENVS 5305	Water Quality and Resources	3
ENVS 5340	Equity & Culture in Science Education: Local/Global	3
ENVS 5450	Urban Food and Agriculture: Perspectives and Research	3
ENVS 5460	Sustainable Urban Agriculture Field Study I	3
GEOG 5230	Hazard Mitigation and Vulnerability Assessment	3
GEOG 5265	Sustainability in Resources Management	3
GEOG 5300	Children's Geographies	3
GEOG 5301	Population, Culture, and Resources	3
GEOG 5335	Contemporary Environmental Issues	3
GEOG 5350	Environment and Society in the American Past	3
GEOG 5420	The Politics of Nature	3
GEOG 5440	Science, Policy and the Environment	3
GEOG 5640	Urban Geography: Denver and the U.S.	3
GEOG 5680	Urban Sustainability: Perspectives and Practice	3
GEOG 5710	Disasters, Climate Change, and Health	3
GEOG 5900	Colloquium	1

Physical Geography

Code	Title	Hours
ENVS 5020	Earth Environments and Human Impacts	3
ENVS 5280	Environmental Hydrology	4
ENVS 5731	Mountain Biogeography	4
GEOG 5240	Applied Geomorphology	3
GEOG 5251	Fluvial Geomorphology	3
GEOG 5270	Glacial Geomorphology	3
GEOG 5740	Soil Science and Geography	3
or ENVS 5740	Soil Science and Geography	
GEOG 5995	Global Study Topics	3-9

Thesis Option

Code	Title	Hours
<i>Take the following</i>		6
GEOG 6750	Research Design	3
GEOG 6950	Master's Thesis	3

Non-Thesis Option

Code	Title	Hours
<i>Take a minimum of six additional credit hours from the lists above or approved by an advisor.</i>		6

To learn more about the Student Learning Outcomes for this program, please visit our website (<https://clas.ucdenver.edu/ges/programs/master-arts/ma-learning-goals-objectives/>).