

GEOGRAPHY

Undergrad

GEOG Major Requirements for Geographic Information Science Track

Required Courses

Students must complete the general requirements of the College of Arts and Sciences and the required courses below. In addition to a standard degree in Geography, the Department offers transcribed concentrations in Geographic Information Science, Human Geography, Environment-Society Geography, and Physical Geography. Coursework required for each concentration is listed below. Students must complete at least 37 and no more than 45 credit hours in Geography with grades of C- or better (23 hours must be upper division). No *pass/fail* grades are allowed in the major. Transfer students majoring in Geography must complete at least 12 hours of upper-division Geography courses at CU-Boulder. No course may be used to fulfill more than one requirement for the major. All courses marked with an * can be used to meet College of Arts and Sciences core curriculum requirements.

Required Courses and Semester Credit Hours Geographic Information Science Concentration

- GEOG 1001* Environmental Systems I: Climate and Vegetation - 4
- GEOG 1011* Environmental Systems II: Landscapes and Water - 4
- One of the following human geography courses:
 - GEOG 1962 Geographies of Global Change - 3
 - GEOG 1972 Environment-Society Geography - 3
 - GEOG 1982 World Regional Geography - 3
 - GEOG 1992 Human Geography - 3
- GEOG 3023 Statistics for Geography - 4
- One of the following mapping courses:
 - GEOG 2053 Mapping a Changing World - 4
 - GEOG 3053 Cartography I: Visualization and Information Design - 4
- One of the following methods courses:
 - GEOG 4023 Introduction to Quantitative Methods in Geography (prereq GEOG 3023) - 4
 - GEOG 4043 Cartography II: Interactive and Multi-media Mapping (prereq GEOG 3053) - 4
 - GEOG 4093 Remote Sensing of the Environment - 4

- GEOG 4173 Research Seminar - 3
- GEOG 4722 Field Methods in Human Geography - 3

Geographic Information Science Concentration

- GEOG 4103 Introduction to Geographic Information Science (prereq GEOG 3023 and GEOG 3053)—4
- Take three electives from the following list:
 - GEOG 4043 Cartography II: Interactive and Multimedia Mapping (prereq GEOG 3053)—4
 - GEOG 4093 Remote Sensing of the Environment—4
 - GEOG 4110 Special Topics—4
 - GEOG 4120 Special Topics—3
 - GEOG 4173 Research Seminar—3
 - GEOG 4203 Geographic Information Science Modeling Applications—4
 - GEOG 4303 Geographic Information Science Programming—4
 - GEOG 3930 Internship (3) and GEOG 4990 Senior Thesis (3) may be applied to the concentration on a case-by-case basis.
- Take one upper division elective from either the Human Geography, Environment and Society Geography, or Physical Geography list.
- Take one upper division elective in Human Geography, Environment and Society, or Physical Geography.
- Take upper and lower division electives within Geography if necessary to reach 37 total credits and 23 upper division credits in the major.

* *core curriculum course*