Geographic Information Science, Minor

The undergraduate minor in geographic information science requires a minimum of 15 s.h. in geographical and sustainability sciences courses, including 12 s.h. in University of Iowa courses numbered 3000 or above. Students must maintain a g.p.a. of at least 2.00 in all courses for the minor and in all UI courses for the minor. Course work in the minor may not be taken pass/nonpass.

Geography majors may not earn the minor in geographic information science.

Geographic information science is the study of geography using digital technology. The field uses geographic information systems (computer-based technologies designed to facilitate the capture, organization, analysis, and display of geographic data), remote sensing (primarily interpretation of satellite imagery), and spatial modeling (viewing, analyzing, and mapping spatial data) to study geographic patterns and processes and to examine research on the nature, development, and use of these tools.

The minor requires one core course, three mid-level specialization courses, and an advanced course that builds on one of the three mid-level courses. Students should contact the department secretary to request an advisor for help in selecting the advanced course.

The minor in geographic information science requires the following course work.

Core Course
One of these:
GEOG:1050 Foundations of GIS 3
GEOG:3010 Geographic Information Systems and Science 3

Mid-Level Specialization Courses
All of these:
GEOG:3500 Introduction to Environmental Remote Sensing 3
GEOG:3520 GIS for Environmental Studies 3
GEOG:3540 Introduction to Geographic Visualization 3

Advanced Course
One of these:
GEOG:3570 Light Detection and Ranging (LiDAR): Principles and Applications 3
GEOG:4020 Field Methods: Mapping and Mobile Computing 3
GEOG:4150/ GHS:4150 Health and Environment: GIS Applications 3
GEOG:4500 Applications in Environmental Remote Sensing 4
GEOG:4520 GIS for Environmental Studies: Applications 3

GEOG:4570 Spatial Analysis and Location Models 3
GEOG:4580 Introduction to Geographic Databases 3
GEOG:4650 Simulation in Environmental Geography 3