

GRADUATE MINOR in Geographic Information Science

Geographic Information Science (GIScience) encompasses the theories and methods for understanding spatial patterns and processes. Because many of our most vexing problems have a spatial component, GIScience underpins our best solutions. GIScience has become a key approach to an increasingly large number of endeavors, from land use planning and environmental management, to epidemiology through law enforcement. Experts in a diverse range of fields are well-served by GIScience knowledge .

The graduate minor in GIScience allows students to develop depth in spatial analysis that complements their discipline-specific knowledge. Completing this minor will improve marketability and opportunities for intellectual and professional development.

The minor involves completing nine (9) credits in approved courses at the University of Minnesota, Twin Cities, namely one introductory course (GEOG 5561 or FR 5131); and at least two other courses from the following:

CSci 8715	Spatial Databases (3 cr)
DHA 5469	Understanding Housing: Assessment and Analysis (3 cr)
ESPM 5031	GPS for GIS (3 cr)
ESPM 5295	GIS for Natural Resources (4 cr)
FR 5262	Remote Sensing of Natural Resources and Environment (4 cr)
FR 5412	Digital Remote Sensing (3 cr)
FR 8205	Research Problems in Spatial Data Analysis (1–5 cr)
GEOG 5511	Advanced Cartography (3 cr)
GEOG 5562	GIS and Analytical Cartography (3 cr)
GEOG 5563	Advanced GIS (3 cr)
GEOG 5564	Urban GIS and Analysis (3 cr)
GEOG 5565	Geographical Analysis of Environmental Systems and Global Change (3 cr)
GEOG 8290	Seminar in GIS and Cartography (3 cr)
GEOG 8291	Seminar in GIS, Technology and Society (3 cr)
GEOG 8292	Seminar in Spatial Modeling and Statistics (3 cr)
GIS 5555	Basic Spatial Analysis (3 cr)
GIS 5571	Introduction to Arc/Info (3 cr)
GIS 5572	Advanced Arc/Info (3 cr)
GIS 5573	Desktop Mapping (1.5 cr)
GIS 5574	GIS and the Internet (1.5 cr)
GIS 5575	Surveying and GIS (2 cr)
GIS 5577	Spatial Data Administration (2 cr)
GIS 5578	GIS Programming (3 cr)
LA 8203	Making Regional Landscape Space (6 cr)

The introductory course may be replaced by a course from the list above if 1) the student has completed an equivalent introductory course at another institution, and 2) the student receives DGS approval for the substitution via a petition and a review of the course syllabus, and other materials if necessary.

Students interested in completing the MGIS minor should contact the Director of Graduate Studies for the MGIS Program at gisdgs@umn.edu.