

Minnesota North College – Itasca Campus
Geographic Information Systems (GIS) Professional

Academic Year 2023-24
Certificate (16 credits)

Fall Start—One Year (3 terms) Course Sequence

FALL SEMESTER 2023 – 6 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 1201 – Map Use and Analysis		3	(1/2)
GEOG 1204 – Principles of GIS		3	(1/2)

SPRING SEMESTER 2024 – 6 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 2104 – Modeling Techniques in GIS		3	(1/2)
GEOG 2206 – Cartography	(GEOG1204)	3	(1/2)

SUMMER 2024 – 4 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 2107 – Remote Sensing and Image Interpretation	(GEOG1204)	3	(1/2)
GEOG 2113 – GIS Applications	(instructor permission)	1	(0/1)
<u>OR</u> GEOG 2201 – GIS Internship (completion of 12 credits of GIS coursework with 2.0 minimum GPA)			

Spring Start—One Year Plus (5 terms) Course Sequence for a slower pace

First (partial) Year

SPRING SEMESTER 2024 – 3 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 1204 – Principles of GIS		3	(1/2)

SUMMER 2024 – 3 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 2107 – Remote Sensing	(GEOG1204)	3	

Second Year

FALL SEMESTER 2024 – 3 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 1201 – Map Use and Analysis		3	(1/2)

SPRING SEMESTER 2025 – 6 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 2104 – Modeling Techniques in GIS		3	(1/2)
GEOG 2206 – Cartography	(GEOG1204)	3	(1/2)

SUMMER 2025 – 1 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 2113 – GIS Applications	(instructor permission)	1	(0/1)
<u>OR</u> GEOG 2201 – GIS Internship (completion of 12 credits of GIS coursework with 2.0 minimum GPA)			

Program Description

Minnesota North College is committed to meeting the needs of the local and regional community, and offers a fully online, 16-credit Geographic Information Systems (GIS) Certificate. The program utilizes Environmental Systems Research Institute’s ArcGIS software, a world leader in GIS development and applications. GIS is a vital tool that can be applied to a diverse range of employment opportunities, and its application is well integrated at all levels of government. The curriculum reflects input from local, regional, and national GIS professionals, and is tailored to prepare individuals with the technical skills and confidence to be productive within the professional GIS working environment.

Students may enter the program in either fall or spring. The fall entry course sequence allows students to complete the certificate in one year (two semesters, plus summer session). The spring entry can be completed in a little more than one year (5 terms) and offers a reduced pace to program completion.

Geographic Information Systems Certificate

Occupational Titles

Excellent job opportunities requiring GIS proficiency exist nationwide in areas as diverse as business, law enforcement, urban/regional planning, forestry, health and human services. Possible position titles include GIS Technician, GPS Technician, Cartographic Technician, Remote Sensing Technician, GIS Analyst, GIS Specialist, Cartographer, GIS Manager, GIS Coordinator, Biological GIS Technician, Ecological Data Specialist, and Disaster Data Analyst.

Program Learning Outcomes

Students of this program will:

1. Demonstrate proficiency applying a core set of technical skills common to GIS professionals at an entry level.
2. Solve GIS problems commensurate in complexity with entry level expectations of a professional environment.
3. Create cartographic products and spatial models which support the use of GIS as a planning and decision-making tool.

Program Faculty Contact

Tim Fox (timothy.fox@minnesotnorth.edu or 218-322-2364)

Mission

Minnesota North College prepares lifelong learners and engaged citizens through inclusive, transformative experiences reflecting the character and natural environment of the region.



Minnesota North College, a member of Minnesota State, is an affirmative action, equal opportunity employer and educator.
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