

Minnesota North College – Itasca Campus

Geography/Geographic Information Systems (GIS)

Academic Year 2023-24

Associate of Science (60 credits)

First Year

FALL SEMESTER 2023 – 13 credits	Prerequisites	Credits	Hr Lc/Lb
ENGL 1231 – College Composition 1 (MnTC Goal 1)	(CLR, CLW)	4	
GEOG 1201 – Map Use and Analysis		3	(1/2)
MnTC Goal 6 – Theory/Appreciation	(see course outline)	3	
REQUIRED GEOGRAPHY COURSE – See list and schedule below.	(CLR)	3	

SPRING SEMESTER 2024 – 15 credits	Prerequisites	Credits	Hr Lc/Lb
ENGL 1240 – Technical Report Writing (MnTC Goal 1)	(ENGL1231)	3	
GEOG 1204 – Principles of GIS		3	(1/2)
MnTC Goal 5 – History and the Social and Behavioral Science course	(see course outline)	3	
MnTC Goal 6 – Creative Process/Interpretive Performance	(see course outline)	3	(var.)
REQUIRED GEOGRAPHY COURSE – See list and schedule below.	(CLR)	3	

Second Year

FALL SEMESTER 2024 – 16 credits	Prerequisites	Credits	Hr Lc/Lb
COMM 1210 – Introduction to Communication (MnTC Goal 1) OR COMM 1215 – Public Speaking (MnTC Goal 1) OR COMM 1220 – Interpersonal Communication (MnTC Goal 1)		3	
GEOG 1315 – Weather and Climate (MnTC Goals 3 & 10)		4	(3/2)
MATH 1200 – Liberal Arts Math or higher MnTC Goal 4 course	(MATH0200)	3	
MnTC Course – Any Goal Area	(see course outline)	3	
REQUIRED GEOGRAPHY COURSE – See list and schedule below.	(CLR)	3	

SPRING SEMESTER 2025 – 16 credits	Prerequisites	Credits	Hr Lc/Lb
GEOG 2104 – Modeling Techniques in GIS		3	(1/2)
GEOG 2206 – Cartography	(GEOG1204)	3	(1/2)
GEOG 2107 – Remote Sensing and Image Interpretation	(GEOG1204)	3	(1/2)
GEOG 2113 – GIS Applications	(instructor permission)	1	(0/1)
MnTC Goal 6 – The Humanities and the Fine Arts (either group)	(see course outline)	3	(var.)
REQUIRED GEOGRAPHY COURSE – See list and schedule below.	(CLR)	3	

Required Geography Courses List and Schedule

GEOGRAPHY COURSES (all four courses are required)	Prerequisites	Credits	Hr Lc/Lb
GEOG 1215 – Physical Geography (MnTC Goals 3 & 9); <i>offered fall, odd years</i>	(CLR)	3	
GEOG 1220 – World Regional Geography (MnTC Goals 5 & 8); <i>offered spring, odd years</i>	(CLR)	3	
GEOG 1225 – Human Geography (MnTC Goals 5 & 7); <i>offered spring, even years</i>	(CLR)	3	
GEOG 1325 – Natural Disasters (MnTC Goals 3 & 9); <i>offered fall, even years</i>	(CLR)	3	

Note:

GEOG 2107 – Remote Sensing is available both spring term (in person) and summer session (online).

GEOG 2113 – GIS Applications is available summer session.

Program Description

The Geography/Geographic Information Systems (GIS) AS degree program is designed to provide individuals with a background in geography, spatial processes, mapping techniques, and the ability to manage and utilize geographic information as a planning and decision-making tool. The program guides the student in developing a sound approach to geographic inquiry and analysis, and provides the opportunity for students to explore the diverse political, economic, social and environmental interrelationships at local, regional, and global scales. Embedded in this interdisciplinary science is a focus on the technical components of mapping, cartographic analysis and production, and the use of state-of-the-art GIS, global positioning systems, and remote sensing software for advanced level data acquisition, integration, and spatial analysis.

Geography/Geographic Information Systems (GIS) AS

Occupational Titles

Although primarily a transfer degree, there are opportunities available. Possible position titles include Geographer, Park Ranger, Surveyor, Ecological Data Specialist, Disaster Data Analyst, Marine Scientist, Wetlands Scientist, Land Use Planner, Environmental Protection Specialist, Teacher, Travel Writer, Researcher, Transportation Manager, Geopolitical Analyst, Urban Planner, Emergency Manager, Environmental Consultant, Economic Consultant, Climatologist, GIS Technician, GIS Analyst, GIS Specialist, Cartographic Technician, Remote Sensing Technician, Cartographer, Demographer, Environmental Analyst, and Environmental Manager.

Program Learning Outcomes

Students of this program will:

1. Apply a core set of technical skills common to GIS professionals at an entry level.
2. Explain the development of geographic landscapes within a variety of contexts and scales of analysis.
3. Solve GIS problems commensurate in complexity with entry level expectations of a professional environment.
4. Apply geographic concepts to describe relationships within the physical and human environment.
5. Create cartographic products and/or spatial models which support the use of GIS as a planning and decision-making tool.

Transfer and Articulation Agreements

The program maintains articulation agreements with Bemidji State University, the University of Minnesota, Duluth, and Minnesota State University, Mankato. The articulation agreement facilitates the transfer of credits and allows ample time to complete an additional minor.

Program Faculty Contact

Tim Fox (timothy.fox@minnesotanorth.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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