



# GEOGRAPHY/*GEOGRAPHIC INFORMATION SYSTEMS (GIS)*

## Itasca Community College-Bemidji State University

**Degree:** Associate in Science  
**Length:** 64 credits

**Program Information:** The Geography/Geographic Information Systems (GIS) 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. Students will develop a sound approach to geographic inquiry and analysis and have the opportunity 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. Students may apply for an internship and find themselves working on real world projects with community organizations. The program maintains an articulation agreement with Bemidji State University which facilitates the transfer of ICC credits and allows ample time (up to one year) for students to earn additional elective credits in the form of minors/specializations while working toward the B.A/B.S. degree in Geography at BSU. **Students fulfilling the following courses for the A.S. degree will have met BSU's general education requirements through the completion of the Minnesota Transfer Curriculum.**

### *I. GENERAL EDUCATION (42 CREDITS)* *(selected from Minnesota Transfer Curriculum)*

			Number of Credits
<b>A. Communications</b>			<b>10</b>
Engl	1101	Expository Writing	4
Engl	1105	Technical Writing	3
		<b>AND</b>	
		<b>Three credits selected from the following courses:</b>	3
Spch	1101	Introduction to Speech Communication	3
Spch	1105	Fundamentals of Public Speaking	3
<b>B. Critical Thinking</b>		Embedded in all courses of the Minnesota Transfer Curriculum	
<b>C. Natural Sciences</b>			<b>7</b>
NSci	1101	Environmental Science	3
		<b>AND</b>	
		<b>Four credits selected from the following courses:</b>	
Biol	1101	Human Biology	4
Chem	1101	Fundamentals of Chemistry	4
Phys	1101	Fundamentals of Physics	4
<b>D. Mathematics/Logical Reasoning</b>			<b>4</b>
Math	1105	Elementary Statistics	4
<b>E. History &amp; The Social/Behavioral Sciences</b>			<b>9</b>
Geog	1101	Physical Geography	3
Geog	1108	Cultural Geography	3
		<b>AND</b>	
		<b>Three credits selected from the following courses:</b>	
Soc	1101	Introduction to Sociology	3
Hist	1142	Native American History	3
MCS	1111	Minority Studies	3
<b>F. Humanities and Fine Arts</b>			<b>9</b>
Phil	1111	Ethics	3
		<b>AND</b>	
		<b>Six credits selected from any of the following courses:</b>	6
		<b>Any 2000 level English literature course;</b>	
		Ansh 1102; Art 1101, 1111, 1112, 1115, 1201, 1202, 1203, 1204 or 1205;	
		Hum 1111; Music 1101 or 1111, 1115; Philosophy 1101, 1112, or 1121	

(OVER)

<b>G. General Education Elective</b>	Minimum of 3 credits from <u>any</u> course that satisfies the Minnesota Transfer Curriculum (General Education areas A-J).	<b>3</b>
<b>Recommended Elective Choices:</b>		
Engl	1113 Research Writing	3
Spch	1121 Interpersonal Communication	3
Spch	1121 Intercultural Communication	3
NSci	1121 Earth Science	4
Math	1111 College Algebra	3
Geog	1104 World Regional Geography	3
Econ	1101 Introduction to Economics	3
<b>TOTAL GENERAL EDUCATION CREDITS</b>		<b>42</b>

**II. GIS PROGRAM CORE (23-24 CREDITS)**

<b>A. GIS Core Requirements</b>		<b>16-18</b>
Geog	1201 Map Use, Analysis & Interpretation	3
Geog	1204 Principles of Geographic Information Science	3
* Geog	2101 Data Acquisition & Database Development in GIS	3
** Geog	2104 Modeling Techniques in Geographic Information Science	3
** Geog	2107 Remote Sensing & Image Interpretation	3
<b>AND</b>		
<b>Minimum of 1-3 credits selected from the following:</b>		
Geog	2201 GIS Internship	1-3
*** Geog	1206 Cartography	3
Geog	2199 Special Topics in Geography	3
NSci	1199 Natural Resource Series	1-2
Fort	1202 Natural Resource Careers	1
<b>NOTE:</b> Students who do not maintain a GIS Program Core GPA of 3.0 or higher are not eligible to enroll in Geog 2201, Internship		
<b>B. Additional Requirements</b>		<b>6</b>
<b>Three credits selected from the following:</b>		
CSci	1120 Introduction to Computers	3
CSci	1150 Foundations of Technology	3
<b>AND</b>		
<b>Three credits selected from the following:</b>		
CSci	1201 Visual Basic Programming	3
CSci	1205 C++ Programming	3
<b>TOTAL CORE CREDITS</b>		<b>22-24</b>

**TOTAL A.S. GIS PROGRAM CREDITS (Section I and II) 64-66**

- \* Prerequisite of both Map Use, Analysis & Interpretation and Principles of GIS, or consent of instructor.
- \*\* Prerequisite of Data Acquisition & Database Development in GIS, or consent of instructor.
- \*\*\* Prerequisite of Principles of GIS, or consent of instructor.

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