

Geographic Information Systems

Associate in Applied Science Degree

Why Geographic Information Systems?

Geospatial studies encompasses several learning domains including geography (study of the features of the Earth) and geodesy (study of the measurement and representation of the Earth), and is used with cartography, geographic information systems, and geospatial analysis to solve problems in a variety of disciplines ranging from life sciences to military to health care fields. Computer and mobile application-based tools such as spatial analysis, 3D mapping, and geovisualization make this career both engaging and challenging.

Why Bay College?

The [Geographic Information Systems program](#) at Bay College prepares students to pursue a number of careers in the GIS field. Lab 400 (HATC Bldg) houses our new ArcGIS Advanced Desktop lab.

Workstations are Quad Core Intel Xeon processors with high definition graphic capability, 16 Gig of RAM, AMD FirePro video, and use Windows 10 OS. All are running ArcGIS 10.3.1 and students taking the GIS 201 Introduction to GIS course receive a great deal of exposure to the software, data types, and how to present the data in a map or poster. Geographic Information Systems is currently used locally by county governments to plan residential and business expansions, water and waste water departments to track equipment, forestry to plan forests and harvesting, and even by real estate and investors to decide on where to purchase land to build a business.

Beyond Bay College

The Geographic Information Systems department at Bay College is pleased to announce the completion of the [Northern Michigan University Transfer Guide](#) to the four-year Geomatics degree at NMU!

Career Opportunities

The Geographic Information Systems program prepares students to pursue any of the following careers in the related field:

- **GIS Analysts**
- **Surveying Technician**
- **Cartographer**
- **Land Surveyor**
- **Mapping Technician**

Contact

Bay College
2001 N Lincoln Rd
Escanaba, MI 49829

Bay College West Campus
2801 N US 2
Iron Mountain, MI 49801

Office of Admissions
906-217-4010
admissions@baycollege.edu

Karl Linderok
Instructor
(906) 217-4056
linderok@baycollege.edu



baycollege.edu

Geographic Information Systems, AAS

Award Granted Upon Completion: Associate in Applied Science in Geographic Information Systems
Credits/Contacts Required: 61/63

Major code: 03/353
CIP Code: 151102

General Education Requirements (Min. 17 Credits)

Course #	Course Name	Cr
ENGL 101	Rhetoric & Composition	3
MATH xxx	Mathematics Elective (MATH 105, MATH 107, or higher)	4
GEOG 110	Physical Geography	4
GEOG 121	World Regional Geography	3
XXXX xxx	Social and Behavioral Science or Humanities	3

Program Requirements (Min. 44 Credits)

Course #	Course Name	Cr
BIOL 107	Environmental Science	3
CIS 101	Computer Concepts & Applications	4
CIS 210	Web Page Design & Structure	3
CNSS 150	A plus Computer Maintenance	4
GEOG 150	Map, Compass, & GPS	2
GIS 201	Introduction to Geographic Information Systems	3
GIS 202	Data Management	3
GIS 203	Spatial Analysis	4
GIS 204	Advanced Cartography	4
GIS 205	Remote Sensing	4
GIS 272	GIS Co-op Internship	1-8*
XXXX xxx	Approved Electives	7

Approved Elective (Min. 7 Credits)

Course #	Course Name	Cr
BUSN 203	Management Information Systems	3
CIS 130	Spreadsheet Applications	3
CIS 140	Database Applications	3
CNSS 245	SQL Server	4
CNSS 262	Web Server Administration	4
CSCI 110	Introduction to Programming	3
CSCI 121	C++ Programming I	3
GIS 273	GIS Co-op Internship	1-8*
GIS 274	GIS Co-op Internship	1-8*

Suggested Sequences Per Semester

First Semester

Course #	Course Name	Cr/Ct
ENGL 101	Rhetoric & Composition	3
GEOG 110	Physical Geography	4
CNSS 150	A plus Computer Maintenance	4
GIS 201	Introduction to Geographic Information Systems	3

First Semester Total - Credit(s): 14 | Contacts: 18

Second Semester

Course #	Course Name	Cr/Ct
XXXX xxx	Approved Electives	3/3*
CIS 101	Computer Concepts & Applications	4
GEOG 121	World Regional Geography	3
GEOG 150	Map, Compass, & GPS	2
XXXX xxx	Social Behavioral or Humanities	3/3

Second Semester Total - Credit(s): 15 | Contacts: 15

Third Semester

Course #	Course Name	Cr/Ct
CIS 210	Web Page Design & Structure	3
MATH xxx	(MATH 105, MATH 107, or higher)	4/4
BIOL 107	Environmental Science	3
GIS 202	Data Management	3
GIS 203	Spatial Analysis	4

Third Semester Total - Credit(s): 17 | Contacts: 17

Fourth Semester

Course #	Course Name	Cr/Ct
XXXX xxx	Approved Elective	4/4*
GIS 204	Advanced Cartography	4
GIS 205	Remote Sensing	4
GIS xxx	Co-op\Internship	3/3*

Fourth Semester Total - Credit(s): 15 | Contacts: 15

Note(s)

* All Internships and Co-ops require that the student pass a criminal background check.