

Geographic Information Systems Technology (UMM/WCCC)

Associate in Science – 62 credit hours

Purpose: The Geographic Information Systems Technology program will give students practical experience in addressing real-world problems and questions. Such skills and experience are in demand in economics, education, geoscience, government, planning, landscape architecture, public health, public safety, recreation, humanities, graphic design, and marine, earth and life sciences.

Career Opportunities: Graduates of Geographic Information Systems Technology may find employment in town governments, public health programs, natural resource management programs, and economic development.

Program Educational Outcomes: Upon completion of the Associate in Science degree in Geographic Information Systems Technology program, the graduate is prepared to:

1. Design a cartographic model, use vector-based and raster-based spatial analysis to execute that model, as required, and use both spatial and non-spatial media to communicate methods and results
2. Have a practical and applied understanding of geodesy, projections, coordinate systems and georeferencing
3. Have a practical and applied understanding of the basic principles of geographic inquiry
4. Have a practical and applied understanding of databases and database management as they are used in GIS
5. Understand common workflows and documentation procedures for geospatial information
6. Have experience in several real-world GIS projects
7. Be generally familiar with the breadth and depth of applications of geospatial technologies and thoroughly knowledgeable about applications in one or more specific fields
8. Use heuristic problem-solving to address novel problems in GIS applications
9. Have an advanced ability to read maps, constructively critique their cartographic design, and evaluate how they communicate information
10. Make maps that effectively communicate information
11. Be proficient in use of industry standard GIS software for making maps, analyzing spatial information, and communicating spatial ideas

12. Recognize relevant elements of spatial problems or questions, translate them into GIS data models and analytical processes, and use GIS software and methods to produce maps and/or information to address them and communicate outcomes

Geographic Information Systems Technology (UMM/WCCC)

Associate in Science – 62 credit hours

Course #	Course Title	Credits
Semester 1		
ENG101	College Composition	3
FYE100	First Year Experience	1
GEO101	Introduction to Geography	3
GIS230	Geographical Info Sys Applications I	4
MAT/SCI	MAT/SCI Elective-MAT 112 or above	3
SCI101	Foundations of Modern Science	4
	Total	18
Semester 2		
MAT Elective	MAT 115 or above	3
Elective	Comm/SS/Hum/Lit/Arts	3
Elective	English/Communications	3
Elective	Open Elective	3
GIS233	Geographical Info Sys Applications II	4
GIS201	Global Positioning Systems	1
	Total	17
Semester 3		
Elective	Math/Science Elective	3
Elective	Social Science Elective	3
Elective	GIS Elective	8
	Total	14
Semester 4		
Elective	Comm/SS/Hum/Lit/Arts	6
Elective	Open Elective	3
Elective	GIS Elective	4
	Total	13

- Only students matriculated in the GIS program can take GIS courses.