GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

The Certificate in Geographic Information Systems (GIS) is a complement to any existing major at the University of Montana or as an addition to a bachelor's degree obtained at another university. Earning the GIS Certificate will ensure you have the knowledge, understanding, and training necessary to acquire, process, analyze, and properly display digital geographic data.

General Certificate Requirements

Additional requirements for graduation can be found on the Degree/Certificate Requirements for Graduation page (https://catalog.umt.edu/academics/graduation-requirements/).

Unless otherwise noted in individual program requirements, a minimum grade point average of 2.00 in all work attempted at the University of Montana-Missoula is required for graduation. Please see the Academic Policies and Procedures page (https://catalog.umt.edu/academics/policies-procedures/) for information on how your GPA is calculated.

Courses taken to satisfy the requirements of a major, minor, or certificate program must be completed with a grade of C- or better unless a higher grade is noted in the program requirements.

Post-Secondary Certificate - Geographic Information Systems

- This certificate requires a minimum GPA of 3.0.
- To earn a GIS Certificate, students must either complete or have completed an undergraduate degree and complete a minimum of 18 semester credit hours (six courses), including 9 to 10 core GIS course credits and 8 to 9 advanced GIS elective credits.

Course Requirements

Code	Title	Hours
Introduction to GIS		
Complete one of the following courses:		3
FORS 250	Intro to GIS for Forest Mgt	
GPHY 284	Intro to GIS and Cartography	
Photogrammetry/Remote Sensing		
Complete one of the following courses:		3-4
FORS 351	Env Remote Sensing	
GPHY 487 & GPHY 489	Remote Sensing/Raster GIS and Cartography/GIS Laboratory	
Additional Required Courses		
Complete one of the following courses:		3
FORS 350	Forestry Apps of GIS	
GPHY 488	Applications of GIS	
Electives		
Complete 8-9 credits of the following courses:		8-9
ANTY 452	GIS in Archaeology	
CSCI 444	Data Visualization	
FORS 505	Sampling Methods	
GPHY 385	Field Techniques	
GPHY 468 & GPHY 469	Community & Regional Analysis and Planning & Analysis Laboratory	
GPHY 474	UAV Remote Sensing for Field Ecology	
GPHY 481	Advanced Cartographic Design	
GPHY 485	Internet GIS	
GPHY 486 & GPHY 489	Transport, Planning & GIS and Cartography/GIS Laboratory	
GPHY 564	Planning Design	
GPHY 580	Seminar GIS & Cartography	
GPHY 587 & GPHY 589	Image Analysis & Modeling and Cartography/GIS Laboratory	
WILD 562	Wildlife Habitat Modeling	
Total Hours		**18**