

GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

Certificate in GIS Sciences and Technologies

The Certificate in GIS Sciences and Technologies, jointly offered by the departments of Geography and Forest Management, is aimed at present or future professionals or scientists who require skills in GIS technologies. The purpose of this program is to provide undergraduate students or individuals possessing an undergraduate degree with the training, knowledge, and understanding necessary to acquire, process, analyze, and properly display digital geographic data.

Special Requirements for the Certificate

To earn a certificate in GIS Sciences and Technologies, students must either complete or have completed an undergraduate degree and complete a minimum of 20 semester credit hours of course work, including 9 to 10 required credits and 10 to 11 elective credits as described below. Students must achieve at least an overall grade point average of 3.0 for courses within the program in order to earn a certificate. The certificate will be awarded upon the successful completion of all of the requirements of the certificate and the undergraduate degree.

Post-secondary Certificate - Geographic Information Systems

College of Humanities & Sciences

Degree Specific Credits: 19-21

Required Cumulative GPA: 3.0

Catalog Year: 2018-2019

Summary

Code	Title	Hours
Required GIS Core Courses		9-11
	Introduction to GIS	
	Photogrammetry/Remote Sensing	
	Additional Required Courses	
Advanced Elective Courses		10
	Raster GIS, Remote Sensing, and Image Analysis	
	Vector GIS and Networks	
	Data Management and Programming	
	GIS Applications	
Total Hours		19-21

Required GIS Core Courses

Rule: Complete each of the following subcategories. 9-10 total credits required.

Introduction to GIS

Code	Title	Hours
Complete one of the following courses:		3
FORS 250	Intro to GIS for Forest Mgt	
GPHY 284	Intro to GIS and Cartography	
Total Hours		3

Minimum Required Grade: C-

Photogrammetry/Remote Sensing

Code	Title	Hours
Complete one of the following courses:		3-4
FORS 351	Env Remote Sensing	
GPHY 487	Remote Sensing/Raster GIS	
& GPHY 489	and Cartography/GIS Laboratory	
Total Hours		3-4

Minimum Required Grade: C-

Additional Required Courses

Code	Title	Hours
Complete one of the following courses:		3-4
FORS 350	Forestry Apps of GIS	
GPHY 488	Applications of GIS	
& GPHY 489	and Cartography/GIS Laboratory	
Total Hours		3-4

Minimum Required Grade: C-

Advanced Elective Courses

Rule: Complete 10 credits from the following subcategories. 10 total credits required.

Raster GIS, Remote Sensing, and Image Analysis

Code	Title	Hours
FORS 551	Digital Image Processing	
GPHY 587	Image Analysis & Modeling	
& GPHY 589	and Cartography/GIS Laboratory	

Minimum Required Grade: C-

Vector GIS and Networks

Code	Title	Hours
GPHY 486	Transport, Planning & GIS	
& GPHY 489	and Cartography/GIS Laboratory	
GPHY 580	Seminar GIS & Cartography	
GPHY 588	Spatial Analysis and Modeling	
& GPHY 589	and Cartography/GIS Laboratory	

Minimum Required Grade: C-

Data Management and Programming

Code	Title	Hours
FORS 505	Sampling Methods	
GPHY 468	Community & Regional Analysis	
& GPHY 469	and Planning & Analysis Laboratory	

Minimum Required Grade: C-

GIS Applications

Code	Title	Hours
ANTY 452	GIS in Archaeology	
GPHY 385	Field Techniques	
GPHY 481	Advanced Cartographic Design	
GPHY 482 & GPHY 489	Spatial Analysis & GIS and Cartography/GIS Laboratory	
GPHY 485	Internet GIS	
GPHY 564	Planning Design	
WILD 562	Wildlife Habitat Modeling	

Minimum Required Grade: C-