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 11 required credits and 9 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.

Certificate of Art - Geographic Information Systems

College Humanities & Sciences

Degree Specific Credits: 20

Required Cumulative GPA: 3.0

Catalog Year: 2017-2018

Summary

Required GIS Core Courses	9-11
Introduction to GIS	
Photogrammetry/Remote Sensing	
Additional Required Courses	3-4
Advanced Elective Courses	
Raster GIS, Remote Sensing, and Image Analysis	
Vector GIS and Networks	
Data Management and Programming	
GIS Applications	
Total Hours	12-15

Required GIS Core Courses

Rule: Must complete 1 from each of the following subcategories

Minimum Required Grade: C-

9-11 Total Credits Required

Introduction to GIS

FORS 250	Intro to GIS for Forest Mgt	3
or GPHY 284	Intro to GIS and Cartography	
Total Hours		3

Minimum Required Grade: C-

Photogrammetry/Remote Sensing

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

Minimum Required Grade: C-

Additional Required Courses

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

Minimum Required Grade: C-

Advanced Elective Courses

Rule: Must complete 9-11 credits of the following subcategories

Minimum Required Grade: C-

9-11 Total Credits Required

Raster GIS, Remote Sensing, and Image Analysis

Select one or both of the following:		4-8
FORS 551	Digital Image Processing	
GPHY 587 & GPHY 589	Image Analysis & Modeling and Cartography/GIS Laboratory	
Total Hours		4-8

Minimum Required Grade: C-

Vector GIS and Networks

Select 3-11 credits from the following:		3-11
GPHY 486 & GPHY 489	Transport, Planning & GIS and Cartography/GIS Laboratory	
GPHY 580	Seminar GIS & Cartography	
GPHY 588 & GPHY 589	Spatial Analysis and Modeling and Cartography/GIS Laboratory	
Total Hours		3-11

Minimum Required Grade: C-

Data Management and Programming

Select 3-10 credits from the following:		3-10
CSCI 250	Computer Mdlng/Science Majors	
FORS 505	Sampling Methods	

GPHY 468	Community & Regional Analysis	
& GPHY 469	and Planning & Analysis Laboratory	
Total Hours		**3-10**

Minimum Required Grade: C-

GIS Applications

Select 3-11 credits from the following:		3-11
ANTY 452	GIS in Archaeology	
GPHY 385	Field Techniques	
GPHY 481	Advanced Cartographic Design	
GPHY 482	Spatial Analysis & GIS	
& GPHY 489	and Cartography/GIS Laboratory	
GPHY 564	Planning Design	
WILD 562	Wildlife Habitat Modeling	
Total Hours		**3-11**

Minimum Required Grade: C-