CERTIFICATE IN APPLIED GEOSPATIAL SCIENCE AND TECHNOLOGY

Geography

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Certificate Program Director

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Certificate Description

This 12 hour certificate is designed to meet the needs of students to utilize geospatial technologies (including geographic information systems and remote sensing) in a wide variety of fields from multiple graduate programs at YSU. This multi-disciplinary approach allows for students to combine applications of geospatial science and technologies with addressing research questions and problems from many different programs.

Admission Requirements

Undergraduate degree with overall GPA of 2.7 or higher.

Certificate Requirements

Certificate Requirements: 12 hours

COURSE	TITLE	S.H.
Required Courses (9 SH):		
GEOG 6901	Introduction to Geographic Information Science	3
GEOG 6902	Introduction to Remote Sensing	3
GEOG 6903	Advanced Geographic Information Science	3
Choose One Course from the Following (3 SH):		3
BIOL 6902	Ecology of Lakes (*)	
BIOL 6903	Stream Ecology (*)	
BIOL 6961	Forest Ecology (*)	
CRJS 5865	Gathering and Using Information in Criminal Justice	
CRJS 6975	Applied Police Correction Management	
CSCI 6901	Principles of Computer Programming	
CSCI 6950	Advanced Database Design and Administration	
DATX 5803	Data Visualization	
DATX 5805	Predictive Modeling Algorithms	
GEOG 5820	Directed Research in Geography (**)	
GEOG 6904	Advanced Remote Sensing	
GEOL 5802	Sedimentology and Stratigraphy	
HIST 6942	Applied History	
HIST 6943	Practicum in Applied History (*)	
MPH 6904	Biostatistics in Public Health	
MPH 6906	Policy and Environmental Health Sciences in Public Health	
STAT 5814	Statistical Data Mining	
STAT 5840	Statistical Computing	
STAT 6940	Advanced Data Analysis	

* This course is allowed for credit in the Graduate GSAT certificate only if it contains a significant Geospatial Science and Technology component and is given approval by the chairperson

** This course is allowed for credit in the Graduate GSAT certificate only if it contains a significant Geospatial Science and Technology component, is taken for 3 s.h. of credit, and is given approval by the chairperson

Learning Outcomes

Understand the fundamental principles and capabilities of geospatial technologies, including geographic information science and remote sensing.

Demonstrate proficiency in the use of geospatial technologies to effectively map, analyze, visualize, query, and manipulate spatial and non-spatial data.

Utilize geospatial analytical methods to solve location-based problems and properly evaluate the results.