CERTIFICATE - GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

Certificate Description

This 12-credit, 4-course online Certificate in Geographic Information Systems (GIS) is designed for students and working professionals who are interested in developing applied skills in spatial data analysis, map-making, and environmental monitoring. Students will learn to acquire, process, and interpret remotely sensed data, design visually effective maps, and perform spatial analysis to solve real-world problems. The certificate will emphasize hands-on, experiential learning using QGIS software, which is a powerful free and open-source GIS software. The program will equip students with the knowledge to address the unique spatial components of environmental, social, and business challenges

Certificate Outcomes

- Apply fundamental principles of cartographic design (e.g., color, symbology, layout) to create clear and effective maps.
- Perform spatial analysis workflows to identify patterns and solve problems in the social and natural sciences.
- Interpret remotely sensed data (e.g., satellite imagery) using QGIS.
- Design and execute a complete, independent GIS project that demonstrates technical proficiency and critical thinking.

GS 101	Foundations of Geographic Information Systems (GIS)	3
GS 201	Cartography and Remote Sensing	3
GS 301	GIS for Social and Natural Sciences	3
GS 401	Applied GIS Project	3
Total Hours		**12**