GEOGRAPHIC INFORMATION SYSTEMS (GIS)

GIS 100 - Introduction to Geospatial Technologies (3 Credits)
2 lecture, 2 lab, 4 total contact hours
Provides an introduction to geospatial technologies, such as Geographic Information Systems (GIS), Global Positioning Systems (GPS), and Remote Sensing through hands-on computer based exercises. The essential principles of map use and design, and spatial analysis are also included in this course. Fundamental desktop computer skills assumed. IAI S4 905

GIS 101 - Geospatial Data Acquisition and Management (3 Credits)
2 lecture, 2 lab, 4 total contact hours
Introduces the concepts and problem solving capabilities of Geographic Information Systems (GIS). Spatial data sourcing and management will be learned using information acquired in the field or from other sources. Spatial analysis concepts will be introduced through hands-on exercises using GIS software. Prerequisite: GIS 100 with a grade of C or better.

GIS 102 - Spatial Analysis (3 Credits)
2 lecture, 2 lab, 4 total contact hours
Continues GIS 101. Emphasizes the practical application of Geographic Information Systems (GIS) technology to solve problems and answer questions. Increases level of proficiency using GIS and performing spatial analysis of data. Introduces GIS operational and management issues. Prerequisite: GIS 101 with a grade of C or better.

GIS 103 - Applied Geospatial Technology (3 Credits)
2 lecture, 2 lab, 4 total contact hours
Consolidates the concepts and techniques acquired through prior coursework within the Geographic Information Systems (GIS) certificate. Students will analyze case studies, understand geospatial technology as a professional field, and apply geospatial technology methods and workflows in classroom projects. Prerequisite: GIS 102 with a grade of C or better.

GIS 104 - Geographic Information Systems Internship (1-3 Credits)
.5 - 1 lecture, 2.5 - 10 lab, 3 - 11 total contact hours
Provides a structured work experience in a supervised setting using GIS or other geospatial technologies. Students are exposed to the technical and managerial issues faced by a geospatial technician or analyst. Students prepare a written report at the end of the assignment. Prerequisite: GIS 100 with a grade of C or better, and consent of program coordinator.

GIS 200 - Introduction to Remote Sensing (3 Credits)
2 lecture, 2 lab, 4 total contact hours
Provides an introduction to remote sensing of the Earth. Topics include the physical principles upon which remote sensing is based; history and future directions; sensors and their characteristics; image data sources; image classification, interpretation and analysis techniques; and the integration of workflow outputs into GIS (Geographic Information Systems). Prerequisite: GIS 100 with a grade of C or better.