

## Geographical Information Systems

The following matrix indicates those courses deemed transferable among institutions listed across the top of the matrix. The numbers on the matrix represent the number of semester hours associated with the course at each institution and which institutions have agreed to transfer the commonly numbered course in each row.

You can view the group leaders at the bottom of the page. If you are interested in printing this page, please note that it is best to print in landscape mode.

Prefix	Number	Gerta	Course Title	BSC	WSC
GIS	105		Fundamentals of GIS	3	
GIS	107		GIS Application	3	
GIS	201		Advanced Applications in GIS	3	3
GIS	206		GIS in Science, Agriculture, and Business	3	
GIS	215		GPS, Photogrammetry, and Remote Sensing	3	

### GIS 105 Fundamentals of GIS

An introduction to Geographic Information Systems (GIS), a tool for integrating and analyzing spatial data to visualize relationships, seek explanations, and develop solutions to problems. Emphasis is places on the nature of geographic information, and the ways in which digital methods support geographic analysis and modeling. Course will be divided between lecture and lab sessions. This course is open to GIS and on-GIS majors. Introduction to Computer (CSCI 101) or a working knowledge of Microsoft Windows is required.

### GIS 107 GIS Application

The course will provide hands-on opportunities to experience the hardware and software used for GIS. The course applies the Fundamental GIS concepts as well as how to create, edit, and work with spatial data through exploring hands-on real world applications in relation to urban community, environmental data, and more. Students will manipulate, query, and present data in maps and make decisions from the presented information. Emphasis will be on ESRI's ArcGIS software

and the spatial analyst extension.

Prerequisites: Fundamentals of Geographic Information Systems

### **GIS 201 Advanced Applications in GIS**

An advanced hands-on applications course designed to extend GIS experience and knowledge and prepare students in becoming self sufficient GIS technicians. The course follows a hands-on problem solving approach that integrates the interests and analytical needs of participating students. The class will be divided between lecture and lab sections.

### **GIS 206 GIS in Science, Agriculture, and Business**

The course integrates the fields of business, agriculture, and science through GIS and GPS. The course will be divided between lecture, guest speakers who are experts in their fields, and lab sessions that apply fundamental concepts associated with how GIS can compliment business, agricultural, and science applications.

Prerequisites: Fundamentals of Geographic Information Systems

### **GIS 215 GPS, Photogrammetry, and Remote Sensing**

The course integrates the disciplines of GPS, photogrammetry, and remote sensing. Hands-on opportunities to manipulate GPS, DOQs, DLGs, TIFFs, and JPEG images to track environmental changes over time are presented through raster analysis. Students will work together to solve environmental problems through group projects.

Electromagnetic radiation in relation to environmental remote sensing will also be covered.

Prerequisites: Fundamentals of Geographic Information Systems

The following individuals are leaders for this discipline. Those marked with an asterisk (\*) are chairs.

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