Both hands-on and online programs are available

GIS is a computer-based methodology for collecting, analyzing, modeling and presenting geographic data for a wide range of applications. The proliferation of desktop hardware and software has made these systems an important tool in our day-to-day lives. GIS data and the people trained in these methodologies and applications are becoming integral components in nearly every type of business and government service. The GIS professional must be competent in integrating geography, data and systems to solve a wide range of problems for business, healthcare, insurance, law enforcement and other industries.

An important component of this program is the project which will be introduced in the first course and carried through the entire certificate program. Certificate graduates will have a completed project portfolio to demonstrate skills developed in the courses.

The Certificate in Geographic Information Systems provides two convenient options for completion: in-classroom or online. Each of the programs consists of four courses totaling 84 hours of lecture and are project based. The certificate graduate will receive 84 Continuing Education Units (CEUs).

Program Objectives

At the conclusion of the certificate program, graduates will be able to:

- Provide a general definition and understanding of the key concepts and topics of GIS including a brief history of the industry;
- Understand the major components of a Geographic Information System including hardware, software and data;
- Identify the role and functions of the GIS Specialist in both the public and private sectors;
- Understand GIS database principles and build a GIS database, data type and data sources;
- Understand the fundamentals of ArcGIS and its related applications; and
- Complete a capstone project integrating the student’s GIS knowledge and skills accumulated over the course of the certificate program.
Certificate in
GEOGRAPHIC INFORMATION SYSTEMS

THE CLASSES

Who Should Attend?
- Recent Baccalaureate graduates across many disciplines
- Employees of organizations either utilizing or planning to utilize GIS
- Career changers - IT Professionals
- Retirees - second career

Classes will be offered online on a rotating basis, with others available in a traditional classroom. An important component of this program is the class project which will be introduced in the first class and carried through the entire certificate program. Certificate graduates will have a completed project portfolio to demonstrate skills developed in these classes.

Introduction to GIS
(1.8 CEUs/18 hours)
Prerequisite: a basic working knowledge of the Windows Operating System and the Internet is highly recommended.
In this class you are introduced to GIS and how it is utilized in today's world. This class will provide a comprehensive overview of GIS including the major components of hardware, software, data and the identification of the skills required of a successful GIS Specialist. You are introduced to ArcGIS software which you will be using throughout the certificate program. You will gain an understanding of the profession and examine the role and functions of the GIS specialist in a broad range of industries.

GIS Data and Formats
SBAE 6919 (2.4 CEUs/24 hours)
Prerequisite: Introduction to GIS or equivalent experience.
Using existing data students will gain an understanding of GIS database principles, the differences between spatial and arbitrary data and the sources for these types of data. Students will learn through hands-on experience the process of acquiring data, accessing quality and querying that data using ArcGIS software.

GIS Analysis and Map Design
SBAE 6920 (2.4 CEUs/24 hours)
Prerequisite: GIS Data and Formats. Students will continue to build on GIS concepts and methodologies learned utilizing the mapping process introduced in previous classes. Key cartographic terms and concepts will be introduced as students learn to develop robust and purposeful maps for analysis and problem solving.

GIS Project
SBAE 6921 (1.8 CEUs/18 hours)
Prerequisite: completion of the three previous classes in this certificate program. This capstone course is conducted in a laboratory environment allowing individuals hands-on experience through use of available data utilizing ArcGIS software. Students using GIS technology will learn and analyze both spatial and arbitrary data, map this data and appropriately present the mapped outcomes.

Register today at extension.fullerton.edu/professionaldevelopment or 657.278.2611
For more information, contact Mimi Lawson: 657.278.3313, mlawson@fullerton.edu
University Extended Education