Fundamentals of GIS (Core)

GIS Data and Geodatabases (Core)

GIS Customization (Elective)

Web Based GIS (Elective)

Vector Spatial Analysis in GIS (Elective)

Raster Spatial Analysis in GIS (Elective)

COLLEGE OF THE
EXTENDED UNIVERSITY
CAL POLY POMONA

GIS
Geographic Information Systems
CAL POLY POMONA

Become Trained in One of Today's Fastest Growing Fields: Geospatial Technology

Because the uses for geospatial technology are so widespread and diverse, the market is growing at an annual rate of almost 35 percent, with the commercial subsection of the market expanding at the rate of 100 percent each year according to the U.S. Department of Labor.

Overview

Geographic Information Systems (GIS) informally describes the fields of geospatial analysis, cartography, remote sensing and global positioning systems. GIS end users, researchers and developers are found in business, marketing, landscape architecture, land surveying, geography, urban planning, local government, the legal profession, law enforcement, health care, education, water resources and many other fields that use spatially referenced information. GIS helps end users analyze and optimize network, transportation and routing systems, retail and service locations, land use, resource monitoring in the natural and man-made environments, emergency response planning, crime and health hot spots, and many other special issues in the private and public sectors.

Benefits/Objectives

In conjunction with hands-on training in ArcGIS version 10 geographic information software, the certificate program at Cal Poly Pomona trains students in methodologies for valid and meaningful spatial data collection, analysis, and information design/dissemination through cartography and other means. Students enrolled in this program will:

- GIS software operation and related skills
- Learn GIS data models and geodatabase structures
- Be able to obtain and process GIS data from various sources
- Be aware of both technical and policy issues related to GIS data and analysis
- Learn quantitative analysis methods as they apply to GI
- Gain geospatial information design and cartographic skills

Intended Audience

The program is designed specifically for non-specialist GIS users in a variety of professional settings. In conjunction with hands-on training in ArcGIS version 10 geographic information software, the certificate program trains students in methodologies for valid and meaningful spatial data collection, analysis, and information design/dissemination through cartography and other means.

Awarded Certificate

A certificate in Geographic Information Systems will be awarded to students who have successfully completed the two core courses along with two elective courses.

Courses sponsored by the Cal Poly Pomona Foundation, Inc.

visit us @ **www.ceu.csupomona.edu/go/gis**   registration/information **909.869.2288**

Fundamentals of GIS

This course introduces the fundamentals of geographic information technologies, beginning with the characteristics spatial data structure and format. Concepts and techniques taught in the class are: coordinate and projection systems, maps and map design (cartography), and basic GIS functions using ArcGIS version 10 software. Students will perform common GIS tasks such as query, display, download and conversion between formats of spatial data. Design and layout techniques of geospatial data are also taught. Lab exercises examine real world problems that are addressed using the techniques and concepts taught.

Date(s): Saturday, February 2, 2013
Time: 9:00 a.m.-5:00 p.m.
Location: Cal Poly Pomona, Bldg 5, Rm 215
Fee: $600
Special Pricing: Visit website for details on 10% discount offer
Course Code: 6GISC-1101

GIS Data and Geodatabases (Core)

This course introduces the basic concepts of GIS database and data development for common tasks. Concepts and techniques taught in the class include: geodatabase concepts and development, data preparation and conversion, integration of web-based data sources, and management of spatial data. Students will be working on real world based exercises to develop skills on designing, maintaining, and developing GIS data to support GIS analysis, visualization and other needs. An introductory GIS knowledge is assumed.

Date(s): Saturday, February 9, 2013
Time: 9:00 a.m.-5:00 p.m.
Location: Cal Poly Pomona, Bldg 5, Rm 215
Fee: $600
Special Pricing: Visit website for details on 10% discount offer
Course Code: 6GISC-1201

GIS Customization (Elective)

This course introduces GIS customization using basic VBA, C# and .NET programming concepts and techniques used in developing ArcGIS applications. It uses hands-on labs and exercises to teach fundamentals of visual programming, interactive customization of the ArtGIS graphical user interface (GUI), as well as programming with GIS components (ArcObjects). After finishing this course, students should have a solid understanding of GIS customization with VB.NET.

Date(s): TBD
Time: 9:00 a.m.-5:00 p.m.
Location: Cal Poly Pomona, Bldg 5, Rm 215
Fee: $600
Special Pricing: Visit website for details on 10% discount offer
Course Code: 6GISC-1301

Web Based GIS (Elective)

This class explores dynamic web based GIS and mapping development processes using ArcGIS based software. Concepts and techniques taught include: basic concepts, components and architecture of web based GIS, web based dynamic map design, and web based GIS applications development. Students will use ArcGIS and ArcGIS for Server tools to design, develop, and publish web based maps and applications. Introductory GIS knowledge is assumed.

Date(s): TBD
Time: 9:00 a.m.-5:00 p.m.
Location: Cal Poly Pomona, Bldg 5, Rm 215
Fee: $600
Special Pricing: Visit website for details on 10% discount offer
Course Code: 6GISC-1401

GIS Analysis I: Vector Processing and Analysis (Elective)

This course introduces intermediate and advanced GIS vector data geoprocessing and the analysis of vector data. It uses hands-on labs and exercises to teach fundamentals of vector data extraction and map overlay processes, object buffering and proximity computations, vector data transformation, merging and generalization in ArcGIS 10.

Date(s): Saturday, February 16, 2013
Time: 9:00 a.m.-5:00 p.m.
Location: Cal Poly Pomona, Bldg 5, Rm 215
Fee: $600
Special Pricing: Visit website for details on 10% discount offer
Course Code: 6GISC-1501

GIS Analysis II: Raster Processing and Analysis (Elective)

This course introduces GIS raster data geoprocessing and the analysis of raster data. It uses hands-on labs and exercises to teach fundamentals of raster data processing, including raster data extraction, data transformation, merging and generalization in ArcGIS 10. Concepts in raster GIS analysis, including overlay analysis and 3D visualization are also introduced.

Date(s): Saturday, February 23, 2013
Time: 9:00 a.m.-5:00 p.m.
Location: Cal Poly Pomona, Bldg 5, Rm 215
Fee: $600
Special Pricing: Visit website for details on 10% discount offer
Course Code: 6GISC-1601