

Geospatial Analysis & Technology

“GIS is the technology of our times and is uniquely suited to assist solving the problems that we face.”

Roger Tomlinson
‘The Father of GIS’

For certificate programs and contact information, see page 60.

Software Training

Introduction to ArcGIS

ArcGIS's advanced display, analysis and presentation mapping functions including ArcMap, ArcCatalog and ArcToolbox.

Note: ArcGIS Version 9.3 - Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Lisa A. Pierce, M.A., Research Associate, Water Resources Institute, California State University, San Bernardino

Credit: 1.5 CEUs

Date/Time: Sat.-Sun. 8 a.m.-5 p.m., Jun. 27-28 (2 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$495 (includes text and parking)

Earth Science 802.2

Reg #091-SCG-G19

Geographic Information Systems

GIS Career Workshop

Information about employment in the GIS field, types of GIS jobs available, resume writing workshops, and mock interviews. Benefits those in the GIS field looking to update their resumes as well as those new to the field or seeking a career change.

Note: Please bring your resume or curriculum vitae to class.

John Josenhans, GIS Analyst, Tetra Tech, Santa Ana

Date/Time: Thurs. 6-8 p.m., Jun. 18 (1 meeting)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$55 (includes parking)

Earth Science 803.6

Reg #084-SCG-G25

Date/Time: Tues. 6-9 p.m., Aug. 25 (1 meeting)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$55

Earth Science 803.6

Reg #091-SCG-G06

Practical Approaches for Implementing Geographic Information Systems (GIS)

GIS needs assessment, database specifications and conversion processes, software and hardware selection, financial requirements and the impact on the implementing organization.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Required for Certificate in Geographic Information Systems

Doug Mende, M.B.A., Director of GIS Business Development, Statistical Research, Inc., Redlands

Credit: 3 units

Date/Time: Mon. 10 a.m.-3 p.m., Jul. 6;

Tues. 9 a.m.-5 p.m., Jul. 7; Mon. 8 a.m.-5 p.m., Jul. 13;

Tues. 5-9 p.m., Jul. 14; Wed. 5-9 p.m., Jul. 15 (5 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$475

Earth Science X450

Reg #091-SCG-G02



Online

GIS Courses

The following courses are offered in cooperation with the ESRI Virtual Campus. Registration codes are provided upon enrollment. Visit campus.esri.com for more details about these courses. Note: PC with Internet access and appropriate software required.

- Learning ArcGIS 9.x Desktop (for 9.2 or 9.3): A Self-Paced Online Course, Reg #091-SCG-G32 (2.4 CEU, \$203)
- Creating, Editing and Managing Geodatabases for ArcGIS 9: A Self-Paced Online Course, Reg #091-SCG-G33 (1.2 CEU, \$87)
- Geoprocessing With ArcGIS Desktop: A Self-Paced Online Course, Reg #091-SCG-G34 (1.5 CEU, \$116)
- Learning ArcGIS Spatial Analyst 9: A Self-Paced Online Course, Reg #091-SCG-G35 (1.5 CEU, \$145)
- Learning ArcGIS 3D Analyst 9: A Self-Paced Online Course, Reg #091-SCG-G36 (2.1 CEU, \$174)
- Customizing ArcGIS 9: A Self-Paced Online Course, Reg #091-SCG-G37 (.6 CEU, \$58)
- Turning Data Into Information Using ArcGIS 9: A Self-Paced Online Course, Reg #091-SCG-G40 (1.5 CEU, \$145)
- Understanding Map Projections and Coordinate Systems: A Self-Paced Online Course, Reg #091-SCG-G42 (1.8 CEU, \$145)
- Learning Visual Basic for Applications for New ArcGIS Developers: A Self-Paced Online Course, Reg #091-SCG-G43 (1.5 CEU, \$145)

For more information: (951) 827-5804 or sciences@ucx.ucr.edu.

ArcGIS Desktop II: Tools and Functionality

Essential tools for visualizing, creating, managing, and analyzing geographic data. Practice with ArcMap and ArcCatalog (the primary applications included with ArcGIS Desktop software) to perform common GIS tasks and workflows.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Lisa A. Pierce, M.A., Research Associate, Water Resources Institute, California State University, San Bernardino

Credit: 2.4 CEUs

Date/Time: Wed.-Fri. 8:30 a.m.-5:30 p.m., Jul. 8-10 (3 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$625 (includes parking and text)

Earth Science 808.11

Reg #091-SCG-G04

GIS Data Resources

Census data and other types of GIS data, and acquisition, classification and visualization methods using ArcGIS. Tools to improve data quality by incorporating metadata development methods into the data acquisition process.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Elective for Certificate in Geographic Information Systems

Lisa A. Pierce, M.A., Research Associate, Water Resources Institute, California State University, San Bernardino

Credit: 3 units

Date/Time: Mon. 6-9 p.m., Wed. 6-9 p.m., Thurs. 6-9 p.m. & Fri. 9 a.m.-5 p.m., Jul. 16, 17, 20, 22, 24 & 31 (6 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$475

Earth Science X454.9

Reg #091-SCG-G12

GIS Database Design

Introduces the goals and industry tools available for planning and implementing the conceptual design phase, logical design phase and physical design phase (using ESRI's Geodatabase). Geodatabase architecture and geodatabase behaviors such as domains, subtypes, annotation, topology and relationship classes.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Prerequisite: ERT X450, Practical Approaches to Implementing GIS; and ERT 802.2, Introduction to ArcGIS.

Required for Certificate in Geographic Information Systems

Colin J. Childs, B.A., Environmental Systems Research Institute, Redlands

Credit: 3 units

Date/Time: Tues. & Thurs. 6-9:30 p.m., Jul. 21-Aug.18 (no meeting Aug. 13) (8 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$475

Earth Science X454.5

Reg #091-SCG-G09

Cartographic Design

Map design and content, design procedures and production techniques. Color selection, the use of text with maps and the creation of a "visual hierarchy" with real-time GIS applications. Thematic and general mapping with the use of GIS data. Software and hardware issues.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Prerequisite: ERT 802.2, Introduction to ArcGIS, or ArcGIS experience.

Elective for Certificate in Geographic Information Systems

Makram A. Murad-Al-Shaikh, M.S., Senior Instructor, ESRI, Redlands. Murad-Al-Shaikh has over 25 years of teaching experience in civil engineering, cartography, remote sensing and geographic information systems.

Credit: 3 units

Date/Time: Sat. & Sun. 8:30 a.m.-5:30 p.m., Jul. 25 & 26 & Aug. 1 & 2 (4 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$475

Earth Science X450.8

Reg #091-SCG-G08

Introduction to Spatial Analysis

Quantitative methods for spatial analysis using GIS. Fundamental and theoretical components of spatial information for building topological relationships among spatial features and multiple map layers. Includes models and techniques for surface analysis, such as krigging, smoothing, filtering, inverse distance weighting, and distance decay.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Prerequisite: Experience using ArcGIS or Introduction to ArcGIS, ERT 802.2.

Required for Certificate in Geographic Information Systems

Cindy Nance, Ph.D., Geography/GIS Instructor, Mt. San Jacinto College. Dr. Nance has extensive experience using ESRI software products including ArcGIS Spatial Analyst and 3D Analyst.

Credit: 3 units

Date/Time: Tues., Wed. & Thurs. 9 a.m.-4 p.m., Jul. 29 & Aug. 4, 6, 11 & 13 (5 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$475

Earth Science X450.2

Reg #091-SCG-G07

GIS Applications Lab

ArcGIS tools to develop and implement GIS projects from conception to finished product including database creation, data analysis, Geodatabase concepts and cartography. Databases from local agencies are integrated into the course to provide real-world applications.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Prerequisite: ArcGIS experience or ERT 802.2, Introduction to ArcGIS.

Required for Certificate in Geographic Information Systems

Thomas R. Corrigan, M.P.A., Public Utilities Department, city of Riverside. In the department's water resources section, Corrigan provides geospatial support and analyses involving the city's water supply and quality.

Credit: 3 units

Date/Time: Mon. & Wed. 6-9:30 p.m., Aug. 3-26 (8 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$475

Earth Science X453.4

Reg #091-SCG-G05

GIS & Google Earth

Importing/exporting GIS data, three dimensional models from programs such as Sketch Up, and creating videos for presentations within the Google Earth Desktop software. Prior knowledge of ArcGIS software is required.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Elective for Certificate in Geographic Information Systems

David Jacobus, B.S., GIS Analyst, RBF Consulting, Irvine

Credit: .8 CEU

Date/Time: Sat. 8:30 a.m.-5:30 p.m., Aug. 8 (1 meeting)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$195 (includes parking)

Earth Science 804.8

Reg #091-SCG-G21

GIS Data Capture Using GPS Technology

Basic signal structure, error and accuracy issues. Data correction techniques, geodesy, data collection techniques, and GPS to GIS applications.

Note: Most seats in this course are reserved for GIS Summer School participants. A limited number of seats may be available for single-course enrollment. If class is full, be sure to add yourself to the wait list; we will contact you by mid-June.

Required for Certificate in Global Positioning System Technology

Elective for Certificate in Geographic Information Systems

Warren Roberts, M.L.A., GIS Coordinator, Rio Hondo College, Whittier. Roberts has over 10 years of professional and academic experience in both CAD and GIS.

Credit: 3 units

Date/Time: Fri. & Sat. 8:30 a.m.-5 p.m., Aug. 14, 15, 21 & 22 (4 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$475

Earth Science X453.6

Reg #091-SCG-G03

Geographic Information Systems Summer School

Participants registered for the GIS Summer School are enrolled in individual courses totaling 24 units. The official transcript will post the individual courses, grades and units earned. The Certificate in GIS is awarded upon successful completion of the 24 units.

Date/Time: Jul. 6-Aug. 27, 2009

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$4895 / Includes certificate enrollment fee, parking, materials, receptions, transportation to field visits, student version software. Special refund policy applies, see www.extension.ucr.edu/gis.

Earth Science 805

Reg #091-SCG-G01

Also of interest

Introduction to ArcGIS

See page 57.

GIS

Summer School

July 6-August 27, 2009

Earn the Certificate in GIS in two months.

- 8-week intensive program
- Comprehensive curriculum
- Learn from GIS professionals
- Gain a competitive edge
- Award-winning program

For application and prerequisite information, visit www.extension.ucr.edu/gis or phone 951-827-5804.



Global Positioning System Technology

GPS Leveling

Concepts and techniques involved in geoid modeling as well as establishing precise ellipsoidal heights, fundamental relationships between heights, practical representation and use of regional and global geoid models, local geoid modeling by surface-fitting, network design and observing procedures for recovering high-accuracy ellipsoidal heights.

Prerequisite: ERT X440.2, Fundamentals of Geodesy, and ERT X440.8, GPS Processing and Analysis, or consent of instructor.

Required for Certificate in Global Positioning System Technology

Jay Satalich, B.A., PLS, Vice President of Land Surveying, Landata Airborne Systems, Inc., Irvine. With experience in both the private and public sectors, Satalich has expertise in geodetic surveying and applications of the Global Positioning System (GPS).

Credit: 1.5 units

Date/Time: Mon. 6-9 p.m., Jul. 6-Aug. 3 (5 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$330 (includes materials)

Earth Science X440.5

Reg #091-SCG-G20

Control Surveys Using GPS

Planning, reconnoitering, performing field measurements, processing data, and interpreting the final results of control surveys. Organizational design and observation planning to meet control survey standards and specifications such as Federal Geodetic Control Subcommittee (FGCS) Standards, Specifications for Geodetic Control Networks and Geometric Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques.

Prerequisite: ERT X440.8, GPS Processing and Analysis, or consent of instructor.

Required for Certificate in Global Positioning System Technology

Arthur R. Andrew III, PLS, Supervisor, Geodetic Unit, county of Orange. He is responsible for all geodetic surveys at the county including control, monitoring, deformation, and real-time networks.

Credit: 1.5 units

Date/Time: Sat.-Sun. 8 a.m.-5 p.m., Sept. 19-20 (2 meetings)

Location: UCR: Extension Center, 1200 University Ave.

Fee: \$395 /\$355.50 each for three or more from same agency. (includes parking)

Earth Science X440.4

Reg #091-SCG-G24

Also applying to the certificate

GIS Data Capture Using GPS Technology

See page 59.

Department Contacts:

Jennifer Campbell

Program Coordinator

(951) 827-5804

sciences@ucx.ucr.edu

To Enroll: See page 92.

Certificates in:

Geographic Information Systems

Global Positioning System Technology

Contact: Jan Crump

(951) 827-5804

sciences@ucx.ucr.edu

