

The Department of Civil, Environmental and Geomatic Engineering, University College London, will be hosting on the 11th and 12th of February 2008 a training course introducing the Manifold GIS Software package. This course is aimed at novice or potential Manifold Users which will be able after course completion to use the power of Manifold GIS to display, manipulate and analyse geographic information confidently and create high-quality outputs.

The course is structured in modules containing comprehensive overviews of fundamental topics relating to geographical information, databases and cartography along with hands-on tutorials teaching users the most important functionalities of Manifold GIS. Participants will be tutored by experienced GIS lecturers and researchers with ample experience of Manifold GIS in a commercial and academic context.

Participants will receive a comprehensive training manual containing all of the course content such as presentation slides, tutorial worksheets Manifold project files and datasets used. This training manual will act as a valuable reference guide after the course is completed.

Each participant can expect:

- Experienced academic tutors
- A workstation preloaded with all software and data for the tutorials
- State-of-the-art air-conditioned computer room
- Comprehensive course documentation folder
- Course Certificate from UCL on completion
- Lunch and refreshments provided

The course fee is £650 per participant. Please note that we have arranged a discount for organisations sending two or more participants. The course will be held on UCL's main campus in Bloomsbury, Central London.

For booking and any further enquiries, please email Patrick Weber at p.weber@ucl.ac.uk or you can phone +44 (0)20 7679 4118

Detailed Manifold Course Curriculum:

Day 1

Principles of GIS

- What is GIS?
- Differences between Vector & Raster Data
- Cartographic Projections
- Compendium of free data sources

Basic Operation of Manifold (p)

- Importing data
- Setting the Current Projection
- Displaying & Navigating Drawings & Tables
- Creating a new Map
- Working with Layers in a Map
- Selecting, creating, editing objects in Drawings & Tables
- Using the Info tool
- Saving a new Project

Cartographic Communication

- Core concepts in cartographic visualisation
- Thematic Formatting
- Colours and symbology
- Differences in screen/print display

Thematic Formatting of a (p) Drawing

- Formatting Drawings
- Setting Area, Point & Line formats
- Formatting in the Map Component
- Creating labels
- Thematic Mapping
- Themes for Thematic Mapping
- Adding a Legend

Creating a Map (p)

- Cartographic principles to consider
- Defining layout scope
- Layout Elements: Text, Images, Legend, Scale bar, North Arrow
- Exporting Layouts
- Printing a Map

Day 2

Introduction to databases

- What is a RDBMS?
- Database design (indexes, keys, integrity & normalisation)
- Geographical data storage in a RDBMS
- Principles of SQL language

Accessing Databases (p)

- Importing Excel Data
- Linking to an external RDBMS table
- Linked Drawings
- Joining table data to a Drawing
- Table Design
- The Selection Toolbar
- The Query Toolbar

Data processing using SQL (p)

- SQL Queries
- SQL Action Queries
- Parameter Queries
- Spatial SQL Queries

Spatial Analysis (p)

- Spatial Analysis Principles
- Spatial Selection using different operators
- Spatial Overlay
- Creating buffers, centroids
- Shortest path
- Point Density

(p) – Practical, Hands-on session