

Course Outline

Day1

9– 10.30 am **Introduction to GIS and Open Source GIS**

- ◆ What is GIS?
- ◆ What is Open Source GIS?
- ◆ Spatial Data
- ◆ Types of questions a GIS can answer
- ◆ GIS Tasks
- ◆ GIS Data Types
- ◆ Mapping in Layers
- ◆ Coordinate Systems
- ◆ GIS Applications
- ◆ Quantum User Interface



11– 12.30 pm

Introduction to Quantum GIS

- ◆ Quantum GIS - Some History
- ◆ The user interface
- ◆ Navigating around a map
- ◆ Project Properties
- ◆ Introduction to Layers and Attribute tables
- ◆ The Quantum GIS File Browser
- ◆ The Print Composer
- ◆ Introduction to Plugins, Bookmarks and File Types
- ◆ Exercise: Getting Started

2– 4.30 pm

Module: The Interface

Lesson: A brief introduction on the interface

Lesson: Adding your first layer

Module: Creating a Basic Map

Lesson: Working with vector data

Lesson: Symbology

Module: Classifying Vector Map

Lesson: Attribute Data

Lesson : The label tool

Lesson : Working with vector data

Lesson : Classification

Day 2

9– 10.30 am Module: Creating Maps

Lesson : Using map composer

11– 12.30 pm Module: Creating Vector Data

Lesson : Creating a new vector dataset

Lesson : Feature topology

2– 4.30 pm Lesson : Forms

Lesson : Actions

Day 3

9– 10.30 am

Module: Vector Analysis

Lesson : Reprojecting and Transforming data

Lesson : The label tool

Lesson : Working with vector data

Lesson : Classification

11– 1 pm

Mobile Data Collection using GPS

Introduction to GPS technology

GPS data and accuracy

Coordinate systems and map projections

Choosing the right GPS devices

Mobile data collection applications

Mobile devices platforms

Displaying GPS data in GIS environment

Location based services

2– 3 pm

Planning your Mapping Project

Strategies for data collection

Recording way points, points of interest and tracks

Uploading data and displaying it in Qgis software

Authoring a map and sharing data

3–4 pm

Practical Session: Data Collection

Day 4

9– 10.30 am **Module: Rasters**

Lesson : Reprojecting and Transforming data

Lesson : The label tool

9– 10.30 am Lesson : Working with vector data

Lesson : Classification

9– 10.30 am **Module: Completing the Analysis**

Lesson : Raster to vector conversion

Lesson : Combining the analysis

Lesson : Supplementary exercise Project

Day 5

9– 10.30 am **Module: Plugins**

Lesson : Installing and Managing Plugins

Lesson : Useful QGIS Plugins

9– 10.30 am **Module : Grass**

Lesson : Grass Setup

Lesson : Grass tools

Lesson : Working with vector data

Lesson : Classification

9– 10.30 am **Module: QGIS Server**

Lesson : Install QGIS Server

Lesson : Serving WMS