

# Migrating to QGIS

## Fast-track to open source mapping

### COURSE OUTLINE

This practical one-day course is intended for current GIS users and provides a rapid orientation to QGIS. Whether you intend to move wholesale to QGIS, or alternatively to establish it in a support role, alongside your current GIS software, this course aims to get you mapping in QGIS with the minimum of delay.

There is an emphasis on comparisons to ArcGIS, the market leading commercial software, however the training is not exclusive to ArcGIS users. The course objective is universal—QGIS familiarisation for the GIS user.

The course aims to describe the logic and functionality of QGIS—Signposting, so you can rapidly locate the tools you're most interested in, or those that you currently use in work or studies.

Training will focus on the core functions of viewing, creating and editing spatial data. In addition, we look at the range of tools and techniques for Analysis and Geoprocessing.

It is important to understand and distinguish the primary data formats employed in GIS work. We'll outline the capability of QGIS with respect to these data formats.

### ANTICIPATED COURSE OUTCOMES / ACHIEVEMENTS

#### Aims and objectives

- QGIS Familiarisation for the current GIS user
- Informing decisions of whether or not to adopt QGIS; fostering comparisons with other GIS software
- Signposting the key areas of the programme, allowing the GIS users to focus on areas of interest
- Illustrate the scope and potential of open source software

#### Learning outcomes - by the end of the course, delegates will understand how to:

- Replicate the GIS functions they currently employ using other software platforms
- Determine the pros and cons of adopting QGIS either alongside or in place of current GIS software
- View, manipulate, edit, create, analyse and manage spatial data in order to investigate topics in the delegate's area of interest

# 1-day course outline

## Section presentations:

### 1 - Migrating to QGIS

- Discussion and product comparison
- Pros/Cons against QGIS rivals
- QGIS – Innovations  
QGIS – Areas for improvement
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## Section exercises:

*Theory and discussion session only  
(i.e. no exercises)*

### 2 – Get going with QGIS!

- Download & Install  
Interface and Orientation  
Key components and where to find them:
- QGIS Map window
  - Navigation and primary toolbars
  - Layers & layer properties
  - Working with Tables
  - Querying and Selections
  - Print Composer
  - QGIS Browser
  - Analysis & Geoprocessing Tools
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***Exercise 2a: QGIS fundamentals***  
***Exercise 2b: Organising & styling data***  
***Exercise 2c: Working with tables***  
***Exercise 2d: Selections & queries***  
***Exercise 2e: Creating a map with Print Composer***

### 3 – Data in QGIS: viewing, editing, creating

- Data formats in QGIS
- Shapefiles
  - SpatiaLite Databases
  - ESRI Geodatabases
  - PostGIS Databases
- Cross-compatibility between GIS platforms  
Basemapping  
Creating and Editing spatial data
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***Exercise 3a: Creating & editing GIS data***  
***Exercise 3b: creating a SpatiaLite database***  
***Exercise 3c: Accessing basemap data***

### 4 – Analysis & Geoprocessing in QGIS

- Where are the tools?  
QGIS Geoprocessing Framework  
Vector processing tools  
Raster processing tools  
Automating geoprocessing steps

***Exercise 4a: Analysis & Geoprocessing***  
***Exercise 4b: Automate data processing using QGIS Graphical Modeler***