



QGIS 3.x

GIS Desktop Software Training Options

Local Government and Enterprise Edition



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Document History

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About Us:

With over 90 years combined industry experience, Mangoesmapping understands the geospatial industry and the evolving market. Mangoesmapping provides personal service every step of the way.

Mangoesmapping's QGIS software trainer has 10+ years of experience using QGIS, 8 years' experience in Local Government GIS and specialises in GIS-related training and geospatial consulting for Local Government, including overhauling internal/public mapping systems and remediating geospatial asset data.

Your Training Choices:

Mangoesmapping offers multiple full-day QGIS training packages to choose from:

- QGIS Essentials – An Introduction to QGIS
- Advanced QGIS – Geospatial Data Editing & Simplifying Workflows.
- Advanced QGIS - Geospatial Analysis, Automating Workflows & Exploring Plugins
- Advanced QGIS - Cartography and Map Production
- QField (QGIS For Field Work) – GIS Administrators

Mangoesmapping offers one half-day QGIS training package:

- QField (QGIS For Field Work) – Field Workers (End-Users)

All coursework includes self-paced learning exercises to provide hands-on experience on the software.

Course content is developed with Local Government and small to medium size organisations in mind. Courses can be tailored to suit individual client needs at additional cost.

Training is available remotely, or on site at additional travel and mobilisation costs if required.



QGIS Essentials – An Introduction to QGIS 3

Overview:

In this course, learners are introduced to the concept of a Geographic Information System (GIS) and learn to navigate the basic functions of QGIS to create and print maps.

Coursework includes self-paced learning exercises to provide hands-on experience generating a map.

Course outcomes include basic awareness of GIS principles, QGIS software functions, locating map features on a map, and avenues for further support and skills development.

Topics include:

- Principles of GIS
- Opening and Editing Projects
- Setting map options
- Understanding the Panels (Layers and Tools)
- Changing Layer properties
- Creating simple Labels
- Creating simple Symbology
- Saving tables and projects
- Making use of the Scratch Layer and Creating a new vector layer
- Adding/Modifying features (graphic data) to an existing layer
- Adding/Modifying information to existing layers
- Creating a simple map layout and final print

Target Audience:

This training package is intended for novice/infrequent users of QGIS and non-technical managers who seek high-level awareness of the software functions.

Maximum 8 trainees.

Course Pre-requisites:

- Basic computer literacy
- PC/Laptop with QGIS 3.x installed (preferably the current Long Term Release)
- Read and Write access to the training material folders

Course Duration: One Day



Advanced QGIS – Geospatial Data Editing & Simplifying Workflows

Overview:

In this course users will be guided through creating QGIS projects that build confidence in adding data to a map (from GIS datasets, worksheets and AutoCAD), creating custom forms (to simplify data entry and reduce human error) and generating advanced symbology and labelling that's focussed on data entry/editing tasks.

Coursework includes self-paced learning exercises to provide hands-on experience creating custom workflows and projects focussed on data integrity.

Knowledge gained within this course will help the trainee to reduce the time required and increase the quality of data entry and editing tasks.

Topics include:

Object Selection and Querying

- Selecting objects using the GUI and using formulas
- Querying data using SQL

Simplifying Workflows

- Creating forms and autocomplete / error checking attributes
- Importing and manipulating AutoCAD and worksheet data

Manipulating data

- Editing objects spatial properties using the GUI
- Editing objects attributes using SQL and table manipulation
- Joining data with a common attribute and using spatial relationships
- Creating buffers, points, polylines and polygons from existing features

Target Audience:

This training package is intended for frequent users and technical managers who seek to utilize QGIS to improve workflows. Maximum 6 trainees.

Course Pre-requisites:

- Functional understanding of Geo-Spatial concepts
- QGIS Essentials training from Mangoesmapping or similar experience with the software.
- SQL Basics
- PC/Laptop with QGIS 3.x installed (preferably the current Long Term Release)
- Read and Write access to the training material folders

Course Duration: One Day



Advanced QGIS – Geospatial Analysis, Automating Workflows & Exploring Plugins

Overview:

In this course, experienced QGIS users are supported to explore sophisticated data creation and management tools available. Focus areas for learning include data analysis, automation tools and awareness of additional tool sources to extend QGIS functionality.

Coursework includes self-paced learning exercises to provide hands-on experience manipulating data.

Knowledge gained within this course will help the trainee gain insights from their data store and increase productivity by automating repeated tasks and making use of additional tools that are available.

Topics include:

Analysing Data

- Creating Thematic Maps & Bivariate Thematic Maps
- Using SQL syntax to generate reports on dataset changes
- Creating views of data for different contexts/themes

Importing data without coordinates

- Registering Raster Images and vector data

Automating Data Processes

- Exploring the Tool box, using history and stringing processes together
- Creating models
- Formulas in the Field Calculator

Exploring Plugins

- Add functionality to the application
- Coordinate Capture and Conversion
- Australian Context data
- CAD like tools

Target Audience:

This training package is intended for experienced users of QGIS and technical managers seeking awareness of data analysis and automation functions.

Maximum 6 trainees.

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Advanced QGIS – Geospatial Analysis, Automating Workflows & Exploring Plugins

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Course Pre-requisites:

- Functional understanding of Geo-Spatial concepts
- QGIS Essentials training from Mangoesmapping or similar experience with the software.
- PC/Laptop with QGIS 3.x installed (version should be at least the current Long Term Release)

Course Duration: One Day



Advanced QGIS – Cartography & Map Production

Overview:

This course presents design principles you can apply to create appealing and effective maps that are easy to use and understand. You will learn how to combine layout composition, colour, symbology, and text to design a map that clearly communicates your intended message. Learn the basics of design with data and maps and explore map design principles by learning about the use of Map Elements, Colours and Typography as well as by learning and applying general cartographic principles.

Knowledge gained within this course will be a good grasp of design principles that allow trainees to create beautiful maps with visualization focussed on the customers using it.

Topics include:

Cartographic Principles

- Understanding your audience needs
- Understanding your data and deciding on the best format
- Less maybe more

Map Templates

- Creating a map template
- Adding elements (scale bars, logos, disclaimers etc) and manipulating them
- Adding legends and manipulating the data
- Adding index/overview maps
- Adding Project numbers, dates, projections etc automatically
- Using viewing themes

Labelling

- Creating data only for labelling
- Manipulating labelling at different scales
- Labelling with SQL and Python

Symbology

- Creating clean, easily understandable symbology
- Using colour and patterns
- Symbology with SQL and Python

Map Atlas (Series)

- Creating a series of maps using the same data at different locations
- Automating the map title and other text and graphic elements in the series

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Advanced QGIS – Cartography & Map Production - continued

Target Audience:

This training package is intended for experienced users and technical managers seeking in-depth awareness of creating cartographic (print) outputs. This course can be tailored to Web and other cartography at an additional cost.

Maximum 6 trainees.

Course Pre-requisites:

- Functional understanding of Geo-Spatial concepts
- QGIS Essentials training from Mangoesmapping or similar experience with the software.
- SQL and Python basics
- PC/Laptop with QGIS 3.x installed (version should be at least the current Long Term Release)

Course Duration: One Day



QField (QGIS For The Field) – for GIS Administrators

Overview:

QField (QGIS For The Field) training builds trainees knowledge in installing the QGIS mobile application (named QField) onto mobile devices and accessing QGIS projects in online and offline environments.

This course builds on knowledge gained during the QGIS Essentials, the Advanced QGIS (Geospatial Data Editing & Simplifying Workflows) and the Advanced QGIS (Cartography) courses.

When you finish this course, you will have learned how to use your mobile device to capture information in the field and sync it with your data store.

Topics include:

QGIS Essentials

- Understanding the key elements of QGIS
- Installing QField

Creating map project

- Understanding the requirements for a map in a mobile environment
- Labelling and Symbology at different scales
- Inclusion of Autofill, Dropdowns and QA/QC tools

Packaging data for mobile (offline) use

- Creating packages of data for use
- Creating sync systems

Collecting data in the field

- Best practice and practical field session
- Opening the QField application and choosing the current work project
- Adding and modifying data using forms while in the field

Syncing data

- Syncing field data with the project data
- Running QA/QC checks

Target Audience:

This training package is intended for staff who will build the forms and analyse data. For field staff who will not be responsible for syncing and analysing data, a half day option is recommended, which will focus on *QGIS Essentials* and *Collecting data in the field*. Maximum 6 trainees.

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QField (QGIS For The Field) – for GIS Administrators - continued

Course Pre-requisites:

- QGIS Experience
 - Mangoesmapping QGIS Essentials, the Advanced QGIS (Geospatial Data Editing & Simplifying Workflows) and the Advanced QGIS (Cartography) courses.
 - Alternatively, equivalent QGIS experience (specifically advanced labelling, advanced symbology and advanced map templates)
- Ability to install software on the mobile devices (QField and sync)
- Read/Write access to the data stores (or training data).

Course Duration: One Day



QField (QGIS For The Field) – for Field Workers (End-Users)

Overview:

QField (QGIS For The Field) training builds trainees knowledge in accessing QGIS projects in online and offline environments to collect and edit data.

When you finish this course, you will have learned how to use your mobile device to capture information in the field and sync it with your organisation's data store.

Topics include:

QGIS Essentials

- Understanding the key elements of QGIS
- Installing QField

Collecting data in the field

- Best practice and practical field session
- Opening the QField application and choosing the current work project
- Adding and modifying data using forms while in the field

Syncing data

- Syncing field data with the project data

Target Audience:

This training package is intended for field staff who will collect data. For field staff who will be responsible for syncing and analysing data, a full day option is recommended, which will focus on *creating projects for the mobile environment and syncing field data with the organisations GIS systems.*

Maximum 8 trainees.

Course Pre-requisites:

- QGIS Experience – QField end-users:
 - No pre-existing QGIS knowledge required
- QField application installed on mobile devices
- Client specific QField projects and data should be installed on devices prior to the training for field staff.

Course Duration: Half Day



Pricing:

All full-day courses: \$990 per person, inc GST

Q Field half-day course: \$550 per person, inc GST

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