



# **Caddie Digital Terrain Modelling (DTM) Application Online Course**

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## **Prerequisites for Completing the Caddie DTM Course**

Before undertaking the Digital Terrain Modelling course, you should:

- Have access to Caddie software, a recent version, (licenced or evaluation) and an internet connection.
- Have successfully completed the Caddie Basic Online training course, Caddie Basic classroom course or have the equivalent self-taught experience.
- Have a reasonable understanding of the principles behind terrain modelling.

## **Downloading and opening a Caddie Course Exercise**

You will become familiar with the structure of the course including the practical exercises requiring you to download and open an example drawing in Caddie and the associated questions linked to them.

- Where to find the course exercises
- How to download the Caddie .DWG course files

## **1. Digital Terrain Modelling Application and Commands**

- The location of the DTM Commands
- How to change between the DTM application and the 'Classic' menu system

## **2. Understanding your data**

- Converting 2D points and text to 3D points
- Generating a DTM

## **3. Triangulation**

- Triangulation
  - Triangulate points to create 3D planes between points
  - Modify a point
- Modifying a DTM
  - Edit or remove an errant point
  - Remove unwanted triangles
  - Swap the direction of two adjacent triangles
  - Split triangles

## **4. Working with Contours**

- Generating Contours
  - Setting the colours for major and minor contours
  - Setting the contour limits and spacing
  - Annotating the contours
  - Generating contours
- Converting from 2D contours to 3D contours
  - Generating contours from points on a DTM
  - Getting the required information allowing 2D contours to be converted to 3D contours
  - Converting individual and multiple 2D contours to 3D contours

## 5 Sections

- Sections
  - Setting the parameters for a section and cross sections
  - Creating a section between two points
  - Defining the path along which the cross sections will be generated
- Cross Sections along a profile
  - Setting the parameters for cross sections
  - Defining the path along which the sections will be generated

## 6 Site Manipulation

- Levelling a site to a specific height
  - Defining the area to be levelled.
  - Choosing the height for the levelled area
  - Controlling how the edges of the levelled area are treated
- Levelling a site with minimum 'Cut and Fill'
  - Adjusting the parameters to suit the site materials
  - Calculating the minimum 'cut and fill' plateau level
- Calculating volume differences between two sites
  - Calculating the volume difference between two sites

## 7. Visualisation

- Using colour to depict different gradients
  - Mapping different colours gradients
  - Selecting the correct render mode to see the gradient colours
  - Applying the gradient colours to a DTM
- Smoothing and Wrapping a Terrain
  - Merging a DTM into a single polyface mesh
  - Draping an image over a DTM / PolyFaceMesh

During the 7 Modules of the course you will complete 14 lessons and associated questions including 8 exercises.

The course can be completed in one or multiple sessions and is equivalent to a half day classroom course. The duration will vary as individuals may take longer depending on their availability to study as well as their knowledge and skill level before starting the course. On average learners have completed the course within 3 hours of study with the maximum time taken of 5 hours.

You will have access to the course for 4 weeks from your enrolment date in which to complete the course. Once you have successfully completed and received a certificate for the course you will have unlimited access to revisit the course.