

## Technical Education Services

### AutoCAD® Civil 3D® for Surveyors



Course Length: 2 days

This in-depth AutoCAD® Civil 3D® for Surveyors training course is for surveyors and survey technicians that do not necessarily need all of the functionality that is taught in the AutoCAD Civil 3D Fundamentals training course. This training course equips the surveyor with the basic knowledge needed to use the AutoCAD Civil 3D software efficiently in a typical daily workflow. Students learn how to import the converted field equipment survey data into a standardized environment in the AutoCAD Civil 3D software and to use the automation tools to create an Existing Condition Plan. Data collection, least square analysis, and traverses are also covered. Other topics that help in increasing efficiency include styles, proper AutoCAD® drafting techniques, the methodology needed to create linework effectively for variables used in defining symbology, surfaces, categorizing points, and importing imagery.

Topics Include:

- Introduction to AutoCAD Civil 3D Survey and automated linework
- The AutoCAD Civil 3D Interface
- Connecting to GIS Data to show existing conditions
- Points overview and styles
- Importing points and coordinate transforms
- Creating points and drafting
- Point groups, grips, and reports
- Point security and editing
- Introduction to data collection in the field
- Survey networks

For the current course  
schedule and to register  
for this course:

Web: [redstack.com.au](http://redstack.com.au)

Phone: 1300 667 263

Prerequisites:

Previous experience with the AutoCAD software and a basic understanding of the Surveying profession is recommended.



# Technical Education Services

## Table of Contents

### Chapter 1: The AutoCAD Civil 3D Interface

- 1.1 Product Overview
- 1.2 AutoCAD Civil 3D Workspaces
- 1.3 AutoCAD Civil 3D User Interface
- 1.4 AutoCAD Civil 3D Toolspace
- 1.5 AutoCAD Civil 3D Panorama
- 1.6 AutoCAD Civil 3D Templates, Settings, and Styles

### Chapter 2: Connecting to Geospatial Data

- 2.1 Introduction to the Planning and Analysis Workspace
- 2.2 Coordinate Systems
- 2.3 Geospatial Data Connection
- 2.4 Create a Surface from GIS Data

### Chapter 3: Survey I

- 3.1 Survey Workflow Overview
- 3.2 Introduction to the Survey Toolspace
- 3.3 Survey Figures
- 3.4 The Survey Database
- 3.5 Survey Networks
- 3.6 Importing a Field Book • 3.8 Filtering a Survey Database
- 3.9 Points Overview
- 3.10 Point Label Styles
- 3.11 Point Settings
- 3.12 Creating Points
- 3.13 Transparent Command
- 3.14 Description Key Sets
- 3.15 Importing and Exporting Points
- 3.16 Point Groups

## Technical Education Services

- 3.17 Reviewing and Editing Points
- 3.18 Locking/Unlocking Points
- 3.19 Point Reports

### Chapter 4: Survey II

- 4.1 Overview
- 4.2 Survey Equipment
- 4.3 Import Field Data
- 4.4 Figure Prefix Database
- 4.5 Field Codes
- 4.6 Survey Data - Figures
- 4.7 Survey Data - Line Code
- 4.8 Translating a Survey Database
- 4.9 Least Squares
- 4.10 Creating a Least Squares Input File
- 4.11 Traverse Basics
- 4.12 Defining a Traverse
- 4.13 Multiple Network Surveys

### Chapter 5: Surfaces

- 5.1 Surface Process
- 5.2 Surface Properties
- 5.3 Surface Data
- 5.4 Breaklines and Boundaries
- 5.5 Surface Editing
- 5.6 Adjusting Surfaces through Surface Properties
- 5.7 Viewing Surfaces in 3D
- 5.8 Surface Labels
- 5.9 Surface Volume Calculations
- 5.10 Surface Analysis Display



# Technical Education Services

## Appendix A: Opening a Survey Database

- A.1 Opening a Survey Database

## Technical Education Services

### Cancellation Policy

The following cancellation policy shall apply to all training and consulting engagements including customised training solutions:

Redstack reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Redstack, Customer is entitled to a full refund. Redstack shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.

For Customer cancellations when written notice is received (i) at least ten (10) business days in advance of the class, Customer is entitled to a full refund of its payment or reschedule enrolment, (ii) less than ten (10) business days, Customer shall not be entitled to a refund, but shall receive a class credit to be used within three (3) months of the date of the original class.

Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Redstack

For all Training orders, cancellation notices must be submitted in writing. Redstack is not responsible for any error in the delivery of the email notice. In the event of any reschedule of any training or consulting services by Customer, Redstack will invoice Customer for all non-cancellable travel expenses.

For more information, contact us on 1300 66 7263.