

Levelling
(For Topographical Surveying and Setting out)
Two-Day Course

Course Overview

This course is designed to give junior surveyors, engineers and personnel in the surveying and construction industry a good grounding in the principles and practical application of levelling for both Topographical Survey and for Setting Out.

The course is aimed at students with little or no previous experience of using levelling equipment.

The course includes the observing, calculation and checking of levelling runs using the 'Height of Collimation' method of booking as well as checking the equipment.

Field practical exercises are used to back up the theory learned in the classroom.

An automatic optical level, manually booked is used for all exercises.

A basic knowledge of the use of calculators for addition / subtraction, multiplication / division and square roots prior to coming on the course would be an advantage.

Summary of main topics covered by the course:

- Introduction and Health and Safety (when using a level & staff)
- Background to levelling and levelling theory
- Reading the staff and booking the readings
- Class exercise; Booking and reducing levelling by Height of collimation
- Practical field levelling exercise – Practice in reading and booking
- Sources of error in levelling and acceptable closures
- Two peg test and adjustment of the instrument theory
- Two peg test field practical – Instrument check
- Use of Intermediate sights & Inverted readings – Theory
- Practical field levelling exercise practical covering topo detail levelling
- Using Benchmarks.
- Setting out levels for Site datum – (Establishing a TBM)
- Settling out levels for profiles – Theory & Practical exercise
- Rise and fall booking theory (overview)
- Use of digital levels (overview)
- Review, questions and close

At the end of the course students receive a certificate of attendance/completion and can follow this with the 3 day total station course to further develop their knowledge and skills.

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