

SURVEY TRAINING



We know that training is vital to unlocking the full potential of your investment in equipment. Sunbelt Rentals offer structured training programs that enable you to stay up to date with the latest advances, take full advantage of your equipment's capabilities and help you to improve your workflow.

We offer courses on Total stations, Laser Scanners, GNSS Systems, Monitoring, Machine Control and Cable Avoidance to ensure you and your employees are trained, developed, and supported.

All published courses can also be customized, allowing you to get the most from your training investments. Choose between training on-site, at your office or our centres. Alternatively, let us know your training requirements and we will do our best to accommodate.

SURVEY TRAINING

TOTAL STATION

Getting Started

Course Introduction:

Workflow training for any Leica, Trimble, or Topcon total station, including data exchange with popular AutoCAD packages. Learn the standard functions of your TPS instrument and perform common survey tasks, including detailed surveys and staking out. Be able to import AutoCAD site drawings and set out directly from them, then create as-built surveys and export your data in AutoCAD formats ready for the office to use.

This course can be completed for a robotic total station or a two-person total station.

Course Aims

Upon completion you will be able to set up a total station using 3 common methods, import and export CAD data to and from AutoCAD, as well as setting out and collecting survey data from site.

Course Structure

The course covers and includes:

- Preparing data in AutoCAD
- Data exchange
- Instrument setup
- Surveying and setting out tasks
- Using Reference lines and calculating volumes
- Theory and practical sessions

Total station - Traverse

Course Introduction

A close look at setting up and adjusting a control network. Step-by-step process of using a total station and traverse kit, including adjustments on-site as well as loading the data into Leica's Infinity software and generating a final report.

Course Aims

Upon completion candidates will be able to carry out traversing on-site, download data and carry out adjustments in Leica Geosystem's Infinity office software.

Course Structure

The course covers and includes:

- Using a traverse kit
- Traversing with a total station
- Downloading data
- Leica Infinity software
- Report generating
- Theory and practical sessions

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GPS/GNSS

GNSS (GPS) - Getting Started

Course Introduction

Learn the basic concepts of GNSS positioning. This course looks at workflow training in Network RTK (NRTK) including detail surveys, survey coding, exporting data, as well as performing site calibration/transformation and understanding when to use different types of co-ordinate systems.

Course Aims

Candidates will be able to carry out surveys and setting out on site as well as setting up site transformations using local coordinate systems.

Course Structure

The course covers and includes:

- GNSS theory
- Understanding coordinate systems
- Understanding scale factors
- Site transformations and local grids
- Theory and practical sessions

GNSS - Post-Processed Kinematic (PPK)

Course Introduction

Focusing on GNSS PPK survey and processing - For when there's just no phone signal.

For those who can post-process GNSS data and have a SmartNet License there are techniques available for when you don't have an internet connection. This course focusses on Post-Processed Kinematic surveys and how to get them right.

Course Aims

Upon completion candidates will be able to process PPK data.

Course Structure

The course covers and includes:

- Theory and basics of PPK
- Setting up equipment to use PPK
- Using PPK on site
- Processing PPK
- Checking your data is accurate
- Theory and practical sessions

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LEVELLING

A course designed for graduates or the experienced surveyor wanting a refresher, the course can be designed using automatic, digital levels or both. Explore Rise & Fall and Height of Collimation booking methods, precise levelling plus checking and caring for your instrument.

GROUND PENETRATING RADAR

Getting Started (1-day)

An introduction into the basic theory of how GPR works, their uses and limitations. Following on from the theory side the course then covers how to use the Leica DS2000 and all its available features, coupled with a practical session on using the Leica DS2000.



C.A.T AND GENNY

Course Introduction

This certified training course offers advanced theoretical and practical instruction in the techniques and uses of Leica or Radiodetection C.A.T and Genny Locators. This 1 day course includes all equipment.

Course Aims

Candidates will be able to carry out C.A.T and Genny scanning to HSG47 standards (Avoiding danger from underground services). Learn best practices, providing a safer environment for everyone.

Course Structure

The course covers and includes:

- Health and Safety Guidance #47 (HSG47)
- Range of features available on the DD, C.A.T4 and RD8000 series
- The theory of locating services
- Range of modes – power/radio/genny/depth measurement
- Theory and practical sessions

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LASER SCANNING

Leica RTC 360/BLK360

Course Introduction

An introduction to terrestrial laser scanning looking at the theory behind terrestrial laser scanners and their practical applications. The training will include looking at best practice when scanning, practical use of the instrument and use of Leica's REGISTER 360 processing software to produce a final point cloud ready for digitisation.

Course Aims

Candidates will be able to carry out scanning surveys with Leica's RTC360 or BLK360 scanners and Register 360 Software, producing a final point cloud ready for digitisation.

Course Structure

- Introduction to Leica RTC360 or BLK360 Laser Scanners
- Scanning theory
- Scanning setups
- Registration of data in Register 360
- Cleaning point cloud data in Register 360
- Data export
- Theory and practical sessions

Faro M or FARO S Series

Course Introduction

An introduction to terrestrial laser scanning looking at the theory behind current terrestrial laser scanners and their practical applications. Training will include looking at best practice when scanning, practical use of the instrument and use of Faro's SCENE processing software to produce a final point cloud ready for digitising.

Course Aims

Candidates will be able to carry out scanning surveys and registration on Faro's S or M series scanners and Scene Software, producing a final point cloud ready for digitisation.

Course Structure

The course covers and includes:

- Introduction to Faro laser scanners
- Scanning theory
- Scanning setups
- Registration of data in Faro Scene
- Cleaning point cloud data in Scene
- Data export
- Theory and practical sessions

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MACHINE CONTROL

Engineer Training

Course Introduction

Get yourself ready for day one on the job using machine control. Covering everything that the engineer is expected to do on site, setting up a base station, uploading models, verification checks, fault finding, and setting the dozer or excavator to automatically record how much muck has been taken off site. This course will really show off the benefits of machine control to an engineer. The course will also cover the basics of GNSS and Coordinate Systems.

Course Aims

Get comfortable dealing with 3D models for machine control, setting up a site, fault finding and exploring verification checks.

Course Structure

- Introduction to GNSS and coordinate systems
- Setting up a GNSS base station
- Getting data/models ready for machine control
- Verification checks
- Fault finding
- Capturing as built data
- Working remotely

Track Measuring Tools

Introduction to using track measuring devices including Geismar Amber, Abtus 5650 Routescan and other tools for measuring track geometry, track infrastructure (including OLE and platform clearances).

Operator Training

Course Introduction

Built for dozer and excavator operators new to machine control, our course will build confidence in using machine control systems and eliminate any anxieties when faced with new technology. Using our state-of-the-art simulator, we can upload data from your site so that the training gets you ready for working in the field.

Course Aims

Get ready to use machine control systems on site. This course is designed to simplify machine control for the operator focusing on getting ready for day one on site.

Course Structure

- How machine control works
- Understanding the machine control screen
- Setting up jobs and getting ready to dig foundations, grade or tailored to your tasks.

Rail Technology

Rail technology courses on Total Stations, GNSS, Laser Scanning, Levelling and CAT and Genny are run in addition to the existing survey equipment courses and are orientated towards the Rail sector.

Geomos Monitoring System

This course covers the use of Leica's automated monitoring system, GeoMos. This includes setting up sites, setting up control, configuring alert limits, setting up reports and running automated systems remotely.

Tilt Monitoring

This course covers the use of the Wisen Tilt Monitoring System. This covers installation, configuration, creating reports and analysing data as well as setting up alerts.