

# Certification Course on Levelling and Setting Out

## INTRODUCTION

Levelling and Setting Out are important skills expected of a construction supervisor in any building or civil engineering project. While a qualified land surveyor is normally engaged to mark out the reference lines, a construction supervisor often needs to transfer levels from a given benchmark and establish level pegs and profile board. He needs the skills and knowledge to interpret surveying and topographical plans and has to be familiar with various types of leveling and setting out equipment such as laser level and theodolites.

Today, the building and civil engineering works are increasingly complex. A competent construction supervisor should possess the necessary skills to plan, organise, and set control points and benchmark for other trades. He must update himself to be familiar with various Acts and Local Regulations pertaining to surveying works and to keep abreast with the changes.

This course will enhance participants' competencies in carrying proper leveling and setting-out work. Graduates with this value-added technical knowledge can move into higher supervisory or management related positions. It opens up opportunities for those who wish to switch career as surveyors or technical specialists in surveying, civil engineering, building, construction, sewerage/drainage or piling firms.

## OBJECTIVES

This course aims to develop the skills and knowledge of participants to:

- Use the various types of leveling and setting out equipment;
- Interpret survey and topographical plans;
- Plan, organize, and carry out work safely;
- Perform levelling and setting out in civil, building, sewerage/drainage, and piling and external works independently;
- Log and compute surveying data

## CONTENTS

### MODULE 1 - Introduction to Levelling and Setting-Out

- Types of levelling and setting out equipment
- Use of computer in Surveyor's office and office work flow chart
- Interpretation of survey and topographical plans
- Procedures in setting out drawings and 'pre-comp' plans
- Acts and local regulations related to construction works
- Safety supervision at work site and visit to registered Surveyor's office

### MODULE 2 - Principles & Applications in Levelling

- Principles of levelling
- Procedures of levelling
- Verticality survey
- Applied levelling in Civil works (sub-structure)
- Applied levelling in Building works (superstructure)
- Applied levelling in sewerage/drainage works

### MODULE 3 - Principles & Applications in Setting-out

- Principles of setting out
- Procedures for setting out works
- Basic linear measurement and detail survey
- Basic survey computation
- Application of setting out (civil works, building works, piling & external works)

## ENTRY REQUIREMENTS

The applicant must be a Singapore Citizen or Permanent Resident or holder of valid employment pass/work permit and possess one of the following recognised qualifications:

- 2 GCE 'O' levels in English (Grade 1 to 8) and Mathematics (Grade 1 to 8); or
- 2 GCE 'N' levels in English (Grade 1 to 5) and Mathematics (Grade 1 to 5); or
- Builder Certificate; or
- Construction Trade Foremen Certificate; or
- Workplace Literacy & Numeracy (WPLN) Level 5.

## ASSESSMENT & AWARD

Participant must attain at least 75% of attendance to be eligible to take the end-of-course examination. Those who passed the examination will be awarded Certificate in Levelling and Setting Out.



## DETAILS

Date: Mar - Jun 2021  
 Duration: 3 months (129 hours)  
 Time: 6.30pm to 9.30pm (Weekday)  
 8.30am to 5.30pm (Saturday)  
 Frequency: 2 to 3 times a week  
 Venue: BCA Academy  
 Fee (incl of GST):  
 S\$3,400.00 (without Subsidy)  
 S\$1,207.00 (with SSG Training Grant\*)  
 S\$540.19 (with Enhance Funding for SME\*)  
 S\$540.19 (with Mid-Career Enhanced Subsidy for self-sponsored applicant\*)

*In keeping with our green and sustainable practices, course notes will be available in e-format.*

\* SSG Training Grant is available for companies who fully sponsor their Singaporean/PR employee for this course. Prior to registration, company is to apply training grant through Skillsconnect Portal, [www.skillsconnect.gov.sg](http://www.skillsconnect.gov.sg). Eligible applicant is to pay the net course fees (after deducting funding amount).

# Mid-Career Enhanced Subsidy

- Eligible for Singaporean aged 40 and above only
- Self-sponsored applicant is to upload last 3 month's pay slips and NRIC copy on the online storefront portal before submitting the online application.
- Applicant will be required to sign a declaration for the subsidy.

## TARGET AUDIENCE

Site supervisor, resident technical officers, site foremen and other related construction personnel who are keen to pick up skills in levelling and setting out.

## REGISTRATION



To register, please log into our Online StoreFront (OSF) at

<https://eservices.bcaa.edu.sg/>

registration/#/login or scan QRcode and search for course code **71003**