



## E-LEARNING

100% online. May include pre-recorded session, live streaming/webinar and discussion forum, where applicable.

### ONLINE LEARNING VIA WEBINAR:

**25th Run:** To be advised

(Test will be conducted thru BCAA Learning Management System)

**To be advised**

(6.30pm-9.15pm)

**To be advised** (6.00pm-10.00pm)

**PLATFORM:** BCAA Learning Management System (LMS)

**FEE** (incl of GST): S\$700.00

Effective 1 Apr 2022, the course fee will be revised to S\$750 (incl. GST).

To enjoy the current course fee, completed registration with payment must be received by BCA Academy latest by 28 Mar 2022.

### TARGET AUDIENCE

- Site Investigation Supervisors
- Practicing Engineers
- Geotechnical Specialists
- Other Supervisory Personnel
- WSH Personnel

### ASSESSMENT AND AWARD

Participants are to pass all the four tests and achieve at least 75% attendance to be awarded the e-Certificate of Successful Completion (e-CSC).

### CPD POINTS

PEB: -

WSH-CPD: -

## Certification Course for

# Site Investigation for Supervisors

### INTRODUCTION

The Singapore Accreditation Council (SAC) of SPRING Singapore, with the support of Geotechnical Society of Singapore (GeoSS), Building and Construction Authority (BCA) and Land Transport Authority (LTA) has introduced an accreditation scheme for site investigation firms. As part of the accreditation requirements for site investigation firms, site investigation supervisors of the firms are required to undergo a training course on site investigation. Upon successfully completing the course, they can be registered as "Certified Site Investigation Supervisor" with GeoSS.

### OBJECTIVES

The main objective of this course is to promote good practices and good quality works among supervisors in site investigation works. This course will educate the site investigation supervisors on Singapore's geological background, roles and responsibilities of the supervisors, various methods of soil sampling and field testing methods and good practices in investigation works. This course is jointly organised by BCA Academy and LTA Academy and supported by GeoSS.

### CONTENTS

#### MODULE 1 - SINGAPORE GEOLOGY (6 HOURS)

##### A. Fundamental of geology

##### B. Geology and updated geological map of Singapore

##### C. Soils

- Classification, description & identification
- Borehole logging
- Properties and assessment

##### D. Rocks

- Weathering, classifications & description
- Calculation of RQD, TCR & SCR at site
- Borehole logging
- Core box marking
- Rock properties and assessment

#### MODULE 2: ROLES AND RESPONSIBILITIES/ COORDINATION WORKS (3 HRS)

##### A. Regulatory Requirements, Applications, Utilities and Safety

- Permission to enter
- Working within RPZ, near trees and near utilities
- Good Housekeeping & Safe Practices

##### B. Supervision of SI works to ensure Quality

- Drilling
- Undisturbed Sampling
- Field Testing
- BH Termination
- Checklists

#### MODULE 3 DRILLING, SOIL SAMPLING, FIELD TEST METHODS & INSTRUMENTATION (4 HRS)

##### A. Drilling

- Types of drilling and machinery
- Manpower structure for drilling operation

- Setting up of drilling rig

- Role of supervisors

- Good/bad practices

##### B. Soil Sampling

- Types & classes of sampling
- Minimising disturbance during sampling
- Using right sampler
- Soil sampling schedules
- Sample preservation
- Disturbance after sampling
- Role of supervisors
- Good/bad practices

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- Good/bad practices

##### C. Field Test Methods

- Standard penetration test, field penetration test, packer test, plate bearing test & vane shear test
- Pressure meter
- Cone penetration test & dilatometer test
- Good/bad practices

##### D. Instrumentation

- Ground/Geotechnical Instrumentation
  - Water stand pipe, casagrande piezometer, vibrating wire piezometer, inclinometer, rod extensometer & magnetic extensometer
  - Heave stake
  - Good/bad practices
- Structural Instrumentation
  - Vertical electro level tiltmeter, horizontal electro level beam, manual tiltmeter
  - Automatic/manual crackmeter
  - Survey glass prism
  - Good/bad practices

### LECTURERS

- **DR U KAR WINN**, Sessional Lecturer, University of Newcastle Singapore
- **MR ZIN KYAW KYAW**, Higher Associate Engineering Geologist, BCA
- **PROF LEUNG CHUN FAI**, Dept of Civil and Environmental Engineering, National University of Singapore
- **MR GAO JIANSHENG**, Technical Manager, Tritech Engineering & Testing (Singapore) Pte Ltd
- **MR HUANG EAN SEONG**, Assistant Chief Specialist, Land Transport Authority
- **MR TING HUA KEONG**, Managing Director, Terralab Technologies Pte Ltd



### 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 **77087**