

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

- 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

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

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

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

- 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 HOURS)

- A. Drilling
 - Types of drilling and machinery
 - Manpower structure for drilling operation
 - Setting up of drilling rig

LECTURERS

- **PROF LEUNG CHUN FAI**, Dept of Civil and Environmental Engineering, National University of Singapore
- **DR CAI JUN GANG**, Executive Director, Trittech Engineering & Testing (S) Pte Ltd
- **MR HUANG EAN SEONG**, Senior Design Engineer, Land Transport Authority
- **MR TING HUA KEONG**, Director, Soil Investigation (Pte) Ltd.
- **MR MICHAEL LEE KIM WOON**, Senior Principal Geologist, Trittech Engineering & Testing (S) Pte Ltd
- **MR U KAR WINN**, Senior Project Manager, GeoLS Pte Ltd
- **MR GAO JIANSHENG**, Technical Manager, Trittech Engineering & Testing (S) Pte Ltd



DETAILS

- 18th Run: 20 Mar 2017 (Module 2)
- 21 Mar 2017 (Module 3)
- 28 Mar & 3 Apr 2017 (Module 1)

Tests will be conducted at the end of every lesson.

Duration: 4 evenings (13 hours)

Time: 6.30pm to 9.30pm

(Module 1 & 2)

6.00pm to 10.00pm

(Module 3)

Venue: LTA Academy/BCA Academy

Fee (incl of GST): S\$700.00

Refreshments will be provided.

ASSESSMENT & AWARD

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

CPD POINTS

PEB: Pending

WSH-CPD: Pending

IES-ACES: Pending (Structural)

TARGET AUDIENCE

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

BCA ACADEMY

200 Braddell Road Singapore 579700

Tel: 6248 9999 Fax: 6258 0558

www.bcaa.edu.sg

LTA ACADEMY

No.1 Hampshire Road Blk 5A, Level 1

Singapore 219428

Tel: 1800-2255 582 Fax: (65) 6396 1559

www.lta.gov.sg/ltaacademy

REGISTRATION FORM

Event Code: 77087

Certification Course for Site Investigation Supervisors

Date: _____
Tests will be conducted at the end of every lesson. Participants are to pass all the four tests and achieve at least 75% attendance to be awarded the Certificate of Successful Completion.

Duration: 4 evenings (13 hours)
Time: 6.30pm to 9.30pm (Module 1&2) / 6.00pm to 10.00pm (Module 3)
Venue: LTA Academy / BCA Academy
Fee (incl of GST): S\$700.00

For Official Use	
Application No.:	
Official Receipt No.:	
Processing Officer: (signature/date)	
Cashier: (signature/date)	

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PART A - SELF-SPONSORED APPLICANTS *please fill in Part A and C and sign in Part D(i).*

Name (Dr/Mr/Mrs/Ms): (as per NRIC/Passport)			NRIC/FIN/Passport No.: (fill in NRIC/FIN if available)		
Birth Date: (DD/MM/YYYY)	Hp No.:	Email:			
Company Name:			Designation:		
Residential Address: (for self-sponsored applicant)				Postal Code:	

(Residential address as per NRIC for Singaporeans & PRs)

PART B - COMPANY-SPONSORED APPLICANTS *please fill in Part B and C, stamp and sign Part D(ii). Confirmation email will only be sent to the HR Contact Person.*

Name (Dr/Mr/Mrs/Ms): (as per NRIC/Passport)			NRIC/FIN/Passport No.: (fill in NRIC/FIN if available)	
Designation:			Birth Date: (DD/MM/YYYY)	
Email:			Hp No.:	
Company Name:			Co. UEN No.:	
Company Address:			Postal Code:	
Contact Person: (HR Personnel)	Fax No.:	Contact No.:		
Designation:	Email:			
Contact Person: (Finance Personnel)	Fax No.:	Contact No.:		
Designation:	Email:			

PART C - PAYMENT

- (i) Enclosed is Cheque No.: _____ (Cheque should be crossed, marked "account payee only" and payable to **Building and Construction Authority** and mailed to **BCA Academy, 200 Braddell Road, Singapore 579700**) for S\$ _____ OR
- (ii) Deduct from GIRO Account No.: _____ (Note: Only company cheque or company GIRO will be accepted if the company is applying for funding or subsidy. The GIRO Account Number must be the same bank account number as indicated in the Direct Debit Authorisation form submitted to BCA.)

PART D - DECLARATION

By submitting and signing this application form, the self-sponsored or company-sponsored applicant agree to the terms and conditions below.

(i) FOR SELF-SPONSORED APPLICATION:	(ii) FOR COMPANY-SPONSORED APPLICATION:
Name : _____	Name of authorised personnel: _____
Signature : _____	Signature : _____
Date : _____	Date : _____

Company Stamp
(For company-sponsored application only)

TERMS AND CONDITIONS

1) The company and individual applicant has read and understood the terms of the brochure (if available) and the application form. 2) The company and individual applicant warrant that the particulars given in the application form are accurate. 3) The Building and Construction Authority (BCA) can disclose to other government agencies any information relating to this application. 4) Payment for the course must be made to BCA before the course commencement date. 5) Any Direct Debit and Direct Credit Authorisation for GIRO applications previously signed and passed to BCA will apply to payments made under this course. 6) BCA reserves the right to accept or reject the application for whatever reason. 7) BCA shall at its discretion allocate a space to the registered applicant, based on availability. 8) BCA reserves the right to amend any details relating to the course, revise the course fees without prior notice, cancel or postpone the course. 9) No deferment is allowed. 10) Request for withdrawal must be made in writing. Requests are subject to approval by BCA and administration fee. Written request for withdrawal that reaches BCA - At least 2 weeks before the course commencement date: full course fee is payable. - Less than 2 weeks but more than 3 working days before the course commencement date: 25% of course fee is payable. - 3 working days or less before the course commencement date: full course fee is payable. 11) No Replacement is allowed for funded participants. 12) The Continuing Professional Development (CPD) points indicated for any course offered by BCA is subject to change and final approval by the relevant professional accreditation bodies. 13) Funding and subsidies offered by BCA or third party organisations for the courses are subject to approval. The company must make the application for funding and subsidies. BCA is not to be held liable and the company agrees to pay BCA the applicable funding amount if funding and subsidies are either granted at a reduced amount, not granted at all or if funding is revoked, for whatever reason. 14) All information, materials, services, intellectual property and other property and rights provided by BCA during the course are provided on an "as is" basis. BCA makes no warranties of any kind, either express or implied, as to any matter, and all such warranties, including warranties of merchantability and fitness for a particular purpose, are expressly disclaimed. 15) The materials supplied to the company and individual applicant for the course ("Materials") are for their personal reference only and the company and individual applicant is not supposed to otherwise use the Materials. The company and individual applicant shall defend and indemnify BCA and its officers, employees and agents from and against any and all liability, damage, loss or expense (including reasonable attorneys' fees and expenses) imposed upon BCA in connection with any claim arising out of the company and individual applicant's use of the Materials. 16) Re-assessment fee is applicable for those who are required to re-take the assessment. 17) I consent to BCA, BCA Academy, and BCA's employees contacting me via my contacts (including email addresses and mobile numbers) to market future courses, seminars, conduct surveys, circulate publications (i.e. magazines, periodicals etc). If you wish to withdraw your consent to any use or disclosure of your personal data as set out above, you may contact us. **PLEASE NOTE:** All correspondence and notices addressed to BCA are to be sent to BCA Academy. Photographs of attendees will be taken at the event for our publicity materials, newsletters and other publications.

Graduates of BCA Academy's Diploma, Specialist Diploma, Degree and Masters programmes may enjoy discounted course fee on some courses by applying for BCA Academy Alumni lifetime membership. To apply, visit www.bcaa.edu.sg or email to alumni@bcaa.edu.sg for more details.

To check the status of your course applications, please log into the Customer Self Service Portal (CSSP) at www.bcaa.edu.sg/self_help_portal/selfhelp/login.aspx. If you need assistance on using the CSSP, please call our customer service hotline: 6248 9999, from 8.30am to 5.00pm, Monday to Friday.

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