

Module 2

Construction of Underground & Related Structures

- Earth Retaining Structures (1st Run)

on 7th December 2019, Saturday

(For Resident Engineers & Resident Technical Officers)



By Er. Wong Pui Fun

Introduction

Underground and related structures are of great significance to the local construction industry. Many structures have to be built below ground and their design and construction are of importance to those in the civil engineering profession.

Resident Engineers and Resident Technical Officers need to be familiar with the construction and supervision of underground and associated structures, as such foundations, basements, tunnels and earth-retaining structures.

Objectives

The specific objective of Module 2 on “Earth Retaining Structures” is to familiarize participants with various types of earth retaining structures adopted in Singapore and the region.

This module is useful to those who are involved in the construction and supervision of earth retaining structures used in civil engineering and building projects.

Course outline

1. Gravity retaining walls
2. Gabion retaining walls
3. Crib walls
4. Mechanically Stabilized Earth (MSE) walls
5. Soil nailed walls
6. Ground anchored walls
7. Contiguous and secant pile walls
8. Sheet piled walls
9. Diaphragm walls
10. Soldier piles and timber lagging walls
11. Cassion Construction & Ground Improvement in retaining Structure

CV of Lecturer

Er. Wong Pui Fun, Joanne is the Associate Director of Meinhardt Infrastructures Pte Ltd. She graduated from Imperial College, University of London with Master Degree in Concrete Structure. She is also an accredited Adjudicator in Singapore. She has more than 25 years of experience in the field of Civil, Structural and Building Engineering which include commercial, residential buildings, infrastructure projects etc. She specialises in building & transit structure, reinforced concrete, precast concrete, prestressed concrete and steel structure. She also has extensive experience in blast design and demolition work. Some of the iconic projects that she carried out are 313@somerset, Queenstown redevelopment RC21, LTA project Down Line 3, and Suntec City, etc.

Course Schedule

Time	Event
8:30am – 9:00am	<i>Registration</i>
9:00am – 10:30am	Gravity retaining walls
	Gabion retaining structures
	Crib walls
	Mechanically Stabilized Earth (MSE) walls
10:30am – 10:45am	<i>Morning Tea Break</i>
10:45am - 12:15pm	Soil nailed structures
	Ground anchored structures
	Contiguous and secant pile walls
	Sheet piled walls
	Diaphragm walls
	Soldier piles & timber lagging
	Cassion Construction & Ground Improvement in retaining Structure

Registration Form

Module 2 – Construction of Underground & Related Structures Earth Retaining Structures (1st Run)			
Date	:	7 December 2019, Saturday	
Duration	:	3 hrs (½ day)	
Time	:	9:00am – 12:15pm	
CPD Programme	:	PDU / 3 STU (Structural) – To be confirmed	
Venue	:	IES Academy@Jurong East, 80 Jurong East St 21 #04-10 Devan Nair Institute S(609607)	
Course Fee	:	\$128.40 (IES Members); \$149.80 (Non- members)	
Course Coordinator	:	Jessie Tan Tel: 6461 1250 Email: jessie.tan@iesnet.org.sg	
Last Date of Registration	:	28 Nov 2019 or till class fully booked (whichever comes first)	
Participant's Details			
Name	:		NRIC/FIN No :
Company	:		Designation :
Address	:		
		Postal Code	:
Office No	:	Mobile	:
			Gender : Male / Female
Email	:		
Please indicate		<input type="checkbox"/> IES Member No:	<input type="checkbox"/> Non-Member <input type="checkbox"/> RTO/RE/PE No:
		<input type="checkbox"/> Sponsored by Company	<input type="checkbox"/> Special Meal Request – Vegetarian
Contact Person (HR/Accounts Department)			
Name	:		Designation :
Office No	:	Fax	:
		Email	:
Payment	Nets/Cheque:	Amount:	
<ul style="list-style-type: none"> Cheque to be made payable to 'ENGINEERS SINGAPORE PTE LTD' Written Notice via email is required for Cancellation or Withdrawal of course, 7 working days prior to course date Course fee inclusive of 7% GST, course materials and one tea break (Halal caterer) Certificate of Attendance will be issued to participants with 100% Attendance 			
Acceptance of Terms & Conditions for Registration of IES Academy Courses / Events			
I agree to abide to the Terms & Conditions for Registration of IES Academy courses and events			
Name:			
Signature:			
Date:			

TERMS & CONDITIONS COURSE REGISTRATION

Registration

Any registration, whether on-line or fax will be on a ***first-come-first-served basis*** and will only be confirmed upon receipt of full payment by Engineers Singapore Pte Ltd unless otherwise invoice to company.

All registrations must be submitted with duly completed registration form.

Closing Date & Payment

The closing date of the event will be 1 week prior to event commencement date or earlier. Cheques should be crossed 'A/C payee only' and made payable to **'Engineers Singapore Pte Ltd'**, with the ***Title of The Event indicated clearly written on the back of the cheques***, and submitted with the duly completed registration forms to:

Attn: Jessie Tan
IES Academy@Jurong East
80 Jurong East Street 21 #04-10
Devan Nair Institute for Employment & Employability
Singapore 609607

Confirmation of Registration

Confirmation of registration will be given at least 1 week before the commencement date via email. ***If you do not receive the said confirmation email, you are required to contact IESA at 6463 9211 during office hours.***

IESA reserves the right to allow only confirmed registrants to attend the Event.

Withdrawals/Refunds of Fees

Written notice **at least 1 week in advance** before the commencement of the event

Full course fee shall be refunded subjected to 4.5% transaction charge.

➤ **NO** refund otherwise.

No show of participant would not be accepted as a valid reason for withdrawal/refund.

One time replacement is allowed only if written notice is received by us at least 1 week before the commencement of the event. However, when an IES member is replaced by a non-member, the participant has to pay the difference in the relevant fees.

Cancellation/Postponement

Changes in Venue, Dates, Time and Speakers for the Events can occur due to unforeseen circumstances. IES reserves the full rights to cancel or postpone the Event under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact person of any cancellation or postponement.

Fees will be refunded in FULL if any Event is cancelled by IESA.

UTAP (Union Training Assistance Programme) is an individual skills upgrading account especially for NTUC members. As a member, you enjoy UTAP funding at 50% of the unfunded course fee capped at \$250 every year.

SkillsFuture Credit (SFC) "All Singaporeans aged 25 and above can use their \$500 SkillsFuture Credit from the government to pay for a wide range of approved skills-related courses. Visit the SkillsFuture Credit website (www.skillsfuture.sg/credit) to choose from the courses available on the SkillsFuture Credit course directory."

Please visit [HERE](#) for more information on SFC & UTAP claim.

PERSONAL DATA PROTECTION ACT

I consent to the processing by Institution of Engineers, Singapore of personal data, including sensitive personal data as defined in the Data Protection Act 2014, about me for the proper purposes of Institution of Engineers, Singapore (IES). I undertake to observe the provisions of the Data Protection Act 2014 in relation to any personal data I may myself hold and process as a Members of Institution of Engineers, Singapore, and I agree to indemnify Institution of Engineers, Singapore from liability for any claims or damages that may arise from the processing of this data. For more information kindly refer to [here](#).

Enquiries

For further enquiries, please contact IESA general office at Tel: 6463 9211.