Module 1 **Construction of Underground & Related Structures** - **Piling & Foundations (1<sup>st</sup> Run)** on 2<sup>nd</sup> November 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 1 on "Piling & Foundations" is to familiarize participants with piling methods adopted in Singapore and the region and how to supervise the installation of piles. The sub-topic on foundations will provide participants with knowledge on various types of foundations and their construction and supervision.

### **Course outline**

- 1) Load-bearing piles:- (displacement and replacement piles)
- 2) Underpinning
- 3) Pile foundation : pile cap, pile raft etc
- 4) Pile tests/Authorities Requirement
- 5) Caisson foundations

# **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	Registration						
	Load-bearing piles:- (displacement and replacement piles)						
9:00am – 10:30am	Underpinning						
	Pile foundation : pile cap, pile raft etc						
10:30am – 10:45am	Morning Tea Break						
10.45	Pile tests/Authorities Requirement						
10:45am – 12:15pm	Caisson foundations						

# **Registration Form**

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Date	25			2 November 2019, Sat	12.15		<u> </u>		1961		1 Stable	6.22				
Duration	20		:	3 hrs (½ day)												
Time			:	9.00am – 12.15pm												
CPD Program	mm	e	01	PDU / 3 STU (Structural) – To be confirmed									100			
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: <u>jessie.tan@iesnet.org.sg</u>												
Last Date of Registration				28 Oct 2019 or till class fully booked (whichever comes first)												
Participant's Details																
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<ul> <li>Cheque to be made payable to 'ENGINEERS SINGAPORE PTE LTD'</li> <li>Written Notice via email is required for Cancellation or Withdrawal of course, 7 working days prior to course date</li> <li>Course fee inclusive of 7% GST, course materials and one tea break (Halal caterer)</li> <li>Certificate of Attendance will be issued to participants with 100% Attendance</li> </ul>																
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#### **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 <u>Title of The Event indicated clearly written</u> <u>on the back of the cheques</u>, 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 <u>HERE</u> 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 <u>here</u>.

#### Enquiries

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