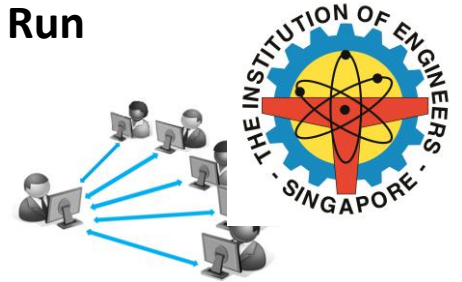


# Quality Insitu Concrete Construction - 20<sup>th</sup> Run

## (Virtual Classroom)

**\*\* Supported by UTAP Credit\*\***



IES Academy Virtual

### Introduction

Insitu concrete construction are commonly found in Singapore, in the building of apartments, office and commercial buildings, port facilities, MRT stations and tunnels, bridges and flyovers, flatted factories and other structures. Insitu concrete must be well supervised in order to obtain the best out of this material and to ensure durable structures with very minimal maintenance. The task of supervising the construction of concrete structures is very much in the hands of Resident Engineers (RE) and Resident Technical Officers (RTO). The overall objective of this series of course modules is to refresh REs and RTOs on good insitu concrete practice specifically in the areas of concrete production, transporting, placing, formwork, curing, finishing, sampling and testing.

### Objectives

#### Module One: Concrete and its production

The objective of Module One: Concrete and its production: - Ready-mix and site production is to familiarise participants with constituents of concrete and ready-mix and site production.

#### Module Two: Transporting, Placing and Working with Insitu Concrete

The objective of Module Two: - Transporting, placing and working with Insitu Concrete is to familiarise participants with various ways of transporting and placing insitu concrete. Other important issues such as construction joints, concreting in cold/hot weather and reinforcement will be discussed.

### Pre-requisites

Prior to attending this course, you should:

- Have a PC / laptop / tablet / smart phone with built-in or external webcam.
- Installed the Zoom client.
- Have Wi-Fi / high speed internet connection available.
- Receive an email with a link for you to submit a registration for webinar 1 week prior to the commencement.
- Receive an email with a link and password for you to join the webinar session after your registration is successful.

### Details

**Date** : 14<sup>th</sup> Nov 2022, (Monday)

**Time** : 1.00pm – 7.00pm

**Duration:** 6 hours

**Delivery Mode:** Zoom Webinar

**CPD** : 6 STU (Structural) **To be confirmed**  
6 PDU (PEB) (CEng) - **confirmed**

**Course Fee (Include GST):**  
**IES Member: \$221.50**  
**Non-member: \$260.00**

E-certificate of Attendance will be awarded to **Paid** participants who have completed course survey with **100% Attendance**.

### Target Audience

Resident Engineers (RE)  
Resident Technical Officers (RTO)

### **IES Academy@Jurong East**

80 Jurong East Street 21, #04-10  
Devan Nair Institute for Employment  
and Employability  
Singapore 609607

Contact Person: Jerine Peh (Ms)  
DID: 6460 4237 | Main Line: 6463 9211  
E-mail: [jerine.peh@iesnet.org.sg](mailto:jerine.peh@iesnet.org.sg)

## Speaker Profile

ER. Teo Ee Huat graduated from Nanyang Technological University with a B.ENG (Civil) degree in 1996 and has since completed his MSc in Civil Engineering (NUS) and MSc in International Construction Management (NTU). He is actively involved in education and has completed his M.E.D with University of Western Australia in 2010. He is a Singapore registered Professional Engineer and Qualified Erosion Control Professional. He is currently serving as the Co-Chairman of Qualified Erosion Control Professional Panel, IES and has trained Professional Engineers as Qualified Erosion Control Professionals and also trained construction site supervisors in implementation, inspection and maintenance of Earth Control Measures. He has written papers in International journals on issues related to Construction Management and other issues.

## COURSE SCHEDULE

| <b>Module 1: Ready-Mix and Site Production</b>                            |   |
|---|---|
| 1:00pm  | Course Introduction   |
| 1.15pm  | Concrete and its constituents: Cement / Aggregates              |
| 2.15pm  | Concrete and its constituents: Water / Admixtures               |
| 3.15pm  | Concrete Properties and Specification                           |
| 4.00pm  | Ready Mixed Concrete and Site Batching                          |
| 4.45pm  | Break   |
| <b>Module 2: Transporting, Placing &amp; Working with Insitu Concrete</b> |   |
| 5.00pm  | Transporting Concrete   |
| 5.45pm  | Placing and Compaction  |
| 6.15pm  | Construction Joints / Concreting in hot weather / Reinforcement |
| 7:00pm  | End of Programme  |

## Course Outline

| <b>Module 1: Concrete and its production</b> |                                   | <b>Module 2: Transporting, Placing and Working with Insitu Concrete</b> |   |
|--|-----------------------------------|---|---|
| 1  | Cement                            | 1   | Transporting concrete                   |
| 2  | Aggregates                        |   | a. Pumping                              |
| 3  | Water                             |   | b. Crane & Skip                         |
| 4  | Admixtures                        |   | c. Dumpers                              |
| 5  | Concrete properties               |   | d. Other methods                        |
| 6  | Concrete specification            | 2   | Place & Compaction                      |
| 7  | Ready mixed concrete              |   | a. Placing                              |
|  | a. Batching plants                |   | b. Compacting                           |
|  | b. Access, delivery and discharge | 3   | Construction Joints                     |
| 8  | Site batching and mixing          |   | a. Location of construction joints      |
|  | a. Storage of materials           |   | b. Preparation and concreting of joints |
|  | b. Mixers and batching operations | 4   | Concrete in cold/hot weather            |
|  |                                   |   | a. Loss of consistence                  |
|  |                                   |   | b. Moisture loss                        |
|  |                                   | 5   | Reinforcements                          |
|  |                                   |   | a. Bar types and sizes                  |
|  |                                   |   | b. Handling, storage and cleanness      |
|  |                                   |   | c. Cover and fixing reinforcement       |
|  |                                   |   | d. Fibres                               |

## REGISTRATION FORM

### Quality Insitu for Concrete Construction - 20<sup>th</sup> Run \*Supported by UTAP Credit\*

Date: 14th Nov 2022, (Monday)

Time: 1pm to 7pm (6 hours)

Venue: Zoom Webinar

CPD Programme: 6 STU (Structural) – To be confirmed / 6 PDU (PEB) (CEng) – To be Confirmed

Fees (inclusive of GST): **IES Member Rate - \$221.50**

**Non-Member Rate - \$260.00**

Registration Closing Date: 4<sup>th</sup> Nov 2022 (Friday) / Till Class is full (Whichever comes first)

Course Coordinator: (Ms) Jerine Peh | Direct: 6460 4247 | jerine.peh@iesnet.org.sg

| Participant's Details  |  |                                     |  |                |            |
|--|--|-------------------------------------|--|----------------|------------|
| Name (as per NRIC in BLOCK Letters):   |  | NRIC / FIN:                         |  | Gender:        | M / F      |
| <input type="checkbox"/> Singapore Pink Identification Card <input type="checkbox"/> Singapore Blue Identification Card <input type="checkbox"/> FIN/Work Permit/SAF 11B <input type="checkbox"/> Foreign Passport <input type="checkbox"/> Others   |  |                                     |  |                |            |
| Race: Chinese/ Malay/ Indian/ Eurasian/ Others, pls specify _____  |  |                                     |  | Date of Birth: |            |
| Address (For Invoice):   |  |                                     |  |                |            |
|  |  |                                     |  | Postal:        |            |
| Mobile:  |  | Contact:                            |  | Fax:           |            |
| Email (For sending confirmation email):  |  |                                     |  |                |            |
| Company Name:  |  | UEN No:                             |  | Designation:   |            |
| Please indicate:   | <input type="checkbox"/> IES Member<br>Membership No:      | <input type="checkbox"/> Non-Member | <input type="checkbox"/> PE/RE/RTO/Safety Officer<br>No: |                |            |
|  | <input type="checkbox"/> Tick here if sponsored by company |                                     | <input type="checkbox"/> Tick here if Self-Sponsor       |                |            |
| Contact Person (For Company Sponsor Only)  |  |                                     |  |                |            |
| Name:  |  |                                     | Designation:   |                |            |
| Mailing Address<br>(For invoice):  |  |                                     | Tel:   | Fax:           |            |
| Email:   |  |                                     |  |                |            |
| Payment:   | Bank / Cheque No:  |                                     |  |                | Amount: \$ |
| <ul style="list-style-type: none"><li>Cheques should be crossed 'A/C payee only' and made payable to '<b>IES Academy Pte Ltd</b>', with the <b>Title of The Event indicated clearly written on the back of the cheques</b>, and submitted with the duly completed registration forms to<br/>Attn: Jerine Peh (Ms)<br/><b>IES Academy@Jurong East</b><br/>Devan Nair Institute for Employment and Employability,<br/>80 Jurong East Street 21, #04-10 Singapore 609607</li><li>E-Certificate of Attendance will be issued to participant with 100% attendance with Full payment made.</li></ul> |  |                                     |  |                |            |
| <b>Acceptance of Terms &amp; Conditions for Registration of IES Academy Courses / Events</b><br>I have read, deemed understood and accept the Terms & Conditions 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 IES Academy 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.

### 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.

Please visit [here](#) for more information on UTAP claim.

**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](http://www.skillsfuture.sg/credit)) to choose from the courses available on the SkillsFuture Credit course directory."

Please click [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: [www.ies.org.sg/PDPA](http://www.ies.org.sg/PDPA).

### Enquiries

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