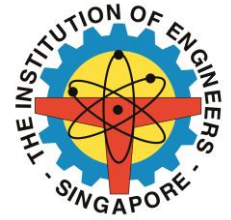


Supplementary Cementitious Materials (SCM) For Reinforced Concrete – 20th Run (Virtual Classroom)

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



IES Academy Virtual

Introduction

With the rapid global infrastructure development, there is a new focus on sustainable usage of concrete. Using supplementary cementitious materials (SCM) like silica fume, pulverized fuel ash or ground granulated blast furnace slag to replace or compliment cement is one practical area to achieve sustainability which is gaining importance. Stakeholders in construction industry (Owners, Architects, Engineers, Resident Technical Officers, Site Supervisors etc) are handling more demanding and complex projects in current development projects and may involve working with SCM. This programme aims to provide information on the nature of these SCM and the resulting properties of concrete batched using such materials to participants to allow them to better execute their projects.

Objectives

At the end of this module the participants will have a better understand the nature of SCM and the key properties of concrete batched using such materials.

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.

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.

Details

Date : 17th Aug 22, (Wednesday)

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

COURSE OUTLINES:

Silica Fume		Ground Granulated Blastfurnace Slag (GGBS)	
1.1	Nature and properties of microsilica	3.1	Nature and properties of GGBS
1.2	Influence on key properties of concrete	3.2	Influences on key properties of concrete
1.3	Influence on durability	3.3	Influences on durability
1.4	Engineering properties of concrete using silica fume	3.4	Engineering properties of concrete using GGBS
1.5	Handling silica fume batched concrete	3.5	Handling GGBS batched concrete
1.6	Specialized application using silica fume	3.6	Specialized application using GGBS
Pulverized Fuel Ash (PFA)			
2.1	Nature and properties of PFA		
2.2	Influences on key properties of concrete		
2.3	Influences on durability		
2.4	Engineering properties of concrete using PFA		
2.5	Handling PFA batched concrete		
2.6	Specialized application using PFA		

Program Outline	
Time	Description
1pm	Introduction to SCM
1.30pm	Nature and properties of pulverized fly ash (PFA)
2.15pm	Handling PFA batch concrete
3pm	Special application of PFA batched concrete
3.30pm	Nature and properties of silica fume
4pm	Properties of silica fume batched concrete
4.30pm	Handling silica fume batched concrete
5pm	Nature and properties of ground granulated blastfurnace slag (GGBS)
5.30pm	Properties GGBS batch concrete
6pm	Handling GGBS batch concrete
6.30pm	Special application of GGBS concrete
7pm	End of programme

REGISTRATION FORM

Supplementary Cementitious Materials (SCM) For Reinforced Concrete – 20th Run

*Supported by UTAP Credit *

Date: 17th August 2022 (Wednesday)

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: 9th Aug 2022 (Tuesday) / 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						
				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 Membership No:	<input type="checkbox"/> Non-Member	<input type="checkbox"/> PE/RE/RTO/Safety Officer 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 (For invoice):		Tel:		Fax:		
Email:						
Payment:	Bank / Cheque No:				Amount: \$	
<ul style="list-style-type: none">Cheques should be crossed 'A/C payee only' and made payable to 'IES Academy 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: Jerine Peh (Ms) IES Academy@Jurong East Devan Nair Institute for Employment and Employability, 80 Jurong East Street 21, #04-10 Singapore 609607E-Certificate of Attendance will be issued to participant with 100% attendance with Full payment made.						
Acceptance of Terms & Conditions for Registration of IES Academy Courses / Events						
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) 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.

Enquiries

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