



Supervision of Prestressing in Singapore (Conducting via Virtual & Physical)

5th Run

By Er. Yow Cheong Hoe & Mr. Zhuo Jin Bao

Date: 25 & 26 July 2024, Thursday & Friday

Time: 25 July 2024: Virtual via Zoom from 2.00pm to 5.15pm

26 July 2024: Physical course from 9.00am to 5.45pm at Orchard Hotel Singapore

Address of Orchard Hotel Singapore: 442 Orchard Road, Singapore 238879

CPD Programme: 2 STU(Safety), 6 STU(Structural) - Confirmed
10 PDU (PE & CEng) - Confirmed

Fees: \$408.75 (IES Members) / \$452.35 (Non-Member)

UTAP
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- *Actual venue (hotel) will be stated in the confirmation email which will be sent to paid participant 2 weeks prior to event date*
- *Please note that attendance for both the courses are compulsory, Certificate of Attendance will be issued to participants with 100% attendance for both course*

- **This is a blended course comprising 3 hours of zoom session and 7 hours of physical course at hotel.**
- **This course is NOT SFC Funded**
- **This course DO NOT HAVE SDU Points**

- 2 Coffee Breaks & 1 Buffet Lunch(At Café) at Orchard hotel
- Special Full Day Parking Rate at \$10nett

Part 1: What is Prestressing and Supervision

This session introduces prestressing design and construction. Supervisory needs and Statutory and Regulatory requirements will also be discussed, together with other duties of site supervision for prestressing.

- What is prestressing (wires, bars, stays, anchors, others; pre- and post-tensioning)
- Basics of prestressing
- Outline of supervision of prestressing work
- Statutory and Regulatory requirements
- Other duties of site supervision (environmental, safety, quality, administrative)

Part 2: Supervision of Concreting Works for Prestressing

This session presents required and general supervisory requirements for concrete construction which is pre-requisite for pre-stressing, focused on prestressing aspects.

- Geometry and setting out
- Installation of accessories
- Casting of concrete
- Post-concreting inspections
- Rectification works
- Paperwork for concreting works

Part 3: Other Prestressing Works

This section discusses some other construction works similar to prestressing with similar supervision principles.

- Stay cables
- Ground anchors

- Fibre reinforcement
- Prestressed steel
- Structural enhancement or upgrading

Part 4: Supervision of Prestressing

This session the supervisory requirements for various typical pre-stressing works, including pre- and post-tensioning. Potential site issues, solutions and rectification works are also discussed.

- Pre-tension installations
- Post-tension installations
- Inspection of prestressing process
- Inspection of grouting process
- Potential site issues and solutions

Part 5: Safety aspects of Prestressing Works

Specific to prestressing works, safety procedures and precautions are discussed, including environmental concerns and safe practices.

- Safety procedures and features for prestressing works
- Safety precautions for supervision of prestressing works
- Environmental aspects of prestressing works
- Examples of safe practices for prestressing works

Part 6: Safety aspects of Supervision

Current industrial practice requires site supervisors to be able to identify safety matters. There is a duty for supervisors to report unsafe acts, being a representative of the QP(Sup) or the Builder, to keep the workplace safe for all.

- Safety awareness – keeping eyes and ears open
- Duty to report and to take actions
- Personal Protection Equipment and safety training
- Risk assessment and safety review for prestressing works

Speakers' Profiles



Er. Yow Cheong Hoe has more than 25 years of experience (more than 15 as a Professional Engineer) in the design, supervision, construction and contract management of construction projects, local and overseas. He has direct experience in civil & structural planning, analysis and design, construction support and project management including serving as the Superintending Officer or the SO Representative in his projects. He is also a Risk Assessment Manager (BizSAFE Level 2), an ISO Auditor, a Design for Safety Professional and a Qualified Erosion Control Professional.

He is well versed with design and supervision of reinforced concrete, prestressed concrete, structural steel, strutted and top-down excavations, fibre-reinforcement, bridges and tunnels (for roads, railways and utilities), infrastructure (roads, drains, sewers, utilities), earthworks (land preparation) and master-planning. He spent more than two years in full-time supervision as Resident Engineer for the construction of the award-winning Keppel Bay Bridge, a cable-stayed bridge constructed over the sea. His supervision experience includes earthworks, reclamation works, bored piling on land and sea, short-line match-cast and long-line bridge segment pre-casting and installation, heavy lifting by cantilever gantry, traveling gantry and marine cranes, post-tensioned pre-stressing, stay-cables installation, pre-cast elements on buildings, steel structures, fibre-reinforcements, excavations and slopes.

Er. Yow was previously a design consultant with T.Y.Lin International and KTP Consultants (a member of Surbana Jurong Group) and is currently the Commercial Engineering Director of Chye Joo Construction. He is actively involved in various engineering and social committees and activities. He sat in the Working Group for the revision of SS515 – “Code of practice for supervision of structural works” (published Dec 2021).



Mr. Zhuo JinBao has more than 15 years of experience working in VSL since graduation from NTU. He started his career as a design engineer in VSL Technical Center designing temporary steel works for casting cells, launching gantry components and temporary steel structure. He then progressed to be an operation engineer in VSL Singapore running projects which involve post-tensioning in industrial buildings & bridges, with his work scope including pre-casting of segmental bridges, heavy-lifting works, under-pinning works, installation of ground anchors, replacement of bridge bearings and installation of a stay-cable bridge in Brunei. With the experience in VSL, he is familiar with the operation requirements & operational safety aspects of all post-tensioning for pre-stress concrete.

JinBao is currently a Project Manager under VSL Singapore and has successfully completed three public sector viaduct projects under LTA, NEA & HDB. He is currently working on the Jurong Region Line Contract J108 MRT viaduct where his team erected the first Launching Gantry within the JRL at Bukit Batok Road.

Pre-requisites for Zoom session on 25 July 2024 from 2.00pm to 5.15pm

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.
- ***It is recommended that participants join the course on a 12-inch or larger screen in order to view clearly the text and photos in the presentation materials.***
- ***ALL PARTICIPANTS ARE REQUIRED TO KEEP WEBCAM OR CAMERA TURNED ON DURING 3-hours of zoom, FAILING OF WHICH THE E-CERTIFICATE OF ATTENDANCE WILL NOT BE ISSUED***

Target Audience

Consultant engineers & supervisors; Developers; Resident Engineer & Resident Technical Officer; Contractor PM, CM, site engineers & supervisors, Site WSHO/WSH Coordinator and Health & Safety Professionals.

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Please register online/email in the completed form by 11 July 2024 to:

Karen Phua, karen@iesnet.org.sg

IES Academy@Jurong East, 80 Jurong East Street 21 #04-10

Devan Nair Institute For Employment and Employability, Singapore 609607

Participant Details

Name: _____ NRIC: _____

Company: _____ Designation: _____

Address 1: _____

Tel: _____

Email: _____

Please indicate: ☐ IES members IES M'ship No.: _____ P.E. No.: _____ (if applicable)
☐ Non-members ☐ Sponsored by company

Contact Person Details (if different from participant)

Name: _____ Designation: _____

Tel: _____ Email: _____

Payment Details

Payment via bank transfer or PayNow. All Fees are inclusive of 9% GST.

**Beneficiary: IES
Academy Pte Ltd Bank:
United Overseas Bank
SWIFT: UOVBSGSG
Bank Code: 7375
Branch Code: 016
Bank Account number: 339-326-153-4**

**PayNow:
IES Academy Pte Ltd
UEN:202026912H**



Acceptance of Terms and Conditions for Registrations of IES Academy's Events

I agree to abide by the Terms and Conditions for Registration of IES Academy's Events.

Name: _____ Signature: _____

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 2 weeks prior to event commencement date or earlier. 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:

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

Confirmation of Registration

Confirmation of registration will be given at least 2 weeks 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 10 days 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 skill 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.

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.