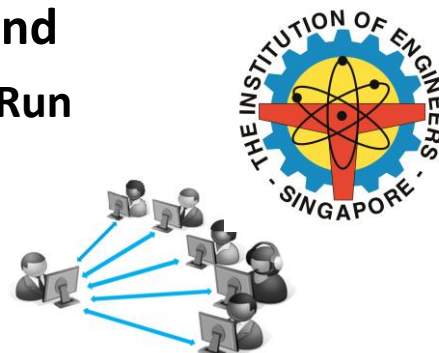


# Guide to Structural Steel, Stainless Steel and Aluminium for Construction Projects - 16<sup>th</sup> Run

## (Virtual Classroom)

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



IES Academy Virtual

### Introduction

Structural steel is still in demand for their high quality and productivity while stainless steel and aluminium has appealing qualities leading to an increasing use in the Construction Industry. Construction stakeholders (Owners, Architects, Engineers, and Resident Technical Officers) are handling more demanding and complex projects in current development projects involving working with stainless steel & aluminium elements and protection of structural steel. This programme aims to provide information on the specification, manufacturing and maintenance of stainless steel & aluminium to participants to allow them to better execute their projects. It also shares concepts to corrosion protection for steel structures.

### Objectives

#### Structural Steel:

Participants will have a better understanding on various corrosion methods on structural steel like hot dip galvanising, anti-corrosion paint & coating. Issues related to inspection, maintenance and repair of steel structures will also be discussed.

#### Stainless Steel:

Participants will have a better understand the production & fabrication process and the available types of finishes offered by stainless steel. They will also know the typical types of connections details as well as basic maintenance and cleaning of stainless steel elements.

#### Aluminium:

Participants will be introduced to the history and manufacture of aluminium and its alloys. The physical characteristics and common aluminium products and fabrication will also be discussed. Basic design concepts for structural use of aluminium including heat affected zone and fatigue will be shared with participants. The final portion of the programme explains the types of corrosion for such structures and the preventive measures.

### 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** : 18<sup>th</sup> Jul 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 & OUTLINE**

TIME	DESCRIPTION
1.00pm	Registration & Introduction
1.30pm	Stainless steel
3.00pm	Structural steel
5.00pm	Break
5.15pm	Aluminium
7.00pm	End of Programme

<b><u>Structural Steel</u></b>	<b><u>Stainless Steel</u></b>	<b><u>Aluminium</u></b>
<ul style="list-style-type: none"><li>❖ Corrosion protection methods</li><li>❖ Hot Dip Galvanising</li><li>❖ Anti-Corrosion Painting &amp; Coating</li><li>❖ Selection of Corrosion Protection System</li><li>❖ Inspection, Maintenance &amp; Repair</li><li>❖ Detailing to Minimize Corrosion</li></ul>	<ul style="list-style-type: none"><li>❖ Introduction to Stainless Steel</li><li>❖ Corrosion of Stainless Steel</li><li>❖ Economics &amp; Environmental Considerations</li><li>❖ Production &amp; Fabrication</li><li>❖ Stainless Steel Finishing</li><li>❖ Welding &amp; Mechanical Bonded Joints</li><li>❖ Maintenance &amp; Cleaning</li></ul>	<ul style="list-style-type: none"><li>❖ History &amp; Manufacture of Aluminum</li><li>❖ Aluminium &amp; Its Alloys</li><li>❖ Aluminium Products &amp; Fabrication</li><li>❖ Connections</li><li>❖ Basic Design Concepts</li><li>❖ Fatigue</li><li>❖ Corrosion &amp; Corrosion Prevent</li></ul>

## REGISTRATION FORM

### Guide to Structural Steel, Stainless Steel and aluminium for Construction Projects - 16<sup>th</sup> Run

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

**Date:** 18<sup>th</sup> Jul 2022, (Monday)

**Time:** 1.00pm to 7.00pm (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:** 8<sup>th</sup> Jul 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
Address (For Invoice):					
		Postal:		Date of Birth:	
Mobile:		Contact:		Fax:	
Email (To Send 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"><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 Attn: Jerine Peh (Ms) <b>IES Academy@Jurong East</b> Devan Nair Institute for Employment and Employability, 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> 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.