

# IES Preparation Course - A Comprehensive and Instructional Three-Days Training Course on SS638



## Introduction

In conjunction with the Publication and Launching of the new SS638(2018) - Requirements for Electrical Installations, IESA is now offering and providing a 3 days comprehensive instructional training course, based on the new SS638(2018) requirements for Electrical Installations.

## Objectives

This comprehensive 3 days preparation training course based on the new issue of SS638(2018) - Requirements for Electrical Installations, is designed to help young and practicing electrical engineers who wants to have a clear understanding of SS638 requirements. The scope of the course generally follows that of SS638 (2018), but it also contains materials not included in the new issue of SS638(2018) that are necessary to explain, expand upon and simplify the essential parts of the regulations, ensure high quality guidance that is simple, easy to follow and understanding of specific key topics.

## Target audience

This course is intended to help practicing Electrical Engineers and Contractor's Engineers as well as mid-career electrical design Engineers working in consulting engineering companies, who are engaged in designing electrical systems for commercial buildings and industrial plants.

The course should also be suitable for intermediate grade Electrical Engineering Designers who are hoping to move into a position of more responsibility as Project Managers and or Chief Electrical Designer, as well as those young Electrical Engineers preparing to sit for the PPE Part II examinations conducted by PE Board.

It should also be of valuable assistance to Senior Engineers of other discipline who have some project responsibilities requiring coordination with Electrical Engineers and installers in project works. It should also be helpful to Electrical Technicians, testing and commissioning Inspectors, LEWs and RTOs.

## DETAILS

**Date: 10 - 12 May 2021**

**Time: 9:00AM - 6:00PM**

**Duration: 21 hours, 3 days training**

**Venue: IES Academy@Jurong East**

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

**CPD : PDU – To be Confirmed**

**Fee (include GST):**

**IES Member: \$898.80**

**Non-member: \$1,123.50**

## Target Audiences

Electrical Engineers  
Electrical Technicians

**IES Academy@Jurong East**

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

Contact Person: Joel Chua (Mr)

Main Line: 6463 9211

E-mail: joel.chua@iesnet.org.sg\_

## Lecturer's CV



### **Er Lee Keh Sai**

Er Lee Keh Sai is a Chartered Electrical Engineer and a Registered Professional Engineer with more than 50 years of industrial experience. He specializes in Electrical Power Engineering, Energy Management and Power Quality Solutions.

Er Lee is the Principal of K.S.Lee & Associates which he established in 1970. He has provided consultancy services to many MNC and SMEs. Prior to the establishment of his consultancy services, he held senior staff positions in the Electricity Department of the former Public Utilities Board and later with Shell Eastern Petroleum at their Pulau Bukom Refinery Complex.

Er Lee has served in various capacities in many professional associations, government agencies and educational institutions. He had previously served as Deputy Chairman, Board of Governors, for both the ITE and Singapore Polytechnic. He is currently serving as a member of Strata Titles Board and EMC 's Market Surveillance Compliance Panel.

Er Lee is an approved and certified trainer and is currently teaching the core module "Motor Driven Systems" under the Singapore Certified Energy

## **COURSE OUTLINE**

This is an overview of all the topics to be discussed which maybe included or briefly expanded on but not limited to the following:

- **Module 1 – An Overview of Key Topics and Essential Requirements for Electrical Installations**
  - Plan and Layout of SS638:2018 or Wiring Regulations
  - Scope, object and Effects and Fundamental Requirements for Safety
  - Protection For Safety
  - Method of Installation of cables and Current- Carrying Capacity of Cables
  - Inspection and Testing
  - Special Installations or locations particular requirements
  
- **Module 2 – Protection Against Overcurrent**
  - Fundamental Principles
  - Load Assessment
  - Protection Against Fault Current
  - Harmonics
  - Short-Circuit Current
  - Calculation of earth fault
  - Selection of Conductor Size
  
- **Module 3 - Protection Against Electric Shock**
  - Electric shock and protective measures
  - Physiology of electric shock Fault protection provided by protective earthing, protective equipotential bonding and automatic disconnection of supply
  - Requirements for disconnection in TN-S and TT systems
  - Double or reinforced installation
  - The protective provisions - electrical separation to one item of equipment
  - Requirements for RCDs
  - Additional protection by RCDs
  - Additional protection by supplementary equipotential bonding
  
- **Module 4 - Isolation and Switching**
  - Fundamental principles and definitions Means of isolation and definition of isolation Switching off for mechanical maintenance Emergency switching
  - Emergency stopping
  - Isolation at the origin of an installation
  - Isolation of circuits within an installation
  - Isolation requirements
  - Switching off for mechanical maintenance Emergency switching and emergency stopping Functional switching
  - Firefighting switches
  
- **Module 5 - Protection Against Fire**
  - Overview of the wiring regulations
  - Generally applicable requirements
  - Wiring systems in escape route
  - Protection against burns
  - Measures to minimize the spread of fire
  - Materials for sealing of wiring system penetrations

- **Module 6 - Earthing and Bonding**

- Protective earthing
- The means of earthing
- The earthing conductor
- System types and earthings arrangements
- Protective equipotential bonding
- Automatic disconnection of supply (ADS)
- Extraneous conductive parts and their connections
- Automatic disconnection of supply (ADS)
- Supplementary equipotential bonding

- **Module 7 - Special installations or location**

- Construction and demolition site installations
- Horticultural premises Section E: Marinas and similar locations
- Medical locations
- Solar photovoltaic (PV) power supply Section H: Exhibitions, shows and stands
- Electric vehicles charging installations Section J: Extra-low voltage lighting installations Section K: Outdoor lighting installations

# IES Preparation Course - A Comprehensive and Instructional Three-Days Training Course on SS638

Date : 10 - 12 May 2021, Monday - Wednesday  
Time : 9am – 6pm  
Venue : IES Academy@Jurong East (Devan Nair Institute, E2i Building)  
80 Jurong East Street 21, #04-10 Singapore 609607  
Fees (Include GST): IES Members: \$898.80  
Non-Members: \$1123.50

Please register online/fax the completed form by **03 May 2021 before 3pm** to:  
Contact Person: **Joel Chua (joel.chua@iesnet.org.sg)**  
Address: **80 Jurong East Street 21, #04-10 Singapore 609607**  
Tel: **64639211**

## Participant Details

\*Name : \_\_\_\_\_ \*NRIC : \_\_\_\_\_  
(Please written in BLOCK Letter)

Company : \_\_\_\_\_ \*Designation : \_\_\_\_\_

\*Address 1 : \_\_\_\_\_  
(For mailing of invoice and receipt)

Address 2 : \_\_\_\_\_  
(For mailing of Certificate)

\*Postal Code : \_\_\_\_\_ Sex : \_\_\_\_\_ Male / Female \_\_\_\_\_

\*Contact No. : \_\_\_\_\_ Fax : \_\_\_\_\_

\*Your Email : \_\_\_\_\_  
(For sending of confirmation email, preferable personal unless company sponsored)

Please indicate :  IES members IES M'ship No.: \_\_\_\_\_  
 Non-members

## Contact Person Details (if different from participant)

#Name : \_\_\_\_\_ Designation: \_\_\_\_\_

#Tel : \_\_\_\_\_ Fax: \_\_\_\_\_

#Email : \_\_\_\_\_

## Payment Details

Bank / Cheque No.: \_\_\_\_\_ Amount (\$): \_\_\_\_\_

Sponsored by company

\* All Fees are inclusive of 7 % GST.

\* Cheque should be made payable to: "IES Academy Pte Ltd".

## 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 : \_\_\_\_\_

**\*Mandatory entry**

**#Compulsory Entry for participant who choose to be INVOICED to your company**

## **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**

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 '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:

**Attention to: Joel Chua (Mr.)**  
**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 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.

## **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.