

## IES Preparation Course for PPE Examination Part 2 - Mechanical Engineering - Fire Safety Systems 2<sup>nd</sup> Run



**Date:** 24 Feb 2021 (Wed), 25 Feb 2021(Thur) & 2 Mar 2021(Tues)

**Time:** 9.00am to 6.15pm

**Venue:** IES Academy@e2i, Devan Nair Institute for Employment and Employability  
80 Jurong East Street 21 #04-10 Singapore 609607

**CET Hours:** 24 Hours – To Be Confirmed

**Fees \*** : \$898.80Nett (IES Members)

\$1123.50Nett (Non-Members)

### Course Synopsis:

The Practice of Professional Engineering Examination Part 2 (Mechanical) has been implemented since 2007. The paper aims to examine candidates on their proficiency in the practice of mechanical engineering at a professional level. Candidates are expected to have a good knowledge of the regulatory requirements and practices in Singapore. In particular, knowledge is required in the areas of regulatory framework, submission and approval procedures, statutory acts and regulations, practice guidelines and codes of practices.

This course aims to equip participants and interested parties on the knowledge in the field of: **Fire Safety Systems** which is **one of the topics** in the syllabus of the PPE Examinations Part 2. Salient points and working knowledge of the relevant regulations, by-laws, Acts and accepted/approved codes of practices, circulars issued by the Authorities will be covered in this preparation course.

### Course Outline/Outcomes:

#### Module 1

- Introduction to Fire Safety Act & Regulations, Related Approved Code of Practice (ACOP)
- Principles of Fire Safety Design
- Fire Code 2018, Chapter 1: General, Terminology & Definitions
- Related SCDF Circulars, Learning points from RI-practice

#### Module 2

- Fire Code 2018, Chapter 2: Means of Escape, Occupancy Load, Exit Capacity
- Fire Code 2018, Chapter 3: Structural Fire Precautions
- Salient points of **SS 532, SS 550, SS 553**
- Related SCDF Circulars, Learning points from RI-practice

#### Module 3

- Fire Code 2018, Chapter 4: Site Planning & External Firefighting Provisions
- Fire Code 2018, Chapter 5: Electrical Power Supplies
- Fire Code 2018, Chapter 6: Firefighting Systems
- Salient points of **CP 52**
- Related SCDF Circulars, Learning points RI-practice

#### Module 4

- Fire Code 2018, Chapter 7: Mechanical Ventilation & Smoke Control Systems
- Fire Code 2018, Chapter 8: Emergency Lighting & Voice Communication Systems
- Fire Code 2018, Chapter 9: Additional Requirements for Each Purpose Group
- Related SCDF Circulars, Learning points from RI-practice

### Module 5

- Salient points of **SS 575, SS 578, NFPA 2001**
- Salient points of **SS 546, SS 645**

### Module 6

- Fire Code 2018, Chapter 10: Special Installations, LP-Gas, Solar-PV
- Fire Code 2018, Chapter 11: Regulated Fire Safety Products & Materials
- Salient points of **SS 608, SS 626**
- Related SCDF Circulars, Learning points from RI-practice

## **Target Audience**

Any interested parties but this course will benefit individuals who are aspiring to be professional engineers and participants who are preparing for the Practice of Professional Engineering Examination Part 2 (Mechanical)

## **Course Facilitators**

### **Dr. SIN Siang-Meng, Ivan**



As a certified emergency operation commander, planner, specialist and investigator, Ivan comes with more than 28 years of experience in the areas of organizational resilience and occupational safety & health management, with focus in fire safety, emergency preparedness, incident investigation, business continuity, disaster recovery, crisis management, incident management and enterprise resilience with the Singapore Civil Defence Force (SCDF), Monetary Authority of Singapore (MAS), and projects with industry corporations. Actively involved with professional organizations such as the Society of Loss Prevention for Process Industries (SLP), Institution of Chemical Engineers (IChemE), Institution of Fire Engineers (IFE), Association of Company Emergency Response Teams (A-CERTS), Fire Safety Managers' Association (FSMAS) and Enterprise Singapore's Standards Technical Committee and Workgroups, his areas of interest include Chemical Process Safety & EHSS Management, Organizational Resilience Planning & Incident Management, Enterprise Risk & Resource Management, Corporate Crisis & Emergency Management, and Business Continuity & Recovery Management. Ivan obtained his PhD in Incident Management from Southern Cross Australia in 2019, MSc in Safety, Health and Environmental Technology from National University Singapore in 2003 and MBA in Business Resilience from Murdoch Australia in 2012. Ivan is currently an Associate Professor with the National University of Singapore, Department of Chemical and Biomolecular Engineering, and Program Chair for the MSc (Safety, Health and Environmental Technology).

### **Er. Vijay RAJARAM**



As a Registered Professional Engineer with the Singapore Professional Engineer's Board (PEB) and a Registered Fire Safety Engineer (FSE) with the Singapore Civil Defence Force, Vijay is an established and experienced practicing engineer with 20 years of track records in Mechanical and Electrical consultancy, Prescriptive Fire Safety Systems and Performance-Based Fire Safety Engineering. Vijay also has other credentials under his under belt such as Chartered Engineer (CEng), Asean Chartered Professional Engineer (ACPE) and Certified Green Mark Manager (GMM). As a certified Project Management Professional (PMP), he has undertaken various high profile projects including design, supervision, implementation, testing and commissioning of various fire safety systems. Vijay has participated in national committees such as (a) Review Committee of Singapore Fire Safety Engineering (SFEG) Guidelines, SCDF, (b) The Institution of Fire Engineers (IFE), (c) The Society of Fire Protection Engineers (SFPE) and (d) Technical Committee (M&E Department) of The Institute of Engineers of Singapore (IES) to promote fire safety/fire science.

### **Er. Matthew KWEK**



As a registered professional engineer, Matthew has been in the Building M&E Industry with extensive experience in Ship Retrofitting; Building Maintenance and M&E Consultancy. He is a qualified Professional Engineer in Mechanical Engineering, a Fire Safety Engineer involved in Performance-based Fire Safety Design, a SCDF Registered Inspector for Building Fire Safety and a Certified Fire Safety Manager. Matthew obtained his Master in Fire Safety Engineering (MFSE) from the University of Western Sydney in 2004, MSc in Property and Maintenance Management from National University of Singapore in 1989, MSc in Mechanical Engineering from National University of Singapore in 1986, and BEng in Mechanical Engineering from University of Singapore in 1980. Matthew is currently a practicing professional engineer in fire safety systems and an associate faculty with the University of Newcastle, Singapore (UONS).

### **Mr. K. RAMANATHAN**



As the Convenor and Member of Working Groups for Singapore Standard, SS CP 52: 2004 on Automatic Sprinkler System, SS EN 3: 2012 on Specification of Fire Extinguishers, and SS 578: 2012 on Use and Maintenance of Portable Fire Extinguishers, Rama comes with more than 35 years of experience and technical knowledge in design, installation and maintenance of fire protection systems covering automatic fire suppression systems such as standard wet-pipe sprinkler, water-based foam systems, fire hose reel systems, wet rising main systems, etc. He is certified by the Loss Prevention Council (UK) to design, inspect, and test sprinkler systems, and has since been involved in numerous projects at various levels. Rama is currently the Vice President of the Institution of Fire Engineers, Singapore (IFES).

### **Mr. David GOH**



As the Convenor of Working Groups for Singapore Standard, SS 645:2019 on Installation and Servicing of Electrical Fire Alarm Systems, and SS 546:2009 on Emergency Voice Communication Systems in Buildings, David comes with more than 30 years of experience and technical knowledge in the fire alarm and emergency voice communication (EVC) industries, leading technical and marketing teams in fire alarm and EVC systems design and sizing, control panel manufacturing, equipment supply that meet statutory and technical requirements. He is also actively involved in various Enterprise Singapore's Technical Committee such as the Technical Committee on Building Maintenance and Management, and the Technical Committee on Building Facilities and Services. David is currently the Vice President of the Fire Safety Managers' Association (Singapore) and Vice Chairman of the Building Products & Construction Material (BPCM) Industry Group in the Singapore Manufacturers' Federation.

## Registration Form

### IES Preparation Course for PPE Examination Part 2 - Mechanical Engineering - Fire Safety Systems 2<sup>nd</sup> Run

Date : **24 Feb 2021 (Wed), 25 Feb 2021(Thur) & 2 Mar 2021(Tues)**

Time : 9am to 6.15pm

CPD Programme: 24 CET Hours – To Be Confirmed

Venue : IES Academy@e2i, Devan Nair Institute for Employment and Employability  
80 Jurong East Street 21 #04-10 Singapore 609607

Fees \* : **\$898.80Nett (IES Members)** **\$1123.50Nett (Non-Members)**

Please register online/mail/fax the completed **form by 15 February 2021 Before 3pm** to:

Karen Phua

IES Academy@e2i, Devan Nair Institute for Employment and Employability,  
80 Jurong East Street 21, #04-10 S(609607)  
(Tel) 6463 9211 Email: karen@iesnet.org.sg

#### **Participant Details**

Name : \_\_\_\_\_ NRIC : \_\_\_\_\_

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

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

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

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

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

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 : \_\_\_\_\_ Fax: \_\_\_\_\_

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

#### **Payment Details**

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

\* **All Fees are inclusive of 7% GST**

\*\* **Cheque should be made payable to: 'Engineers Singapore 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: \_\_\_\_\_

## **TERMS & CONDITIONS**

### **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 1 week prior to event commencement date or earlier. Cheques should be crossed 'A/C payee only' and made payable to '**Engineers Singapore 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 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.

**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 visit [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 [here](#).

### **Enquiries**

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