

IES Preparation Course for PPE Examination Part 2 - Mechanical Engineering - Fire Safety Systems & Technology 1st Run



Date: 3 to 6 Sep 2024 (Tuesday to Friday)

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: PDU – To Be Confirmed

Fees * : \$1220.80Nett (IES Members)

\$1526.00Nett (Non-Members)

UTAP Funding - In Application, Subject to Approval
This course is NOT SFC Supported

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)
- Fire Science & Principles of Fire Safety Design

Module 2

- Fire Code 2023, Chapter 1: General, Terminology & Definitions
- Fire Code 2023, Chapter 2: Means of Escape, Occupancy Load, Exit Capacity
- Fire Code 2023, Chapter 3: Structural Fire Precautions
- Related SCDF Circulars, Learning Points from RI-practice

Module 3

- Fire Code 2023, Chapter 4: Site Planning & External Firefighting Provisions
- Fire Code 2023, Chapter 5: Electrical Power Supplies
- Fire Code 2023, Chapter 6: Firefighting Systems
- Sample Exam Question: Sprinkler System

Module 4

- Salient Points of SS 575, SS 578, CP 52
- Related SCDF Circulars, Learning Points from RI-practice

Module 5

- Fire Code 2023, Chapter 7: Mechanical Ventilation & Smoke Control Systems
- Salient Points of NFPA 2001

Module 6

- Fire Code 2023, Chapter 8: Emergency Lighting & Voice Communication Systems
- Fire Code 2023, Chapter 9: Additional Requirements for Each Purpose Group
- Salient points of SS 608, SS 626
- Related SCDF Circulars, Learning Points from RI-practice

Module 7

- Salient Points of SS 546, SS 645
- Related SCDF Circulars, Learning Points from RI-practice

Module 8

- 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 532, SS 550, SS 553
- 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 Safety & Quality Standards Committee (SQSC) and Technical Committee on Chemicals & Processes. 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 Director for the NUS 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.

Mr. CHIAW Fund Shern



As a certified System Designer, Installation, Commissioning Engineer by leading international System Manufactures, Fund Shern comes with more than 30 years of technical experience in the fire protection industry. He was involved in the Clean Gas Fire Extinguishing System industry since the early 1980s. He has a Diploma in Building Services and is currently leading a team of engineers, who have successfully completed more than 1000 installations, both locally and overseas, covering installations of fire clean-agent fire protection for Datacenters and Pharmaceutical Plants. Fund Shern is the current Honorary Secretary of the Fire Protection Association of Singapore (FPAS).

Registration Form

IES Preparation Course for PPE Examination Part 2 - Mechanical Engineering - Fire Safety Systems & Technology 1st Run

**** UTAP - In Application, Subject to Approval****

**** This course is NOT SkillsFuture (SFC) Funded**

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Time : 9am to 6.15pm
CPD Programme : PDU - To Be Confirmed
Venue : IES Academy@e2i, Devan Nair Institute for Employment and Employability
80 Jurong East Street 21 #04-10 Singapore 609607

Fees * : **\$1220.80Nett (IES Members) \$1526.00Nett (Non-Members)**

Please register online/mail/fax the completed **form by 27 August 2024 Before 3pm** to:
Karen Phua
IES Academy@e2i, Devan Nair Institute for Employment and Employability,
80 Jurong East Street 21, #04-10 Singapore 609607
(Tel) 6463 9211 Email: karen@iesnet.org.sg

Participant Details

Name : _____ NRIC : _____
Company : _____ Designation: _____
Address : _____
Postal Code : _____ Gender : Male / Female
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 : _____ Fax: _____
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 
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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 if seats are filled. Course fee to be made via AXS, ATM, Paynow or Bank/Internet Transfers.

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) to choose from the courses available on the SkillsFuture Credit course directory.”

Please visit [HERE](#) for more information on SFC & UTAP claim.

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.

Please visit [HERE](#) for more information on 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.