The Institution of Engineers, Malaysia

PHYSICAL ONE DAY TRAINING ON

INTRODUCTION TO HFE IN OIL & GAS

BEM APPROVED CPD: 6 REF NO: IEM25/HQ/404/T

ORGANISED BY: OIL, GAS AND MINING TECHNICAL DIVISION, IEM

Date : 4 October 2025 (Saturday)
Time : 9.00 am - 5.00 pm
Venue : Wisma IEM, PJ
Speakers: Ir. Danaraj Chandrasegaran
Ts. Piryengkasai Gajendran

REGISTERED HRD CORP TRAINING PROVIDER

HRDCORP CLAIMABLE • HRDCORP CLAIMABLE • HRDCORP CLAIMABLE • HRDCORP CLAIMABLE

HRD Corp Serial No:
Applying

Approved Duration:
Applying

REGISTRATION FEE'S (subject to 8% SST)		
	ONLINE FEE (NON HRDF Claimable) (Log-in for registration & payment: www.myiem.org.my/member/login.aspx)	**NORMAL FEE (HRDF Claimable)** (By Email : Payment by cash, credit card, Quotation & Invoice)
IEM Student Members	180.00	230.00
IEM Graduate Members	300.00	350.00
IEM Corporate Members	450.00	500.00
Non-IEM Members	900.00	950.00

SYNOPSIS

Facility design in the oil and gas industry often emphasizes process requirements, with limited consideration for operational needs. This one-day course introduces the operational perspective in the design of plant and building facilities, focusing on how people interact with systems, equipment, and their environment. It highlights the importance of integrating Human Factors Engineering (HFE) early in the design process to improve usability, safety, and efficiency.

Participants will explore how operational aspects such as material handling, human-machine interfaces, and workforce management influence facility performance. The course also covers current industry practices, regulatory expectations, and recent developments in operational engineering. Practical tools and methods used in human factors and operational studies will be introduced to support better design decisions and reduce the need for costly modifications later in the facility lifecycle.

A key theme is the alignment between operational and process goals to achieve safe, reliable, and efficient facilities. Gaps between design intent and operational realities can lead to inefficiencies, increased risks, and lost-time injuries—issues that persist throughout the facility's life. With growing industry emphasis on low manning, operational resilience, and safety culture, a systematic and human-centered approach during the early design phase is essential.

This course is designed for engineers, designers, and project professionals involved in facility development. Through interactive discussions and group activities, participants will gain practical insights and skills to enhance engineering delivery and improve human experience in facility operations.

LEARNING OUTCOMES

At the end of the course, participants will:

- Acquire essential human factors in operation know-how
- Able to lead successful early engineering phase – integrating end-user requirements
- Learn tools that will help you manage design engineers and end-user needs
- Managing relationship dynamics between your client / end-user and organization
- Developing framework for better design usability

TENTATIVE COURSE SCHEDULE AND OUTLINE

08:30 – 09:00	Registration
09:00 – 09:15	Introduction
09:15 – 10:00	Business Case for Cohesive Design
10:00 – 10:45	Operational & Maintenance Expertise Critical to Buildings and Facilities
10:45 – 11:00	**Tea Break**
11:00 – 12:15	Introduction to Human Factors Engineering (HFE) Concepts
12:15 – 13:00	Work Group 1
13:00 – 14:15	**Lunch**
14:15 – 15:45	• Challenges Facing Engineers and Designers • Systematic Approach and Tools for Engineers in Developing Cohesive Design
15:45 – 16:00	**Tea Break**
16:00 – 16:45	Work Group 2
16:45 – 17:00	Q & A / Feedback / Summary

Cancellation Policy

No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with 7 days prior notification and substitute will be charged according to membership status.

Personal Data Protection Act

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at http://www.myiem.org.my and I agree to IEM's use and processing of my personal data as set out in the said notice.

BIODATA OF SPEAKER 1

Danaraj Chandrasegaran M.Eng P.Eng IntPE (MY) CEng CErgHF (UK), is a Chartered Engineer with an honors degree in Mechanical Engineering from the University of Technology Malaysia and a Master of Engineering degree from the University of Malaya. Additionally, he currently serves as a committee member with The Institution of Engineers Malaysia.

Throughout his career as a Mechanical Engineer, Danaraj has amassed diverse experience encompassing front-line project execution, technical roles, training, and management functions. His expertise spans various industries, including building construction, marine, mining, and energy. Notable projects in his portfolio include the Shell Malikai TLP and the Barzan Offshore Project, where he demonstrated his ability to collaborate effectively with vendors and subcontractors, ensuring successful project delivery.

BIODATA OF SPEAKER 2

Piryengkasai Gajendran TechCIEHF P. Tech is a Human Factors Consultant holding a Chemical Engineering degree from Universiti Teknologi Petronas. With a solid engineering background, she has cultivated extensive expertise in enhancing user roles and interfaces within complex systems, particularly in the oil and gas sector. With a wealth of experience, Piryengkasai has been actively involved in performing analyses and integration works across all stages of project life cycles. From front-end engineering to detailed design and installation, she has played a pivotal role in ensuring the effectiveness and efficiency of various projects.

Notably, Piryengkasai has made significant contributions to major projects such as the Woodside Scarborough FPU and INPEX Ichthys BCM Projects, demonstrating her ability to handle large-scale initiatives with precision and expertise. Her experience spans across projects in the America, Middle East, Southeast Asia, and Australia, giving her a broad perspective on regional operational practices and design standards.

REGISTRATION FORM

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4 OCTOBER 2025 (SATURDAY) CLOSING DATE: 26 SEPTEMBER 2025

Email : ezzaty@iem.org.my

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NAME	I/C No	MEMBERSHIP NO. / GRADE	FEES (RM)
		Sub Total:	
		SST Added 8% :	
		Total Amount Payable :	

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Email :_____