The Institution of Engineers, Malaysia

Organised by:
Seniors Special Interest Group (SSIG), IEM

Physical One-Day Seminar on Design, Develop & Certify: An Introduction to Automotive Product Development, Homologation, Regulation and VTA

28 July 2026, Thursday
9.00 am - 5.30 pm

BEM Approved CPD: 7.0
CPD Ref No.: IEM26/HQ/230/S

CSETD & TUSTD Lecture Room,
2nd Floor, Wisma IEM

1) Ir. Ts. Sukhairul Nizam Abdul Razak
2) Mr. Yusri Napiah

Register Now!

Closing Date : 21 July 2026

REGISTRATION FEE'S (subject to 8% SST)		
	ONLINE (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, bank-in, Quotation & Invoice)
IEM Student Members	180.00	230.00
IEM Graduate Members	300.00	350.00
IEM Corporate Members	400.00	500.00
Non-IEM Members (Non of the Above)	800.00	1000.00

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SPEAKERS PROFILE

Ir. Ts. Sukhairul Nizam Bin Abdul Razak brings over 31 years of hands-on automotive industry experience spanning engineering design, manufacturing, homologation, and regulatory compliance.

He began his career at PROTON in 1995 as a Body Design Engineer within R&D, where he was directly involved in automotive product development, including component design, anti-corrosion and painting development, aerodynamic development, and crash test development for Malaysia's national car company. Over nearly 18 years at PROTON Edar, he held multiple key positions—including Manager of Warranty Operations, Manager of Equipment, Tools & Calibration, and Head of Division Office—giving him deep insight into product quality, safety regulations, and post market compliance.

His practical exposure to homologation and regulatory affairs is reinforced by his experience managing product recall operations and ensuring adherence to national and international vehicle standards. Later, as part of a Daimler Group project with Accenture Malaysia, he further strengthened his understanding of global automotive regulatory frameworks.

Ir. Ts. Sukhairul Nizam holds a Bachelor of Aeronautical Engineering from UTM Skudai and an MBA from Charles Sturt University, Australia. He is registered as an ASEAN Chartered Professional Engineer (ACPE) , a Professional Mechanical Engineer with Practicing Certificate (PEPC) under the Board of Engineers Malaysia (BEM), and a Professional Technologist (MBOT) . He currently serves as an assessor for EAD (ETAC & EAC) under BEM and for TTAC under MBOT.

He has also served as a Senior Lecturer at City University Malaysia and Programme Coordinator First City University College, where he taught mechanical engineering subjects for Master, Degree and Diploma courses. He is currently a Director of Enviroklar Tech Sdn Bhd.

Through his direct experience in automotive design, development, crash testing, warranty operations, product recalls, and regulatory compliance, Ir. Ts. Sukhairul Nizam is ideally positioned to guide participants through the complete journey of Designing, Developing, and Certifying a vehicle—including homologation, regulations, and Vehicle Type Approval (VTA).

Mr. Yusri Napiah is a senior professional with over 32 years of experience across the automotive, semiconductor, and consumer products industries, including 20 years in managerial roles. Possesses extensive cross-functional expertise in product planning, procurement, logistics, business development, and corporate affairs, developed through diverse leadership responsibilities. Since 2011, specializing in business development, marketing, sales, and corporate affairs within the automotive testing and certification sector, supporting industry compliance and market expansion. Also a Certified Lead Auditor for Management Systems and UNECE Conformity of Production (CoP) audits, with strong experience in regulatory compliance and automotive certification frameworks.

SYNOPSIS

The Automotive industry is evolving rapidly, driven by new technologies, stringent safety requirements, and ever-changing global regulations. However, many engineers and newcomers to the field understand product design and development or regulatory compliance separately - but rarely how both must work together seamlessly to bring a vehicle successfully to market.

This one-day seminar bridges the gap.

"Design, Develop & Certify" provides a practical, end-to-end introduction to the complete automotive product lifecycle - from initial concept and engineering design, through prototyping and testing, to homologation, regulatory compliance and finally Vehicle Type Approval (VTA).

Participants will learn:

- The key stages of automotive product development and why design decisions directly impact homologation success.
- The fundamentals of automotive regulations (safety, emissions, lighting, braking, cybersecurity, etc.) and which regulatory bodies govern different global markets (UNECE, ASEAN NCAP, JPJ, DOT, etc.).
- What homologation really means and how it differs from certification and type approval.
- A step-by-step walkthrough of Vehicle Type Approval (VTA) process, including technical services, test reports, and Certificate of Conformity (COC).
- How to avoid common costly figures by integrating regulatory thinking early in the design phase.

Through a real-world case study and interactive Q&A, participants will see how a new vehicle model moves from design, development, homologation and VTA, and understand the critical role of homologation engineer in modern automotive programs.

WHO SHOULD ATTEND?

This seminar will benefit:

- Engineering students and fresh graduates.
- Young engineers entering the automotive sector.
- Design, testing, or quality engineers seeking regulatory knowledge.
- Professionals in product development, project management, or compliance roles

LEARNING OBJECTIVES

By the end of the workshop, participants will be able to:

- Describe the automotive product development lifecycle and its key milestones.
- Explain the purpose of homologation, regulations and VTA.
- Identify major global regulatory frameworks and their requirements.
- Outline the VTA process from testing to certification.
- Apply regulatory thinking early in the design phase to reduce compliance risks.

PROGRAMME

Time	Programm (Day 1)
8.30 am	Registration & Welcome Beakfast
9:00 am - 10.30am	Chapter 1: Automotive Product Development Lifecycle • Stages of product development (Concept → Design → Prototype → Testing → Production) • Roles of cross-functional teams (Design, Engineering, QA, Regulatory) – Gateways and milestones in automotive development
10:30 am - 10:45 am	Morning Tea Break
10:45 am - 12:30 pm	Chapter 2: Engineering Design & Development • CAD, CAE, and virtual validation – Design for manufacturing (DFM) and assembly (DFA) – Prototyping and testing loops Chapter 3: Introduction to Automotive Homologation • What is homologation? Why is it required? • Key global markets (UNECE, ASEAN, India, China, etc.) • Homologation vs. certification vs. type approval
12:30 pm - 1:30 pm	Lunch
1:30pm - 2:45 pm	Chapter 4: Automotive Regulation & Standards • Key regulations (braking, lighting, emissions, safety, cybersecurity) • Regulatory bodies (UN WP.29, ASEAN NCAP, JPJ, DOT, etc.) • Understanding ECE, FMVSS, and local regulations
2:45 pm - 3:45 pm	Chapter 5: Vehicle Type Approval (VTA) • VTA process step-by-step • Technical services, test reports, and COC (Certificate of Conformity) • Differences between component, system, and full vehicle approval
3:45 pm - 4:00 pm	Afternoon Tea Break
4:00 pm - 4:45 pm	Chapter 6: Case Study & Integration • Real-world example: Taking a new vehicle model from design → development → homologation → VTA • Common failures and how to avoid them • Role of a Homologation Engineer
4:45 pm - 5:15 pm	Q&A + Group Discussion Open floor + short quiz or scenario based questions
5:15 pm - 5:30 pm	Wrap-up & Certificate Distribution Summary, key takeaways, closing

*** IEM reserves the right to postpone, reschedule, allocate or cancel the Seminar**

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.

"IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion'.
For intending participants who choose to 'walk in without prior registration',
IEM SHALL NOT be responsible for any direct or consequential losses".

REGISTRATION FORM

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Email: suriani@iem.org.my

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

PAYMENT DETAILS :

☐ Cash RM_____

☐ Cheque no._____for the amount of RM_____(non-refundable) .

FULL PAYMENT must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. The Registration Fee includes lecture notes, refreshment and lunch.

For **ONLINE REGISTRATIONS,** please note that payment **MUST** be made **BEFORE the closing date.** If payment is not received within the stipulated time, the registration fee will be reverted to the normal registration fee.

ContactPerson:_____Designation:_____

Name of Organization:_____

_____

Telephone No. : _____(0)

_____(HP)

Email:_____

_____ _____

Signature & Stamp Date