The Institution of Engineers, Malaysia

IEM MECHANICAL & ELECTRICAL FORUM

KL CONVENTION CENTER
23 - 25 MAY 2016

The mechanical and electrical (M&E) engineering fields are ever evolving. There are many changes in the legislation, practices and contracts that has change how the engineer approaches the design and specifications. And in today' s world of multi-tasking and being technology savvy, M&E engineers are expected to have broad knowledge in the area of safety and risk management. To be a leading-edge engineer, engineers would need to know how a sub-system builds into an infrastructure and be beneficial to the community.

Day 1 – 23 May	Day 2 – 24 May	Day 3 – 25 May

STREAM 1

Green Energy & Sustainable
- Conservation of Water - Apply Basic Engineering Principles Green Tech
- Why Green Energy & Sustainability
- Hdrocarbon as greener and more efficient refrigerants
- Renewable Energy in the Context of Sustainable Development
- Energy Efficiency : Catalyst for Green?

Power
- Renewable Energy Policy & latest development of RE in Malaysia
- Overview of MS ISO 50001 Energy Management System
- Latest electrical installations requirement
- Electrical Safety Legislation Update
- Why Earn a Professional Certification in Project Management?

REVAC
- Commissioning Process for Smoke Control System
- Healthcare Ventilation System Requirements and ChallengesEmphasising
- Controls In Green Buildings (Air-conditioning Systems)
- IOT of REVAC Systems

STREAM 2

Development in Code and Standards
- OSC 3.0
- M&E concern with Strata or mixed development
- New UBBL
- IEM M&E form of contract
- Earthquake Restrains for Mechanical Systems

M&E Infrastructure
- Railway control centre ergonomic M&E
- Greenfield Power Plant Project
- Regulatory Compliance to Water Services Industry Act 2006 (WSIA) for Water and Sewage Works
- Water Use Reduction in Green Buildings
- PM of Major Infra Works

Safety and Risk Control
- Combustible Dust Explosion Risk Management
- Lift & Escalator Code in Malaysia
- Very Early Aspirating Smoke Detection Technology and Solutions& New approach to Gas Detection
- CLASS and GHS for M&E

IEM MECHANICAL & ELECTRICAL FORUM

DATE	TIME	THEME	STREAM 1	THEME	STREAM 2
23 May 2016 (Monday)	10:30 am – 11:30 am	**GREEN ENEGY & SUSTAINABLE BEM Approved CPD/PDP Hours: 4 Ref No: IEM16/HQ/184/F**	Conservation of Water - Apply Basic Engineering Principles ***(Ir. Gary Lim)***	**DEVELOPMENT IN CODE & STANDARDS BEM Approved CPD/PDP Hours: 5 Ref No: IEM16/HQ/185/F**	M&E Concern with Strata or Mixed Development ***(Ir. Lum Youk Lee)***
	11:30 am – 12:30 am		Why Green Energy & Sustainability ***(Mr. James Chua)***		OSC 3.0 of Building Permits ***(Ir. Yim Hon Wa)***
	12:30 pm – 2.00 pm		**BREAK**		**BREAK**
	2:00 pm – 3:00 pm		Hydrocarbom as Greener and More Efficient Refrigerants ***(Mr. Ferdinand Ng)***		New UBBL ***(Ir. Thin Choon Chai)***
	3:00 pm – 4:00 pm		Green Technology & Sustainable Development ***(Ir. Dr. Aidil Chee Tahir)***		Earthquake restrains for Mechanical Systems ***(Ir. Tan Yiing Yee)***
	4:00 pm – 5:00 pm		Energy Efficiency : Catalyst for Green? ***(Ir. Kok Yen Kwan)***		IEM Form of Contracts for Civil and Mechanical & Electrical Engineering Works ***(Ir. Oon Chee Kheng)***
24 May 2016 (Tuesday)	10:30 am – 11:30 am	**POWER BEM Approved CPD/PDP Hours: 5 Ref No: IEM16/HQ/186/F**	Renewable Energy Policy & Latest Development of RE in M'sia ***(Dato' Dr. Ali Askar)***	**M&E INFRASTRUCTURE BEM Approved CPD/PDP Hours: 5 Ref No: IEM16/HQ/187/F**	Railway Control Centre Ergonomic M&E ***(Ir. Syed Neguib)***
	11:30 am – 12:30 pm		Overview of MS ISO 50001 Energy Management System - Requirements with Guidance for Use ***(Ir. Francis)***		Greenfield Power Plant Project ***(Ir. Fam Yew Hin)***
	12:30 am – 2.00 pm		**BREAK**		**BREAK**
	2:00 pm – 3:00 pm		Latest Updates on MS1979:2016- Electrical Installations of Buildings – Code of Practice ***(Ir. Yau Chau Fong)***		Regulatory Compliance to Water Services Industry Act 2006 (WSIA) for Water and Sewage Works ***(Mr. Chow Kin Liung)***
	3:00 pm – 4:00 pm		Electrical Safety Legislation Update- Amendment of Electricity Supply Act 1990 with Respect to Improving Safety Practices ***(Ir. Hj. Nur Ali Bin Omar)***		Water Use Reduction in Green Buildings ***(Mr. Gregers Reimann)***
	4:00 pm –5:00 pm		"Why Earn a Professional Certification in Project Management?" ***(Ir. Frankie Chong)***		PM of Major Infra Works ***(Ir. Dr. Cheong Thiam Fook)***
25 May 2016 Wednesday)	10:30 am – 11:30 am	**REVAC BEM Approved CPD/PDP Hours: 4 Ref No: IEM16/HQ/188/F**	Commissioning Process for Smoke ***(Ir. Soong Peng Soon)***	**SAFETY & RISK CONTROL BEM Approved CPD/PDP Hours: 3 Ref No: IEM16/HQ/189/F**	Combustible Dust Explosion Risk Management ***(Mr. Felipe Ong)***
	11:30 am – 12:30 am		IOT of REVAC Systems ***(Ir. Dr. Tan Chee Fai)***		Lift & Escalator Code in M'sia ***(Mr. Raghib, Grad IEM)***
	12:30 pm – 1:30 pm		**BREAK**		**BREAK**
	1:30 pm – 2:30 pm		Healthcare Ventilation System Requirements & Challenges ***(Ir. Al-Khairi)***		Very Early Aspirating Smoke Detection Technology and Solutions& New approach to Gas Detection ***(Mr. Derrick Wong)***
	2:30 pm – 3:30 pm		Emphasising Controls In Green Buildings (Air-conditioning Systems) ***(Ir. Daniel Lim Kim Chuan)***		CLASS & GHS for M&E EngineersCLASS ***(Ir. Kim Kek Seong)***

DATE	TIME	STREAM 2
23 May 2016 (Monday)	12:30 p.m - 1:30 p.m	COPE in Code Assessment and Risk Management ***(Ir. Loo Chee Kin)*** **BEM Approved CPD/PDP Hours: 2** **Ref No: IEM16/HQ/190/T**
24 May 2016 (Tuesday)	12:30 p.m - 1:30 p.m	Flood Pumping Stations ***(Ir. Puvanesan)*** **BEM Approved CPD/PDP Hours: 2** **Ref No: IEM16/HQ/191/T**

***Attending on the lunch time forum is complimentary to participants who have signed up for any day or stream**

IEM MECHANICAL & ELECTRICAL FORUM

23 MAY 2016 (MONDAY)
STREAM 2
DEVELOPMENT IN CODE& STANDARDS
BEM Approved CPD/PDP Hours: 5
Ref No: IEM16/HQ/185/F

10. 00 am – 10.30 am	Registration
10. 30 am – 11.30 am  **Ir. Lum Youk Lee**	**Topic : M&E Concern with Strata or Mixed development** M&E consideration has become very complexed and demanding for modern developments, mainly due to the high expectations from stakeholders and property owners, especially developments that involves large number of public users, such as convention centres or shopping malls. Mixed developments has become a norm in many city mega projects, where it involves very complexed mix of building types catering to different stakeholder's need. to further complicate the M&E design and operation of mixed development, would be to take into considerations developments that involves multiple stratified units where engineers has to factor in land and strata management as major part of the design elements. this paper will address some of the concerns and case studies of M&E systems in mixed strata developments.
11.30 am – 12.30 pm  **Ir. Yim Hon Wa**	**Topic : OSC 3.0 of Building Permits** The Seminar on OSC 3.0 dealing with improvement of the building permits application process over OSC 2.0 and the speaker will elaborate these process improvements and the engineer's role; its duties and responsibilities in the issuance of Certificate of Compliance and Completion (CCC). The speaker will also cover the relevant Acts governing the CCC which replaces Certificate of Fitness Occupation CFO). He will explain how and when CCC can be issued. There are twenty one forms to be filled (G1 to G21). Practical examples of common errors in the form filling will be demonstrated and explained. Active interaction from the floor during question time will be expected.
12.30 pm – 2.00 pm	Break
2.00 pm – 3.00 pm  **Ir. Thin Choon Chai**	**Topic : New UBBL** The new Uniform Building By-Laws (UBBL) was passed and approved by the Cabinet in 2012. The Ministry of Housing and Local government also distributed the amended UBBL 1984 to all the states and local authorities for adoption into their respective state uniform building by-laws. Currently only the states of Selangor and Terengganu have incorporated this amended UBBL 1984 into their state Uniform Building By-Laws 2012. This presentation looks into the new UBBL 1984 and the various amendments made compared to the previous version.
3.00 pm – 4.00 pm **Ir. Tan Yiing Yee**	**Topic : Earthquake Restrains for Mechanical Systems**
4.00 pm – 5.00 pm  **Ir. Oon Chee Kheng**	**Topic : IEM Form of Contracts for Civil and Mechanical & Electrical Engineering Works** IEM Conditions of Contract for Works Mainly of Civil Engineering Construction was first published in May 1989. It was modelled very much on PWD 203 Form of Contract and was much used in private sector-financed civil engineering construction works. It has been a little more than two decades since it was published. The Institution felt that it was time that the Contract be given a complete overhaul. This task has been entrusted to the Sub-Committee on Engineering Contracts. IEM Form of Contract for Civil Engineering Works (as it has now been renamed), or IEM.CE 2011 in short, is a complete departure from its predecessor. An opportunity has been taken to take into consideration new developments. The drafting has also taken a new approach. The launching of IEM.CE 2011 has also given an opportunity for the Institution to brief the potential users on this new form. Other IEM Forms of Contract will be launched at a later stage.

IEM MECHANICAL & ELECTRICAL FORUM

24 MAY 2016 (TUESDAY)
STREAM 2
M&E INFRASTRUCTURE
BEM Approved CPD/PDP Hours: 5
Ref No: IEM16/HQ/187/F

10. 00 am – 10.30 am	Registration
10. 30 am – 11.30 am  **Ir. Syed Neguib Bin Syed Mohamed**	**Topic : Railway Control Centre Ergonomic M&E** The Malaysian Government is expected to spend up to RM 160 Billion by year 2020 in rail transport projects to reduce traffic congestion, increase fuel saving and reducing carbon emission . This talk aims to give an introduction to the essential parts of a railway system and focuses on the nerve center of the system which is the Control Centre, providing an overview on the functionality and how Ergonomic Studies and M&E Design plays a critical role in the efficiency and safety of the railway system.
11.30 am – 12.30 pm  **Ir. Fam Yew Hin**	**Topic : Greenfield Power Plant Project** Depending on the availability of various natural resources, electricity can be generated via coal, oil, natural gas, hydro, nuclear, wind and geothermal. Today, with the limited fuel supply and increasing environmental concerns, most policy makers and developers have also placed great emphasis on green energy technology. The objective of this session is to introduce to the audience the outlook of various power generation technologies, and the factors to be considered in developing a new power plant or acquisition of an operating power plant.
12.30 pm – 2.00 pm	Break
2.00 pm – 3.00 pm  **Mr. Chow Kin Liung**	**Topic : Regulating Compliance to Water Services Industry Act 2006 (WSIA) for Water and Sewerage Works** Water Services Industry Act 2006 (WSIA) was enforced in 2008 whereas the Suruhanjaya Perkhidmatan Air Negara Act 2006 (SPAN Act) which establishes the Commission (SPAN) was enforced in 2007. Both acts empower SPAN to carry out holistic regulation of water services industry for water supply services and sewerage services throughout Peninsular Malaysia and Federal Territory of Labuan. The aim is to provide uniform regulating regime and to improve efficiency and effectiveness of water and sewerage services sectors. The objective of this topic is to present an overview on the functions of SPAN, in particular the regulating compliance to the Act for M&E engineers engaged in the water and sewerage works. It will highlight various necessary compliances by the M & E engineers for the design and execution of water and sewerage projects.
3.00 pm – 4.00 pm  **Mr. Gregers Reimann**	**Topic : Water Use Reduction in Green Buildings** 1. Importance of water conservation - increased frequency and severity of hot dry climate 2. A look as water consumption per capita in the region 3. Comparative review of water consumption of 2 JKR offices (Blok F vs Blok G). Non-Green vs GBI Platinum 4. Water conservation / reuse strategies at Menara Kerja Raya - we'll run through the rainwater harvesting system, greywater recycling system and water usage monitoring & leakage warning system 5. Breakdown of water usage - how much is the RWH & GWR contributing to total water usage of the building 6. Lessons learnt - focusing on GWR & RWH
4.00 pm – 5.00 pm  **Ir. Dr. Cheong Thiam Fook**	**Topic : PM of Major Infra Works**

IEM MECHANICAL & ELECTRICAL FORUM

25 MAY 2016 (WEDNESDAY)
STREAM 2
SAFETY & RISK CONTROL
BEM Approved CPD/PDP Hours: 3
Ref No: IEM16/HQ/189/F

10. 00 am – 10.30 am	Registration
10. 30 am – 11.30 am  **Mr. Felipe Ong**	**Topic : Combustible Dust Explosion Risk Management** This talk cover very important aspects on creating awareness of such a risks, identifying type of hazardous materials, type of processing equipment at risk, type of Industries which require Dust explosion Risk Management, Hazards evaluation & testing including: Kst - Dust Explosibility Index; Pmax - Max pressure arising of deflagration; identifying all the possible sources of ignition that is present & how to control & mitigate them, and discuss what the available prevention methods: such as inertion; static controls; containment; Sparks & burning embers detection; CO monitoring, etc...etc... Available protection method such as venting, Suppression, Building Vents, Mechanical & Chemical Isolation. International Codes & Standards covering NFPA (USA), ATEX (EU). Some of the recent and significant dust explosion case studies will be shared as well along with valuable lesson learnt!
11.30 am – 12.30 pm  **Mr. Raghib Fasih Azmi,** **Grad IEM**	**Topic : Lift & Escalator Code in Malaysia** The Malaysian Lift Regulations which is based on BS2655 was established under the Factory and Machineries Act 1967. The regulations came into force on 1st February 1970. The Lift Regulations is for Passenger and Goods lifts while Escalators are managed under special provision. Since the establishment of the Lift Regulations, the BS which it is based on has undergone many revisions. However, the Malaysian Lift Regulations has remained the same. Jabatan Keselamatan dan Kesihatan Pekerjaan (JKKP) is the regulatory authority which enforces the Lift Regulations and has issued directives to incorporate some important requirements that are in the latest standards but are not in the Lift Regulations. The Working Group on Lift and Escalator (WGLE) at SIRIM has published some Malaysian Standards by adapting EN in an effort to bring the Malaysian VTS industry up to par with global standars. Currently the WGLE is working on adapting the latest EN.
12.30 pm – 1.30 pm	Break
1.30 pm – 2.30 pm **Mr. Derrick Wong**	**Topic : Very Early Aspirating Smoke Detection Technology and Solutions& New approach to Gas Detection**
2.30 pm – 3.30 pm  **Ir. Kim Kek Seong**	**Topic : CLASS & GHS for M&E Engineers CLASS**

IEM MECHANICAL & ELECTRICAL FORUM

FORUM SPECIAL FEATURE BY IEM
23 MAY 2016 (MONDAY)
STREAM 2
BEM Approved CPD/PDP Hours: 2
Ref No: IEM16/HO/190/T

12.30 - 1.30 pm

Ir. Loo Chee Kin

Topic : COPE in Code Assessment and Risk Management

COPE is an acronym that stands for the four characteristics an insurance underwriter reviews when evaluating the risk presented by a building; Construction, Occupancy, Protection and Exposure. Although the COPE approach has traditionally been used to evaluate the risk presented by existing buildings, this approach can also be used to manage the risk presented by a project.

This session will illustrate some of the COPE ideas. The speaker will provide pointers on available resources to engineers, as some of the resources are readily available online.

As engineers, it is necessary to be concern about any possible risks before and during the project period as well as the facility's concerns while in operational stage and till the facility is finally decommissioned. In that before stage, it should include code assessment and risk management in the project conceptual and site selection too.

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IEM MECHANICAL & ELECTRICAL FORUM

FORUM SPECIAL FEATURE BY IEM
24 MAY 2016 (TUESDAY)
STREAM 2
BEM Approved CPD/PDP Hours: 2
Ref No: IEM16/HQ/191/T

12.30 - 1.30 pm

Ir. Puvanesan Mariappan

Topic : Flood Pumping Stations

Flooding is the most common cause of disaster in the world and by far the fastest growing. Flooding occurs mainly due to overflow of the river, backwater effect due to tidal intrusion from the sea, morphological issues and inadequate capacity of waterway, drainage system and any existing tributaries. Flood can be mitigated via construction of polder bund and pumping stations. Flood pumping stations will be established once the flood mitigation scheme design developed with detailed hydrological and hydraulic modelling. The establishment of excellent flood pumping station consists of flooding control, source and solution of flooding, the design of flood control pumping station, CFD and model testing and vortex and its prevention.

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	Category 1 IEM Member	Category 2 For Non-Member
Per Session	RM400.00	RM600.00
Per Stream	RM800.00	RM1200.00
Full Flex	RM900.00	RM1350.00

*GST not included

SPECIAL!!

1. Student will be entitled to 30% discount (upon authentication of student status)
2. Group discount will be entitled for groups of 3 or more delegates from same company – 10%
3. Early bird registration before 23 April 2016 will be entitled to 10% discount

Terms & Conditions:

- Meals are not provided
- For ONLINE REGISTRATIONS, only ONLINE PAYMENT is applicable [via Credit Card]
- Payment via CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN will be considered as NORMAL REGISTRATION
- For online registrations, please note that **payment MUST be made on registration.**
- **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 participants fail 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. Registration fee includes lecture notes, refreshment and lunches.
- The Organising Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid disappointment.

REGISTRATION

			Stream 1*			Stream 2*			
No	Name	IEM M'ship No	23 May	24 May	25 May	23 May	24 May	25 May	Fees (RM)
								Subtotal	
								GST 6%	
								Total Payable	

*Please tick to the appropriate day

Organisation/ Company:		
Address:		
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For Further details, please contact and/or fax this REGISTRATION FORM to:

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Who should attend:

- Mechanical and electrical (M&E) engineers.
- Building services engineers and those involved in green technology and renewable energy; power and electrical industries; or refrigeration, ventilation and air-conditioning.
- Facility management, engineers, consultants, designers, contract administrators and project managers interested in recent developments in Code and Standards.
- Planners, engineers, designers and project consultants involved in planning M&E infrastructure.
- Safety engineers and those responsible to implement safety and risk control measures.

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.

CANCELLATION POLICY

IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund less 30% if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with prior notification and substitute will be charged according to membership status.

Organised By: UBM

Hosted By: IEM The Institution of Engineers, Malaysia