#### Chairman

# **Engineering Education Technical Division**

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# BEM APPROVED CPD/PDP Hours: 5.5 hours Ref. No: IEM17/HQ/008/C



Organized by: Engineering Education Technical Division, IEM

# ONE DAY COURSE ON "DESIGN CONSIDERATIONS OF FIBRE OPTIC NETWORKS FOR ENGINEERS"

Bv

Assoc. Prof. Dr. Tan Ching Seong, CEng

16 MARCH 2017

9.00am - 5.30pm

Venue:
C&S and TUS LECTURE ROOM,
2ND FLOOR, WISMA IEM

# **REGISTRATION FEE (SUBJECT TO 6% GST)**

Member Type	Online Rate (RM)	Normal Rate (RM)
IEM Student Member	150.00	200.00
IEM Graduate Member + SEEM & CEM Members	350.00	400.00
IEM Corporate Member	500.00	550.00
Non IEM Member	700.00	750.00

# **GST** is implemented effective 1 April 2015

# **FEES COVER**

- Course notes
- Refreshment (1 lunch & 2 breaks)
- Certificate of attendance

#### **REGISTRATION:**

Name(s)		IEM M'ship No. / Grade	Fees (RM)
		SUB TOTAL	
		ADD GST @ 6%	
		TOTAL PAYABLE	
Company:			
Address:			
Mobile:	Tel(0):	Fax:	
E-mail:			
(Please write clearly as the "Confir	mation Notification	n" will be sent via email)	
Contact Person:	Designation:		
Signature	Date:		
Signature	D	acc	
	PAYMENT	DETAILS	
Cash RM			
Cheque no	for the am	ount of RM	

#### Terms & Conditions:

- 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

(non-refundable) and made payable to "" and crossed 'A/C Payee Only".

- 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 no- 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.

#### WHO SHOULD ATTEND?

Network engineers, M&E engineers, engineering contractors, property developers and consultants involved in designing fixed fibre and wireless telecommunications networks, including networks in single & multi-rise buildings.

# **SYNOPSIS**

This course is intended to impart the fundamental knowledge in Fibre optic design in high speed telecommunication network. Commonly known simply as the FTTH, it is the next generation of network standards, which is being widely implemented all over the world. This course shall provide the exposure to the participants on the importance of the technology, the fundamental of the optical fiber as the core, components and its network. At the end of the day, participants shall go through an understanding assessment before they are qualified for certification.

This seminar is targeted at all those involved in the design and construction of single and multi-rise buildings, and communication network, including, approving agencies, consultants, developers, contractors and designers. The topics will also highlight the improvements pertaining to telecommunications architecture of buildings wanting to adopt FTTH.

#### TENTATIVE PROGRAMME

Time	Event			
0900	Arrival of participants			
0930	Introduction to Optical Communications  Optical Fibre construction for various ITU-T compliant optical fibre and their key features Optical Fibre connectivity methods available in the market and their selection criteria Optical Fibre characteristics: The Do's and Don'ts when handling fibre Optical Fibre cleanliness: The No:1 enemy for FTTH networks			
1030	Break + Refreshment			
1100	Introduction to FTTH Components and Testing  Introduction to Common Optical Distribution Network Components in FTTH  FTTH Test & Measurement Equipment and how are they different from conventional ones  The importance of Insertion Loss & Optical Return Loss Testing  FTTH Testing Phases and its respective methodologies			
1230	Lunch			
1400	Broadband Infrastructure Building By-Laws & Standards  Technical Standards and Infrastructure Requirements for Fixed Network Infrastructure Minimum FTTH installation guidelines and standards (MTSFB 002:2009) Minimum FTTH associated international technical and safety specifications. International Electro-technical Commission (IEC) Standards Key functional requirements for a FTTH network			
1445	Fibre Optics System and Components  Current market product and requirement.  Best practices in design and installation.  Testing.  Maintenance and trouble shooting.			
1530	Break + Refreshment			
1600	Case study and design issues in building and infrastructures.			
1700	Test and Wrap up session.			

- \* Participants are advised to bring their course outline/file that they would like to implement team-based learning so that they can design and plan for an actual course during the workshop.
- \*\* Participants who had attended the workshop on "Effective implementation of SCL techniques for OBE, Part 1: Active Learning" are encouraged to bring their notes from the workshop.

#### BIODATA OF THE SPEAKER

Dr. Tan Ching Seong is an Associate Professor at Graduate Institute of Engineering, Multimedia University. He also currently serves as the Honorary Secretary of TEEAM and Vice Chairman of MyCIE. Dr Tan is active in consultancy and is a consultant to many companies including SenkoAdvanced Components, Finestar Ltd, etc.

He is a recipient of the J. William Fulbright Award 2012/2013.

Dr. Tan received his first degree in 1998 from the University of Malaya and obtained his PhD in Engineering in 2006 from NTU Singapore. Academically he has served as director, department head, research centre chair, and research team leader since 2005 in various academic and non-academic institutions. He is a senior member of IEEE, a member of the SPIE (International Society of Optical Engineering) and a Chartered Engineer (UK). He has co-authored an engineering text book, titled: Applied Engineering Failure Analaysia: Theory and Practice. He is also the author of over 25 peer reviewed journal papers and over 30 peer reviewed conference papers.

# 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.

#### PERSONAL DATA PROTECTION ACT

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