22 May 2018 | 9am - 5pm| WWW.SEAS.ORG.SG

Optimising Building IAQ Through Green HVAC System Design

Course Summary

Indoor Air Quality (IAQ) is one of the many factors that determine building functionality and economics. Good IAQ plays a vital role in creating a healthy and productive workplace. During this one-day course, the trainer will discuss the issues and problems of poor IAQ and how the problems can be mitigated through effective HVAC system design and practices and deployment of advanced air cleaning technologies.

Course Outline

The participants of this course will acquire the following skills:

- Understanding of various factors which impact IAQ
- Fundamental knowledge of building related illnesses, their causes and effects
- Adoption of a holistic integrated approach in designing of building systems to improve occupant health and well-being
- Development of creative HVAC system design skills to maximize IAQ and energy performance

7 SCEM PDU points awarded

SEAS
Sustainable Energy Association of Singapore

22 May 2018
9am - 5pm
Singapore Sustainability Academy
180 Kitchener Road Level 6 Sky Park, #06-10
City Square Mall Singapore 208539

Optimising Building IAQ Through Green HVAC System Design

Program Outline

Session 1: IAQ - Basic Concepts and Relevance to Building Functionality and Economics

- Economic value of good IAQ
- Collaborative integrated building design approach
- Indoor air pollutants and health effects
- Environmental contaminants: Organic compounds, Inorganic compounds, Particulate matter and Biological contaminants
- Sick building syndrome/Building related illnesses/Environmental sensitivity

Session 2: Effective HVAC System Design for Healthy Indoor Air

- Strategies to reduce "Environmental Footprint"
- Techniques to control indoor humidity and moisture
- Establishing proper pressure relationships with outdoor and between spaces
- Design of outdoor intakes and exhaust outlets
- IAQ Code of Practice SS 554:2016, Air-con Code of Practice S553:2016
- ASHRAE Standard 62.1-2007
- Strategies for effective ventilation, air filtration and air cleaning
- Strategies to counter infectious pandemics and bioterrorism
- Demand-Controlled ventilation
- Special HVAC design concepts: Displacement ventilation, Radiant cooling, Chilled beams, AHU with face and bypass damper, Dedicated outdoor air systems (DOAS)

Session 3: Air Cleaning Technologies

- Particulate filtration and gas-phase air cleaning
- Adsorption and chemisorption tehnologies
- Air filtration efficiency testing standards: ASHRAE Standard 52.1 and 52.2, IEST-RP CC001.4
- Minimum Efficiency Reporting Value (MERV) parameters
- Energetic Filtration Technologies: Active electric fields, Ionization, Ultraviolet germicidal irradiation, Catalytic activation and other Electron manipulation

Mr Lui Wing Sin

Mr. Lui Wing Sin is a Senior Consultant in PrimusTech Pte. Ltd., a company specialising in smart building and green IAQ technologies. Mr Lui holds a BE in Electrical Engineering from Monash University (Australia) and has worked for more than 35 years in the controls and building automation industry.

He has good knowledge of the issues and problems relating to IAQ as well as remediation strategies. He is a practitioner in the application of germicidal ultraviolet irradiation, electrostatic precipitation, photocatalytic oxidation and the use of natural plant-based non-chemical disinfection solutions.

Mr Lui has acted in the capacity of Energy and ESD Consultant for many buildings in Singapore and has been instrumental in helping many building owners win energy and environmental awards. He is currently a part-time lecturer in BCA Academy and Singapore Environmental Institute, a training and knowledge division of NEA.

Rates

SEAS Member:	3 participants and above
$ 380.00	$ 420.00
Non-Member:	SCEM Special Rates:
$ 480.00	$430.00

Fees are inclusive of GST
SEAS may cancel or reschedule a course at its discretion and will use reasonable efforts to notify delegates at least 5 working days in advance. In these circumstances, delegates will be offered an alternative date, an alternative location or a full refund of course fees paid. SEAS is not responsible for airline or accommodation costs incurred by delegate in the event a course is cancelled or re-scheduled.
Substitutions (name changes) are accepted at any time prior to the event without penalty, subject to the replacement delegate satisfying any necessary course pre-requisites.

Call us at +65 6338 8578 to enquire **Email: training@seas.org.sg**

Registration Form

☐ Yes! I would like to register for this programme ☐ I am unable to attend but please put me on your mailing list

Participant's Details

1 Name (Dr/Mr/Ms/Mrs) Designation
Hp Email
NRIC

Participant's Details

2 Name (Dr/Mr/Ms/Mrs) Designation
Hp Email
NRIC

Billing Information

Company Name Contact Name
Company Address Email
Tel