GreenRE Manager's Course 12th Intake (Petaling Jaya)

*** HRDF claimable**

*** BEM (15 CPD points – 3 parts); LAM (pending); GreenRE (15 CPD points – 3 parts)**

Course Date:
15th August 2017 (Part I)
16th August 2017 (Part II)
17th August 2017 (Part III)

Time
9.00am – 5.00 pm

Examination Date:
9th September 2017 (half-day)

Venue:
Wisma REHDA, No. 2C, Jalan SS 5D/6, Kelana Jaya, 47301 Petaling Jaya, Selangor.

* **Please refer registration form for course fees**

Course Objectives

This is to accord recognition to professionals who have the knowledge and ability to advise their development project team in designing sustainable buildings.

- To gain better understanding of GreenRE criteria and framework
- To facilitate towards an Integrated design which is compliance with GreenRE standards
- To conduct cost benefit analysis of options and to explore innovative solutions which would enhance scoring
- To coordinate the documentation process necessary for smooth processes of certification and implementation

Learning Outcomes

An in-depth understanding of GreenRE criteria for buildings including baseline, scores and certification process.

* Ability to implement practical strategies and solutions to minimize energy & water usage to improve indoor environmental quality and to reduce waste

* Familiarize with current sustainable best practices which are applicable to green buildings

* Ability to facilitate and manage buildings for GreenRE certification

Certification Requirements

Applicants for the **certified GreenRE Manager** must satisfy the following criteria:

A recognised degree in engineering, architecture or other building related disciplines approved by the **GreenRE Review Panel** with a minimum 3 year working experience in a related field for degree holders or 5 years minimum working experience for diploma holders

OR

Other Building practitioners with a minimum of 5 years relevant working experience accepted by the **GreenRE Review Panel**

AND

Has successfully completed the **GreenRE Manager's Course**.

Applicant is deemed to have successfully completed the course by attending at least 75% of the 3 day course and passing the examinations and group project.

The GreenRE Manager's Course consists of three (3) parts; Part I, Part II & Part III. Participants have the options to attend all the three parts or any one or two of the three parts. To be eligible to sit for the examination, participants shall complete all three parts within two years from the date of the first attendance of the course.

The full 3-days course consisting of 3 parts provides BEM accredited 15 CPD, GreenRE 15 CPD and LAM (applying). Each part provides BEM accredited 5 CPD, GreenRE 5 CPD and LAM (applying). Part I of the course shall also serve as a refresher course for existing certified GreenRE Managers and they are encouraged to attend Part I of the course in order to renew the certificate.

A sustainability initiated by:. REHDA

Course Schedule

<table>
<tr><th></th><th>PART I
15th AUGUST 2017</th><th>PART II
16th AUGUST 2017</th><th>PART III
17th AUGUST 2017</th></tr>
<tr><td>0830 – 0900</td><td colspan="3">BREAKFAST & REGISTRATION</td></tr>
<tr><td>0900 – 0930</td><td>INTRODUCTION TO GREMC</td><td>GROUP PROJECT BRIEFING</td><td rowspan="2">DAYLIGHTING (DR. JOSEPH KONG)</td></tr>
<tr><td>0930 – 1000</td><td>GREENRE ASSESSMENT PROCESS</td><td rowspan="5">EFFICIENT AIR-CONDITIONING
(CHOONG CHOW NENG)</td></tr>
<tr><td>1000 – 1030</td><td rowspan="2">GREENRE TOOLS VERSION 3.0</td><td rowspan="2">INDOOR ENVIRONMENTAL QUALITY
(DR. JOSEPH KONG)</td></tr>
<tr><td>1030 – 1100</td></tr>
<tr><td>1100 – 1130</td><td rowspan="4">PHOTOVOLTAIC TECHNOLOGIES,
TRENDS & TROPICAL COMMON SENSE
(CHRISTOPHE INGLIN)</td><td rowspan="2">STORMWATER MANAGEMENT ISSUES
(DR. NORLIDA MOHD DOM)</td></tr>
<tr><td>1130 – 1200</td></tr>
<tr><td>1200 – 1230</td><td rowspan="2">GREENERY PROVISIONS & IRRIGATION
(AR. CLEMENT WONG)</td></tr>
<tr><td>1230 – 1300</td></tr>
<tr><td>1300 – 1400</td><td colspan="3">LUNCH BREAK</td></tr>
<tr><td>1400 – 1430</td><td rowspan="6">ENERGY EFFICIENT LIGHTING
(K.SESHADRI)</td><td rowspan="2">COMPUTATIONAL FLUID DYNAMICS
(JIMMY LEE)</td><td rowspan="2">PASSIVE COOLING FOR GREEEN BUILDING
DESIGN IN THE TROPICS
(RPOF. DR. SHAH KWOK WEI)</td></tr>
<tr><td>1430 – 1500</td></tr>
<tr><td>1500 – 1530</td><td rowspan="2">ENERGY MODELLING (JIMMY LEE)</td></tr>
<tr><td>1530 – 1600</td><td>TAX INCENTIVES (MIDA)</td></tr>
<tr><td>1600 – 1630</td><td rowspan="2">OVERALL THERMAL TRANSFER VALUE
(JIMMY LEE)</td><td rowspan="2">GROUP PROJECT'S DISCUSSION</td></tr>
<tr><td>1630 – 1700</td></tr>
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**The above tentative schedule is subject to change. Please visit our website for more details.*

Module Abstracts and Module Speakers

MODULE 1 – PHOTOVOLTIC (PV) TECHNOLOGIES, TRENDS & TROPICAL COMMON SENSE

Module Abstract

Photovoltaic (PV) system uses solar panels to absorb and convert sunlight into electricity, without creating air or water pollution during this process. This module introduces various PV technologies and their system components. Building Integrated Photovoltaic (BIPV) are solar products that generate electricity and aesthetically integrated into the building as roof, façade, skylight atrium etc.

Participants will be introduced to key terminologies and case studies of PV system. Issues related to maintenance, installation and performance monitoring will be discussed. Participants will have the opportunity to understand the energy yield and economics of installing PV system. Guidelines and rules of thumb to install PV system will be introduced in this module too.

Module Speaker

Mr Christophe Inglin is an expert in PV industry, with more than 20 years of experiences throughout the value chain of silicon ingots in manufacturing solar panels to turnkey solar power plants. He is the MD of Energetix Pte Ltd (Singapore), which involves in the design, installation and maintenance of rooftop solar power plants and large scale solar farms.

Christophe is a much sought-after speaker and trainer in PV industry. He conducts PV-related courses at Building & Construction Authority (BCA) – Singapore and Real Estate and Housing Developers' Association (REHDA) – Malaysia regularly. He also conducts regular workshops for Asian Productivity Organization, headquartered in Tokyo and for Sustainable Energy Association of Singapore (SEAS) , which he sits as Vice Chairman for SEAS.

Module Abstracts and Module Speakers

MODULE 2 – ENERGY EFFICIENT LIGHTING

Module Abstract

Buildings use significant amount of electricity for lighting purposes. This module explores ways to achieve energy efficient lighting by means of natural (daylighting) and artificial lighting as well as various lighting controls. Participants will be introduced to key terminologies in relation to lighting and different types of light fixtures.

Module Speaker

Mr K. Seshadri is the CEO of Gritti Consulting Pte Ltd (Singapore). He has vast experiences in the field of lighting technology and design. He is the ex-Vice President for Philips Lighting (Asia Pacific), a corporation which he worked with of more than 20 years since 1976.

He is the Adjunct Lecturer for Building & Construction Authority (BCA) – Singapore and a part-time lecturer at the National University of Singapore (NUS) in the specialization field of lighting technology and design.

Seshadri has been the Convener of Singapore Standards of Working Group for Lamps & related equipment (IEC34) for the past 25 years. He is also the Secretary General to Lighting Association of Singapore.

MODULE 3 – EFFICIENT AIR-CONDITIONING

Module Abstract

Air-conditioning system forms a vital part of a building as it provides thermal comfort to its occupants. This module introduces different components of an air-conditioning system and its associated functions. Participants will learn to analyse the energy performance characteristics of an air-conditioning system and thus to identify the potential energy saving in the system.

Module Speaker

Mr Choong Chow Neng is the Regional Director (Business & Operation) of G-Energy Global Pte Ltd (Singapore) - a leading energy service company (ESCO) which specializes energy audit within buildings. He has vast experiences in the field of air-conditioning and mechanical ventilation (ACMV). He was instrumented in setting up G-Energy offices in Malaysia and Indonesia.

Mr Choong is also a lecturer of BCA Academy for Singapore Certified Energy Manager (SCEM) course. He lectures on various ACMV topics in Green Mark Manager Course and GreenRE Manager Course.

MODULE 4 – COMPUTATIONAL FLUID DYNAMICS (CFD), ENERGY MODELLING & OVERALL THERMAL TRANSFER VALUE (OTTV)

Module Abstract

Computational Fluid Dynamics (CFD) uses mathematical and fluid mechanics modelling in computation software to understand and to visualize the flow of liquid, predominantly air. Participants will be introduced to the methodology and application of CFD modelling / simulation. Air ventilation within/around building can be understood better with the application of CFD simulation.

OTTV is a design criterion for a building envelope. It reflects the heat conduction of building through its windows and walls and the solar heat gain through windows. Greater OTTV value implies a higher cooling load is needed to provide cooling comfort to building's occupants. Participants will learn the computation of OTTV and the corresponding techniques and devices used to lower OTTV value.

Module Speaker

Mr Jimmy Lee is the Senior Application Engineer of Integrated Environmental Solutions (IES) Limited (UK). He is well-versed with computer software in performing energy simulation/modelling and CFD for buildings. His work covers the countries in Southeast Asia region and United Kingdom (UK).

He is invited to conduct workshops/seminars on CFD and energy modelling to various educational institutions and corporate organizations frequently. Mr Jimmy is a Certified LEED Accredited Professional and an Associate Member for American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE).

Module Abstracts and Module Speakers

MODULE 5 – DAYLIGHTING & INDOOR ENVIRONMENTAL QUALITY (IEQ)

Module Abstract

Daylighting is a technique used to illuminate building interiors without artificial lighting, thus reducing the consumption of electricity. It also can be applied as a design element to the building form architecturally.

This module introduces the techniques in bringing daylight into the buildings. The glazing and external shading devices are discussed in reducing the admission of solar radiation in the building. The methodology of daylight simulation is discussed in relation to the requirements spelled in MS1525:2014 and GreenRE rating tools.

For the **IEQ**, people spend about 80-90% of time indoor. There are studies indicating that a range of comfort and health related effects are linked to the building's indoor environmental quality (IEQ) in terms of thermal, acoustic (noise), visual and air quality.

Indoor Air Quality (IAQ) is discussed in this module by introducing methods in improving IAQ. The standard code of practice and management for IAQ is also elaborated.

Sound Transmission Class (STC) value is introduced in this module, in order to measure the noise level.

Module Speaker

Ar Dr Joseph Kong is professional architect registered with LAM/PAM. He holds a doctorate degree in Sustainable Design from University of Malaya. To date, he has received local and international awards in sustainable design. Also, he has published a number of articles and conference papers, outlining passive design strategies for buildings in tropical countries.

Ar Dr Joseph speaks frequently in workshops/seminars on the topics of green design concepts and sustainable construction methods to the fraternity of building industry.

MODULE 6 – STORMWATER MANAGEMENT ISSUES

Module Abstract

Stormwater runoff occurs during rain precipitating over the land surface. With climate change due to rapid urbanization/development, we are constantly experiencing heavy rainfall within short duration of time. Furthermore, the ground is not able to soak up stormwater runoff fast enough due to the addition of roads, driveways, parking lots, rooftops and etc. Thus, it remains one of the contributing factors to flash floods.

Participants will learn about the formulation and requirements of Urban Stormwater Management Manual (MSMA) by the Department of Irrigation and Drainage (DID) – an approval condition to Development Order (DO) Plan for development projects.

Module Speaker

Dr Norlida bt Mohd Dom is the Deputy Director of the Regional Humid Tropics Hydrology and Water Resources Centre for Southeast Asia and Pacific (HTC Kuala Lumpur). She holds a doctorate degree in Urban Hydrology from Universiti Sains Malaysia (USM).

Dr Norlida has been attached to the DID's Applied Hydrology Unit for more than 20 years in different capacities with a wealth knowledge and deep understanding of flood and river models throughout Malaysia's waterways.

Module Abstracts and Module Speakers

MODULE 7 – GREENERY PROVISIONS & IRRIGATION

Module Abstract

This module examines the provision of credit points scored within GreenRE Tools, such as the calculations of Green Plot Ratio (GnPR). Concepts of green roof, vertical green, conservation of vegetation and trees on-site, compost pit, rainwater harvesting system, drought-tolerant plants are discussed at length too.

Module Speaker

Ar. Clement Wong is a Principal Architect registered under Board of Architect Malaysia (LAM). Graduated from University of Melbourne in 1999, he has 16 years of experience in various housing, commercial and institution projects.

He is the founder of Clement Wong Architecture and also the leader of the Company's Project Management Team which role and responsibility is to oversee the full cycle of the project, and to provide Project Management Consultancy (PMC) such as scheduling, cost budgeting, value engineering, risk identifying, monitoring & controlling, time line optimization, resources allocation and procurement.

This firm focusing on sustainable design and a touch of creativity and the projects consist of residential, institutions, commercials, highrise and resorts. Clement Wong Architecture also focus on green building design and productively engage in global community. They also provide an office space for research and design experiment including vertical garden, rain water harvest, sustainable construction methods and low carbon footprint material.

MODULE 8 – PASSIVE COOLING FOR GREEN BUILDING DESIGN IN THE TROPICS

Module Abstract

This module explores the latest techniques and technologies used as passive cooling for green buildings in the tropics. The cutting edge of technology such as nanotechnology is discussed at length and various examples are provided as proof to the adoption of technology in green building designs.

Module Speaker

Prof Shah Kok Wei (Dr) is the Assistant Professor and Deputy Program Director of the Department of Building, School of Design and Environment – National University of Singapore (NUS). He is appointed as the BCA Ambassador and a member of SPRING and SGBC technical review committees. He is also the advisory board member of Vietnam Green Building Council and VGBC education committee, a visiting professor at Tianjin University of Technology (China) and the reviewer of the famous journal namely Energy and Building.

At NUS, Prof Shah leads a research team conducting advanced research on smart nanomaterials, nanostructured phase change materials and their green building applications, as well as nano enhanced thermal management.

REGISTRATION FORM

PARTICIPANT 1

Salutation & Full Name: .....
NRIC/Passport No.: .....
Company Name: .....
Designation: .....
Office/HP No.: .....
Email Address: .....
Mailing Address: .....
.....
.....
Membership No.: .....
(REHDA/IEM/ACEM/PAM/ISM/MIP/MBAM)
Field Specialization: .....
(Civil/Mechanical/Electrical/Architect/Surveyor/others)

PARTICIPANT 2

Salutation & Full Name: .....
NRIC/Passport No.: .....
Company Name: .....
Designation: .....
Office/HP No.: .....
Email Address: .....
Mailing Address: .....
.....
.....
Membership No.: .....
(REHDA/IEM/ACEM/PAM/ISM/MIP/MBAM)
Field Specialization: .....
(Civil/Mechanical/Electrical/Architect/Surveyor/others)

PAYMENT INFORMATION

Please tick ☒ which part (s) you are participating;
Part I ☐ Part II ☐ Part III ☐

Early Bird (before 21/07/17)	**One Part (only)**	**Two Parts (only)**	**Three Parts (all)**
Member	RM 402.80 ☐	RM 731.40 ☐	RM 1038.80 ☐
Non-member	RM 498.20 ☐	RM 890.40 ☐	RM 1261.40 ☐

Normal Rate	**One Part (only)**	**Two Parts (only)**	**Three Parts (all)**
Member	RM 477.00 ☐	RM 869.20 ☐	RM 1219.00 ☐
Non-member	RM 572.40 ☐	RM 1038.80 ☐	RM 1484.00 ☐

Course fees;
i) include 6% of GST (**GST ID No.: 000639389696**)
ii) include training materials, F&B and examination fees.
iii) are **HRDF claimable**
Member rate: **REHDA/IEM/ACEM/ISM/PAM/ISM/MIP/MBAM**

Bank drafts of cheque should be crossed and made payable to "**GreenRE Sdn Bhd**". The cheque/cash can be deposited to GreenRE's Public Bank account no. **3182 978 625** and please email the bank in slip to **training@greenre.org**. And submit your registration form to **training@greenre.org**

CONTACT PERSON (if different from the above)

Salutation & Full Name: .....
Office/HP Tel. No.: .....
Designation: .....
Email address: .....

IMPORTANT NOTES & DISCLAIMER

1. Upon the approval and confirmation of registration and payment, the e-confirmation will be sent to your email.
2. Cancellation will occur no fee but replacement is compulsory.

The organizer reserves the right to change the content, venue and date or cancel the event if insufficient minimum target number of participants are met

Company Stamp with Address

GreenRE Sdn Bhd (1040485-V), Wisma REHDA, No. 2C, Jalan SS 5D/6, Kelana Jaya, 47301 Petaling Jaya, Selangor
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