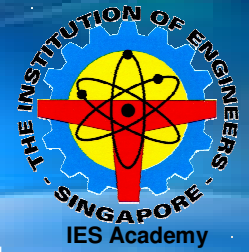


Design for Safety Coordinator (DfSC) for Engineers (Two Day DfSC Certifiable Course)

By: Chan Yew Kwong (MOM), Dr Goh Yiang Miang, Tan Kai Hong, Jason Oh Boon Chye



INTRODUCTION

This Competency Requirement document specifies the performance criteria, underpinning knowledge, range and context for the design, training and assessment of the Design for Safety Coordinator (DfSC) Course. Learners of this course will gain the knowledge and skills for fulfilling the roles of the construction in accordance with the Guideline on Design for Safety and Health in Buildings and Structures.



PROGRAMME DETAILS

Date	: 15 Apr & 16 Apr 2011 (Fri-Sat)
Duration	: 2 Days
Time	: 9 am – 5pm
Venue	: NTU one-north campus - near Buona Vista MRT (To be confirmed)
CPD	: SDU, PDU, CDP & STU (To be confirmed)
Fees	: \$838.00 (IES/ SIA/ ACES/ SCAL Members) : \$1,068.00 (Non-members)

** Fees are inclusive of 7% GST, course materials and lunch.*

**Certificate of Attendance will be issued to participants with at least 75% attendance.*

OBJECTIVES

Upon completion of this unit, learners will have the skills and knowledge to function as a DfSC and able to:

- Assist the client to address and identify means to eliminate or mitigate the risk inherent in the design of a construction project so as to reduce the safety and health risks during the construction, maintenance/repair, and demolition of the building and structure and;
- Coordinate the flow of the construction project safety and health risks information among the stakeholders from the design stage to the construction stage until the handover to the client for occupation and maintenance.

HOW IS THIS SERIES RELEVANT TO ENGINEERS AND ARCHITECTS?

The following was noted in the Opening Address by Mr. Hawazi Daipi, Senior Parliamentary Secretary (Manpower & Health) at the Opening Ceremony of the Construction Safety, Health & Security Campaign 2010, 2 July 2010, 9:40am, SCAL House.

(<http://www.mom.gov.sg/newsroom/Pages/SpeechesDetail.aspx?list=264>)

“... The Design for Safety programme will receive much attention in our plans ahead. Over the years, we have seen poor design contributing to various work incidents. Designing out the risks at the construction in maintenance as well as demolition stages can help to mitigate or even eliminate the risk from the onset. Since the Design of Safety programme was announced in end of 2008, it has been piloted at more than 8 projects. To equip the industry with relevant competencies to effectively implement the Design for Safety, the WSH Council has developed a course for the Project Safety and Health Coordinator, Various persons, like the architects and the engineers are expected to attend...”

COURSE OUTLINE

The skill and knowledge learnt during this course are likely to be applied in the following activities:

- Facilitate Design Review Process that involves the relevant stakeholders to identify and address safety and health risks associated with construction project.
- Maintain records of safety and health issues arising from the Design Review Process and actions taken.
- Coordinate the flow of relevant safety and health information among all stakeholders of a construction project at appropriate time.

TARGET AUDIENCE

This competency unit will be relevant to the following persons who would like to undertake the role of a Project Safety and Health Coordinator.

- Professional Engineers
- Designers
- Architects
- Project Managers
- Surveyors
- Other Professionals

ENTRY REQUIREMENTS (PLEASE REFER TO PART B & PART C OF THE APPLICATION FORM)

Learners are required to possess the following working experience and qualification:

- A Recognize University degree or other qualifications recognized by PEB and/ or BOA for professional registration as an Engineer and/ or Architect
- Have a total of 10 years of both design and construction experience in any combination and have relevant construction related qualifications acceptable by recognised construction-related institutions
- Have safety and health experience
- Possess the following skills and knowledge:
 - ✓ Building design and construction processes
 - ✓ Legal and statutory requirements associated with building and construction
 - ✓ Basic safety and health issues associated with construction operations
 - ✓ Written and oral communication, presentation, facilitation and problem solving skills

CERTIFICATION

Participants will be issued with a Certificate of Attendance upon meeting 75% of the required course attendance. Only candidates assessed competence in Assessment 1 will be invited to submit the project report for Assessment 2. Certificate of Competency will be issued only if participants are assessed to be competent in Assessment 2.

COURSE ASSESSMENTS

All course participants are required to complete an assessment session at the end of the course. The table below indicates the different types of assessment required

Assessment	Assessment Methods	Assessment Duration	Remarks
Assessment 1	30 MCQ	30 min	To score at least 70%
Assessment 2 (Need to clear Assessment 1)	Part 1: Written Assessment Part 2: Interview	Submit within 12 weeks upon completion of classroom training Interview will be arranged by the individual participant accordingly to the trainer's availability	This is an individual project to be completed outside the course schedule Report to be submitted in full

LESSON PLAN: DAY 1

Construction Design For Engineers – Design for Safety Coordinator Course	
<i>Time</i>	<i>Activity</i>
8:30 to 9:00 AM	Registration
9:00 to 9:30 AM	Overview
9:30 to 10:00 AM	Important of Design for Safety
10:00 to 10:15 AM	Tea Break
10:15 to 11:00 AM	Legal and Statutory Requirements
11:00 to 12:00 PM	Basic Concept in WSH Risk Assessment
12:00 to 1:00 PM	Lunch Break
1:00 to 1:30 PM	Duties and Responsibilities
1:30 to 2:30 PM	Design Review Process
2:30 to 3:00 PM	Safety and Health Risk Considerations for Design Review
3:00 to 3:15 PM	Tea Break
3:15 to 3:45 PM	Hazard Identification Tools
3:45 to 4:45 PM	Learning Activity 1
4:45 to 5:00 PM	Summary of Day 1

LESSON PLAN: DAY 2

Construction Design For Engineers – Design for Safety Coordinator Course	
<i>Time</i>	<i>Activity</i>
8:30 to 9:00 AM	Registration
9:00 to 9:15 AM	Recap Key Learning Points in Day 1
9:15 to 09:45 AM	Preparation for Design Review
9:45 to 10:15 AM	Conducting the Design Review
10:15 to 10:30 AM	Tea Break
10:30 to 11:00 AM	Safety and Health Risk Register
11:00 to 11:30 AM	Documentation, Monitor and Review Of Safety & Health Risk Register
11:30 to 12:00 PM	Coordination and Communication of Safety & Health Information
12:00 to 1:00 PM	Lunch Break
1:00 to 3:15 PM	Learning Activity 2
3:15 to 3:30 PM	Tea Break
3:30 to 4:00 PM	Summary of Day 2
4:00 to 4:15 PM	Requirement and expectation of Assessments
4:15 to 4:30 PM	Course Evaluation
4:30 to 5:00 PM	Assessment 1

CV OF TRAINERS



- 1. Mr. Chan Yew Kwong**
Deputy Director
Construction Safety of OSH Specialist Department
OSH Division, Ministry of Manpower

Chan Yew Kwong is the Deputy Director (Construction Safety) of OSH Specialist Department, OSH Division. He has been with the OSH Division for about 26 years. His 26 years' working experience involves inspection of construction worksites, shipyards, chemical and other manufacturing factories, investigations into fatal/serious accidents, development of safety management systems and safety auditing.

As Deputy Director, he plans and ensures that the strategies, programmes and activities of the Construction Safety Branch in the key areas of standards, research and best practices are effective in contributing to the control of workplace hazards and ensuring the safety and health of the Singapore workforce.

Mr Chan is also very involved in the development and promotion of OSH-related Singapore Standards. He is the Chairman of the SPRING's General Engineering & Safety Standard Committee, and a member of the Building and Construction Standards Committee.



2. Mr. Tan Kai Hong

Senior Manager (WSH)

Mr Tan Kai Hong is currently working as Senior Manager (WSH) at Eng Lee Engineering Pte Ltd, one of the major contractors for LTA projects. Mr. Tan, formerly Corporate Health and Safety Manager of a local multinational contracting company, had more than 30 years of working experience in workplace safety and health in general; process engineering; and construction industries. In his previous company, he supervised some 10 WSH Manager/Officers cum ECOs and 25 safety coordinator/safety supervisors to reduce the risk and accident rates of his company.

He was involved in a number of recent mega building & civil projects such as DTSS Changi, RWS, MBS and LTA projects; involving exposure to design consideration in relations to conducting risk assessment and management for the construction, management and/or maintenance of building and structures.

Kai Hong is the Chairman of the IES Health & Safety Engineering Technical Committee (HSETC) since 2009. He is currently serving in the WSH sub-committee, Workplace Safety and Health Council (WSHC). He is also a member of the task force on Design for Safety. He has been involved in presenting papers in a number of safety seminars and conferences in Singapore & overseas.

Kai Hong was awarded as one of the three winners of the inaugural “Workplace Safety and Health Officer” Award in 2007, organised by the Workplace Safety and Health Advisory Committee (WSHAC) and the Ministry of Manpower (MOM), Singapore.

Kai Hong, a Council & Fellow Member of the Institution, attended accreditation form WSH Council as a trainer for the PSH Coordinator Course after participating in the inaugural “train-the-trainer” course in August 2009.



3. Dr. Goh Yang Miang

Senior Consultant

Dr Goh is versatile with a range of occupational health and safety (OHS), risk management, safety culture intervention, incident analysis/ investigation and system dynamics/ systems thinking methods and tools. He was the Assistant Director (Investigations) at the Ministry of Manpower and has practical experience in the investigation of more than 80 fatal/ serious accidents, inspection of different workplaces (e.g. construction worksites, manufacturing factories and shipyards), and OHS management system auditing/ development.

Dr Goh taught risk management, incident investigation and safety technology at post-graduate and undergraduate levels when he was Senior Lecturer at Curtin University, Australia. He was a Senior Research Fellow of the WHO Collaborating Centre in Environmental Health Impact Assessment, and a member of the Curtin-Monash Accident Research Centre when he was in Curtin University.

Dr Goh is the Guest Editor for the special issue of Accident Analysis and Prevention and a manuscript reviewer for the American Society of Civil Engineers – Journal of Construction Engineering and Management. Dr Goh is currently an Adjunct Associate Professor with Curtin University.



4. Mr. Oh Boon Chye, Jason Project Manager

Mr Jason went to study overseas and graduated with a B Eng Honours degree in Civil Engineering, from the University of Glasgow, UK. On his return, Mr Oh joined Contractors as Engineer, Safety Manager and Project Manager. In 2005, he was invited to be the General Manager of Metal Technology LLC (i.e. joint venture companies between ETA-HITACHI-LINAIR) for the world tallest building project in Dubai –Burj Kalifah.

Jason was in the construction sector for more than 15 years. He is an active member of Health and Safety Engineering Technical Committee (HSETC). He was appointed by The Institution of Engineers, Singapore (IES), as Chairman of the IES Overseas Chapter (UAE) Committee for 2006 to 2011. In this capacity, he will act as the main liaison between organizations in UAE, and IES.

Jason, a member of the Institution, attended accreditation from WSH Council as a trainer for the PSH Coordinator Course after participating in the inaugural “train-the-trainer” course in August 2009. Currently, he is a Project Manager working with Chiu Teng Construction Co. Pte Ltd.

A) Registration Form

Design for Safety Coordinator (DfSC) for Engineers

Dates : 15 April 2011 – 16 April 2011 (Friday & Saturday)
Time : 9.00am - 5.00pm
Venue : NTU one-north campus. - 5 min walk from Buona Vista MRT (To be confirmed)
Fees : \$838.00 (IES/SIA/ACES/SCAL members)
\$1,068.00 (Non-Members)

****Due to the stringent requirements in enrollment, participants are encouraged to submit their application & relevant documents early for assessment.***

Please register by completing all the forms and attached necessary document and email (scanned copies) to vincent@iesnet.org.sg / mail / fax **by 06 April 2011 before 3pm** to:

Address: Attn.: Vincent Chiew
IES Academy
70 Bukit Tinggi Road
IES Building
Singapore 289758
(Tel) 6463 9211 (Fax) 6463 9468

Participant Details

Name : _____ NRIC : _____
Company : _____ Designation: _____
Address 1 : _____
(For mailing of invoice and receipt)
Address 2 : _____
(For mailing of Certificate)
Postal Code : _____ Sex : _____ Male / Female
Tel : _____ Fax : _____
Email : _____
Please indicate : ☐ IES member IES M'ship No.: _____ P.E. No.: _____ (if applicable)
☐ Affiliated member Organization _____ Membership No.: _____
☐ Non-member ☐ Tick here if sponsored by company

Contact Person Details (if different from participant)

Name : _____ Designation: _____
Tel / Mobile : _____ Fax : _____
Email : _____

Payment Details

Bank / Cheque No.: _____ Amount (\$): _____

* All Fees are inclusive of 7 % GST.

Cheque should be made payable to: "IES" or "Institution of Engineers, Singapore"

Acceptance of Terms and Conditions for Registrations of IES Academy's Events

I agree to abide by the Terms and Conditions for Registration of IES Academy's Events.

Name : _____

Signature : _____

TERMS & CONDITIONS COURSE REGISTRATION

Registration

Any registration, whether on-line or fax will be on a ***first-come-first-served basis*** and will only be confirmed upon receipt of full payment by The Institution of Engineers, Singapore (IES) unless otherwise invoice to company.

All registrations must be submitted with duly completed registration form.

Email registrations will not be accepted.

Closing Date & Payment

The closing date of the event will be 7 days prior to event commencement date. Cheques should be crossed 'A/C payee only' and made payable to 'IES' or 'Institution of Engineers, Singapore', with the ***Title of The Event indicated clearly written on the back of the cheques***, and submitted with the duly completed registration forms to:

**IES Academy
70 Bukit Tinggi Road
Singapore 289758**

Confirmation of Registration

Confirmation of registration will be given 7 days prior to the commencement date via email. If you do not receive the said confirmation email, you are required to contact IESA general admin immediately at 6463 9211 (office).

IESA reserves the right to allow only confirmed registrants to attend the Event.

Withdrawals/Refunds of Fees

Notice of withdrawal must be given in writing to IESA. Policy on refund of course fee is as follows:

- **FULL** refund if we receive your written notice of withdrawal at least 7 days before the commencement of the Event.
- **NO** refund otherwise.

No show of participant would not be accepted as reason for withdrawal/refund.

Replacement is allowed but restricted to once only. Replacement will be allowed only if written notice is received by us at least 3 days before the commencement of the event. However, when an IES member is replaced by a non-member, the participant has to pay the difference in the relevant fees at least 3 days before the commencement date.

Cancellation/Postponement

Changes in Venue, Dates, Time and Speakers for the Events can occur due to unforeseen circumstances. IES reserves the full rights to cancel or postpone the Event under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact person of any cancellation or postponement.

Fees will be refunded in FULL if any Event is cancelled by IESA.

Enquiries

For further enquiries, please contact IESA general office at Tel: 6463 9211.

B) Current Employment Details

Name of Company: _____

Designation: _____

Company Address: _____

Postal Code: _____

Contact No: _____ (Fax) _____

Years of training experience: _____

C) Applicant Declaration

I declare all the information given by me in this application is true and correct and I understand that misrepresentation or omission is sufficient grounds for rejection of my application or withdrawal of any place which may be offered and that this withdrawal may take place at any stage during the course I undertake. I also authorize any investigation of the above information for the purpose of verification. I understand and accept the terms and conditions, rules and regulations of the program set by IES.

Signature of Applicant: _____

Date: _____

Before submitting to IES please ensure you have all the items in the checklist ready

- Completed Application form
- 1 copy of NRIC/passport/Employment Pass
- 1 copy of highest academic certificate
- Supporting document or proof of relevant experience such as details of sites involved.

• State the name of institution, title of qualification and year of graduation for a recognized university degree or other qualifications recognized by BOA and/or PEB for professional registration as an Architect and/or Engineer: (Please attach true copy of your qualification certificate).

[illegible]

• Provide details of an aggregate of 10 years experience in a consulting firm(s) of professional Architectural and/or Civil/Structural or Mechanical &/or Electrical Engineering practice or working as such an Architect or Engineer on Site for a construction firm(s) – while holding a degree or other qualifications recognized by BOA and/or PEB for professional registration as an Architect and/or Engineer:

[illegible]

- Provide a summary your skills and knowledge in the following:

Building design and construction operations

Building and construction processes

Legal and statutory requirements associated with building and construction

Basic safety and health issues associated with construction operations

Written and oral communication, presentation, facilitation and problem solving skills
