



INSTITUTION OF ENGINEERS, SINGAPORE

IES ACADEMY

80 JURONG EAST ST 21 #04-10

DEVAN NAIR INSTITUTE OF EMPLOYMENT AND EMPLOYABILITY

SINGAPORE 609607

TEL: 6463 9211; FAX: 6563 6030

Website: www.ies.org.sg

## 5-Day Course for Appointed Person – Lifting Operations – 5<sup>th</sup> Run

### Introduction

As the Singapore Government pushes for higher productivity in various sectors, more and more cranes will be deployed at various work places. Use of cranes at site involves many people from various organisations, such as the crane manufacturer, site occupier, crane contractor, and various sub-contractors that use the cranes. According to the latest Singapore Standard on Safe Use of Tower Cranes SS 559:2010, it is crucial that one person be appointed to have overall control of the cranes. This appointed person shall be notified formally in writing of their appointment. This course is aimed at anyone who is required to plan safe systems of work, using lifting equipment and intends to take up this position as an appointed person. It is recommended that prior to attending this course, individuals should have some experience of working with lifting equipment, especially mobile cranes and tower cranes.

### Objectives

The objective of this course is to equip candidate with an in-depth understanding of the roles and responsibility of the Appointed Person. Successful completion of the course will enable the candidate to prepare and implement safety system of work for lifting operation.

### Target Audience

Managers, engineers and safety officers involve in site planning of safe systems of work, crane selection, project management, installation, commissioning, specification and consultancy of cranes at various jobsite, such as construction, shipyard, ship repairing, A&A, oil & gas etc.

### Entry Requirements

1. An engineering degree **OR**
2. At least an engineering diploma holder with 3 years of relevant experience.
3. Assumed knowledge of rigging, signaling and lifting experience  
(Scanned certificate/s and short CV reflecting item 3, needed for assessment)

### PROGRAMME DETAILS

Date	: 18, 20, 21, 23, 24, 25 April 2018 02 May 2017 (Written Test)
Duration	: 5 Days
Time	: Please refer to schedule
Venue	: IES Academy@Jurong East & BCA Academy@Braddell
CPD Programme	: 30 SDUs 33 PDUs (To confirm)
Fees	: \$2,782.00 (IES Members/SISO Members) \$2,996.00 (Non-Members)
Organizer	: IES Academy

\* Fees inclusive of 7% GST & course materials.

\* Certificate of Completion will be issued to participants with passed on both Practical and Written tests.





**Program Schedule (Subject to minor changes)**

Date / Time	Topics
<b>Day 1 (18 April 2018)</b>	<b>IESA @ Jurong East (By Er. Leslie Tay)</b>
1300 – 1330	Registration
1330 – 1415	WSH Act 2009
1415 – 1530	WSH (General Provisions) Regulation
1530 – 1545	Tea Break
1545 – 1605	WSH (Risk Management) Regulations
1605 – 1705	WSH (Operation of Cranes) Regulations
1705 - 1735	WSH (Construction) Regulations
1735 - 1745	Q&A + preview of next day's content
<b>Day 2 (20 April 2018)</b>	<b>IES Academy @ Jurong East (By Er. Leslie Tay)</b>
1300 – 1330	Registration
1330 – 1430	SS343 Part 1: Wire Rope Slings
1430 – 1545	SS536: Safe Use of Mobile Cranes
1545 – 1600	Tea Break
1600 – 1630	CP63 – The Lifting of Persons in Work Platforms Suspended from Cranes
1630 – 1745	WSHC Code of Practice of Safe Lifting Operations in the Workplace
<b>Day 3 (21 April 2018)</b>	<b>IESA @ Jurong East</b>
0830 – 1000 <b>By Mr Alan Ong</b>	Quick Introduction to WSH Act 2006 Introduction to Rigging Terminology Wire Sling Rope Calculation Centre of Gravity
1000 – 1015	Tea Break
1015 – 1200 <b>By Er. Teng Chin Seng</b>	Estimating load weight Stability of load Choosing lifting equipment: Slings, Shackles, Lifting beam/spreader beam Summary
1200 – 1300	Lunch Break
1300 – 1500 <b>By Er. Teng Chin Seng</b>	An Overview of SS 559:2010 Code of Practice for Safe Use of Tower Cranes Regulatory framework for tower cranes Basic crane physics
1500 – 1515	Tea Break
1515 – 1800 <b>By Mr Frankie Tan</b>	Different type of crane: mobile cranes, crawler cranes, all terrain cranes, truck cranes, gantry cranes, etc. Load chart – understanding in detail Machine selection Planning of crane operation, mob, actual lift and de-mob Basic types of outrigger mats Tandem lifting Role of appointed person



Time	Activity
<b>Day 4 (23 April 2018)</b>	<b>IESA @ Jurong East (By Mr Jason Oh and Er. Sam Ko)</b>
0830 – 1000	Factors affecting safe lifting operations
1000 – 1015	Tea Break
1015 – 1200	Risk Assessments and Permit-to-work for Lifting Operations
1200 – 1300	Lunch Break
1300 – 1500	Personnel Roles and responsibilities/emergency and contingency planning
1500 – 1515	Tea Break
1515 – 1730	Lifting Plan
<b>Day 5 (24 April 2018)</b>	<b>BCA Academy @ Braddell (By Er. Sam Ko and Mr Chew Por Eng)</b>
0830 – 1000	Case Study – Tower Crane/Mobile Crane
1000 – 1015	Tea Break
1015 – 1230	Case Study – Tower Crane/Mobile Crane
1230 – 1330	Lunch Break
1330 – 1500	Learning from past incidents
1500 – 1515	Tea Break
1515 – 1800	Develop method statement inclusive of lifting plan, risk assessment, safe work procedure, role play & crane inspection. 1. Yard training. Gather relevant information relating to lifting operation (Mobile Crane; Truck mounted) 2. Conduct site assessment. Determine the weight of the load, etc. 3. Develop method statement, lifting plan, risk assessment etc.
<b>Day 6 (25 April 2018)</b>	<b>Practical Assessment – BCA Academy @ Braddell (By Mr Chew Por Eng)</b>
	<b>Group 1 – AM session (10 participants)</b>
0830 – 0845	Registration
0845 – 1000	1. Role Play: Lifting Supervisor, signaller & Rigger. 2. Participants need to play difference roles such as lifting supervisor, signaller and rigger during practical assessment. Estimated 15 minutes per participant. 3. Perform briefing, hand signal and rigging
1000 – 1015	Tea Break
1015 – 1200	Continue role play
1200 – 1230	Course de-brief and evaluation
	<b>Group 2 – PM session (10 participants)</b>
1330 – 1345	Registration
1345 – 1500	1. Role Play: Lifting Supervisor, signaller & Rigger. 2. Participants need to play difference roles such as lifting supervisor, signaller and rigger during practical assessment. Estimated 15 minutes per participant. 3. Perform briefing, hand signal and rigging
1500 – 1515	Tea Break
1515 – 1700	Continue role play
1700 – 1730	Course de-brief and evaluation
<b>02 May 2018 (1900 – 2100)</b>	<b>Written Assessment – 2 hours (IESA @ Jurong East)</b>



## Trainers' Profile



**Er. Leslie Tay** is a member of the WSHC National Crane Safety Taskforce. He has a first class honours degree in mechanical engineering and is a registered specialist professional engineer in crane engineering. He has many years of practical experience in the design, operation, maintenance and inspection of cranes and contributed to Singapore standards and codes of practice on cranes and lifting gears. He has conducted courses and presented papers at seminars on lifting operations and regulatory requirements.



**Mr Frankie Tan** is presently the Secretary of the Singapore Cranes Association and represents the Association in the National Crane Safety Taskforce. He is also the Regional Director of STSY International Pte Ltd. His practical crane knowledge comes through many involvements in management and operational level of the companies he managed. With a BBA and professional certifications, Frankie Tan always gives a different insight to crane safety.



**Mr Chew Por Eng** graduated with Diploma in Mechanical Engineering from Singapore Polytechnic and Specialist Diploma in Workplace Safety and Health from BCA Academy. He has also attended and passed the Appointed Person–Lifting Operations course jointly organised by IES and LEEA (Lifting Equipment Engineers Association, UK).

Mr Chew is a certified crane operator and trainer for crane courses at BCA Academy. He has more than ten years of experiences in the training of crane courses. Prior to his present profession, he was an Engineer for the ST Engineering and the job scope involved project management, planning of site layout and implementing safe work procedures for manufacturing processes and this include of lifting operation as well.



**Er. Teng Chin Seng**, B. Eng, M. Eng, P. Eng (Mechanical), MBA, is the Managing Director of CST Engineering Services Pte Ltd. He is a professional engineer and authorised examiner for lifting equipment. Prior to his current position, he was the Chief Operating Officer of an international tower crane rental company. He also held several positions in an international crane manufacturing company. He has extensive experience in crane design and installation.



**Er. Sam Ko** had graduated with a Diploma in Civil Engineering from Singapore Polytechnic and B.Eng. (Hon) Civil Engineering from University of Glasgow. Sam is a Professional Engineer in Singapore and Chartered Professional Engineer in Australia. He is a certified mobile crane operator and an associate trainer in BCA Academy. Sam is a Registered Workplace Safety & Health Officer and was trained as an auditor for Occupational Safety and Health.

Since graduating from University, Sam has had about 30 years of working experience as an Engineer, Project Manager, Project Director and General Manger in the construction industry. He had vast experiences in project management, coordinate of site layout, selection of crane and deployment & usage of crane in construction project.



**Mr Jason Oh** has more than 20 years of Project Engineering Construction, Design and Management experience. He is the Principal Consultant of JOH Safety Consultancy Pte Ltd ([www.johsafetyconsultancy.com](http://www.johsafetyconsultancy.com)). He was the Chief Operating Officer/ Senior Project Director of BCEG International (Singapore) Pte Ltd/ BCEG International (Malaysia) Sdn Bhd/ Abu Dhabi precast; Executive Director of Linair Bio-energy Pte Ltd; General Manager & Executive Director of Metal Technology LLC, United Arab Emirates; Few reputed Developer and A1 Contractor in Singapore. He obtained his B.Eng (Civil) (Hons) from the University of Glasgow, United Kingdom and furthers his study at the National University of Singapore for his Master of Science (Safety, Health and Environmental Technology). Jason ventures into construction industry starting

from ground as a Project Engineer, Safety Officer/ Manager, Designer, Project Manager/ Director. The projects ranged from heavy industry warehouse/ factory, School, Hotel, Private and Public Residential housing projects in Singapore, Malaysia, Vietnam, Thailand, China and United Arab Emirates. Jason is the Advisor for the Health & Safety Engineering Technical Committee of IES (2015 to 2017); He also serve as the Executive Committee of IOSH (Singapore Branch). Co-Convenor for the SS 559: 2010 review committee (Code of Practice for Safe use of Tower cranes); He is the register Dfs Professional Trainer with WSH Council since 2010.



**Registration Form**

**5-Day Course For Appointed Person – Lifting Operations (5<sup>th</sup> Run)**

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**02 May 2018 – Written Assessment**

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Venue (to confirm) : IES Academy@Jurong East and BCA Academy

Course Fee (Incl. 7% GST) : \$2,782 (IES member/SISO member); \$2,996 (Non-members)  
 Florence Lee  
 IES Academy  
 80 Jurong East St 21

Course Coordinator : Devan Nair Institute of Employment and Employability  
 #04-10 Singapore 609607  
 Tel: 6460 4248 Fax: 6563 6030  
 Email: florence.lee@iesnet.org.sg

Last Date of Registration : On first-come-first-serve basis, maximum 20 pax

**Participant Details**

Name : \_\_\_\_\_ Nric/FIN No : \_\_\_\_\_

Company : \_\_\_\_\_ Designation : \_\_\_\_\_

Address : \_\_\_\_\_

Postal : \_\_\_\_\_

Email : \_\_\_\_\_

Hp : \_\_\_\_\_ Off: \_\_\_\_\_ Fax: \_\_\_\_\_

Please indicate:     IES Member No     Non-members     Sponsored by Company  
 PEB/SISO Member No     Vegetarian

**Contact Person (if different from participant)**

Name : \_\_\_\_\_ Designation : \_\_\_\_\_

Tel : \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Payment:    Cash / Nets / Cheque: \_\_\_\_\_    Amount: \_\_\_\_\_

- Cheque to be made payable to 'Engineers Singapore Pte Ltd'
- Notification of Cancellation or withdrawal from course must be 7 days before course date via email to Course Coordinator
- Course fee includes 7% GST

**Acceptance of Terms & Conditions for Registration of IES Academy Courses / Events**  
 I agree to abide by the Terms & Conditions for Registration of IES Academy courses / 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 Engineers Singapore Pte Ltd unless otherwise invoice to company. All registrations must be submitted with duly completed registration form.

### **Closing Date & Payment**

The closing date of the event will be 1 week prior to event commencement date or earlier. Cheques should be crossed 'A/C payee only' and made payable to '**Engineers Singapore Pte Ltd**', 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@Jurong East**  
Devan Nair Institute for Employment and Employability,  
80 Jurong East Street 21, #04-10  
Singapore 609607

### **Confirmation of Registration**

Confirmation of registration will be given at least 1 week before the commencement date via email. ***If you do not receive the said confirmation email, you are required to contact IESA at 6463 9211 during office hours.*** IESA reserves the right to allow only confirmed registrants to attend the Event.

### **Withdrawals/Refunds of Fees**

***Written notice at least 1 week in advance*** before the commencement of the event

Full course fee shall be refunded subjected to 4.5% transaction charge.

➤ **NO** refund otherwise.

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

One time replacement is allowed only if written notice is received by us at least 1 week 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.

### **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.

### **PERSONAL DATA PROTECTION ACT**

I consent to the processing by Institution of Engineers, Singapore of personal data, including sensitive personal data as defined in the Data Protection Act 2014, about me for the proper purposes of Institution of Engineers, Singapore (IES). I undertake to observe the provisions of the Data Protection Act 2014 in relation to any personal data I may myself hold and process as a Members of Institution of Engineers, Singapore, and I agree to indemnify Institution of Engineers, Singapore from liability for any claims or damages that may arise from the processing of this data. For more information kindly refer to [here](#).

### **Enquiries**

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