



5-Day Course for Appointed Person – Lifting Operations, (34th Run)

Introduction

As the Singapore Government pushes for higher productivity in various sectors, more and more cranes will be deployed at various workplaces. Use of cranes at site involves many people from various organisations, such as the crane manufacturer, occupier, approved crane contractor (ACC), and various sub-contractors that use the cranes. According to the latest SS 559:2022 Code of practice for tower cranes and SS 536:2023 Code of practice for safe use of mobile cranes, 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 (AP). It is recommended that prior to attending this course, individuals should have some ground 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 Workplace Safety and Health Professional Officers (WSHO) 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.

Minimum Entry Requirements

1. An Engineering Degree **OR** At least an (Local) Engineering Diploma holder with 1 - 3 years of relevant experience.
And
2. Assumed knowledge of rigging, signaling and lifting experience.

It is compulsory to send all soft-copy of documents (certificates, transcript and updated CV for verification purposes)

PROGRAMME DETAILS

Date	:	18, 19, 20, 22, 24, 26 July 2024 26 July 2024 (Written Exam)
Duration	:	5 Days
Time	:	Please refer to schedule
Venue	:	IES Academy @ Jurong East & BCA Academy @ Braddell
CPD Programme	:	30 PDUs & 10 SDU (All TBC)
Fees	:	\$2,834.00 (IES Members) \$3,052.00 (Non-Members)
Organizer	:	IES Academy



Day 1 (18 July 2024, Thursday): IES Academy

Timing	Description	Trainer
0800 – 0830	Registration	
0830 – 0900	WSH Act 2006	Chia CY/Jason Oh
0900 – 0945	WSH (General Provisions) 2006 WSH (Risk Management) Regulations 2006	Chia CY/Jason Oh
0945 – 1000	WSH (Work at Heights) Regulations 2013	Chia CY/Jason Oh
1000 – 1015	Coffee/ Tea-Break	
1015 – 1045	WSH (Construction) Regulations 2007 WSH (Shipbuilding and Ship-repairing) Regulations 2008	Chia CY/Jason Oh
1045 – 1115	WSH (Operation of Cranes) Regulations 2011	Chia CY/Jason Oh
1115 – 1200	Case Studies	Chia CY/Jason Oh
1200 – 1230	Quiz	Chia CY/Jason Oh
1230 – 1330	Lunch	
1330 – 1400	WSH (Approved Codes of Practice) Notification 2023	Chia CY/Jason Oh
1400 – 1430	Code of Practice on WSH Risk Management 2021	Chia CY/Jason Oh
1430 – 1530	Rapid Transit Systems Act/Regulations Code of Practice for Railway Protection	Chia CY/Jason Oh
1530 – 1545	Coffee/ Tea-Break	
1545 – 1645	Case studies (Tower crane)	Chia CY/Jason Oh
1645 – 1800	Case Study (Mobile crane)	Chia CY/Jason Oh
1800 – 1830	Quiz	Chia CY/Jason Oh

Day 2 (19 July 2024, Friday): IES Academy

Timing	Description	Trainer
0830 – 1000	Code of Practice on Safe lifting operations in the workplaces	Jason Oh
1000 – 1015	Coffee/ Tea-Break	
1015 – 1100	Introduction to DfMA/ PPVC	Jason Oh
1100 – 1230	Case Study on “Crane Location” Risk Assessment	Jason Oh
1230 – 1330	Lunch	
1330 – 1400	Lifting Plan (LP) preparation	Sam Ko
1400 – 1430	- Essential elements in a Lifting Plan, General information, Loads, Lifting Equipment, Details of Lift, Mean of communication, Physical/Environmental considerations, and sketch of lifting operation/Layout plan - Wind loading affecting crane lifting operation	Sam Ko
1430 – 1530	- Crawler crane access and hoisting platform - Mobile crane maximum outrigger load - Crane pressure vs ground bearing capacity	Sam Ko
1530 – 1545	Coffee/ Tea-Break	
1545 – 1645	- Tower crane foundation (use of fixed anchor base) - Tower crane tie-back design	Sam Ko
1645 – 1745	Case Study -Mobile crane planning and deployment	Sam Ko
1800 – 1830	Quiz	Sam Ko



Day 3 (20 July 2024, Saturday): IES Academy

Timing	Description	Trainer
0830 – 0900	SS 559:2022, Code of Practice for Tower Cranes - Part 1: General - Part 2: Safe Use - Part 3: Inspection	Teng Chin Seng
0900 – 1000	SS 536: 2008, Code of Practice for the Safe use of Mobile Cranes	Teng Chin Seng
1000 – 1015	Coffee/ Tea-Break	
1015 – 1100	SS 595: 2014, Singapore Standard for steel wire ropes for hoisting - Part 1: Specification for steel wire ropes - Part 2: Specification for selection of wore ropes - Part 3: Code of practice for the care, inspection and maintenance of steel wire rope for hoisting	Teng Chin Seng
1100 – 1130	SS 497: 2011 Code of Practice for design, safe use and maintenance of gantry cranes, overhead traveling Cranes and Mono hoists	Teng Chin Seng
1130 – 1200	SS 617:2016, Code of Practice for the Lifting of Persons in Work Platforms Suspended from Cranes	Teng Chin Seng
1200 – 1230	Case Studies (Cranes recovery)	Teng Chin Seng
1230 – 1330	Lunch	
1330 – 1500	Tandem lifting (Equal and Unequal Lifting)	Teng Chin Seng
1500 – 1530	Quiz	Teng Chin Seng
1530 – 1545	Coffee Tea-Break	
1545 – 1615	Selection of cranes, i.e. mobile cranes, crawler cranes, all terrain cranes, truck cranes, gantry cranes, etc.	Frankie Tan
1615 – 1645	Interpretation of various cranes Load chart	Frankie Tan
1645 – 1730	Planning of lifting operation, i.e. preparation works, mobilisation, actual lift and demobilisation	Frankie Tan
1730 – 1800	Quiz	Frankie Tan

Day 4 (22 July 2024, Tuesday): BCA Academy

Timing	Description	Trainer
0830 – 1000	Virtual classroom -Theory lesson	Chew Poh Eng
1000 – 1015	Coffee/ Tea-Break	
1015 – 1230	Virtual classroom -Theory lesson	Chew Poh Eng
1230 – 1330	Lunch	
1330 – 1430	Introduction to Rigging Terminology	Alan Ong
1430 – 1530	SS 343: 2014, Specification for Lifting gear Part 1 (Wire rope slings), Part 2 (Hooks) and Part 3 (Shackles)	Alan Ong
1530 – 1545	Coffee/ Tea break	
1545 – 1615	Wire Sling Rope and Centre of Gravity (CG) Calculation (2, 3, 4-legged)	Alan Ong
1615 – 1715	Estimating load weight for various shape and size	Alan Ong
1715 – 1800	Choosing lifting equipment: Slings, Shackles, lifting Beam/ spreader beam	Alan Ong
1800 – 1830	Quiz	Alan Ong



Day 5 (24 July 2024, Wednesday): BCA Academy

Timing	Description	Trainer
Group 1 & 2: 0830 - 0900	Registration (Group 1 & 2) -- At Training Yard	
Group 1: 0900 - 1030	<ol style="list-style-type: none"> 1. Role Play: Lifting Supervisor, Signaller & Rigger 2. Participants need to play difference roles such as lifting supervisor, signaller and rigger during practical assessment. 3. Perform briefing, hand signal and rigging. 4. Course de-brief, evaluation. (Estimated 15 minutes per participant) 	Chew Poh Eng
1030 - 1100	Coffee/ Tea-Break	
Group 2: 1100 - 1230	<ol style="list-style-type: none"> 1. Role Play: Lifting Supervisor, Signaller & Rigger 2. Participants need to play difference roles such as lifting supervisor, signaller and rigger during practical assessment. 3. Perform briefing, hand signal and rigging. 4. Course de-brief, evaluation. (Estimated 15 minutes per participant) 	Chew Poh Eng
Group 3 & 4: 1300- 1330	Registration (Group 3 & 4) -- At Training Yard	
Group 3: 1330 - 1500	<ol style="list-style-type: none"> 1. Role Play: Lifting Supervisor, Signaller & Rigger 2. Participants need to play difference roles such as lifting supervisor, signaller and rigger during practical assessment. 3. Perform briefing, hand signal and rigging. 4. Course de-brief, evaluation. (Estimated 15 minutes per participant) 	Chew Poh Eng
1500 - 1530	Coffee/ Tea-Break	
Group 4: 1530 - 1700	<ol style="list-style-type: none"> 1. Role Play: Lifting Supervisor, Signaller & Rigger 2. Participants need to play difference roles such as lifting supervisor, signaller and rigger during practical assessment. 3. Perform briefing, hand signal and rigging. 4. Course de-brief, evaluation. (Estimated 15 minutes per participant) 	Chew Poh Eng

Day 6 (26 July 2024, Friday): IES Academy

Timing	Description	Trainer
0900 – 1130	Written Assessment – 2.5 hours	



Trainers' Profile



Mr. Chia Chee Yong is a Senior Principal Specialist with the Engineering Safety Unit in the Occupational Safety and Health Division, Ministry of Manpower. He graduated from the Nanyang Technological University in Mechanical and Production Engineering. His work includes carry out workplace and equipment inspection and providing specialist support and guidance in engineering and equipment safety to various stakeholders. Mr. Chia has served in several technical committees on cranes, lifting equipment and lifting operation including SS559, SS343, the Code of Practice on Safe Lifting Operation in the Workplaces and the WSH Guidelines on Safe Use of Lorry Crane.



Mr Jason Oh has 25 years of project engineering Design, construction and management experience. He is the Principal Consultant of JOH Safety Consultancy Pte Ltd (www.johsafetyconsultancy.com). He obtained his B.Eng (Civil) (Hons) from the University of Glasgow (UK) and furthers his study at the National University of Singapore (NUS) for his Master of Science (Safety, Health and Environmental Technology). He ventures into construction industry starting from ground as Engineer, Safety Officer/ Manager, Project Manager, Civil & Structural Designer and DfS Professional. The projects ranged from infra-structures, schools, chemical plants, residential apartments and mixed development in Singapore, Malaysia, Thailand, China and United Arab Emirates (UAE). Jason is a Fellow member of IES (FIES). He was appointed as the Convenor for the CP 63:1996 (2005) review committee (Code of Practice for the Lifting of persons in work platforms suspended from cranes) (Replaced by SS 617:2016) and also as Co-Convenor for Singapore Standard, SS 559: 2010 (Safe use of Tower cranes) review committee (currently under review)



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 Manager 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.



Er. Teng Chin Seng had graduated with 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.



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 Alan Ong has experience in planning and engineering complicated lifts using multiple cranes and alternative lifting method like strand jack and skidding and was involved in some of the largest projects in Singapore and Asia region. Alan is also experienced in modular construction and movement of large and oversized equipment using SPMT trailers and skidding method. He has worked with global EPC companies and consultancy companies as well as an international heavy lift company. He advised mega projects on the construction strategy and planning from initial concept and design phase to the construction stage.



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 organized 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.