

TECHNICAL DIPLOMA IN VERTICAL TRANSPORTATION

Module Objectives

Lift Safety and Orientation

On completion of the module, trainees should be able to implement strategies and processes to ensure all works comply with requirements of the Workplace Safety and Health (WSH) Act, which would include environmental management, explosion protection, fire protection, chemical hazard management, material handling, Personal Protective Equipment (PPE), risk management and work at height.

Lift Mechanical System

On completion of the module, trainees should be able to perform repair and diagnostic of mechanical system in lift, including motors, braking gears, buffers, cables, lift controller, counterweight, doors, door mechanisms, drive sheaves, guide rails, landing equipment, lift car, overspeed governor, roping system, safety/arresting gear and traction machine.

Escalator Technology

On completion of the module, trainees should be able to interpret technical requirements and engineering drawings of escalator system, and perform basic maintenance in compliance with relevant specifications, regulations and codes of practice.

Lift Electrical System

On completion of the module, trainees should be able to perform repair and diagnostic of electrical system in lift, including motors, traction machine, electrical supply, power quality, electrical controls, safety gear, predictive failure for buffer, door safety devices, door mechanisms, emergency battery operated power supply, automatic rescue devices, transducers, overspeed governor and safety/arresting circuits.

Lift and Escalator Installation

On completion of the module, trainees should be able to interpret technical requirements and engineering drawings for new lift and escalator installation. They should also be able to supervise installation work according to contract requirements, and in compliance with relevant specifications, regulations and codes of practice.

Lift and Escalator Maintenance

On completion of the module, trainees should be able to interpret technical requirements and engineering drawings for lift and escalator maintenance. They should also be able to plan, schedule and supervise preventive and corrective maintenance works according to contract requirements, and in compliance with relevant specifications, regulations and codes of practice.

Lift Electronics and Controls

On completion of the module, trainees should be able to troubleshoot electronics and controls in lift, including field bus and equipment - lift controller, display indicators, communication and intercom, fire/BMS link interface and group control.

Lift and Escalator Inspection and Testing

On completion of the module, trainees should be able to schedule and conduct interim inspection prior to testing. They should also be able to prepare records for commissioning and supervise annual load test according to contract requirements, and in compliance with relevant specifications, regulations and codes of practice.

Incident Investigation and Technical Communication

On completion of the module, trainees should be able to communicate, liaise and coordinate with client and external agency/authority in the event of a lift incident. They should also be able to investigate and identify cause(s), and prepare lift incident report.

Lift Traffic Pattern Analysis

On completion of the module, trainees should be able to conduct lift traffic analysis, identify problem in lift control and operation, and recommend solution to improve lift operation and traffic pattern to client.

Application of Smart Technology

On completion of the module, trainees should be able to acquire and apply knowledge and skills in IT, virtual reality and augmented reality solution to improve productivity.

Advanced Lift and Escalator Technologies

On completion of the module, trainees should be able to apply fundamental knowledge of lift and escalator technology and their operations, including major lift and escalator systems/components, as well as relevant statutory regulations. In addition, trainees should be able to diagnose, troubleshoot serious lift fault with the aid of event log, schematic diagram and specialised instrument

Company Project

On completion of the module, trainees should be able to supervise and motivate technician team, plan maintenance schedule and roster, address and resolve workplace grievance that arise from time to time, and actively seek inputs relating to improvement of work processes. In addition, they should be able to identify training needs and plan for professional development of technician team.

On-the-Job Training

On completion of the module, trainees should be able to apply the skills and knowledge acquired at ITE College and workplace to take on the full job scope, including supervisory function, where appropriate, at the company.