

## HIGHER NITEC IN VERTICAL TRANSPORTATION (3 YEARS)

### CERTIFICATION

Credits required for certification:

Sector Foundation Modules	: 18
Cluster Core Modules	: 12
Specialisation Modules	: 27
Internship Programme Modules	: 12
Life Skills Modules	: 10
Cross-Disciplinary Core Modules	: 9
Electives	: 8
Total	: 96

### COURSE STRUCTURE

Module Title	Credits
<b>SECTOR FOUNDATION MODULES</b>	
Workplace Safety, Health & Environment	3
Data & Digital Essentials	3
Electrical Fundamentals	3
Sustainable Engineering	3
IoT for Engineering	3
Green Building Technology	3
<b>CLUSTER CORE MODULES</b>	
Commercial Electrical Installation	3
Electrical Design & Drafting	3
Electrical Motor & Control	3
Electrical Machine & Drive	3
<b>SPECIALISATION MODULES</b>	
Lift Mechanical System I	3
Lift Mechanical System II	3
Lift Power System	3
Lift Control System	3
Lift Inspection & Testing	3
Escalator Maintenance, Inspection & Testing	3
Lift & Escalator Electronic System	3
Advanced Lift & Escalator Maintenance	3
Internet of Elevator	3
<b>INTERNSHIP PROGRAMME MODULES</b>	
Internship Programme 1	4

Module Title	Credits
Internship Programme 2	8
<b>ELECTIVES (GENERAL) AND LIFE SKILLS MODULES</b>	
For details, click <a href="#">here</a>	

*Note: The offer of Cross-Disciplinary Core (CDC) modules and electives is subject to the training schedule of respective ITE Colleges. Students are advised to check with their Class Advisors on the availability of the CDC and elective modules they intend to pursue.*

## MODULE OBJECTIVES

### Sector Foundation Modules

#### Workplace Safety, Health & Environment

On completion of the module, students should be able to apply Workplace Safety and Health (WSH) policies, Environmental Management System procedures and practices in the planning, preparation and execution of work activities to ensure a safe and reliable workplace environment.

#### Data & Digital Essentials

On completion of the module, students should be able to prepare data for analysis, use online tools for collaborative work and maintain information security when online.

#### Electrical Fundamentals

On completion of the module, students should be able to interpret circuit schematic and board layout, perform DC circuit connection and in-circuit measurement.

#### Sustainable Engineering

On completion of the module, students should be able to determine key contributors to environmental changes and the challenges involved in implementing sustainable initiatives, and propose effective strategies to promote sustainability and address environmental challenges across various industries.

#### IoT for Engineering

On completion of the module, students should be able to set up an IoT, configure the controller to transmit sensor's collected data wirelessly to an IoT platform.

#### Green Building Technology

On completion of the module, students should be able to interpret and determine green building features and performance; and to develop best practices for sustainable buildings in accordance with BCA Green Mark Framework.

### Cluster Core Modules

#### Commercial Electrical Installation

On completion of this module, students should be able to manage, inspect and test commercial electrical installation, maintain temporary electrical supply system as well as manage smart monitored emergency lighting and fire alarm system.

#### Electrical Design & Drafting

On completion of the module, students should be able to design electrical installation and prepare electrical drawing of electrical installation.

#### Electrical Motor & Control

On completion of the module, students should be able to maintain DC and AC motors as well as maintain motor control circuit and equipment.

### Electrical Machine & Drive

On completion of the module, students should be able to maintain transformer installation, electrical motor and drive system installation as well as select electrical motor for application.

## Specialisation Modules

### Lift Mechanical System I

On completion of the module, students should be able to maintain mechanical equipment and systems in lift machine room, lift landing and lift car.

### Lift Mechanical System II

On completion of the module, students should be able to maintain mechanical equipment and systems in lift hoistway and lift pit as well as mechanical systems and components of lift safety equipment.

### Lift Power System

On completion of the module, students should be able to maintain lift safety system, emergency battery operated power supply unit, travelling cables and other forms of electrical cabling as well as perform measurement of power quality.

### Lift Control System

On completion of the module, students should be able to maintain lift controller, lift control devices, car door operator and braking system.

### Lift Inspection & Testing

On completion of the module, students should be able to inspect installation of lift and lift hoistway, as well as perform heat run and commissioning tests on lift system.

### Escalator Maintenance, Inspection & Testing

On completion of the module, students should be able to maintain escalator equipment and systems, test escalator safety devices and perform commissioning tests on escalator/moving walk system.

### Lift & Escalator Electronic System

On completion of the module, students should be able to maintain drives, devices, sensors and electronic circuitry of lift and escalator/moving walk systems as well as troubleshoot electronics faults.

### Advanced Lift & Escalator Maintenance

On completion of the module, students should be able to perform troubleshooting and adjustments of lift and escalator/moving walk components and safety circuits, including assessing its overall condition, as well as prepare lift and escalator/moving walk systems for audit.

### Internet of Elevator

On completion of the module, students should be able to perform remote monitoring and evaluate faults using remote intervention.

## Electives (General) and Life Skills Modules

For details, click [here](#).