***HIGHER NITEC* IN TECHNOLOGY – FACILITIES MANAGEMENT & ENGINEERING**
Course Code: HT2FM / Plan Code: HT2FM

COURSE OBJECTIVE
This course provides students with the skills and knowledge to supervise the maintenance and management of the typical facilities in a commercial, industrial, institutional or residential building in accordance with authority requirements to ensure optimum functioning of plant, equipment and systems. These facilities include air-conditioning systems, plumbing sanitary and fire protection systems, Building Management System, and other electrical and mechanical systems.

COURSE STRUCTURE
Core/Specialisation Modules

S/N	Module Details	Module Code	Module Objectives
MSC1: *Building Systems*			
C1	**Residential Air Conditioning Systems** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC43001FP** Equivalent Code Nil	On completion of the module, students should be able to carry out the installation, commissioning and maintenance of residential air conditioning systems and refrigeration system.
C2	**Electrical Systems** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC43009FP** Equivalent Code Nil	On completion of the module, students should be able to interpret electrical circuit diagrams, conduct continuity and insulation resistance tests. They should be able to conduct first line maintenance and coordinate maintenance of Extra Low Voltage system as well as the power and lighting circuits.
C3	**Fire Detection & Protection Systems** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC43004FP** Equivalent Code Nil	On completion of the module, students should be able to interpret building mechanical system plan, inspect fire alarm system, riser system (dry and wet), private hydrant system, automated sprinkler system, emergency voice communication systems and fire suppression system. They should be able to conduct first line maintenance and coordinate maintenance of fire detection and protection systems.
MSC2: Smart Facilities			
C4	**Commercial Air Conditioning & Mechanical Ventilation Systems** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC53007FP** Equivalent Code Nil	On completion of the module, students should be able to implement operational principle of commercial air conditioning systems and carry out inspections, commissioning and maintenance for air conditioning systems and mechanical ventilation systems in the buildings.
C5	**Integrated Smart Facilities Management** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC43007FP** Equivalent Code Nil	On completion of this module, participants will be able to interpret and implement diverse control systems within Building Management Systems (BMS), execute system health assessments for primary and secondary subsystems, implement control strategies of Smart Facilities Management (FM) to correct common faults, compile and oversee BMS-related system reports.
C6	**Energy Audit & Management** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC53003FP** Equivalent Code Nil	On completion of this module, students should be able to carry out on-site energy audits using suitable measuring instruments and tools and propose corrective actions to enhance energy utilization within buildings.

MSC3: ***Sanitary & Plumbing Systems***			
C7	**Sanitary & Drainage Systems** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC43003FP** Equivalent Code Nil	On completion of the module, students should be able to repair sanitary piping systems, replace piping fittings, sanitary fixtures, clear pipe and drain chokes.
C8	**Plumbing Systems** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC43005FP** Equivalent Code Nil	On completion of the module, students should be able to repair potable water supply piping system, replace piping fittings and inspect water pump and control systems.
MSC4: ***Building Management***			
C9	**Estate Management & Coordination** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC43006FP** Equivalent Code Nil	On completion of the module, students should be able to interpret building contract administration terms, supervise works for pest control, landscaping, cleaning services and handing & taking over of job tasks.
C10	**Building Systems & Services Supervision** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**FC53001FP** Equivalent Code Nil	On completion of the module, students should be able to maintain fittings, fixtures and inspect painting works related to building. Students should be able to supervise swimming pool maintenance, monitor lift and escalator maintenance and electronic car park system. In addition, students should be able to interpret and understand service report related to the above-mentioned works and systems.

Abbreviations: T - Theory, P - Practical, MSC - Modular Skills Certificate

CREDITS FOR CERTIFICATION
Total of 30 credits from successful completion of 10 Core/Specialisation modules.

Applicants who do not meet the entry requirements for Core/Specialisation modules will need to complete 12 credits from 4 Foundation modules before taking Core/Specialisation modules.

Foundation Modules

S/N	Module Details	Module Code	Module Objectives
F1	**Workplace Safety, Health & Environment** 15 (T) 45 (P) Credits 3 Prerequisite: Nil	**EG33001FP** Equivalent Code Nil	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.
F2	**Data & Digital Essentials** 21 (T) 39 (P) Credits 3 Prerequisite: Nil	**EG33002FP** Equivalent Code Nil	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.
F3	**Electrical Fundamentals** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**EG33003FP** Equivalent Code Nil	On completion of the module, students should be able to interpret circuit schematic and board layout, perform DC circuit connection and in-circuit measurement.

F4	**Sustainable Engineering** 36 (T) 24 (P) Credits 3 Prerequisite: Nil	**EG33005FP** Equivalent Code Nil	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.

Abbreviations: T - Theory, P - Practical

VENUE
ITE College Central, ITE College East, ITE College West

Note:
1) The training schedule of lessons is subject to change.
2) Depending on the demand, not all the modules in the CET *Higher Nitec* in Technology courses will be offered in each intake. Where the modules are offered and there is insufficient enrolment, the classes will be cancelled, and a full refund will be given to the affected students.