***HIGHER NITEC* IN TECHNOLOGY – ELECTRICAL ENGINEERING**
Course Code: HT2EE / Plan Code: HT2EE

COURSE OBJECTIVE
This course equips students with skills and knowledge to install, maintain and service electrical installations in residential, commercial and industrial premises in accordance with regulations, engineering specifications and codes of practice. They will also learn to manage power distribution systems and solar photovoltaic systems as well as to prepare electrical drawings.

COURSE STRUCTURE
Cluster Core/Specialisation Modules

S/N	Module Details	Module Code	Module Objectives
MSC: ***Electrical Design & Installation***			
C1	**Residential Electrical Installation** 21 (T) 39 (P) Credits 3 Prerequisite: Nil	**EE33001FP** Equivalent Code EE4005FP	On completion of the module, students should be able to install, maintain, inspect and test electrical installation in residential and office premises.
C2	**Commercial Electrical Installation** 18 (T) 42 (P) Credits 3 Prerequisite: Nil	**EE43004FP** Equivalent Code EE4005FP and EE4008FP	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.
C3	**Electrical Design & Drafting** 12 (T) 48 (P) Credits 3 Prerequisite: Nil	**EE33002FP** Equivalent Code EE4005FP	On completion of the module, students should be able to design electrical installation and prepare electrical drawing of electrical installation.
MSC: ***Electrical Power & Distribution***			
C4	**Electrical Switchboard** 18 (T) 42 (P) Credits 3 Prerequisite: Nil	**EE43003FP** Equivalent Code EE4006FP	On completion of the module, students should be able to maintain electrical switchboard circuit and equipment, manage electrical power monitoring system and perform predictive and condition-based maintenance for electrical system.
C5	**Power Distribution System** 39 (T) 21 (P) Credits 3 Prerequisite: Nil	**EE43006FP** Equivalent Code EE4006FP	On completion of the module, students should be able to manage electrical standby supply system, electrical power factor improvement system and maintain electricity distribution system.
MSC: ***Electrical Principles, Machine & Motor Control***			
C6	**Electrical Principles** 30 (T) 30 (P) Credits 3 Prerequisite: Nil	**EE43001FP** Equivalent Code EE4007FP	On completion of the module, students should be able to troubleshoot DC and AC circuits.
C7	**Electrical Motor & Control** 18 (T) 42 (P) Credits 3 Prerequisite: Nil	**EE43002FP** Equivalent Code EE4007FP	On completion of the module, students should be able to maintain DC and AC motors as well as maintain motor control circuit and equipment.

C8	**Electrical Machine & Drive** 39 (T) 21 (P) Credits 3 Prerequisite: Nil	**EE43005FP** Equivalent Code EE4007FP	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.
MSC: *Sustainable Energy*			
C9	**Solar Photovoltaic System** 12 (T) 48 (P) Credits 3 Prerequisite: Nil	**EE43007FP** Equivalent Code EE5007FP	On completion of the module, students should be able to install and maintain solar photovoltaic system.
C10	**Sustainable Energy System** 21 (T) 39 (P) Credits 3 Prerequisite: Nil	**EE53102FP** Equivalent Code Nil	On completion of the module, students should be able to manage electric vehicle supply equipment and maintain energy storage system.

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

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

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

Sector 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 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.