

ETT - ELECTRICAL TECHNOLOGY

ETT 101 Explore AC electrical circuits (2-2-4)

This course is designed to provide students with a comprehensive understanding of electrical AC circuits, while emphasizing the importance of safe working practices. Students will learn how to analyze, measure, and solve electrical AC circuits effectively. They will gain knowledge and skills in defining and applying appropriate procedures to calculate and measure power factor in AC circuits. Additionally, the course will cover the behavior of three-phase circuits in special situations.

ETT 120 Explore combination logics (1-2-3)

The unit provides an introduction to the devices, circuits, and techniques of digital electronics. Candidates investigate the logical and electrical characteristics of logic gates. From given Boolean expressions, logic gates are combined to form combinational logic circuits, which are then built and tested. The binary number system used by digital circuits, the decimal number system, and the hexadecimal number system are investigated, along with methods of conversion between them.

ETT 121 Explore electronics (2-2-4)

The aim of this unit is to provide learner with skills and fundamental knowledge of basic industrial electronics and instrumentation. Learners will understand the operation of digital electronics and semiconductor. Learners will be able to demonstrate the knowledge of logic gates and operational amplifiers used in industrial measurement.

ETT 130 Work Awareness Experience (0-24-0)

The course is a Work Awareness Experience where the student spends at the workplace site, observing standard tests, measurements, and equipment. functioning effectively as a member of a technical team, and observing health, safety and accident prevention procedures in the workplace.

ETT 210 Illustrate the fundamentals of Programmable Logic Controllers (PLCs) (1-3-4)

The overall objective of this unit is to develop students' skills in using PLC's in industry. It is designed to equip the novice with no prior PLC programming experience with the basic tools necessary to create a complete PLC program using ladder logic common to most current platforms. Using the Siemens S7300. Topics will include general controls, digital and analog IO, ladder logic programming, alarm / notification handling, HMI, emulation, best practices and more. In the end, Students will go through an entire, working PLC program and HMI line by line to solidify comprehension of the learnin

ETT 220 Test and maintain electrical transformers (1-2-3)

The aim of this unit is to provide the learner with the skills and knowledge related to electrical transformers to be able to: test, install, operate, monitor, diagnose and repair electrical transformers within the scope of this unit

ETT 221 Create printed circuit boards (1-1-2)

Provide students with knowledge and hands-on skills in computer aided design (CAD) for printed circuit board (PCB), copper board fabrication & assembly and testing of functional electronic boards.

ETT 222 Analyse Electrical Machines (1-3-4)

This unit gives an understanding of a range of electrical devices such as motors and transformers. Learners will be introduced to the techniques used for AC analysis and the concept of magnetic circuits. They will study the constructional features, principle of operation, performance characteristics and applications of DC motors, single phase motors, three phase motors, synchronous generators and motors, and transformers.