

# Diploma (Specialized in Electrical and Electronic Engineering)

## OVERVIEW

Electrical & Electronic Engineering is a field of engineering that generally deals with the study and application of electricity. This field first became an identifiable occupation in the latter half of the 19<sup>th</sup> century after commercialization of the electric telegraph, the telephone, and electric power distribution and use. Subsequently, broadcasting and recording media made electronics part of daily life. The invention of the transistor, and later the integrated circuit, brought down the cost of electronics to the point they can be used in almost any household object.

## PROGRAMME OBJECTIVES:

The Diploma (Specialized in Electrical and Electronics Engineering) is a recognized qualification for Electrical & Electronics engineering technicians and supervisors and is supported by the industry. Learn to apply Electrical & Electronics engineering theory to practice and competently perform technical operations to the standards expected by the engineering profession. This course covers wide knowledge of Electrical and Electronic Principles, Circuit Theory and Analysis, Electrical Power Fundamentals, Programmable Logic Controller.

## ASSESSMENT METHODS:

100% Coursework

## DURATION COMPONENTS:

Classroom Training Hours: 30 Hours Per Module

## MODULE SYNOPSIS:

### FWSH101 Fundamental of Workplace Safety and Health

The Fundamental of Workplace Safety and Health module provides students with the requisite knowledge of Health and Safety in the workplace. Upon completion of the module, students should be able to identify hazards in the workplace and state their possible effects and outline methods for creating a safe working environment and dealing with incidents.

### MP102 Managing People

The Managing People module provides students with a solid grounding in the basics of managing people in the organization. Students are expected to identifying the various models and methods available to monitor tasks, explaining how orders are given and discuss the steps involved in ensuring that those orders are carried out.

### CTA104 Circuit Theory and Analysis

This module aims to provide students with a strong foundation and understanding of the basic concepts and principles of circuit theory and to apply these principles to solve engineering problems. The Circuit Theory and Analysis module is designed to equip students with the knowledge of the Basic Circuit Concept, Circuit Analysis, Network Theorems, Two Port Networks, Resonance and Filters and Attenuators.

## PROGRAMME OUTCOMES:

Upon completion of this course, learners could be The Diploma Programme in Electrical and Electronics Engineering seeks to provide more accessible and quality education and training to manufacturing / production personnel to meet the real work needs of manufacturing / production industry and prepare them for the changes in techniques, technologies, markets and employment patterns. This Programme has been designed to enhance quality and productivity of manufacturing personnel.

Upgrade and modernize the technical know-how of those will to engaged in the manufacturing / production-related activities, of advancing their careers in manufacturing / production; and Provide better industry-education linkage by matching learner's educational needs while collaborating with professional bodies and technical institutions

## AWARDING BODIES:

Global School of Technology and Management

## NUMBER OF MODULE:

6

## TOTAL CONTACT HOURS:

180

### EM106 Engineering Mechanics

The Engineering Mechanics module is equipped with students with a solid understanding of statics and dynamics in engineering. Students will identify the machine members in which friction exists, comprehend the principles involved in the simple mechanism and explain the geometric properties of sections and basic link mechanism.

### EPP106 Electrical Power Fundamentals

This module introduces the fundamental concepts of energy and power. The underlying electrical engineering, physics and mathematics are illustrated using electricity generation, distribution and storage. Focus is given to sustainable energy sources amidst current concerns about climate change, finite natural resources and energy security, Method of Bulk Energy Generation, Power Factor Improvement, Load, Load curves and Power Plant Economics and Tariffs and Selection of Power Plant.

### PLC105 Programmable Logic Controller

Upon completion of this module, the participants will be able to explain the Programmable controller selection, demonstrate the use of programming techniques to produce a program for a modern programmable controller and understand data communications media and networks used.