

Diploma (Specialized in Chemical Process Engineering)

OVERVIEW

Chemical Process Engineering is a multi-disciplinary branch of engineering that combines natural and experimental science (such as chemistry and physics), along with life sciences (such as biology, microbiology and biochemistry) plus mathematics and economics to design, develop, produce, transform, transport, operate and manage the industrial processes that turn raw materials into valuable products

PROGRAMME OBJECTIVES:

The Diploma (Specialized in Chemical Process Engineering) is a foundation programme for students to learn the basic of chemical process engineering theory to practice and competently perform assistant/technical operations to the standards expected by the engineering profession. Upon completion the course, the student may progress to Specialist Diploma levels.

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.

ICE103 Introduction to Chemical Engineering

This module provides students with a basic concept of chemical engineering processes and related problem-solving methods. It gives a comprehensive introduction to the principles of chemical engineering process analysis. The module begins with an overview of the chemical process industry and a discussion of several significant examples. Details of steady-state material and energy balance, including recycle, phase change and reaction, form the core substance of the course. Other topics include simultaneous mass and energy balances and unsteady state balances. All concepts and principles are amply illustrated with relevant process examples. This module is targeted at level one engineering or science students.

PROGRAMME OUTCOMES:

The Diploma Programme in Chemical Process Engineering seeks to provide more accessible and quality education and training to production personnel to meet the real work needs of chemical process engineering 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 chemical process engineer.

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

AWARDING BODIES:

Global School of Technology and Management

NUMBER OF MODULE:

6

TOTAL CONTACT HOURS:

180

ME106 Material Engineering

The Material Engineering module is designed to equip students with understand the importance of engineering materials and its properties, destructive testing and non-destructive testing, heat treatment and Iron - Carbon Equilibrium Diagram, Ferrous, Non- Ferrous and their Alloys and powder metallurgy and primary manufacturing process.

ICTFM105 Introduction to Chemical Thermodynamics and Fluid

This module develops a good understanding of the basic concepts and application of thermodynamics and heat transfer required to analyse, model, and design processes and thermal-fluid systems in engineering practice. Major topics include the introduction and the application of the First and Second Laws of Thermodynamics, reversible and irreversible processes, entropy, non-flow and flow processes, cycles involving entropy changes, power and refrigeration cycles, as well as convection & radiation heat transfer.

IOC106 Inorganic and Organic Chemistry

Organic materials and compounds all contain carbon atoms. They comprise the most known chemicals, form the basis for all life on Earth, and have many commercial applications. This module will introduce students to the basic principles and theories behind organic chemistry, such as recognising functional groups, anticipating their reactivity and interconversions, and the reagents required for these transformations and identifying and explaining the relationships between the isomers and conformers of organic molecules.