Business and Advanced Technology Centre

INTRODUCTION

Petroleum production facilities, refineries, chemical and petro-chemical complexes are major processing plants in the oil and gas industry. Designing and operating these processing plants require not only experience but also comprehensive understanding of the various stages of plant lifecycle. Plant lifecycle begins from *feasibility study, engineering design, fabrication, construction, installation, commissioning, operation and maintenance.* Each stage of the plant lifecycle activities require knowledge and experience of the industry's stringent standard practice and codes.

Executive Diploma in Plant Technology is a study of the engineering knowledge and industry practice that are required at all stage of plant lifecycle. This program is designed to produce quality personnel to meet the industry requirements.

WHO SHOULD ATTEND THIS PROGRAM?

- Plant operators and maintenance personnel
- Technical personnel who are involved in engineering design, fabrication, construction, installation, commissioning, or project management
- Diploma holder or higher in the same field

OUTCOME OF PROGRAM

- Be able to gain employment in any stage of plant life cycle
- Be able to execute and supervise engineering projects either in engineering design, fabrication or commissioning
- Be able to manage plant operation and maintenance effectively
- Pursue their career as designer in engineering consultants

ENTRY REQUIREMENT

- Min. diploma in any engineering fields or
- Draftsman, fabricators supervisor, plant operator or plant technician with min 5 years experience in relevant discipline

CLASSES

ONE weekend in a month class

LOCATION

Kajang

TUITION FEE STRUCTURE

Application Fee	RM	100
Registration Fee*	RM	3 000
Modules Fee	RM	10 900
Project Fee	RM	1 000
Total	**RM**	**15 000**

*Deposit RM500 if payment is via EPF or Loan

BATC Business & Advanced Technology Centre

Executive Diploma in Plant Technology
(Piping and Plant Layout)

WHY UTM EXECUTIVE DIPLOMA PROGRAMME

- **Prestigious University Diploma**—Executive Diploma awarded by UTM
- **Flexibility**—Modular based. Flexi time and location
- **Course Duration**— 13 months to 36 months
- **Experienced trainers and lecturers —** Combination of UTM lecturers , experienced professional, expatriates and specialist
- **No Exams–** No need of memorization
- **100% Assignment Based Assessment—**Course is assessed through Post Module Assessment and Project
- **Experienced Based Learning—** Experience as prerequisite
- **Comprehensive study materials—**lecture notes etc.
- **Executive Environment—**Executive lecture room with audio visual aid
- **Financial Assistance—**Study loans, bank loans and EPF withdrawal
- **New Academic Pathway**— Bachelor, Masters and EngD
- **Cost Saving —** No extra tuition fee for repeated module
- **Industry Specific Syllabus—**Focus on industry knowledge and practice.

12 MODULES

CORE MODULES

- Petroleum Engineering
- Plant Layout Development and 3D Application
- Asset Management Integrity, HSE and Economics
- Project Planning, Management and Control
- Quality Management
- Information System Strategy

TECHNICAL MODULES

- Piping Material Engineering and Procurement
- Piping Design Engineering Management
- Piping & Equipment General Arrangement
- Plant Layout Design and Optimization
- Pipe Stress Analysis and Pipe Support Design
- Piping Fabrication, Installation and Commissioning

Exec. Diploma in Plant Technology Area Specializations:

- ☐ (Process)
- ☐ (Instrumentation & Control)
- ☐ (Electrical)
- ☐ (Mechanical)
- ☐ (Offshore Structure)
- ☐ (Piping and Plant Layout)

OCTAGON PETROLEUM TECHNOLOGY

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SYLLABUS

Candidates must take six (6) core modules and six (6) technical modules and undertake a major project submitted in the form of a dissertation

1.0 CORE MODULES

Module 1: Petroleum Engineering

This module is an introduction and orientation of the overall plant engineering activities focusing on the petroleum industry beginning from *exploration, appraisal, development, production, facilities operation* and *abandonment*. In addition to covering the different oil processing facilities, it also covers the different stages of project development beginning from engineering, fabrication, construction, installation, commissioning to operation and maintenance. The understanding of the overall picture of petroleum engineering activities is important to help technical personnel to play out their role in each stage of the plant lifecycle.

Module 2: Project Planning, Management and Control

Understanding of project planning, management and control is very crucial to ensure that; project is delivered on time, within budget and meeting the required quality. Competent project managers need to apply the principles of project planning, management and control and drive the project team to execute the project. The course is intended to provide the knowledge, understanding and the tools required for the successful and effective project planning, management and control.

Module 3: Quality Management

Quality is every employee's responsibility. Therefore, every person within an organization needs to understand and be able to apply basic quality concepts to their daily work activities and interactions, both internal and external. This module is designed to introduce the quality concepts and tools, the fundamental quality practices and principles to employees new to the quality and to refresh the skills of those with some previous background in quality. It is designed for organizations dedicated to improving and maintaining the highest level of quality excellence from the ground up. The course is effective for employee training, orientation programs or reinforcing common quality competencies throughout your organization. It also satisfies Section 6.2 resource management requirements for the new ISO 9001:2000 standard which covers *competence, awareness and training.*

Module 4: Plant Layout Development and 3D Application

This module introduces the students the sequence of Plant Layout Development and Optimization. It includes the general process involved in developing a plant layout. It also introduces the process of optimizing the plant space utilization required by all engineering disciplines.

Module 5: Asset Management Integrity, HSE and Economics

This module covers the study of economic justification before executing any activities relating to the different stages of the processing plant resource lifecycle. This module begins by describing the overall processing plant resource lifecycle. It also covers the description of work scopes of all the engineering disciplines. It also looks at the HSE requirements of a project and cost estimation of project. Finally, it reviews the preparation of production forecast, the cash flow of project; and project economic criteria and approval.

2.0 ELECTIVE MODULES

Module : Information System Strategy
Module : Creativity and Innovation Strategy
Module : Business Strategic Management
Module : Financial Analysis and Control System

3.0 TECHNICALS MODULES

Module 7: Piping Material Control and Procurement

In this module, the students are introduced to the preparation of the bill of material. It also gives them the exposure of the procurement standard practices starting from the preparing of the material specification, purchasing, expediting, inspecting and controlling material at site for piping fabrication and construction. Finally, the students are taught the final material documentation requirement before the actual hand over to client.

Module 8: Piping Design Engineering Management

This module exposes the students to the different roles and responsibilities of the individual piping design engineering team and their activities. Through a correct understanding of the team work flow, designers can have an effective project design control to ensure effective piping design engineering execution as per contract work scope. This can be achieved through a process that includes clarifying the project scope of work, schedule, manpower planning and preparation of specifications as per project (client's) compliances.

Module 9: Processing Plant Piping and Equipment Arrangement

This module introduces to students the core design activity that is to arrange the overall plant piping layout according to spacing requirements. General piping arrangement is the core piping activities to ensure all piping spacing requirements. In this module, students will be introduced to piping engineering details requirements and piping spacing study. These exercises are important to designer in order to determine the space required to develop in overall plant layout.

Module 10: Plant Layout Design and Optimization

This module focuses on teaching the students the process of managing piping engineering documents and modeling. It will cover managing piping engineering drawings and 3D modeling production as per project requirements. In addition, it will also discuss the concept of production of 2D drawings from 3D CAD system. The piping engineering drawing will be the main reference to fabricator to construct, erect and commission the piping system of a plant.

Module 11: Pipe Support and Stress Requirement Compliance

This module focuses on teaching the students about pipe support details. It is based on the stress and vibration analysis result and pipe bending movement. Different types of pipe support shall be designed to cater the pipe weight and to protect the piping routing from thermo expansion caused by the pressure and the temperature of the fluid flow.

Module 12: Piping Fabrication, Installation and Commissioning

This module covers the process of piping assembling of the different piping components to build a complete piping system. Fabrication of piping is the activities of joining together of weld able pipe and fittings by qualified field personnel. This module also introduces the piping engineering fabrication drawings (spool drawings) and piping engineering fabrication supervision to ensure the integrity of the piping

For Registration and Enquiries. APPLY NOW

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