

# Business and Advanced Technology Centre



**BATC**  
Business & Advanced  
Technology Centre

## Executive Diploma in Plant Technology (Electrical)

### 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.

### INTRODUCTION

Petroleum production facilities, refineries, chemical and petrochemical 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 the other stages of plant life cycle
- Be able to execute and supervise plant engineering projects either in engineering design, fabrication or commissioning
- Be able to manage plant operation and maintenance effectively
- Pursue their as designers career in engineering consultant

### 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	13 900
Project Fee	RM	1 000
<b>Total</b>	<b>RM</b>	<b>18 000</b>

\*Deposit RM500 if payment via EPF or Loan

### 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

- Electrical Engineering
- Cable Management and Layout
- Lighting and Small Power Distribution
- Lighting and Earthing Design
- Electrical Construction Support
- Electrical Fabrication, Installation and Commissioning

#### Exec. Diploma in Plant Technology Area Specializations:

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

**OCTAGON**  
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## Executive Diploma in Plant Technology (Electrical)



### 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: Electrical Engineering

This module expose the students to the different roles and responsibilities of the individual electrical designer 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 conceptual design as per project compliances.

##### Module 8: Cable Management and Layout

This module introduces the students to the core design activity that is arrange the cable management and layout routing system according to plant equipment arrangement. The cable routine system to ensure all electrical cable will be proper routed from source to end load.

##### Module 9: Lighting and Small Power Distribution

This module exposes the students to know and familiar with lighting and small power design. Through a correct understanding of the lighting and small power design flow, designers can be an effective design control to ensure effective lighting and small power distribution in electrical system.

##### Module 10: Lighting and Earthing Design

This module exposes the students to know and familiar with lighting and earthing design. Through a correct understanding of the lighting and earthing design flow, designers can have an effective design control to ensure effective lighting and earthing in electrical system.

##### Module 11: Electrical Construction Support

The module exposes the students to know and familiar with type support document required for electrical construction. With knowing id document required and support design flow, designer can have an effective control of overall electrical construction and capable to assist electrical procurement.

##### Module 12: Electrical Fabrication, Installation and Commissioning

This module covers the process of electrical assembling of the different electrical components to build a complete electrical system. This module also introduces the electrical engineering fabrication drawings and electrical pre-commissioning and commissioning to ensure the integrity of the electrical system. A designer should know this module is to ensure practical electrical design practice.

**For Registration and Enquiries. APPLY NOW**

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