

Specialist Diploma in Civil Engineering and Construction

OVERVIEW

The Specialist Diploma in Civil Engineering and Construction programme enables learners to learn the whole construction process, from development to evaluation also develop a maintenance system of the construction project.

PROGRAMME OBJECTIVES:

Construction is a recognized qualification for civil engineering technicians and supervisors throughout Singapore and Malaysia and is supported by industry. Learner learns to apply civil engineering theory to practice and competently perform technical operations to the standards expected by the engineering profession. This course covers side knowledge of construction technology, construction cost control, fundamental structural design of builders and construction environment.

ASSESSMENT METHODS:

70% Coursework & 30% Examination

DURATION COMPONENTS:

Classroom Training Hours: 32 Hours Per Module

MODULE SYNOPSIS:

WSH201 Workplace Safety and Health Practice in Building Industry

Upon completion of this module, students will be able to explain the main health, safety and welfare legislation in the construction sector including the requirements of an effective health and safety policy along with the organizational arrangements necessary for its implementation, demonstrate an understanding of hazard and risk identification in design and construction, undertake risk assessment and formulate control measures to prevent ill health and injury and review, revise and monitor assessments as required.

SD207 Structural Design

This module is focus on analyse bending moments and shear forces for simple structures, explore bending deflections for simple structures, elastic columns under axial loading and analyse design methods for simply supported Beams in Steel, Reinforced Concrete, Timber, Columns in Steel, Masonry and Eel.

SPM204 Site Planning and Management

In this module, students will gain solid knowledge of the management and planning process and its application to site planning and operation management, site requirement for temporary facilities and its welfare and environment perspectives, planning and management function of project monitoring and control; the utilization of plants and equipment reference to supply chain management

ICA208 IT and Computing Applications

Upon completion of this module, students will be able to demonstrate the ability to use commercially available measurement software packages including the CAD and produce measured works in alternate formats including in analysing and estimating software models to produce comparative rates and display the results graphically of a building project.

PROGRAMME OUTCOMES:

Upon completion of this course, learners could be involved in the planning, project cost control and participate in construction of the infrastructure and buildings, involved in establishment of facilities like roads, airports, water supply, drainage, waste water disposal, bridges, high rise residential buildings, commercial buildings, and other public or private works. Throughout the course, learner's ability to learn will be developed through teaching and learning approaches that encourage creative thinking and problem-solving skills, and through the execution of industry-based projects and assignments. Also, abilities to handle safety procedures in the construction industries

AWARDING BODIES:

Global School of Technology and Management

NUMBER OF MODULE:

8

TOTAL CONTACT HOURS:

272

CP202 Contracts & Procurement

Upon completion of this module, students will be able to analyse the factors affecting the choice of different procurement and contractual arrangements, determine and apply current issues and best practice associated with the procurement of projects through reference to government and industry sponsored reports and recommendations, examine the roles and activities of the parties and organizations involved, analyse the forms of contract with particular reference to time, cost and quality and evaluate the forms of contract in respect of supply-chain management.

CCC205 Construction Cost Control

In this module, students will learn the importance of pre-contract planning, requirements of specific contracts and plan accordingly so as to establish and maintain a functional and profitable construction site and contract undertaking, so as to fulfil the underlying intent from top management, develop feasible site control strategies, and to ensure that contracts are delivered with the balanced achievement of time, cost and quality in mind and appreciate, uphold and apply fundamental health and safety guidelines.

CT206 Construction Technology

Upon completion of this module, students will be able to understand the production and construction techniques associated with innovative technologies, understand how innovation and sustainability may affect the life cycle of a construction project, performance of buildings and energy efficiency performance of the building services systems.

HMBE203 Human Management in the Built Environment

Upon completion of this module, students will be able to demonstrate an awareness of the ways in which the managers of an organization can seek to ensure that the organization has sufficient competent staff to facilitate the achievement of strategic objectives in the face of a changing environment.