Specialist Diploma in Civil Engineering and Construction

OVERVIEW

The Specialist Diploma in Civil Engineering and Construction programme enables leaners to learn the whole constriction 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: 30 Hours Per Module

MODULE SYNOPSIS:

WSH201 Workplace Safety and Health Practice in Building Industry

This module is equipped students with the workplace health & safety problems associated with the construction industry. This is incusing the safety laws in Singapore relevant to construction operations and the office environment, Work Place Safety & Health Regulations by the Ministry of Manpower and the theory and practice of safety management in the construction industry.

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

This module aims to provide students with solid knowledge of the management and planning process and its application to site planning and operation management in the construction industry.

CP202 Contracts & Procurement

This module focuses on the contract administration, bidding and procurement processes to enable students to progress to the next module focus on the practical theme of contracts and procurement theme at the Advanced Diploma level.

CT206 Construction Technology

This module focuses on modern construction technology in construction and building services systems. Innovation and sustainability of the life cycle of a construction project, performance of buildings and energy efficiency performance of the building services systems are a crucial part of successful projects.

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:

240

ICA208 IT and Computing Applications

Information Technology (IT) and Computing have become an integral part of the construction and building project. It generates new opportunities for collaboration, coordination, and information exchange among organisations that work on a construction project. The current information technologies or software applications are available to support most aspects of construction projects. The applications including Computer-Aided Design and Visualisation, Building Engineering Applications, Computer-Aided Cost Estimation, Planning, Scheduling, Site Management, Computer-Aided Facilities Management, Integration, Business and Information Management, etc. Students need to understand IT and computing applications in the construction industry and how it affects their job performance and productivity.

CCC205 Construction Cost Control

It is every supervisor's responsibility to complete their project on budget and within the estimated costs. Therefore, the module aims to equip students with solid knowledge of effective control of construction costs at the job site and construction projects. Students will study construction cost and apply principles and practices associated with cost awareness and production control to each project element. Cost control begins with the estimate and then continues through work and cost analysis, production scheduling, reporting, production control, and project evaluation. The information will be studied by solving common construction problems, considering case studies, and discussing common cost control issues.

HMBE203 Human Management in the Built Environment

Human Resource Management (HRM) is the process of managing people within an organisation. In construction, HRM is primarily concerned with ensuring that a project has sufficient human resources, with the correct skill-sets and experience, to complete. HR managers have to identify and document project roles and responsibilities and develop a plan describing the end-to-end processes required on a project (or series of projects) to determine its human resource requirements.

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