

Diploma in Construction

Global BW College (Pte) Ltd has designed this diploma programme to provide the students the foundation and knowledge in Construction (Mandarin).

Module Title and Learning Objectives

1. Module 1: Construction Technology

- Upon completion of the course, students should be able to:
- (a) Appreciate the professional and moral duties of an engineer to promote and maintain good safety practices both onsite and at the higher industry level
- (b) Select suitable types of machineries for different job operations onsite while understanding the basis/limitations of his/her choice
- (c) Prepare method statements and sketches, and describe the construction procedures for various structures including basements, foundations, tunnels, high-rise buildings, bridges and coastal structures
- (d) Describe the objectives and methods of building appraisal and retrofitting
- (e) Explain the role, types and application of automation and robotics in construction and their potential impact on the construction industry
- (f) Understand the underlying factors that would lead to higher level of build ability.

2. Module 2: Steel Design Structure

- Upon successful completion of the course, students will be able to calculate factored design loads from structural plans, design laterally restrained and unrestrained beams, design columns in simple structures, design columns in continuous structures and design bolted and welded connections.

3. Module 3: Reinforced Concrete Design

- The students are expected to be able to understand the behaviour and load-carrying capacity of basic reinforced concrete members. They should be able to design beam, slab, column and footing, with confidence using existing codes of practice. It is also expected that the student would know the limitations of the design methods used.

4. Module 4: Structural Design Analysis

- On successful completion of the course, students are expected to understand the difference between real structures and idealised systems, and the distribution of forces on structural systems. Students will be equipped with basic knowledge of loading, boundary condition, and equilibrium of systems. They will possess an understanding of the physical response of structures to loading and the effect this has on the response.

They will be able to perform basic calculations to determine internal forces and deflections of simple structures and appreciate the importance of structural analysis in the design of practical structures.

5. Module 5: Environmental Engineering

- The course will equip the students with fundamentals on water and air quality. The students will be capable of designing simple unit processes for water and wastewater treatment.

6. Module 6: Project Planning and Management

- Upon completion of the course, students should be able to:
- (a) Appreciate the roles and duties of a project planner and manager to promote
- and maintain good planning and control of projects
- (b) Select suitable planning and control techniques while understanding the
- basis/limitations of his/her choice
- (c) Upon completion of the course, the student should acquire basic skills in tackling
- research in civil engineering. This includes gaining knowledge in the application of
- modern equipment for research, data collection and analyses, critical review of
- published literature, preparation of a research report and oral defense of his findings
- and conclusions.

Minimum Entry Requirements:

- Age: 18 years old
 - Language: Chinese Language proficiency with GCE 'O' Level C6 pass grade or equivalent
- Academic: At least 3 GCE

Mode of Delivery:

Students can achieve the guided learning hours in combination of face-to-face classroom interactions, self-study and group study as well as research work. They will be required to attend a certain number of lecture hours to support their studies, and will receive guidance to complete the learning hours.

Duration:

- 6 months (part-time)

Award Criteria:

Upon completion of all 6 modules the Diploma in Construction (Mandarin) Certification will be awarded by Global BW College. The student must achieve at least 75% (part-time) attendance requirement per module.