APPROVED

Diploma in Engineering Technology (Civil)

Faculty of EDICT (Engineering,Design and ICT)

Programme Title (Arabic)	الدبلوم في تقنية الهندسة (الهندسة المدنية)				
Acronym / Abbreviation *	DTechEngCiv				
Nature	Embedded Qualification				
Programme Code	ENT6080	**Programme Duration**	2 Year/Cycle	**Programme Level**	Level 6
Programme Credits	240	**Award Category**	Diploma		
Effective From	2023/2024 Sem 1				
Owner	School of Engineering				

Professional Body

Professional Body	*Recognition Status*	*Effective From*	*Interim Date*	*Professional Bodies*	*Contact Person*	*Evidence*
Employability Skills	Yes	15/12/2022		Employability Skills		

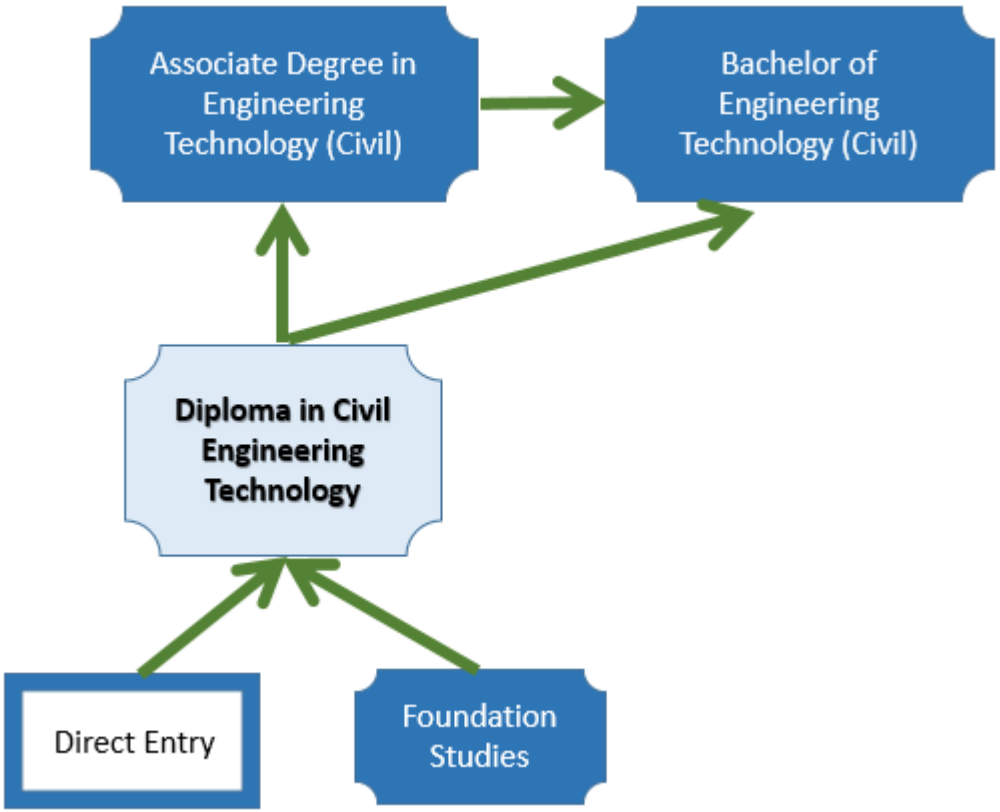
Target Groups *
High School Graduates
International Students
People in Employment
Unemployed
Bahrain Polytechnic students from another programme

Qualification Completion Requirements Criteria	Awarded where candidates have met all of the requirements below: • Successful completion of, or exemption from, all courses listed in Schedule A • Achievement of National Requirement courses • Completion of courses to accumulate a total of 240 credits • Completion of 60 days of work experience
	The Diploma in Engineering Technology (Civil) at Bahrain Polytechnic shares common 1st year courses with all engineering qualifications that lay the foundations of Engineering Technology and provide the students with the required knowledge to succeed in their chosen specialization. It is of 240 credits at NQF level 6, delivered over a 2-year period of 4 semesters. Students are expected to take 60 credits on average per semester. It is composed of 15 credits of National Requirements courses, 30 credits of English courses, 195 credits of General Engineering courses and specialized Civil Engineering courses. The diploma programme requires students to have 60 days industry work experience.

Programme Overview *	The Diploma in Engineering Technology (Civil) is designed and delivered in such a way, after extensive interaction with the Bahrain Engineering environment and society, to provide work-ready civil engineering technology diploma graduates. The graduates will acquire detailed technical knowledge in their respective fields, basic and some advanced applied skills and valuable employability skills that will allow them to provide the drive for the transformation towards a knowledge-based economy in Bahrain. The uniqueness of the Engineering Technology qualifications at Bahrain Polytechnic is the strong commitment of the Institution to deliver these qualifications using student-centred learning and more specifically, the Problem-Based Learning (PBL) Methodology. Using this learning methodology allows the provision of the required theoretical knowledge, practical skills and employability skills to graduates and thus achieve the Polytechnic's mission of producing enterprising and work-ready graduates for Bahrain Society and Economy. The PBL methodology is implemented through the design of appropriate assignments that motivate the students to provide a solution to an Engineering design and/or analysis problem. Students are required to complete lab experiments, software practical assignments, design projects, controlled assignments such as theory tests and to provide rational justification for their work through the preparation of technical reports, presentations and posters. The theoretical knowledge given to students is provided through a balanced combination of lectures, tutorials, experimental work, project work and one-to-one supervision with Faculty members.
Entry and Selection *	General entry requirements such as secondary school achievements, English and Mathematics are described in the Student Admission Policy A/AB/010. Specific entry requirements for this Programme, beyond those described in the Student Admission Policy are as follows: Academic Successful completion of: AP4203 English 2 AP4102 Mathematics 2 (Technical) or Passing English and Mathematics selection tests at the required level or equivalent.
Selection and Criteria and Process *	Where there are more applicants who meet the programme entry criteria than can be accepted, the following shall be used: Selection Criteria: • Successful completion of the Foundation Programme at Bahrain Polytechnic and demonstration of a commitment to study • Results of programme entry tests • Work experience and prior educational achievement Selection Process: • Applicants may be required to attend an interview.

Major Selection Criteria *	N/A
Accreditation / External Approval Requirements *	The Diploma in Engineering Technology (Civil) qualification shall be submitted for potential IET, UK accreditation.
Attendance Requirements *	Attendance requirements are described in the policy Student Attendance A/AB/006.
Qualification Overview *	The Diploma in Engineering Technology (Civil) qualification is a technologically-strong qualification that aims to provide for the industry needs nationally, regionally and internationally. The qualification has a wide base of detailed knowledge, basic skills and some advanced skills on Civil Engineering upon which graduates can build to reflect the wide range of fields and industries that are present locally and regionally. There is emphasis on 2D and 3D engineering drawing, health and safety, mechanics of structures, linear and levelling surveys, building technology, and producing engineering reports. Students gain detailed knowledge, basic skills and some advanced skills in the areas of structural mechanics (static and dynamic), engineering graphics on the use computer aided design, building construction, land surveying, quantity surveying, and civil engineering works in construction. Students are introduced to software packages like Matlab and LabView, Auto Cad and 3-Dimensional modelling software throughout the programme. Students are required to have a final project in semester 2 year 2 through the Applied Project course. Diploma in Engineering Technology (Civil) is an applied technology programme which will provide new learning opportunities for engineering students within the local and regional community. It is a standalone programme which allows students to acquire the qualification with options to progress for future pathways in Civil Engineering such as Associate Degree and Bachelor's Degree in Engineering Technology (Civil). The programme is at NQF level 6 and has 240 credits over four semesters.
Qualification Aim *	The aim of the qualification is to provide students with a comprehensive set of knowledge, skills and competencies for employment as civil engineering technologists competent at evaluating, implementing, supervising and taking responsibility for civil engineering problems and activities. The qualification will provide students with: • Theoretical and practical skills to solve practical problems in related specific skills in basic building technology, civil engineering works supervision, quantity surveying and land surveying in the built environment. •Basic and some advanced skills necessary for effective communication, teamwork, documentation and site works supervision through the inclusion of courses in English language, mathematics, ICT, project supervision, ethics and social responsibility.
	Students will be provided the following learning pathways at Bahrain Polytechnic:

Graduate Pathways and Destination *



Students will be provided the following learning pathways to other Academic Institutions or Professional Bodies:

- Graduates of the Diploma in Civil Engineering Technology programme who wish to continue their studies may apply to any university for admission into their programme according to their admission criteria. For diploma engineering technology holder, it is common practice for a university to accept the student into the Associate degree or the 3rd year of a BEngTech degree.

Graduates are likely to be employed using the specific skills gained in this qualification, in the following occupations:

- Architectural Draftsman
- CAD Operator
- Land Surveyor
- Quantity Surveyor
- Site Supervisor

Other Information *

Employability Skills Generic Definition:

Communication	Communicate in ways that contribute to productive and harmonious relationships across employees and customers.
Team work	Work effectively independently and in collaboration with others.
Problem solving	Think critically and respond appropriately to changing needs within a growing and diversifying economy.
Initiative and enterprise	Apply resourcefulness, innovation and strategic thinking to a range of workplace situations.
Planning and organisation	Plan and manage their working lives.
Self management	Demonstrate self discipline and adaptability, and be able to plan and achieve personal and professional goals.
Learning	Understand the need for and engage with continuous learning throughout the lifespan.
Technology	Utilize information technology effectively and ethically in their personal and professional lives.

Programme Learning Outcomes

On successful completion of this programme the learner will be able to :

Description
Apply knowledge of mathematics, science, engineering fundamentals, and an engineering specialisation to deal with defined and applied engineering procedures, processes, systems or methodologies.
Identify, formulate, research literature and solve broadly-defined engineering problems reaching substantiated conclusions using analytical tools appropriate to civil engineering technology.
Identify and commit to professional ethics, responsibilities and norms of engineering technology practice.
Determine the impact of engineering solutions in a societal context and demonstrate knowledge of the need for sustainable development.
Demonstrate understanding of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering technology practice.
Design solutions for broadly-defined engineering technology problems and contribute to the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
Conduct investigations of broadly-defined problems; locate, search and select relevant data from codes, data bases and literature, design and conduct experiments to provide valid conclusions.
Select and apply appropriate techniques, resources, and modern engineering tools, including prediction and modeling tools, to broadly-defined engineering activities, with an understanding of their limitations.
Practice as a professional using 21st century skills.
Provide engineering solutions to the construction and built environment in global, economic, environmental, and societal contexts.
Apply techniques, skills and modern technologies in civil engineering practice to be competitive in the national and global marketplace.
Design a construction process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, constructability, and sustainability, in accordance with governing standards.

Semester Schedules

Year 1 / Semester 1

Core

Course Code	Title
EN6000	**Electrical Fundamentals**
EN6990	**Engineering Practice**
EL6001	**English for EDICT 3**
EN6907	**Mathematics for Engineers 1**

Year 1 / Semester 2

Core

Course Code	Title
EN6010	**Engineering Computing Fundamentals**
EL6002	**English for EDICT 4**

EN6914	Mathematics for Engineers 2
EN6903	Mechanical Fundamentals

Year 2 / Semester 1

Core	
Course Code	**Title**
EN6801	Building Construction
EN6904	Engineering Graphics
EN6902	Engineering Mechanics 2
NR	National Requirements

Optional	
Course Code	**Title**
NR-Arabic	National Requirements- Arabic

Year 2 / Semester 2

Core	
Course Code	**Title**
ED7000	Applied Project
EN6804	Civil Engineering Works Supervision
EN6803	Quantity Surveying
EN6802	Surveying