

APPROVED

Diploma in Cloud Computing
 Faculty of EDICT (Engineering,Design and ICT)

Programme Title (Arabic)	ةيدباحسلا قنبسوحلا يف مولبدلا					
Acronym / Abbreviation *	DipCC					
Nature	Specialisation					
Programme Code	ICT6025	Programme Duration	2 Year/Cycle	Programme Level	Level 6	
Programme Credits	240	Award Category	Diploma			
Effective From	2023/2024 Sem 1					
Owner	School of ICT					
Professional Body						
Professional Body	Recognition Status	Effective From	Interim Date	Professional Bodies	Contact Person	Evidence
Employability Skills	Yes	04/01/2021				
Target Groups *						
High School Graduates						
International Students						
People in Employment						
Unemployed						
Targeted Industry Groups						
Qualification Completion	Awarded where candidates have met all of the requirements below:					
	Successful completion of, or exemption from, all courses listed in Schedule A and					
	Accumulation of 15 credits courses as National requirement. and					
	Achieve the Bahrain Polytechnic General Qualification Requirements as documented in the Naming and Awarding Qualifications policy A-AB-004 and					
	Completion of courses to accumulate a minimum of 240 credits from any Bahrain Polytechnic Qualification;					

Requirements Criteria	
Programme Overview *	<p>The Diploma in Cloud Computing offered at Bahrain Polytechnic is designed after extensive interaction with the Curriculum Advisory Group (CAG) and the EDB Bahrain, report on Cloud Computing for Business in order to provide work-ready cloud technology graduates. The graduates will acquire technical knowledge in their respective fields, specialized practical skills, and valuable employability skills.</p> <p>The qualification is placed at NQF level 6, designed and delivered to provide work-ready graduates. Students are expected to take 60 credits on average per semester; thus, at completing their studies, they should have accumulated a total of 240 credits. Of those 240 credits, 30 credits of English courses are included, and the remaining 210 credits are taken from the core and specialized information technology courses. Additionally, students are required to complete a total of 60 work placement days.</p> <p>The uniqueness of the Diploma in Cloud Computing qualifications at Bahrain Polytechnic is the strong commitment of the Institution to deliver these qualifications using blended and student-centered learning and, more specifically, the Problem-Based Learning (PBL) Methodology. Utilizing this learning methodology allows us to provide the required theoretical knowledge, practical skills, and employability skills to our graduates and thus achieve our mission of producing enterprising and work-ready graduates for the Bahrain Society and Economy, particularly the oil and gas and manufacturing industry. The PBL methodology is implemented through the design of appropriate assignments that motivate students to provide a solution to an engineering design and/or analysis of a problem and also includes real work scenarios, long-term project development, and simulated environments. Students are required to complete lab experiments, software practical assignments, design projects, and controlled assignments such as theoretical tests and to provide a rational justification for their work through the preparation of technical reports, presentations, and posters. The theoretical knowledge given to the students is provided through a balanced combination of lectures, tutorials, experimental work, project work, and one-to-one supervision with the Faculty Members.</p>

Entry and Selection *	<p>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:</p> <p>Achievement of AP4203 English 2 and AP4101 Mathematics 2 (General) courses of Bahrain Polytechnic's Foundation program</p> <p>or</p> <p>Passing English and Mathematics selection tests at the required level or equivalent.</p>
Selection and Criteria and Process *	<p>Where there are more applicants who meet the programme entry criteria than can be accepted, the following shall be used:</p> <p>Selection Criteria</p> <p>Preference will be given to students who have successfully completed the Foundation programmes at Bahrain Polytechnic and have clearly demonstrated an aptitude for ICT and a commitment to their study.</p> <p>Results from programme entry tests will be used to select students with the highest likelihood of successfully completing the degree programme.</p> <p>Selection Process</p> <p>The School will determine on a yearly basis the seats available for each of the entry and selection categories.</p> <p>Additionally, applicants may be required to attend an interview.</p> <p>Consideration of work experience and prior educational achievement may be used.</p>

Major Selection Criteria *	Not Applicable.
Accreditation / External Approval Requirements *	<p>All the majors in the Bachelors of Information and Communication Technology majors have received the BCS - The Chartered Institute of IT UK accreditation.</p> <p>The new Diploma in Cloud Computing will be submitted for similar international accreditation, subject to the accreditation body's requirements and review.</p>

Attendance Requirements *	<p>Institutional attendance requirements are described in the policy Student Attendance A/AB/006. There are no programme specific attendance requirements.</p>
Qualification Overview *	<p>The qualification encompasses an initial four semesters of full-time academic years of study in the broad ICT disciplines at NQF levels 6, 7, and one NQF level 8 course, accompanied by experience in the industry through a 60 days placement. The intention is to build core knowledge in various areas, including networking, operating systems, databases, cloud-based technologies, cloud architecture, security, and applied project.</p> <p>After the first three semesters, the student can then specialize in Cloud Computing technologies, such as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS), which can be used to build scalable and flexible solutions that can handle large amounts of data and traffic. Cloud services like Amazon Web Services (AWS) and Microsoft Azure provide a wide range of tools and services that can be used to build cloud-based applications. During those specialization activities, students receive exposure to the most common enterprise services such as operating systems (UNIX, LINUX, and MS Windows), Information security, Cloud computing, virtualization, and Artificial Intelligence. In the final semester, this knowledge is consolidated through the applied capstone project. Cloud computing applied project involves leveraging the power and flexibility of cloud technologies to create innovative and scalable solutions for specific business needs or requirements.</p> <p>Graduates of this qualification may also progress to further studies in the Information Systems Major Associate degree or the Information Systems Major Bachelor degree.</p>

Qualification Aim *	<p>The aim of this qualification to provide students with the foundational knowledge and skills necessary to understand the principles, technologies, and applications of cloud computing. The vocational focus of cloud computing is to prepare students with the skills and knowledge essential to succeed in the field for careers in the rapidly growing field and to meet the growing demand for computing professionals.</p>
Graduate Pathways and Destination *	<p>The Diploma in Cloud Computing will prepare students for a range of careers in cloud computing. Some specific career options include, but are not limited to:</p> <ul style="list-style-type: none"> cloud solution architect cloud security architect cloud solution consultant cloud engineer cloud system engineer and cloud system administrator. cloud Infrastructure technician/engineer <p>The graduates of this program will also be able to take cloud-computing certifications offered by various vendors and organizations such as AWS, Microsoft, and Google.</p>

Other Information *	<p>Empolyability Skills Generic Definition:</p> <table border="1"> <tr> <td>Communication</td><td>Communicate in ways that contribute to productive and harmonious relationships across employees and customers.</td></tr> <tr> <td>Team work</td><td>Work effectively independently and in collaboration with others.</td></tr> <tr> <td>Problem solving</td><td>Think critically and respond appropriately to changing needs within a growing and diversifying economy.</td></tr> <tr> <td>Initiative and enterprise</td><td>Apply resourcefulness, innovation and strategic thinking to a range of workplace situations.</td></tr> <tr> <td>Planning and organisation</td><td>Plan and manage their working lives.</td></tr> <tr> <td>Self management</td><td>Demonstrate self discipline and adaptability, and be able to plan and achieve personal and professional goals.</td></tr> <tr> <td>Learning</td><td>Understand the need for and engage with continuous learning throughout the lifespan.</td></tr> <tr> <td>Technology</td><td>Utilize information technology effectively and ethically in their personal and professional lives.</td></tr> </table>	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.
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
Demonstrate critical knowledge and understanding of the latest cloud models, cloud services, and cloud deployment models.
Recognise the professional, moral, and ethical issues involved in exploiting computer technology and be guided by appropriate professional, ethical and legal practices in a Bahrain context.
Comprehend and follow formal architecture design and implementation methodologies.
Demonstrate knowledge of a variety of techniques for requirements analysis of enterprise systems and infrastructure.
Exhibit critical knowledge of enterprise systems and infrastructure.
Analyse existing systems and provide models and specifications of same.
Evaluate designs for new systems and assess capabilities of designed system against specified requirements.
Create or implement appropriate Cloud Infrastructure from designs documents. (Generic)
Document system solutions for a range of audiences.
Use specialist level skills to effectively manage and maintain existing systems.
Analyse business requirements and design an appropriate cloud architecture.
Implement an cloud infrastructure for small, medium and enterprise organisations that is fit for purpose
Operate and manage ICT Cloud Infrastructure.
Practice as a Professional using 21st Century Skills

Semester Schedules

Year 1 / Semester 1

Core	
Course Code	Title
IT6001	Computer Systems
IT6001	Computer Systems
EL6001	English for EDICT 3
IT6010	Maths for Computing
IT6004	Unix Systems

Year 1 / Semester 2

Core	
Course Code	Title
IT6005	Database Systems 1

EL6002	English for EDICT 4
IT6003	Networks and Data Communications
GS5303	Python and Cloud Fundamentals

Year 2 / Semester 1

Core	
Course Code	Title
IT7009	Artificial Intelligence
IT6011	Introduction to Information Security
NR	National Requirements
IT7004	Operating Systems and Platforms
Optional	
Course Code	Title
NR-Arabic	National Requirements- Arabic

Year 2 / Semester 2

Core	
Course Code	Title
ED7000	Applied Project
IT8212	Cloud Computing
IT7204	Cloud Security
IT7203	Cloud Solutions Architecture