

## **1. ESSENTIAL QUALITIES AND ATTRIBUTES OF THE PROGRAMME'S GRADUATES**

This programme aims to prepare students to be successful IT managers in the growing world of technology by providing skills and understanding across the core areas of computing and systems management.

## **2. RATIONALE OF THE PROGRAMME**

In today's fast changing world, computing and information systems are becoming an essential part of many organizations. Information has become a management resource equal in importance to property, facilities, employees and capital, and information systems and computer applications are essential to the ability of an organisation to compete or gain competitive advantage in the marketplace.

The Computing and Information Systems programme places emphasis on the analysis of business processes, the development and selection of appropriate computing solutions, and human aspects of information systems development. The subject areas included in the curriculum will equip the students with an in-depth knowledge of modern software and hardware tools, the principles of good software engineering, concepts of systems analysis and design, the development and management of database systems, and programming language skills.

It is recognized that in today's field of computing and information systems, skills are transitory. Hence, the programme seeks to ensure that a balance is struck between learning current techniques and emphasizing the underlying fundamentals and theories which will provide a sound basis for understanding and evaluating new approaches, techniques and technologies.

The combination of computing and information systems will equip students for a variety of roles within the business and commercial sectors. Graduates from this programme are likely to find opportunities for work as IT advisers, system specialists, data analysts and the like.

# BSc (Hons) - Computing and Information Systems

	Year 1	CU Level	C.P	Year 2	CU Level	C.P	Year 3	CU Level	C.P	Summer	Year 4	CU Level	C.P	
Fall Semester	College Mathematics	0	10	Inferential Statistics	1	10	ELECTRONICS ENGINEERING	1	15	INTERNSHIP	Omani Studies	0	10	
	Computer Fundamentals	0	10	Business Communication	0	10	FUNDAMENTALS OF COMPUTER NETWORKS	1	15		SPECIAL TOPIC / SYSTEMS PROJECT MANAGEMENT	3	15	
	English for Special Purpose	0	10	FUNDAMENTALS OF RELATIONAL DATABASE MANAGEMENT SYSTEM	2	15	Internet Programming	2	10		DATABASE ADMINISTRATION	3	15	
	FUNDAMENTALS OF COMPUTER HARDWARE	0	15	Introduction to Information Systems	1	10	Advanced Object Oriented Programming	2	10		Knowledge Management	3	10	
	ELECTRICAL ENGINEERING	0	15	ELECTIVE - I	1	15	Operating Systems	2	10		Project Planning	3	10	
				60							60			
Spring Semester	Calculus and Numerical Methods	1	10	Object Oriented Paradigm	1	10	Business Environment	0	10		Data Warehousing	3	10	
	Descriptive Statistics	0	10	Object Oriented Programming	1	10	COMPUTER ARCHITECTURE	2	15		Database Security	3	10	
	Introduction to Internet	0	10	Software Engineering	1	10	Active Server Pages	2	10		ELECTIVE - III	3	10	
	SYSTEM ANALYSIS AND DESIGN	1	15	Management Information System	2	10	Object Oriented Design using UML	2	10		Project Design and Implementation	3	30	
	INTRODUCTION TO PROGRAMMING	0	15	PROJECT - I	2	20	ELECTIVE - II	2	15				60	
			60						60					
	Certificate in Computing			Diploma in Computing and Information Systems			Advanced Diploma in Computing and Information Systems				BSc (Hons) in Computing and Information Systems			

WHITE	10	COLLEGE REQUIREMENT
TURQUOISE	10	DEPARTMENTAL REQUIREMENT
YELLOW	13	MAJOR ELECTIVES
RED	2	PROJECT
LAVENDAR	4	ELECTIVES

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Level 0	125
Level 1	120
Level 2	125
Level 3	110
	480
Level 2+Level 3	235

### **3. PROGRAMME LEARNING OUTCOMES**

On successful completion of the programme, students should be able to:

1. demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to computing and information systems.
2. deploy appropriate theory, practices and tools for the specification, design, deployment and marketing of information systems.
3. evaluate an information system in terms of general quality attributes and assess the extent to which it meets the specification for its current use and future development.
4. present succinctly to a range of audiences (orally, electronically or in writing) rational and reasoned arguments that explain the construction, application and value of information systems.
5. recognise the professional, commercial and ethical issues involved in the exploitation of computing and information systems and be guided by the adoption of appropriate professional, ethical and legal practices.
6. work effectively as a member of a development team, recognising the different roles within a team and different ways of organising teams.

Transferable skills form an integral part of most modules. Self-directed learning and the necessity to work within tight deadlines are essential requirements in all parts of the curriculum. A variety of assessment techniques will ensure that students are given every opportunity to demonstrate skills in these areas.

### **4. PROGRAMME LEARNING OUTCOMES and CORE MODULES MAPPING**

<b>MODULE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Fundamentals of Computer Hardware	x					
Electrical Engineering	x					
Electronics Engineering	x					
Introduction to Programming		x				
Fundamentals of RDBMS	x					
Introduction to Information Systems	x		x		x	
Object Oriented Paradigm		x	x			
Object Oriented Programming		x				
Software Engineering	x					
Management Information Systems	x		x	x	x	
Project 1				x	x	x
System Analysis and Design	x		x			x
Fundamentals of Computer Networks	x					
Internet Programming		x				x
Advanced Object Oriented Programming		x				
Operating Systems	x					
Computer Architecture	x	x				
Active Server Pages		x				x
Object Oriented Design using UML		x				
Systems Project Management				x	x	
Database Administration		x			x	
Database Security	x				x	
Data Warehousing	x		x	x		
Knowledge Management	x		x	x	x	
Project Planning	x	x	x	x	x	x
Project Design and Implementation	x	x	x	x	x	x