Middle East College

Muscat, (Sultanate of Oman)
Validated Programme Leading to the Award of:
BSc (Hons) Computing and Information Systems

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	Discrete Mathematics	1	10	ELECTRONICS ENGINEERING	1	15		Omani Studies	0	10
	Programming Logic Development	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	Server Side Programming	2	10		DATABASE ADMINISTRATION	3	15
	FUNDAMENTALS OF COMPUTER HARDWARE	0	15	Object Oriented Paradigm	1	10	Object Oriented Design using UML	2	10		Knowledge Management	3	10
	ELECTRICAL ENGINEERING	0	15	ELECTIVE - I	1	15	Management Information Systems	2	10		Project Planning	3	10
			60			60			60				60
Spring Semester	Calculus and Numerical Methods	1	10	Introduction to Information Systems	1	10	Business Environment	0	10		Data Warehousing	3	10
	Probability and 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	Internet Programming	2	10		ELECTIVE - III	3	10
	SYSTEM ANALYSIS AND DESIGN	1	15	Operating Systems	2	10	Advanced Object Oriented Programming	2	10				
	INTRODUCTION TO PROGRAMMING	0	15	PROJECT - I	2	20	ELECTIVE - II	2	15		Project Design and Implementation	3	30
			60			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*		

(The "INTERNSHIP" label appears vertically in the Summer column)

WHITE	10	COLLEGE REQUIREMENT			Level 0	125
TURQUOISE	10	DEPARTMENTAL REQUIREMENT				
YELLOW	13	MAJOR ELECTIVES			Level 1	120
RED	2	PROJECT				
LAVENDAR	4	ELECTIVES			Level 2	125
	39					
					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

MODULE	1	2	3	4	5	6
Programming Logic Development		x				
Introduction to Internet		x				
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