INFORMATION SYSTEMS

Admission to Program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalogue.

Program Mission

The mission of the Bachelor of Information Systems is to produce graduates who can successfully align information technology and business processes to address organizational needs. The graduates should be equipped with core Information technology and information systems skills, knowledge, and work competencies to create, implement, and manage IT solutions in response to business challenges and requirements. The program aims to prepare graduates for direct entry into positions related to the management of information systems within organizations. In addition to theoretical and technical skills, the program prepares students to adapt to complex and evolving technological environments such as those observed in the workplace, apply ethical standards, and use various communication approaches in their interactions with others.

Program Description

The Bachelor of Information Systems program prepares students to apply ethical values to complex and unpredictable problems and to plan, design, implement, evaluate, and manage an organization's ICT infrastructure. The program provides students with the required knowledge, skills, and competencies in the areas of information technology assets, archival, and information processing systems. Throughout the program, students learn to apply fundamental concepts and skills from a variety of information technologies and develop an understanding of the role of information systems within organizations.

Students also develop professional work competencies to complement their technical skills and apply high level special administrative responsibilities including leading multiple and complex groups. Within each concentration, students learn to apply current and advanced techniques, skills, and tools; analyze organizations and user needs; create and evaluate computer-based solutions, and implement information systems solutions in a given organizational environment.

The program offers a concentration in:

• **Business Solutions**

Students are eligible for one year Work Experiential Learning during their study.

Program Goals

The goals of the Bachelor of Information Systems (Business Solutions) program are to:

- Produce graduates who can successfully align information technology and business processes to address organizational needs.
- Develop student knowledge and skills to create, implement, and manage IT solutions in response to business challenges and requirements.
- Prepare graduates for entry into technical leadership roles related to management of information systems within organizations.

- Prepare graduates who exhibit an entrepreneurial spirit and can adapt and evolve in complex technological environments such as those found in the workplace.
- Produce graduates who contribute to and observe ethical standards, accept social responsibility and use various communication approaches in their interactions with others.

Program Learning Outcomes

Bachelor of Information Systems

Graduates will be able to:

- Apply knowledge of computing and mathematics appropriate to the discipline
- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs and drive innovation.
- Function effectively as a member and leader in a technical team to accomplish a common goal
- Understand professional, ethical, legal, security and social issues and responsibilities
- Communicate effectively with a range of audiences
- Analyze the local and global impact of computing on individuals, organizations, and society
- Recognize the need for and an engage in continuing professional development
- Use current techniques, skills, and tools necessary for computing practice and entrepreneurship.

Business Solutions Concentration

Graduates will be able to:

- Exhibit a critical awareness of a range of relevant principles and theoretical knowledge to develop strategies and solutions to business problems.
- Demonstrate a critical awareness of the core functions of business administration (including management, accounting, human resources, and finance).
- Employ analytical skills to formulate business solutions in order to manage and maintain organizations' information system effectively.
- Determine e-business strategies and infrastructure requirements for an organization to develop e-business applications

Requirements
Completion Requirements
Bachelor of Information Systems

Students must successfully complete a minimum of 135 credits, including:

Code	Title	Credit Hours
Information Systems Core Courses		60
Business Solutions Concentration Courses		36
4000 Elective Courses		6
General Studies		33
Total Credit Hours		**135**

Code	Title	Credit Hours
Information Systems Core Courses		
Required Credits: 60		
CIS 1003	Information Systems in Organisations and Society	3
CIS 1103	Hardware and Networking	3
CIS 1203	Web Technologies	3
CIS 1303	Data and Information Management	3
CIS 1403	Fundamentals of Programming	3
CIS 2003	Statistics and Probability	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3
CIS 2203	Applied Discrete Maths	3
CIS 2303	Systems Analysis and Design	3
CIS 2403	Object Oriented Programming	3
CIS 2806	Work Related Experience I	6
CIS 2903	Operating Systems	3
CIS 3203	Enterprise Architecture	3
CIS 3806	Work Related Experience II	6
CIS 4203	Information Technology Strategy and Governance	3
CIS 4603	Project Management	3
CIS 4913	Capstone Project I	3
CIS 4923	Capstone Project II	3
Business Solutions Concentration Courses		
Required Credits: 36		
CIB 2003	Technology Based Marketing	3
CIB 3003	Human Resource Management and Systems	3
CIB 3013	Data Analytics	3
CIB 3103	Object Oriented Analysis & Design	3
CIB 3113	Business Finance	3
CIB 3123	Big Data Technology	3
CIB 3203	Accounting For Managers	3
CIB 3303	E-Business Principles	3
CIB 3403	Advanced Database Technologies	3
CIB 4003	E Business Applications Development	3
CIB 4203	Customer Relationship Management Systems	3
CIB 4603	Enterprise Resource Planning	3
4000 level Elective Courses		
Required Credits: 6		
CIA 4503	Advanced Object Oriented Programming	3
CIA 4613	Mobile Application Administration	3
CIM 4103	Web Authoring and Administration	3
CIS 4103	Research Methods for Emerging Technologies	3
CIS 4403	Cloud Computing	3
CIS 4703	Blockchain Applications and Coding	3
CIS 4713	Virtual Reality and 3D Virtual Environments	3
CIS 4863	Special Topics In Computer Information Science	3
CSF 4613	Security Intelligence	3
General Studies		
Required Credits: 33		
English, Arabic or other Languages		
Required Credits: 12		

Humanities or Arts	
Required Credits: 3	
Information Technology or Mathematics	
Required Credits: 6	
The Natural Sciences	
Required Credits: 3	
The Social or Behavioral Sciences	
Required Credits: 9	

Description	Data
Total Required Credits	135
Maximum Duration of Study	6 years
Minimum Duration of Study	4 years
Cost Recovery Program	No
Program Code	BCSIS
Major Code	ISB

Ideal Study Plan
Recommended Sequence of Study
Bachelor of Information Systems (Business Solutions)

Year 1

Semester 1		Credit Hours
CIS 1003	Information Systems in Organisations and Society	3
CIS 1203	Web Technologies	3
ICT 2013	Computational Thinking and Coding	3
LSC 1103	Professional Communication and Reporting	3
LSS 1003	Life and Future Skills	3
	Credit Hours	**15**
Semester 2		
CIS 1103	Hardware and Networking	3
CIS 1303	Data and Information Management	3
CIS 1403	Fundamentals of Programming	3
AES 1013	Arabic Communications	3
LSM 1003	Applied Mathematics	3
	Credit Hours	**15**

Year 2

Semester 3		
CIS 2103	Principles of Information Assurance, Security and Privacy	3
CIS 2203	Applied Discrete Maths	3
CIS 2403	Object Oriented Programming	3
CIS 2903	Operating Systems	3
LSS 1123	Basic Research Methods	3
	Credit Hours	**15**
Semester 4		
CIB 2003	Technology Based Marketing	3
CIB 3203	Accounting For Managers	3
CIS 2003	Statistics and Probability	3
CIS 2303	Systems Analysis and Design	3
LSC 2223	Future Skills Capstone	3
	Credit Hours	**15**
Summer		
CIS 2806	Work Related Experience I	6
	Credit Hours	**6**

Year 3

Semester 5		
AES 1003	Emirati Studies	3

AES 1033	Islamic Culture	3
CIB 3003	Human Resource Management and Systems	3
CIB 3013	Data Analytics	3
CIS 3203	Enterprise Architecture	3
	Credit Hours	**15**
Semester 6		
BUS 2403	Innovation and Entrepreneurship	3
CIB 3103	Object Oriented Analysis & Design	3
CIB 3113	Business Finance	3
CIB 3123	Big Data Technology	3
CIB 3303	E-Business Principles	3
CIB 3403	Advanced Database Technologies	3
	Credit Hours	**18**
Summer		
CIS 3806	Work Related Experience II	6
	Credit Hours	**6**
Year 4		
Semester 7		
CIB 4003	E Business Applications Development	3
CIB 4603	Enterprise Resource Planning	3
CIS 4603	Project Management	3
CIS 4913	Capstone Project I	3
4000 Level Elective		3
	Credit Hours	**15**
Semester 8		
CIB 4203	Customer Relationship Management Systems	3
CIS 4203	Information Technology Strategy and Governance	3
CIS 4923	Capstone Project II	3
LSN 1113	Introduction to Sustainability	3
4000 Level Elective		3
	Credit Hours	**15**
	Total Credit Hours	**135**

Additional courses may be offered in each Summer Semester at the discretion of the academic faculty.

Faculty and Academic Staff

Alexandros Alexandropoulos, PhD (Computing), The University of Manchester, UK

Ali Khan, Doctor of Science (Software Engineering), Abo Akademi University, Finland

Ali Muhammad, PhD (Parallel Genetic Algorithms), Nottingham Trent University, UK

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