



FACULTY OF **COMPUTER
INFORMATION SCIENCE**



Computer Information Science

Faculty Mission

The mission of the Faculty of Computer Information Science (CIS) is to provide future-focused programs to prepare students for the dynamic information systems and technology sectors of the UAE. CIS graduates are 'T-shaped professionals' with industry-ready technical and managerial skills.

All HCT CIS program are continually monitored and reviewed to ensure that the skills students acquire in the classroom, and the resources they use, are at the cutting edge of technology and are industry appropriate. As a result, the HCT CIS graduates are in high demand from leading industry employers looking for talented people who have the technical, communication and team-working skills needed to enhance their businesses.

This exciting field provides excellent career prospects for graduates in the fields of education, government, private enterprise, internet development, database engineering, programming and other areas within the steadily growing communications industry.

Senior Staff

Executive Dean: **Dr. Hamad Odhabi**

Associate Executive Dean: **Dr. Nasser Nassiri**

Degrees offered

Degree	Offered at
Bachelor of Information Systems (Business Solutions)	Al Ain Women's; Abu Dhabi Men's; Abu Dhabi Women's; Dubai Women's; Khalifa City Women's; Madinat Zayed Women's; Ras Al Khaimah Women's; Ruwais Men's.
Bachelor of Information Technology (Applications Development)	Al Ain Women's; Abu Dhabi Men's; Dubai Men's; Dubai Women's; Khalifa City Women's; Ras Al Khaimah Women's; Sharjah Women's
Bachelor of Information Technology (Interactive Multimedia Technologies)	Al Ain Women's; Abu Dhabi Women's; Khalifa City Women's; Ras Al Khaimah Women's
Bachelor of Information Technology (Networking)	Al Ain Men's; Dubai Men's; Dubai Women's; Fujairah Men's; Ras Al Khaimah Men's; Ras Al Khaimah Women's; Sharjah Men's; Sharjah Women's
Bachelor of Information Technology (Security and Forensics)	Al Ain Men's; Al Ain Women's; Abu Dhabi Men's; Dubai Men's; Khalifa City Women's; Ras Al Khaimah Men's; Ras Al Khaimah Women's; Sharjah Men's; Sharjah Women's

Bachelor of 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 have the option to exit the program with a Higher

Diploma degree after completion of the third year (see Completion Requirements below).

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 direct entry into positions related to the management of information systems within organizations.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards 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
- Function effectively on teams 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.

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

Completion Requirements

Bachelor of Information Systems

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

- Information Systems Core Courses: 60 credits
- Business Solutions Concentration Courses: 36 credits
- 4000 Elective Courses: 6 credits
- General Studies: 33 credits

Higher Diploma in Information Systems Exit Option

Students must successfully complete a minimum of 105 credits, including:

- Information Systems Core Courses: 48 credits including both internships
- Business Solutions Concentration Courses: 27 credits
- General Studies: 30 credits

Business Solutions Concentration

Information Systems Core Courses			Course Credits
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 4906	Capstone Project (Integrative & Consultancy Focused)	6	

Business Solutions Concentration Courses			Course Credits
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 Elective Courses			
Required Credits: 6			
CIA 4613	Mobile Application Administration	3	
CIM 4103	Web Authoring and Administration	3	
CIS 4403	Cloud Computing	3	
CSF 4003	Security and Risk Management	3	
General Studies			
Required Credits: 33			
English, Arabic or other Languages		12	
Humanities or Art		3	
Information Technology or Mathematics		6	
The Natural Sciences		3	
The Social or Behavioural Sciences		9	

Recommended Sequence of Study

Bachelor of Information Systems (Business Solutions)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	LSC 2103	Academic Reading and Writing II	3
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*					
Required Credits:					
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2203	Applied Discrete Math	3	CIS 2003	Statistics and Probability	3
CIS 2403	Object Oriented Programming	3	CIS 2303	Systems Analysis and Design	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIB 2003	Technology Based Marketing	3
CIS 2903	Operating Systems	3	CIB 3203	Accounting For Managers	3
ICT 2013	Computational Thinking and Coding	3	AES 1003	Emirati Studies	3
Year 2 Summer Semester*					
Required Credits: 6					
CIS 2806	Work Related Experience	6			
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 18		
CIS 3203	Enterprise Architecture	3	LSS 2403	Innovation and Entrepreneurship	3
CIB 3013	Data Analytics	3	CIB 3103	Object Oriented Analysis & Design	3
LSS 1123	Basic Method of Scientific Research and Development	3	CIB 3303	E-Business Principles	3
LSN 2433	Ecology	3	CIB 3113	Business Finance	3
CIB 3003	HR Management and Systems	3	CIB 3403	Advanced Database Technologies	3
			CIB 3123	Big Data Technology	3
Year 3 Summer Semester*					
Required Credits: 6					
CIS 3806	Work Related Experience	6			
Higher Diploma in Information Systems Exit Option					
Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
AES 3003	Professional Arabic	3	CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
CIB 4003	E Business Applications Development	3	CSF 4613	Security Intelligence (Upper Elective)	3
CIS 4403	Cloud Computing (Upper Elective)	3	CIB 4203	Customer Relationship Management Systems	3
CIB-4603	Enterprise Resource Planning	3	CIS 4203	Information Technology Strategy and Governance	3
CIS 4603	Project Management	3			

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

Bachelor of Information Technology

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 Technology is to develop graduates with Information technology skills and knowledge, and work competencies required to create cutting-edge IT solutions to meet the work environment. The program aims to prepare graduates to be able to work as IT specialist in one of the 4 currently offered concentration. The concentrations are Application Development, Security and Forensics, Interactive Multimedia Technologies and Networking.

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 Technology program prepares students to respond to the needs of the workforce for knowledgeable and skilled IT professionals who can apply ethical values to complex and unpredictable problems and to plan, design, implement, evaluate and manage IT solutions.

The program provides students with the broad technical education necessary for employment in the public or private sector, and it enables them to develop an understanding of fundamentals and current issues important for future development. Students also develop professional work competencies to complement their technical skills and apply high-level special administrative responsibilities.

The program is structured as a set of core, elective, general studies, and concentration courses. In the core courses, students will acquire the core knowledge, skills, and competencies needed for IT. Through the concentration courses, students will develop up-to-date knowledge and skills, in this fast-growing field to meet the industry requirement.

The program offers four concentrations:

- **Application Development**
- **Interactive Multimedia Technologies**
- **Networking**
- **Security and Forensics**

Students have the option to exit the program with a Higher Diploma degree after completion of the third year (see Completion Requirements below).

Program Goals

Applications Development Concentration - Goals

- Produce graduates with the development skills required to create cutting-edge software applications and apps on multiple platforms.
- Offer graduates with the required knowledge and skills in current software development methodologies using state-of-the-art tools and facilities.
- Prepare graduates to be able to work as software engineers, enterprise system developers, system architects, project managers, and mobile application developers.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Interactive Multimedia Technologies Concentration - Goals

- Produce graduates with professional skills built on a sound foundation in the fields of interactivity and multimedia powered by information technology.
- Prepare graduates to become leaders and innovators in a new and interactive society based on interactive arts, multimedia, web and interface design, game design, and development.
- Prepare graduates to work as 2d and 3d graphic artists, animation experts, interactive multimedia developers, game designers and developers, and simulation specialists.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Networking Concentration - Goals

- Produce graduates who can design, configure, implement, and troubleshoot converged campus and enterprise networks.
- Provide graduates with the required knowledge and skills to work at multiple levels of local and enterprise networks.
- Produce graduates who will be able to work as network engineers, network architects, infrastructure designers, project managers, and consultants.

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

Security and Forensics Concentration - Goals

- Produce graduates with skills and a strong foundation in the field of information security.
- Provide graduates with technical and managerial skills for assessing risk, securing information assets, identifying and responding to attacks, conducting a forensic investigation, and recovering from incidents and disasters.
- Prepare graduates to work as requirement security specialists; security practitioners, managers, and consultants; forensic investigators; and IT auditors.
- Prepare graduates who can adapt and evolve in complex technological environments such as those found in the workplace and accept social responsibility at large.
- Produce graduates who contribute to and observe ethical standards and use various communication approaches in their interactions with others.

Program Learning Outcomes

Bachelor of Information Technology

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
- Function effectively on teams 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 engage in continuing professional development
- Use current techniques, skills, and tools necessary for computing practice.

In addition, each concentration has its specific program learning outcomes.

Applications Development Concentration

Graduates will be able to:

- Demonstrate a critical awareness of a range of analysis, design and programming methods to solve complex business problems
- Develop secure desktop, web and mobile applications for multiple platforms using client-side and server side coding, and advanced database techniques

- Deploy applications for mobile devices using industry standard tools and practices for design, development and testing.

Interactive Multimedia Technologies Concentration

Graduates will be able to:

- Demonstrate a solid understanding of Interactive Multimedia Design principles.
- Employ technical skills proficiency with industry-standard tools to produce interactive multimedia products
- Apply industry best practices and techniques for planning, designing and producing interactive multimedia products

Networking Concentration

Graduates will be able to:

- Explain concepts and theories of networking and apply them to various situations, classifying networks, analyzing performance, troubleshooting and implementing new technologies.
- Design network infrastructure by selecting appropriate devices, topologies, protocols, systems software, network services and security.
- Develop solutions for networking and security problems, balancing business concerns, technical issues and security

Security and Forensics Concentration

Graduates will be able to:

- Critically consider relevant principles and theoretical knowledge to assess risk and develop policies and procedures to secure an organizational information system.
- Demonstrate the ability to identify security weaknesses using intrusion detection techniques and take corrective actions to secure information assets.
- Employ advanced skills to conduct forensic investigations in line with local and international law and standards.
- Deploy and manage secured client and server operating systems.

Completion Requirements

Bachelor of Information Technology

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

- Information Technology Core Courses: 60 credits
- Concentration Courses: 36 credits
- 4000 Elective Courses: 6 credits
- General Studies: 33 credits

Higher Diploma in Information Technology Exit Option

Students must successfully complete a minimum of 105 credits, including:

- Information Technology Core Courses: 48 credits including both internships
- Concentration Courses: 27 credits
- General Studies: 30 credits

Applications Development Concentration

Information Technology Core Courses			4000 Elective Courses		
Required Credits: 60			Required Credits: 6		
CIS 1003	Information Systems in Organisations and Society	3	CIB 4203	Customer Relationship Management Systems	3
CIS 1103	Hardware and Networking	3	CIB 4603	Enterprise Resource Planning	3
CIS 1203	Web Technologies	3	CIM 4103	Web Authoring and Administration	3
CIS 1303	Data and Information Management	3	CIS 4403	Cloud Computing	3
CIS 1403	Fundamentals of Programming	3	CSF 4103	Web Application and E-Commerce Security	3
CIS 2003	Statistics and Probability	3	General Studies		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	Required Credits: 33		
CIS 2203	Applied Discrete Maths	3	English, Arabic or other Languages		12
CIS 2303	Systems Analysis and Design	3	Humanities or Art		3
CIS 2403	Object Oriented Programming	3	Information Technology or Mathematics		6
CIS 2806	Work Related Experience I	6	The Natural Sciences		3
CIS 2903	Operating Systems	3	The Social or Behavioural Sciences		9
CIS 3003	Human Computer Interaction	3			
CIS 3303	System Architecture and Integration	3			
CIS 3806	Work Related Experience II	6			
CIS 4603	Project Management	3			
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6			
Applications Development Concentration Courses					
Required Credits: 36					
CIA 2503	Web Applications Development	3			
CIA 2513	Key Components of IoT Architecture for Smart Applications	3			
CIA 3003	Introduction to Mobile Applications	3			
CIA 3103	Database Design and Administration	3			
CIA 3113	IoT and Security	3			
CIA 3123	Mobile Game Development	3			
CIA 3133	Advanced Application Development	3			
CIA 4003	Advanced Mobile Applications	3			
CIA 4103	Data Driven Web Technologies	3			
CIA 4203	Enterprise Database Applications	3			
CIA 4503	Advanced Object Oriented Programming	3			
CIB 3103	Object Oriented Analysis & Design	3			

Recommended Sequence of Study

Bachelor of Information Technology (Applications Development)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	AES 1013	Arabic Communications I	3
LSC 1103	Academic Reading and Writing I	3	LSC 2103	Academic Reading and Writing II	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*					
Required Credits:					
Year 2 Semester 3			Year 2 Semester 4		
Required Credits: 15			Required Credits: 15		
CIS 2203	Applied Discrete Math	3	CIS 2003	Statistics and Probability	3
CIS 2403	Object Oriented Programming	3	CIS 2303	Systems Analysis and Design	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIA 2503	Web Application Development	3
CIS 2903	Operating Systems	3	CIA 2513	Key Components of IoT Architecture for Smart Applications	3
ICT 2013	Computational Thinking and Coding	3	AES 1003	Emirati Studies	3
Year 2 Summer Semester*					
Required Credits: 6					
CIS 2806	Work Related Experience	6			
Year 3 Semester 5			Year 3 Semester 6		
Required Credits: 15			Required Credits: 18		
CIS 3303	System Architecture and Integration	3	LSS 2403	Innovation and Entrepreneurship	3
CIS 3003	Human Computer Interaction	3	CIA 3113	IoT and Security	3
CIA 3123	Mobile Game Development	3	CIA 3133	Advanced App Development	3
LSS 1123	Basic Method of Scientific Research and Development	3	CIA 3003	Introduction to Mobile Applications	3
LSN 2433	Ecology	3	CIB 3103	Object Oriented Analysis & Design	3
			CIA 3103	Database Design and Administration	3
Year 3 Summer Semester*					
Required Credits: 6					
CIS 3806	Work Related Experience	6			

Higher Diploma in Information Technology Exit Option

Year 4 Semester 7			Year 4 Semester 8		
Required Credits: 15			Required Credits: 15		
CIA 4103	Data Driven Web Technologies	3	CIA 4503	Advanced Object Oriented Programming	3
CIA 4203	Enterprise Database Applications	3	CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
CIS 4403	Cloud Computing (Elective)	3	CIB 4603	Enterprise Resource Planning (Elective)	3
CIS 4603	Project Management	3	CIA 4003	Advanced Mobile Applications	3
AES 3003	Professional Arabic	3			

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

Interactive Multimedia Technologies Concentration

Course Credits			Course Credits		
Information Technology Core Courses			4000 Elective Courses		
Required Credits: 60			Required Credits: 6		
CIS 1003	Information Systems in Organisations and Society	3	CIA 4503	Advanced Object Oriented Programming	3
CIS 1103	Hardware and Networking	3	CIB 4203	Customer Relationship Management Systems	3
CIS 1203	Web Technologies	3	CIB 4603	Enterprise Resource Planning	3
CIS 1303	Data and Information Management	3	CIS 4403	Cloud Computing	3
CIS 1403	Fundamentals of Programming	3			
CIS 2003	Statistics and Probability	3	General Studies		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	Required Credits: 33		
CIS 2203	Applied Discrete Maths	3	English, Arabic or other Languages		12
CIS 2303	Systems Analysis and Design	3	Humanities or Art		3
CIS 2403	Object Oriented Programming	3	Information Technology or Mathematics		6
CIS 2806	Work Related Experience I	6	The Natural Sciences		3
CIS 2903	Operating Systems	3	The Social or Behavioural Sciences		9
CIS 3003	Human Computer Interaction	3			
CIS 3303	System Architecture and Integration	3			
CIS 3806	Work Related Experience II	6			
CIS 4603	Project Management	3			
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6			
Interactive Multimedia Concentration Courses					
Required Credits: 36					
CIA 2503	Web Applications Development	3			
CIM 2003	Graphic Design for Multimedia	3			
CIM 2103	Storyboarding for Multimedia	3			
CIM 3003	2D Animation	3			
CIM 3113	Motion Graphics	3			
CIM 3203	Programming for Multimedia	3			
CIM 3403	3D Modelling and Animation	3			
CIM 3503	Computer Game Design and Development	3			
CIM 4003	Multimedia Scripting	3			
CIM 4103	Web Authoring and Administration	3			
CIM 4203	Virtual Reality and Simulation	3			
CIM 4303	VFX, Audio, Editing and Composition	3			

Networking Concentration

Information Technology 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 3003	Human Computer Interaction	3
CIS 3303	System Architecture and Integration	3
CIS 3806	Work Related Experience II	6
CIS 4603	Project Management	3
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6

Networking Concentration Courses		
Required Credits: 36		
CIN 2003	Enterprise Network Services	3
CIN 2103	Networking Fundamentals	3
CIN 2203	Routing Protocols	3
CIN 3003	LAN Switching	3
CIN 3103	Wireless Networks	3
CIN 3203	WAN Technologies	3
CIN 3303	Network Security	3
CIN 3503	Virtualisation Technologies	3
CIN 4003	Routing Solutions for the Enterprise	3
CIN 4103	Network Management	3
CIN 4203	Voice over Internet Protocol (VoIP) Fundamentals	3
CIN 4113	Scalable Computer Network	3

4000 Elective Courses		
Required Credits: 6		
CIA 4613	Mobile Application Administration	3
CIB 4203	Customer Relationship Management Systems	3
CIB 4603	Enterprise Resource Planning	3
CIS 4403	Cloud Computing	3
CSF 4613	Security Intelligence	3

General Studies		
Required Credits: 33		
English, Arabic or other Languages		12
Humanities or Art		3
Information Technology or Mathematics		6
The Natural Sciences		3
The Social or Behavioural Sciences		9

Recommended Sequence of Study

Bachelor of Information Technology (Networking)

Course Code	Course Title	Course Credits
Year 1 Semester 1		
Required Credits: 15		
CIS 1003	IS in Organization and Society	3
CIS 1103	Hardware and Networking	3
CIS 1203	Web Technologies	3
LSC 1103	Academic Reading and Writing I	3
LSS 1003	Life and Study Skills	3
Year 1 Summer Semester*		
Required Credits:		
Year 2 Semester 3		
Required Credits: 15		
CIS 2203	Applied Discrete Math	3
CIS 2403	Object Oriented Programming	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3
CIS 2903	Operating Systems	3
ICT 2013	Computational Thinking and Coding	3
Year 2 Summer Semester*		
Required Credits: 6		
CIS 2806	Work Related Experience	6
Year 3 Semester 5		
Required Credits: 18		
CIS 3303	System Architecture and Integration	3
CIS 3003	Human Computer Interaction	3
LSS 1123	Basic Method of Scientific Research and Development	3
LSN 2433	Ecology	3
CIN 2203	Routing Protocols	3
CIN 3003	LAN Switching	3
Year 3 Summer Semester*		
Required Credits: 6		
CIS 3806	Work Related Experience	6

Higher Diploma in Information Technology Exit Option

Year 4 Semester 7		
Required Credits: 15		
CIN 4103	Network Management	3
CIN 4003	Routing Solutions for the Enterprise	3
CIS 4403	Cloud Computing (Elective)	3
CIS 4603	Project Management	3
AES 3003	Professional Arabic	3

Course Code	Course Title	Course Credits
Year 1 Semester 2		
Required Credits: 15		
CIS 1303	Data and Information Management	3
CIS 1403	Fundamentals of Programming	3
LSC 2103	Academic Reading and Writing II	3
AES 1013	Arabic Communications I	3
LSM 1003	Applied Mathematics	3
Year 2 Semester 4		
Required Credits: 15		
CIS 2003	Statistics and Probability	3
CIS 2303	Systems Analysis and Design	3
CIN 2003	Enterprise Network Services	3
CIN 2103	Networking Fundamentals	3
AES 1003	Emirati Studies	3
Year 3 Semester 6		
Required Credits: 15		
LSS 2403	Innovation and Entrepreneurship	3
CIN 3303	Network Security	3
CIN 3203	WAN Technologies	3
CIN 3103	Wireless Networks	3
CIN 3503	Virtualization Technologies	3
Year 4 Semester 8		
Required Credits: 15		
CIN 4203	Voice over Internet Protocol (VoIP) Fundamentals	3
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6
CIB 4603	Enterprise Resource Planning (Elective)	3
CIN 4113	Scalable Computer Network	3

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

Security and Forensics Concentration

Information Technology Core Courses			4000 Elective Courses		
Required Credits: 60			Required Credits: 6		
CIS 1003	Information Systems in Organisations and Society	3	CIA 4503	Advanced Object Oriented Programming	3
CIS 1103	Hardware and Networking	3	CIB 4203	Customer Relationship Management Systems	3
CIS 1203	Web Technologies	3	CIB 4603	Enterprise Resource Planning	3
CIS 1303	Data and Information Management	3	CIN 4203	Voice over Internet Protocol (VoIP) Fundamentals	3
CIS 1403	Fundamentals of Programming	3	CIS 4403	Cloud Computing	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 3003	Human Computer Interaction	3			
CIS 3303	System Architecture and Integration	3			
CIS 3806	Work Related Experience II	6			
CIS 4603	Project Management	3			
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6			
Security and Forensics Concentration Courses			General Studies		
Required Credits: 36			Required Credits: 33		
CIN 2003	Enterprise Network Services	3	English, Arabic or other Languages		12
CIN 2103	Networking Fundamentals	3	Humanities or Art		3
CSF 2113	Programming for Information Security	3	Information Technology or Mathematics		6
CSF 3003	Cyber Law and Ethics	3	The Natural Sciences		3
CSF 3103	Incidence Response and Disaster Recovery	3	The Social or Behavioural Sciences		9
CSF 3203	Intrusion Detection and Ethical Hacking	3			
CSF 3403	Computer Forensics and Investigation	3			
CSF 3603	Cryptography and Network Security	3			
CSF 4003	Security and Risk Management	3			
CSF 4103	Web Application and E-Commerce Security	3			
CSF 4203	Telecommunications and WAN Security	3			
CSF 4613	Security Intelligence	3			

Recommended Sequence of Study

Bachelor of Information Technology (Security and Forensics)

Course Code	Course Title	Course Credits	Course Code	Course Title	Course Credits
Year 1 Semester 1			Year 1 Semester 2		
Required Credits: 15			Required Credits: 15		
CIS 1003	IS in Organization and Society	3	CIS 1303	Data and Information Management	3
CIS 1103	Hardware and Networking	3	CIS 1403	Fundamentals of Programming	3
CIS 1203	Web Technologies	3	LSC 2103	Academic Reading and Writing II	3
LSC 1103	Academic Reading and Writing I	3	AES 1013	Arabic Communications I	3
LSS 1003	Life and Study Skills	3	LSM 1003	Applied Mathematics	3
Year 1 Summer Semester*			Year 2 Semester 4		
Required Credits:			Required Credits: 15		
Year 2 Semester 3			Required Credits: 15		
Required Credits: 15			CIS 2003	Statistics and Probability	3
CIS 2203	Applied Discrete Math	3	CIS 2303	Systems Analysis and Design	3
CIS 2403	Object Oriented Programming	3	CIN 2103	Network Fundamentals	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CSF 2113	Programming for Info Security	3
CIS 2903	Operating Systems	3	AES 1003	Emirati Studies	3
ICT 2013	Computational Thinking and Coding	3	Year 3 Semester 6		
Year 2 Summer Semester*			Required Credits: 15		
Required Credits: 6			CIS 3103	Incidence Response and Disaster Recovery	3
CIS 2806	Work Related Experience	6	CSF 3403	Computer Forensics and Investigation	3
Year 3 Semester 5			CSF 3603	Cryptography and Network Security	3
Required Credits: 18			LSS 2403	Innovation and Entrepreneurship	3
CIS 3303	System Architecture and Integration	3	CSF 3203	Intrusion Detection and Ethical Hacking	3
CIS 3003	Human Computer Interaction	3	Year 3 Summer Semester*		
CIN 2003	Enterprise Network Services	3	Required Credits: 6		
LSS 1123	Basic Method of Scientific Research and Development	3	CIS 3806	Work Related Experience	6
LSN 2433	Ecology	3	Higher Diploma in Information Technology Exit Option		
CSF 3003	Cyber Law and Ethics	3	Year 4 Semester 7		
Year 3 Summer Semester*			Required Credits: 15		
Required Credits: 6			CSF 4003	Security and Risk Management	3
CIS 3806	Work Related Experience	6	CSF 4103	Web Application and E-Commerce Security	3
Year 4 Semester 8			CIS 4403	Cloud Computing (Elective)	3
Required Credits: 15			AES 3003	Professional Arabic	3
CSF 4613	Security Intelligence	3	CIS 4106	Project Management	3
CIS 4906	Capstone Project (Integrative & Consultancy Focused)	6	Year 4 Summer Semester*		
CIB 4203	Customer Relationship Management Systems (Elective)	3	Required Credits: 6		
CSF 4203	Telecommunications and WAN Security	3	Year 4 Summer Semester*		

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

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