College of Engineering and Information Technology

<u>Information Technology Program</u>

Curriculum Structure and Credit Hours

The B.Sc. degree in Information Technology requires the completion of 120 credit hours. In addition, the student is required to complete an internship program for 10 weeks (240 working hours) after completing 90 credit hours. This internship experience is equivalent to three credit hours making the total completion requirements 123 credit hours.

The Information Technology program has two concentrations:

a. Networking and Security,
b. Databases and Web Systems

Each concentration consists of five specific courses (15 credit hours). The structure of the program is described below.

Program Structure

The B.Sc. degree in Information Technology with its two concentrations requires the completion of 120 credit hours distributed according to the following plan for the two concentrations:

Type of Courses	Credit Hours
1. University General Education Courses	
(a) University Compulsory Courses	15
(b) University Elective Courses	9
2. Information Technology Program Common Compulsory Courses	
(a) General Courses	9
(b) Information Technology Core Courses	60
(c) Internship	3
3. Information Technology Program Concentration Courses	15
4. Information Technology Program Elective Courses	12
Total Credit Hours	**123**

Program Courses

University General Education Courses

(a) University Compulsory Courses *(15 Cr.Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
ARB111	Communication Skills in Arabic Language	3	0	0	3	-
COM111	IT Fundamentals	2	2	0	3	-
INN311	Innovation & Entrepreneurship	3	0	0	3	-
ISL114	Islamic Culture	3	0	1	3	-
STA112	Statistics	2	2	0	3	-

(b)University Elective Courses *(9 Cr.Hrs.)*

Course Code	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1. Humanities / Arts (3 Credit Hours)						
ARB113	The Art of Written Expression (Arabic)	3	0	0	3	-
ART111	Introduction to Art	3	0	0	3	-
ART112	Introduction to Aesthetics (English)	3	0	0	3	-
ART211	Introduction to Digital Photography	3	0	0	3	-
ENG113	Academic Writing (English)	3	0	0	3	-
ENG211	The Art of Public Speaking (English)	3	0	0	3	-
FRE211	French Language	3	0	0	3	-
ISL211	Introduction to Hadeeth and Sunna	3	0	0	3	-
LAW211	Legal Culture	3	0	0	3	-
2. Natural Sciences (3 Credit Hours)						
AST211	Astronomy	3	0	0	3	
BIO111	General Biology	3	0	0	3	
CHM111	General Chemistry	3	0	0	3	
PHY111	General Physics	3	0	0	3	
3. Social or Behavioral Sciences (3 Credit Hours)						
ECO211	Economic Concepts	3	0	0	3	-
EMS111	Emirates Society (English)	3	0	0	3	-
ENG111	English Communication Skills	3	0	0	3	-
INF113	Library Information System	3	0	0	3	-
PSY111	General Psychology (English)	3	0	0	3	-
SOC112	Communication Between Cultures	3	0	0	3	-

Information Technology Program Common Compulsory Courses

(a) Program General Courses *(9 Cr. Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
ACC200	Principles of Accounting I	3	0	0	3	-
INT101	Calculus for Information Technology	3	0	2	3	-
MGT200	Introduction to Management	3	0	0	3	-

(b) Information Technology Core Courses & Internship *(63 Cr. Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
INT100	Introductory Programming	2	2	2	3	-
INT103	Information Technology in Business	3	0	0	3	COM111
INT201	Object Oriented programming	2	2	2	3	INT100
INT202	Discrete Mathematics	3	0	2	3	INT101
INT203	Computer Organization	3	0	0	3	COM111
INT209	Data Structures	3	0	2	3	INT201, INT202
INT205	Fundamentals of Data Communications and Networking	2	2	0	3	INT203
INT206	Fundamentals of Web Systems	2	2	0	3	INT201
INT207	Multimedia Technology	2	2	0	3	INT100
INT301	Operating Systems	2	2	0	3	INT203
INT302	Database Management Systems	2	2	0	3	INT201
INT303	Fundamentals of Information Security	3	0	0	3	INT205
INT313	User Interface Design	3	0	0	3	INT305

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
INT305	Fundamentals of Software Engineering	3	0	0	3	INT209
INT306	Computer Ethics and Professional Practices	3	0	0	3	INT303
INT307	Information Technology Project Management	3	0	0	3	INT305
INT309	Cloud Computing	2	2	0	3	INT303
INT322	Web Technologies	2	2	0	3	INT206
INT401	Information Technology Project	1	4	0	3	INT307
INT402	Information Technology Internship				3	90 Cr. Hrs.
INT430	Artificial Intelligence	2	2	0	3	INT302

Information Technology Program Concentration Specific Compulsory Courses

Each concentration is composed of fifteen credit hours of compulsory courses as described below.

(a) Networking and Security Concentration Compulsory Courses (15 *Cr. Hrs.*)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
INT311	Advanced Computer Networks	2	2	0	3	INT205
INT312	Network Security	2	2	0	3	INT303
INT414	Wireless Networks	2	2	0	3	INT311
INT419	Network Design and Management	2	2	0	3	INT311
INT432	Ethical Hacking	2	2	0	3	INT312

(b) Databases and Web Systems Concentration Compulsory Courses (15 *Cr. Hrs.*)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
INT323	Big Data Technologies	2	2	0	3	INT302
INT421	Web Application Design and Development	2	2	0	3	INT322
INT423	Advanced Database Design and Implementation	2	2	0	3	INT302
INT424	E-Commerce	2	2	0	3	INT322
INT428	Data Warehousing and Data Mining	3	0	0	3	INT302

Information Technology Program Elective Courses (12 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
INT321	Database Administration	2	2	0	3	INT302
INT403	Selected Topics in Information Technology	3	0	0	3	INT307
INT405	Knowledge-Based Systems	2	2	0	3	INT305
INT406	Computer Modeling and Simulation	2	2	0	3	INT201
INT413	Network Operating Systems	2	2	0	3	INT301
INT416	Data Compression	2	2	0	3	INT303
INT417	Distributed Systems	3	0	0	3	INT311
INT422	Information Architecture	2	2	0	3	INT302
INT426	Knowledge Management	3	0	0	3	INT302
INT427	Advanced Web Topics	2	2	0	3	INT322
INT429	Mobile Applications	2	2	0	3	INT301, INT302

In addition, students registered in a particular concentration can choose one or more elective courses from other concentrations of the information technology program provided that the corresponding prerequisites of these courses are met.