

Study Plan

COLLEGE OF INFORMATION TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

BSc in Computer Science 2022 - 2023

SEMESTER ONE

1ST YEAR	Code	Course Title	Cr.Hr
	MATH 111	Calculus I	3 credits
	PHYS 111	General Physics I	4 credits
	GS 102	Creative Thinking	2 credits
	ENGL 103	English for Academic Purposes I	3 credits
	GS 111	Arabic Language Skills	3 credits
	Total		15

SEMESTER TWO

Code	Course Title	Cr.Hr
MATH 112	Calculus II	3 credits
PHYS 113	General Physics II	4 credits
CSC 102	Introduction to Programming I: Programming with Java	3 credits
LAW 106	Human Rights	2 credits
ENGL 104	English for Academic Purposes II	3 credits
Total		15

SEMESTER THREE

2ND YEAR	Code	Course Title	Cr.Hr
	ENGL 202	English Writing for Communications	3 credits
	MATH 203	Probability and Statistics	3 credits
	MATH 204	Discrete Mathematics	3 credits
	CSC 201	Introduction to Programming II: Programming with Python	3 credits
	CSC 202	Data Structures and Algorithms I	3 credits
	CSC 203	Computer Organization and Architecture	3 credits
	Total		18

SEMESTER FOUR

Code	Course Title	Cr.Hr
CSC 204	Server-side Web programming I (HTML, CSS, JAVA SCRIPT)	3 credits
CSC 205	Operating Systems	3 credits
CSC 207	System Analysis and Design	3 credits
GS 133	History of Bahrain	3 credits
MATH 206	Linear Algebra	3 credits
Total		15

SEMESTER FIVE

3RD YEAR	Code	Course Title	Cr.Hr
	CSC 301	Data Science I	3 credits
	CSC 303	Introduction to Database Management Systems	3 credits
	CSC 304	Algorithms and Data Structures II	3 credits
	CSC 305	Object Oriented Design - Java and GUI	3 credits
	CSC 306	Server-side Programming II (PHP, .NET FRAMEWORK)	3 credits
	Total		15

SEMESTER SIX

Code	Course Title	Cr.Hr
CSC 309	Software Engineering	3 credits
CSC 310	Information Retrieval	3 credits
CSC 311	Advanced Object-Oriented Programming in C#	3 credits
CSC 390	Industrial Training	3 credits
CSC 391	Cloud Computing (AWS & AZURE)	3 credits
Total		15

SEMESTER Seven

3RD YEAR	Code	Course Title	Cr.Hr
	CSC 401	Introduction to Computer Networks	3 credits
	CSC 411	Database Management Systems II	3 credits
	CSC 403	Computer and Cyber Security	3 credits
	CSC 404	Mobile App development I	3 credits
	MGT 102	Principles of Management	3 credits
	Total		15

SEMESTER Eight

Code	Course Title	Cr.Hr
CSC 412	Machine Learning and Data Mining	3 credits
CSC 490	Graduation project	6 credits
CSC xxx	Three electives from traks	9 credits
Total		18

(Choose one track from the following, each 3 courses)

1.Data Science Track:

CSC 410	Data Science II	3 credits
CSC 414	Bioinformatics	3 credits
CSC 426	Crypto currencies and Security on the Blockchain	3 credits
		9 credits
2. Machine Learning and Artificial Intelligence Track:		
CSC 413	Advanced Machine Learning	3 credits
CSC 415	Artificial Intelligence and the Web	3 credits
CSC 420	Physical Computing and the Internet of Things	3 credits
		9 credits

3. User Experience Track:

CSC 430	Advanced Computer Graphics	3 credits
CSC 418	Virtual Reality programming	3 credits
CSC 422	User Interface Design	3 credits
		9 credits
4. Web, Mobile Apps and Games Development Track:		
CSC 425	Computer Game Design	3 credits
CSC 421	Mobile Application Development II	3 credits
CSC 429	Advanced Web Development	3 credits
		9 credits

Total for program

126 credits