Plan of Study- Sequence of Courses for

Bachelor of Science in Computer Science

Effective Semester Fall/ Spring AY 2021-2022

Year	Semester	Code	Name	Prerequesite	Credits	Total in semester
YEAR ONE (1)	Fall	ICTC 1302	Information and Computing Technology Concepts		3	17
		LOGC 1202	Digital Logic Concepts		2	
		ARTS XXXX	Arts and Design		2	
		COMM 1301	Communication Skills I		3	
		ARAB XXXX	Arabic Studies		3	
		MATH 1304	Calculus I		3	
		BSCS 1160	Computer Ethics and Society		1	
	Spring	COMM 1302	Communication Skills II		3	18
		MATH 1305	Calculus II	MATH 1304	3	
		BSCS 1330	Discrete Structures		3	
		BSCS 1350	Introduction to Programming	ICTC 1302 MATH1304	3	
		BSCS 1320	Computer Architecture and Organization	LOGC 1202	3	
		BSCY 1310	Fundamentals of Cybersecurity		3	
YEAR TWO (2)	Fall	Math 1306	Linear Algebra		3	18
		CHEM 1301	Chemistry		3	
		STAT 2301	Statistics	MATH 1304	3	
		BSCS 2355	Object Oriented Programming	BSCS 1350	3	
		BSCS 2351	Fundamental Data Structures	BSCS 1350	3	
		BSCS 2370	Operating Systems	BSCS 1320	3	
	Spring	ARAB XXXX	Arabic Studies		3	18
		XXXX XXXX	Required Gen. Ed Electives (HUMN, NASC, SBSC)		3	
		PHYS 1302	Physics		3	
		BSCS 2375	Networking and Data Communication	BSCS 2370	3	
		BSCS 2310	Analysis of Algorithms	BSCS 2351	3	
		BSIS 2340	IS Project Management	ICTC 1302	3	
YEAR THREE (3)	Fall	EMOI 1201	Emotional Intelligence		2	17
		ISLS XXXX	Islamic Studies		3	
		BSCS 3340	Computer Graphics and visualization	BSCS 2310	3	
		BSCS 3345	Human Computer Interaction	BSCS 2355	3	
		BSCS 3380	Artificial Intelligence	BSCS 2310	3	
		BSCS 3365	Software Engineering	BSIS 2340	3	
	Spring	XXXX XXXX	Required Gen. Ed Electives (HUMN, NASC, SBSC)		3	18
		XXXX XXXX	Free Electives		3	
		ISLS XXXX	Islamic Studies		3	
		BSIS 3320	Database Management Systems	BSCS 2351	3	
		BSCS 3330	Computational Science Principles	BSCS 1330	3	
		BSCS XXXX	Program Elective		3	
YEAR FOUR (4)	Fall	ENTR 3301	Entrepreneurship and Design Thinking		3	17
		ISLS XXXX	Islamic Studies		2	
		BSCS 4390	Advanced Applications Programming	BSCS 2355	3	
		BSCS 4315	Parallel and Distributed Computing	BSCS 2310	3	
		BSCS 4391	Capstone Project I	BSCS 3360	3	
		BSCS XXXX	Program Elective		3	
	Spring	BBBF 1101	Basic Body and Brain Fitness		1	13
		XXXX XXXX	Free Electives		3	
		BSCS 4392	Capstone Project II	BSCS 4391	3	
		BSCS 4393	Internship	BSCS 3365	3	
		BSCS XXXX	Program Elective		3	

General Electives		Prerequest	CH
BSCS 2325	Computer Systems Fundamentals	BSCS 1320	3
BSCS 3311	Basic Automata and Complexity	BSCS 2310	3
BSCS 3390	CS Research Methods	BSCS 3380	3
BSCS 3304	Introduction to Data Science	BSCS 3380	3
BSCS 4303	Data Visualisation	BSCS 2310	3
BSCS 4302	Big Data Analytics	BSCS 3380	3
BSCS 3385	Machine Learning	BSCS 3380	3
BSCS 4386	Natural Language Processing	BSCS 3380	3
BSCS 4388	Computer Vision	BSCS 2310	3
BSCS 3305	Software Requirements Engineering	BSCS3365	3
BSCS 4307	Software Verification and Validation	BSCS 3305	3
BSCS 4306	Software Design and Construction	BSCS 4306	3
BSCS 3395	Computer Games Design and Development		3
BSCS 4396	Mobile and Casual Games		3
BSCS 4397	Educational and Serious Game Design		3
Electives: Track 1 (Data Analytics)			**CH**
BSCS 3304	Introduction to Data Science	BSCS 3380	3
BSCS 4303	Data Visualization	BSCS 2310	3
BSCS 4302	Big Data Analytics	BSCS 3380	3
Electives: Track 2 (Software Engineering)			**CH**
BSCS 3305	Software Requirements Engineering	BSCS3365	3
BSCS 4306	Software Design and Construction	BSCS 3305	3
BSCS 4307	Software Verification and Validation	BSCS 4306	3
Electives: Track 3 (Intelligent Systems)			**CH**
BSCS 3385	Machine Learning	BSCS 3380	3
BSCS 4386	Natural Language Processing	BSCS 3380	3
BSCS 4388	Computer Vision	BSCS 2310	3
Electives: Track 4 (Game Development)			**CH**
BSCS 3395	Computer Games Design and Development	BSCS 3340	3
BSCS 4396	Mobile and Casual Games Development	BSCS 3395	3
BSCS 4397	Educational and Serious Game Design	BSCS 3395	3

University Requirement		19	
Ministry Requirement		14	
Required General Elective		6	
Free Elective		6	
ABET (18/19V2)	Program Requirement (Math & Science)	21	
	Computing Department Requirement	34	
	Program Requirement (CS Core Knowledge)	27	
	Program Elective	9	

Total credit hours for graduation   136