

Curriculum of CS Program

Program Name: Bachelor of Science in Computer Science (BSCS)										
BS in Computer Science (Course Number, Title, Credit) List all courses in the program by term starting with first term of the first year and ending with the last term of the final year.			Indicate Whether Course is Required, Elective or a Selected Elective by an R, an E or an SE. ¹	Subject Area (Credit Hours)					Last Two Terms the Course was Offered: Year and, Semester, or Quarter	Average Section Enrollment for the Last Two Terms the Course was Offered ⁵
				Math & Sciences ²	Computing Topics Mark with an F or A for Fundamental or Advanced ³	General Education	Other ⁴			
First Year 1st Semester (Level-1)										
CPIT-100	Computer Skills	3	R			3		Fall 2017, Spring 2018	34, 36	

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ELI-101	English Language (I)		R					Fall 2017, Spring 2018	University wide course
ELI-102	English Language (II)	2				2		Fall 2017, Spring 2018	University wide course
MATH-110	General Mathematics (I)	3	R	3				Fall 2017, Spring 2018	University wide course
PHYS-110	General Physics (I)	3	R	3				Fall 2017, Spring 2018	University wide course
First Year 2nd Semester (Level-2)									
COMM-101	Communication Skills	3	R			3		Fall 2017, Spring 2018	University wide course
ELI-103	English Language (III)	2	R			2		Fall 2017, Spring 2018	University wide course
ELI-104	English Language (IV)	2	R			2		Fall 2017, Spring 2018	University wide course
STAT-110	General Statistics (I)	3	R	3				Fall 2017, Spring 2018	University wide course
CHEM-110	General Chemistry (I)	3	R	3				Fall 2017, Spring 2018	University wide course
BIO-110	General Biology (I)	3	R	3				Fall 2017, Spring 2018	University wide course
Second Year 1st Semester (Level-3)									
ISLS-101	Islamic Culture (1)	2	R			2		Fall 2017, Spring 2018	University wide course

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CPIT-201	Introduction to Computing	3	R		3F			Fall 2017, Spring 2018	27, 24
STAT-210	Probability Theory	3	R	3				Fall 2017, Spring 2018	University wide course

CPCS-202	Programming I	3	R		3F			Fall 2017, Spring 2018	23, 26
CPIT-221	Technical Writing	2	R			2		Fall 2017, Spring 2018	24, 21

Second Year 2nd Semester (Level-4)

ISLS-201	Islamic Culture (II)	2	R			2		Fall 2017, Spring 2018	University wide course
ARAB-101	Language Skills	3	R			3		Fall 2017, Spring 2018	University wide course
MATH-202	Calculus (II)	4	R	4				Fall 2017, Spring 2018	18, 22
CPCS-203	Programming (II)	3	R		2F+1A			Fall 2017, Spring 2018	18, 25
CPCS-222	Discrete Structures (I)	3	R	3				Fall 2017, Spring 2018	23, 28

Third Year 1st Semester (Level-5)

CPCS-204	Data Structures (I)	3	R		3F			Fall 2017, Spring 2018	23, 19
CPCS-212	Applied Math for Computing (I)	4	R	4				Fall 2017, Spring 2018	17, 13

CPCS-211	Digital Logic Design	3	R		3F			Fall 2017, Spring 2018	19, 16
-	Lab Science (II)	4	R	4				Fall 2017, Spring 2018	University wide course
Third Year 2nd Semester (Level-6)									
STAT-352	Applied Probability & Random Processes	3	R	3				Fall 2017, Spring 2018	13, 8
CPCS-301	Programming Languages	3	R		2F+1A			Fall 2017, Spring 2018	24, 21
CPCS-241	Database (I)	3	R		2F+1A			Fall 2017, Spring 2018	23, 19
CPCS-214	Computer Organization & Architecture (I)	3	R		2F+1A			Fall 2017, Spring 2018	17, 14
CPCS-223	Analysis & Design of Algorithms	3	R		3F			Fall 2017, Spring 2018	20, 16
Fourth Year 1st Semester (Level-7)									
CPIS-334	Introduction To Software Project Management	2	R		1F+1A			Fall 2017, Spring 2018	17, 20
CPCS-324	Algorithms & Data Structures (II)	3	R		3A			Fall 2017, Spring 2018	19, 14
CPCS-331	Artificial Intelligence (I)	3	R		2F+1A			Fall 2017, Spring 2018	15, 21
CPCS-351	Software Engineering (I)	3	R		2F+1A			Fall 2017, Spring 2018	23, 18

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CPCS-361	Operating Systems (I)	3	R		2F+1A			Fall 2017, Spring 2018	18, 21
CPCS-371	Computer Networks (I)	3	R		2F+1A			Fall 2017, Spring 2018	25, 11
Fourth Year 2nd Semester (Level-8)									
ISLS-301	Islamic Culture (III)	2	R			2		Fall 2017, Spring 2018	University wide course
CPCS-302	Compiler Construction	3	R		2F+1A			Fall 2017, Spring 2018	16, 12
CPCS-381	Human-Computer Interaction (I)	2	R		2F+1A			Fall 2017, Spring 2018	19, 14
-	Free Course I	3	E				3	Fall 2017, Spring 2018	
CPCS-391	Computer Graphics (I)	3	R		2F+1A			Fall 2017, Spring 2018	24, 17

Fourth Year Summer Semester									
CPCS-323	Summer Training		R					Summer 2017	8
Fifth Year 1st Semester (Level-9)									
ARAB-201	Writing Skills	3	R			3		Fall 2017, Spring 2018	University wide course
CPCS-498	Senior Project (I)	1	R		1A			Fall 2017, Spring 2018	10, 17
-	Elective Course I	3	SE		3A			Fall 2017, Spring 2018	

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-	Free Course II	3	E				3	Fall 2017, Spring 2018	
-	Free Course III	3	E				3	Fall 2017, Spring 2018	
Fifth Year 2nd Semester (Level-10)									
ISLS-401	Islamic Culture (IV)	2	R			2		Fall 2017, Spring 2018	University wide course
-	Elective Course II	3	SE		3A			Fall 2017, Spring 2018	
-	Elective Course III	3	SE		3A			Fall 2017, Spring 2018	
CPIS-428	Professional Computing Issues	2	R		1F+1A			Fall 2017, Spring 2018	19, 13
CPCS-499	Senior Project (II)	3	R		3A			Fall 2017, Spring 2018	12, 10
TOTALS-ABET BASIC-LEVEL REQUIREMENTS					36	67 = (44:F + 23:A)	28	9	

OVERALL TOTAL CREDIT HOURS FOR THE DEGREE	140								
PERCENT OF TOTAL			25.71%	47.86%	20%	6.43%			
CS Program Elective Courses List					CS Program Electives Offered in the Academic Year 2017-18				

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- Artificial Intelligence (II)
- Artificial Intelligence Topics
- Component-Based Computing
- Computer Architecture (II)
- Computer Networks (II)
- Computer Networks Practice
- Computing Systems Security
- Database (II)
- Dependable Computing
- High Performance Computing
- Information Security
- Internet Application Programming
- Multimedia & User Interface Design
- Object-Oriented Analysis & Design
- Operating Systems (II)
- Performance & Modeling of Computing Systems

- Artificial Intelligence Topics (Spring: 3)
- Computer Networks (II) (Fall: 6, Spring: 5)
- Computing Systems Security (Spring: 5)
- High Performance Computing (Fall:5, Spring:8)
- Information Security (Fall:19, Spring: 11)
- Internet Application Programming (Fall:10, Spring:7)
- Multimedia & User Interface Design (Fall: 22, Spring:6)
- Object-Oriented Analysis & Design (Fall: 22)
- Software Engineering Practices (Fall: 12, Spring: 9) ▪
Special/Selected Topics (Fall: 11, Spring: 8)

Note: Spring: 3 means, average enrollment in a section in Spring session was 3 students. Similarly, for others.

<ul style="list-style-type: none">▪ Software Engineering Practices▪ Software Engineering Theory▪ Software Technology Topics▪ Special/Selected Topics▪ Systems Programming▪ TCP/IP & Web Networking▪ Theory Of Computation	
<ol style="list-style-type: none">1. Required courses are required of all students in the program, elective courses (often referred to as open or free electives) are optional for students, and selected elective courses are those for which students must take one or more courses from a specified group.2. If math and science courses are chosen from a list, indicate this and include information elsewhere on the courses that students may choose from.3. We opted for free courses' topics as 'Other Subject Area' because for such a course, our students can take any course offered in any other department in the University.4. For courses that include multiple elements (lecture, laboratory, recitation, etc.), indicate the maximum enrollment in each element. For selected elective courses, indicate the maximum enrollment for each option.	