

BSCS - Bachelor of Science in Computer Science

Program Structure

6 hours	Pre-requisite courses
53 hours	General Studies courses
42 hours	Major courses
19 hours	Elective courses
120 hours	Total credits

<u>Pre-requisite Courses</u>				<u>6 hours</u>	Prerequisite
Course Transfer Matrix					
1	MTH 1112	ALGE 1112	Pre-Calculus Algebra	3	
2	MTH 1114	TRIG 1114	Pre-Calculus Trigonometry	3	MTH 1112
<u>General Courses</u>				<u>53 hours</u>	
AREA I: Composition				6 hours	
3	ENG 1101		Composition & Modern English I	3	IELTS 5.5 or TOEFL iBT 61
4	ENG 1102		Composition & Modern English II	3	ENG 1101
AREA II: Hum/Fine/Art				12 hours	
5	ENG 2211		American Literature before 1875	3	ENG 1102
6	ENG 2212		American Literature after 1875	3	ENG 1102
7	COM 2241	SPEE 2341	Fundamentals of Speech	3	
8	MUS 1131	MUAP 1231	Music Appreciation	3	
AREA III: Math, Science				12 hours	
9	MTH 1125	MATH 1121	Calculus I	4	MTH 1114
10	PHY 2252	PHYS 2252	General Physic I	3	MTH 1114
11	PHY L252	PHYL 2252	General Physic I Lab	1	MTH 1114
12	PHY 2253	PHYS 2253	General Physic II	3	PHY 2252 & PHY L252
13	PHY L253	PHYL 2253	General Physic II Lab	1	PHY 2252 & PHY L252
AREA IV: History/Sociology Science				12 hours	
16	HIS 1122	HISO 1122	World History to 1500	3	
14	ECO 2251	ECMA 2351	Principles of Macroeconomics	3	
15	ECO 2252	ECMI 2252	Principles of Microeconomics	3	
17	LDR 1100	LDS 1100	Introduction to Leadership	3	
AREA V: Major Required General Study				11 hours	
18	CS 2220	ITNM 2220	Numerical Methods in Computing	3	MTH 1112
19	CS 2250	ITCS 2250	Computer Science I	3	MTH 1112
20	MTH 1126	MATH 1222	Calculus II	4	MTH 1125
21	TROY 1101	ITAU 01	The University Experience	1	
<u>Computer Science Major</u>				<u>42 hours</u>	
<u>Major Courses</u>				42 hours	
22	CS 2255	ITCS 2355	Computer Science II	3	CS 2250
23	CS 3310	ITCS 3410	Foundations of Computer Science	3	MTH 1112
24	CS 3323	ITDS 3423	Data Structures	3	CS 2255 & MTH 2215 & MTH 1125

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25	CS 3329	ITAA 3529	Analysis of Algorithms	3	CS 3323
26	CS 3332	ITSE 3632	Software Engineering I	3	CS 3323
27	CS 3360	ITOO 3760	Concepts of Object Oriented Programming I	3	CS 2250
28	CS 3365	ITOA 3865	Introduction to Computer Organization & Architecture	3	CS 3310
29	CS 3370	ITPL 3870	Nature of Programming Languages	3	CS 3323
30	CS 3372	ITFL 3372	Formal Languages & the Theory of Computation	3	CS 3323
31	CS 4420	ITDS 4520	Introduction to Database Management Systems	3	CS 3323
32	CS 4445	ITDC 4545	Data Communications & Networking	3	CS 3323
33	CS 4448	ITOS 4648	Operating Systems	3	CS 3323
34	MTH 2215	MATH 2211	Discrete Mathematics	3	MTH 1112
35	STAT 2210	MATH 2210	Introductory Statistics	3	MTH 1112
<u>Electives (take 19 semester hours of elective credits)</u>				<u>19 hours</u>	
<u>Major Electives (take 6 semester hours of major elective credits)</u>				6 hours	
36	CS 3320	ITBS 3320	Business Systems Programming	3	CS 2255
37	CS 3331	ITFI 3631	Fundamentals of Artificial Intelligence	3	CS 3323
38	CS 4410	ITML 4410	Introduction to Machine Learning	3	CS 3323
39	CS 4443	ITWD 4643	Web-based Software Development	3	CS 3323
40	CS 4447	ITAD 4747	Systems Analysis and Design	3	CS 3323
41	CS 4451	CSCS 4751	Computer Security	3	CS 3323
<u>Free Elective courses (select 13 of the following)</u>				13 hours	
42	CS 3333	ITIC 3333	Introduction to Cryptography	3	MTH 1125
43	CS 3334	ITCS 3334	Foundations of Cyber Security	3	MTH 1112
44	CS 3347	ITAP 3747	Advanced Programming II (.NET programming)	3	CS 2255
45	CS 4458	ITMD 4458	Mobile Application Development	3	CS 3360
46	CS 4461	ITSE 3761	Software Engineering II	3	CS 3332
47	BIO 1100	BIPR 1110	Principles of Biology	3	
48	BIO L100	BILA 1110	Principles of Biology Lab	1	