

BSc Computer Engineering (4 academic years, 240 ECTS, Bachelor (BSc))

A/A	Course Type	Course Name	Course Code	Periods per week	Period duration (min.)	Number of weeks/ Academic semester	Total periods/ Academic semester	Number of ECTS
Semester 1								
1.	Required	Foundations of Computing	ACSC110	4	50	13	52	5
2.	Required	Programming Principles I	ACSC182	4	50	13	52	5
3.	Required	Calculus and Analytic Geometry I	AMAT111	3	50	13	39	5
4.	Required	Electrical Principles	AEEE170	4	50	13	52	5
5.	Required	Linear Algebra with MATLAB	AMAT181	3	50	13	39	5
6.	Free Elec.	Free Elective		3	50	13	39	5
Semester 2								
7.	Required	Digital Logic	ACOE161	5	50	13	65	5
8.	Required	Programming Principles II	ACSC183	4	50	13	52	5
9.	Required	Calculus and Analytic Geometry II	AMAT122	3	50	13	39	5
10.	Required	Circuit Analysis I	AEEE222	4	50	13	52	5
11.	Required	Physics Elective		3	50	13	39	5
12.	Free Elec.	Free Elective		3	50	13	39	5
Semester 3								
13.	Required	Computer Organization and Architecture	ACOE201	5	50	13	65	5

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14.	Required	Operating Systems	ACSC271	4	50	13	52	5
15.	Required	Data Structures	ACSC288	4	50	13	52	5
16.	Required	Electronics I	AEEE238	4	50	13	52	6
17.	Required	Differential Equations	AMAT204	3	50	13	39	5
18.	Required	Technical Writing and Communication Skills	AENG201	3	50	13	39	5
Semester 4								
19.	Required	Computer Ethics and Public Policy	ACSC319	2	50	13	26	5
20.	Required	Computer Networks I	ACOE313	4	50	13	52	5
21.	Required	Electronics II	AEEE239	4	50	13	52	5
22.	Required	Random Signals and Systems	AEEE305	3	50	13	39	5
23.	Required	Discrete Mathematics	ACSC191	3	50	13	39	5
24.	Free Elec.	Free Elective		3	50	13	39	5
Semester 5								
25.	Required	Advanced Computer Architecture	ACOE301	4	50	13	52	6
26.	Required	Computer Networks II	ACOE323	3	50	13	39	6
27.	Required	Digital Systems Design	ACOE361	4	50	13	52	6

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28.	Required	Automation and Data Acquisition Systems	ACOE347	4	50	13	52	6
29.	Required	Software Methodology	ACSC359	4	50	13	52	6
Semester 6								
30.	Required	Real Time Embedded Systems	ACOE343	4	50	13	52	6
31.	Required	Systems Programming	ACSC372	4	50	13	52	6
32.	Required	Computer Engineering Placement	ACOE399	2	50	13	26	6
33.	Required	Artificial Intelligence	ACSC368	3	50	13	52	6
34.	Required	Systems, Transforms and Signal Processing	AELE310	4	50	13	52	6
Semester 7								
35.	Required	Network and System Security	ACOE426	4	50	13	52	6
36.	Required	Computer Interfacing and System Integration	ACOE453	4	50	13	52	6
37.	Required	Senior Project Planning	ACOE489	0	50	13	13	6
38.	Tech. El.	Technical Elective						6

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39.	Tech. El.	Technical Elective						6
Semester 8								
40.	Required	Parallel Processing	ACOE401	4	50	13	39	6
41.	Required	Senior Project	ACOE490	0	50	13	13	6
42.	Tech. El.	Technical Elective						6
43.	Tech. El.	Technical Elective						6
44.	Tech. El.	Technical Elective						6

Technical Elective Courses					
	Code	Course Title	Periods/Week		ECTS
			Lect.	Lab	
1.	ACOE412	Digital Communications	3	1	6
2.	ACOE414	Robotics	3	1	6
3.	ACOE418	Digital Signal Processing	3	1	6
4.	ACOE419	VLSI Design	3	0	6
5.	ACOE422	Wireless Networks	3	0	6
6.	ACOE428	Digital Image Processing	3	1	6
7.	ACOE447	Smart Systems and the Internet-of-Things	3	0	6
8.	ACSC285	Numerical Methods	3	0	6
9.	ACSC299	Human Computer Interaction	2	2	6
10.	ACSC371	Languages and Compilation	3	0	6
11.	ACSC383	Software Engineering	3	1	6
12.	ACSC384	Advanced Database Systems	3	1	6
13.	ACSC402	Neural Networks and Genetic Algorithms	3	0	6
14.	ACSC404	Web Applications and Services	2	2	6
15.	ACSC423	Mobile and Ubiquitous Computing	3	1	6
16.	ACSC468	Machine Learning	3	0	6
17.	ACSC476	Web Programming	2	2	6