

**«Computer Engineering (4 Years/240 ECTS, B.Sc.)»**

**TABLE 2: COURSE DISTRIBUTION PER SEMESTER**

A/A	Course Type	Course Name	Course Code	Periods per week	Period duration	Number of weeks/ Academic semester	Total periods/ Academic semester	Number of ECTS
<b>1<sup>st</sup> Semester</b>								
1.	Compulsory	Mathematical Foundations for Science and Engineering	MAT140	3	50	14	42	6
2.	Compulsory	Programming Principles I – Robotics Lab	CSE100	3	50	14	42	6
3.	Compulsory	Physics I	PHY100	3	50	14	42	6
4.	Compulsory	Problem Solving Fundamentals & Measurements	ECE105	3	50	14	42	6
5.	Free Elective		----	3	50	14	42	6
<b>2<sup>nd</sup> Semester</b>								
6.	Compulsory	Calculus I	MAT150	3	50	14	42	6
7.	Compulsory	Programming Principles II – Robotics Lab	CSE120	3	50	14	42	6
8.	Compulsory	Physics II	PHY110	3	50	14	42	6
9.	Compulsory	Discrete Structures	MAT170	3	50	14	42	6
10.	Free Elective		----	3	50	14	42	6

<b>3<sup>rd</sup> Semester</b>								
11.	Compulsory	Calculus II	MAT200	3	50	14	42	6
12.	Compulsory	Digital Systems I	ECE200	3	50	14	42	6
13.	Compulsory	Circuits & Electronics I	ECE205	3	50	14	42	6
14.	Compulsory	Data Structures & Algorithms	CSE200	3	50	14	42	6
15.	Compulsory	Instruction in Expository Writing	ENL103	3	50	14	42	6
<b>4<sup>th</sup> Semester</b>								
16.	Compulsory	Differential Equations	MAT210	3	50	14	42	6
17.	Compulsory	Computer Organization & Architecture	ECE210	3	50	14	42	6
18.	Compulsory	Writing for Computer Science and Engineering	CSE215	3	50	14	42	6
19.	Compulsory	Circuits & Electronics II + Lab	ECE220	6	50	14	84	12
<b>5<sup>th</sup> Semester</b>								
20.	Compulsory	Linear Algebra	MAT160	3	50	14	42	6
21.	Compulsory	Data Communications and Computer Networks	CSE300	3	50	14	42	6
22.	Compulsory	Digital Systems II + Laboratory	ECE300	6	50	14	84	12
23.	Compulsory	Advanced Computer Organization and Architecture	ECE305	3	50	14	42	6
<b>6<sup>th</sup> Semester</b>								
24.	Compulsory	Probability & Statistics	MAT225	3	50	14	42	6
25.	Compulsory	Embedded Systems + Laboratory	ECE310	6	50	14	84	12
26.	Compulsory	Operating Systems	CSE320	3	50	14	42	6
27.	Compulsory	Signals & Systems Theory	ECE230	3	50	14	42	6
<b>7<sup>th</sup> Semester</b>								

28.	Compulsory	Computer Engineering Design	ECE400	3	50	14	42	6
29.	Compulsory	Wireless & Mobile Networks	ECE405	3	50	14	42	6
30.	Compulsory	Information Security	CSE405	3	50	14	42	6
31.	Compulsory	Senior Design Project	ECE495	--	--	--	--	12
<b>8<sup>th</sup> Semester</b>								
32.	Elective	Major Elective	-----	3	50	14	42	6
33.	Elective	Major Elective	-----	3	50	14	42	6
34.	Elective	Major Elective	-----	3	50	14	42	6
35.	Elective	Major Elective	-----	3	50	14	42	6
36.	Elective	Free Elective	-----	3	50	14	42	6

<b>Major Electives</b>		<b>24</b>
Students select four (4) of the following courses:		
CSE230	Systems Analysis and Design	6
CSE315	Fundamentals of Distributed Systems with Cloud computing	6
CSE330	Artificial Intelligence	6
ECE361	Network Fundamentals	6
ECE362	Routing & Switching	6
ECE418	Internship Project	6
ECE425	Digital Signal Processing	6
ECE430	Parallel & Distributed Computing	6
ECE450	Contemporary Topics	6