

**«Electrical and Electronic 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>Semester 1</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.	Compulsory	Upper Intermediate English	ENL102	3	50	14	42	6
<b>Semester 2</b>								
6.	Compulsory	Calculus I	MAT150	3	50	14	42	6
7.	Compulsory	Digital Systems I	ECE200	3	50	14	42	6
8.	Compulsory	Physics II	PHY110	3	50	14	42	6
9.	Compulsory	Linear Algebra	MAT160	3	50	14	42	6
10.	Elective	Free Elective		3	50	14	42	6
<b>Semester 3</b>								
11.	Compulsory	Calculus II	MAT200	3	50	14	42	6
12.	Compulsory	Numerical Analysis	ECE240	3	50	14	42	6
13.	Compulsory	Circuits & Electronics I	ECE205	3	50	14	42	6
14.	Compulsory	Computer Organization & Architecture	ECE210	3	50	14	42	6

15.	Compulsory	Electric and Magnetic Fields	ECE225	3	50	14	42	6
<b>Semester 4</b>								
16.	Compulsory	Differential Equations	MAT210	3	50	14	42	6
17.	Compulsory	Probability & Statistics	MAT225	3	50	14	42	6
18.	Compulsory	Signals & Systems Theory	ECE230	3	50	14	42	6
19.	Compulsory	Circuits & Electronics II + Lab	ECE220	6	50	14	84	12
<b>Semester 5</b>								
20.	Compulsory	Power Engineering	ECE320	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	Introduction to Communication Systems	ECE325	3	50	14	42	6
<b>Semester 6</b>								
24.	Compulsory	Embedded Systems + Laboratory	ECE310	6	50	14	84	12
25.	Compulsory	Power Electronics	ECE340	3	50	14	42	6
26.	Compulsory	Electromechanical Energy Conversion	ECE345	3	50	14	42	6
27.	Elective	Major Elective	-----	3	50	14	42	6
<b>Semester 7</b>								
28.	Compulsory	Control Systems - Theory & Laboratory	ECE401	6	50	14	84	12
29.	Compulsory	Power Systems: Analysis	ECE410	3	50	14	42	6
30.	Compulsory	Senior Design Project	ECE496	6	50	14	84	12

Semester 8								
31.	Compulsory	Electrical Energy: Generation, transport and distribution	ECE480	3	50	14	42	6
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

Major Electives (Students select <b>five (5)</b> of the following courses)		
ECE305	Advanced Computer Organization and Architecture	6
ECE361	Network Fundamentals	6
ECE362	Routing and Switching	6
ECE405	Wireless and Mobile Networks	6
ECE419	Internship Project	6
ECE425	Digital Signal Processing	6
ECE435	Microwave and Optical Transmission	6
ECE442	Renewable Energy Sources	6
ECE445	Photovoltaic Technologies	6
ECE451	Contemporary Topics	6
ECE455	Electrical Integration of Renewable Technologies	6
ECE465	Wiring Regulations: Explained and Illustrated	6
ECE470	Wiring Regulations: Design and verification of electrical installations	6