

## 1. Curriculum Structure- BSc in EEE

- a. **Duration of the program:** 4 years/8 Semesters
- b. **Total minimum credit requirement:** 140
- c. **Course Distribution**
  - i. **General Course**
    1. **Arts and Humanities:** 15 Credits
    2. **Social Sciences:** 15 Credits
    3. **ICT:** N/A
    4. **Basic science:** 36 Credits
  - ii. **Core Courses**
    1. **Major:** 48 Credits
    2. **Minor:** 0 Credit
    3. **Inter-disciplinary:** 4 Credits
  - iii. **Optional/Elective Courses-**
    1. **Major:** 9 Credits
    2. **Minor:** 3 Credits
  - iv. **Capstone Course/Internship/Research/Practical Training:** 10 Credits
- d. **Complete List of Courses**

<b>PRESIDENCY UNIVERSITY</b>			
<b>B.Sc. in EEE Curriculum</b>			
			<b>Total Credits</b>
			<b>140</b>
<b>COURSE_NUM</b>	<b>COURSE_TITLE</b>	<b>CREDIT</b>	
<b>Language Courses</b>			<b>15</b>
ENG099	Basic English (Waived for O/A Level Students)	3	
ENG101	English Reading and Composition	3	
ENG105	Advanced English Reading and Composition	3	
ENG215	Professional English Communication	3	
BNG101	Bangla Language and Literature	3	
<b>GED</b>			<b>15</b>
<b>All courses</b>			
ACT235	Financial and Managerial Accounting	3	
ECO235	Engineering Economics	3	
HIS105	Emergence of Bangladesh	3	
PHI301	Engineering Ethics	3	
SOC103	Sociology	3	
<b>Science</b>			<b>12</b>
PHY107	General Physics I	3	

PHY108	General Physics I Laboratory	1	
PHY109	General Physics II	3	
PHY110	General Physics II Laboratory	1	
CHE101	General Chemistry	3	
CHE102	General Chemistry Laboratory	1	
<b>Math Courses</b>			<b>24</b>
MAT099	Pre-Math (for non-Math HSC students)	0	
MAT121	Pre-Calculus	3	
MAT123	Calculus I	3	
MAT125	Calculus II	3	
MAT227	Calculus III	3	
MAT229	Calculus IV	3	
MAT331	Engineering Mathematics	3	
MAT333	Linear Algebra	3	
MAT335	Probability and Statistics	3	
<b>INTER-DISCIPLINARY ENGINEERING COURSES</b>			<b>4</b>
EDR101	Engineering Drawing	1	
IPE301	Industrial and Production Engineering	3	
<b>EEE Core Courses</b>			<b>48</b>
CSE109	Computer Programming	3	
CSE110	Computer Programming Laboratory	1	
EEE201	Electrical Circuits I	3	
CSE207	Digital Logic Design	3	
CSE208	Digital Logic Design Laboratory	1	
EEE203	Electrical Circuits II	3	
EEE204	Electrical Circuits Laboratory	1	
EEE205	Electronics I	3	
EEE307	Electronics II	3	
EEE308	Electronics II Laboratory	1	
EEE309	Energy Conversion I	3	
EEE310	Energy Conversion I Laboratory	1	
EEE311	Numerical Methods	3	
EEE313	Signals and Systems	3	
EEE319	Engineering Electromagnetics	3	
EEE321	Communication Engineering	3	
EEE322	Communication Engineering Laboratory	1	
CSE321	Microprocessors Based System Design	3	
CSE322	Microprocessors Based System Design Laboratory	1	

EEE401	Electrical and Electronic Shop	1	
EEE403	Control Systems	3	
EEE404	Control Systems Laboratory	1	
<b>Capstone Design Project</b>			<b>5</b>
EEE491	Capstone Project 1	2	
EEE492	Capstone Project 2	3	
<b>Research and Practical Training</b>			<b>5</b>
INT401	Internship (minimum 8 weeks)	1	
EEE471	Directed Research	1	
PME403	Project Management and Entrepreneurship	3	
<b>Electives</b>	<b>Total: 3 courses</b>		<b>9</b>
<b>Trail I</b>	<b>Electronics</b>		
EEE420	Power and Industrial Electronics	3	
EEE421	CMOS Analog Circuit Design	3	
EEE423	Optoelectronics	3	
EEE425	Semiconductor Device	3	
EEE427	Introduction to Nanotechnology	3	
<b>Trail II</b>	<b>Power System Engineering</b>		
EEE430	Power System Analysis	3	
EEE431	Energy Conversion II	3	
EEE433	Power System Operation and Control	3	
EEE435	Power Transmission and Distribution	3	
EEE437	Power System Protection	3	
EEE439	High Voltage Engineering	3	
<b>Trail III</b>	<b>Communication and Signal Processing</b>		
EEE441	Digital Signal Processing	3	
EEE443	Telecommunication Engineering	3	
EEE445	Wireless Communication	3	
EEE447	Optical Fiber Communication	3	
EEE449	Microwave Engineering	3	
EEE451	Digital Communication	3	
EEE453	Satellite Communication	3	
CSE453	Data Communication	3	
CSE459	Blockchain Systems and Communication Networks	3	

<b>Trail IV</b>	<b>Hardware and Software Systems</b>		
CSE307	Computer Architecture	3	
CSE433	Data Science	3	
CSE435	Deep Learning	3	
CSE437	Machine Learning	3	
CSE439	Embedded System	3	
CSE441	Introduction to VLSI Systems	3	
CSE443	Digital Systems Design	3	
CSE445	Internet of Things (IoT)	3	
CSE451	Robotics	3	
EEE48x	Special Topics in Electrical Engineering	3	
<b>Open Elective</b>	<b>Should be Approved by the ECE Department</b>		<b>3</b>
	Any course from the EEE Electives or any other course not similar to a course in the EEE curriculum	3	

## 2. Semester/Term/Year/Level wise Courses

### a. First Year First Semester: 16 Credits

Course ID	Course Name	Credit(s)
ENG099	Basic English	3
MAT121	Pre-Calculus	3
BNG101	Bangla Language and Literature	3
PHY107	General Physics I	3
PHY108	General Physics I Laboratory	1
HIS105	Emergence of Bangladesh	3

### b. First Year Second Semester: 16 Credits

Course ID	Course Name	Credit(s)
ENG101	English Reading and Composition	3
MAT123	Calculus I	3
EEE201	Electrical Circuits I	3
SOC103	Sociology	3
PHY109	General Physics II	1
PHY110	General Physics II Laboratory	3

### c. Second Year first Semester: 21 Credits

Course ID	Course Name	Credit(s)
ENG105	Advanced English Reading and Composition	3
MAT125	Calculus II	3
CSE109	Computer Programming	3
CSE110	Computer Programming Lab	1

CHE101	General Chemistry	3
CHE102	General Chemistry Laboratory	1
ECO235	Engineering Economics	3
EEE203	Electrical Circuits II	3
EEE204	Electrical Circuits Laboratory	1

**d. Second Year second Semester: 19 Credits**

Course ID	Course Name	Credit(s)
ACT235	Financial and Managerial Accounting	3
ENG215	Professional English Communication	3
MAT227	Calculus III	3
EEE205	Electronics I	3
IPE301	Industrial and Production Engineering	3
CSE207	Digital Logic Design	3
CSE208	Digital Logic Design Laboratory	1

**e. Third Year First Semester: 21 Credits**

Course ID	Course Name	Credit(s)
PHI301	Engineering Ethics	3
EEE307	Electronics II	3
EEE308	Electronics II Laboratory	1
MAT229	Calculus IV	3
MAT335	Probability and Statistics	3
EEE309	Energy Conversion I	3
EEE310	Energy Conversion I Laboratory	1
EEE313	Signals and Systems	3
EEE401	Electrical and Electronic Shop	1

**f. Third Year second Semester: 20 Credits**

Course ID	Course Name	Credit(s)
CSE321	Microprocessors Based System Design	3
CSE322	Microprocessors Based System Design Laboratory	1
EEE311	Numerical Methods	3
EEE319	Engineering Electromagnetics	3
EEE321	Communication Engineering	3
EEE322	Communication Engineering Laboratory	1
MAT331	Engineering Mathematics	3
MAT333	Linear Algebra	3

**g. Fourth Year First Semester: 16 Credits**

Course ID	Course Name	Credit(s)
EEE403	Control Systems	3
EEE404	Control Systems Laboratory	1
EEE471	Directed Research	1
CSE4xx/EEE4xx	Elective Course 1	3

CSE4xx/EEE4xx	Elective Course 2	3
EEE491	Capstone Design Project I	2
PME403	Project Management and Entrepreneurship	3

**h. Fourth Year Second Semester: 10 Credits**

Course ID	Course Name	Credit(s)
CSE4xx/EEE4xx	Elective Course 3	3
XXXXxx	Open Elective	3
EEE492	Capstone Design Project II	3
INT101	Internship (minimum 8 weeks)	1