

**Gautam Buddha University, School of Engineering, Electrical Engineering Department
4 year B.Tech. (Electrical Engineering) programme for Batch 2018-22 onwards batches**

I Semester						
S. No.	Course Code	Name of Course	L-T-P	Credits	UGC	AICTE
Theory Courses						
1	CY101/ PH102	Engineering Chemistry/ Engineering Physics	3-1-0	4	FC	BSC
2	MA 101	Engineering Mathematics –I	3-1-0	4	FC	BSC
3	EC 101/ EE 102	Basic Electronics Engineering/ Basic Electrical Engineering	3-1-0	4	FC	ESC
4	CS 101/ ME101	Fundamentals of Computer Programming/ Engineering Mechanics	3-1-0	4	SEC	ESC
5	BS 101	Human Values & Buddhist Ethics	2-0-0	2	AECC	HSMC
6	EN 101	English Proficiency	2-0-0	2	AECC	HSMC
Practical Courses						
7	CE103*/ ME102	Engineering Graphics/ Workshop Practice	1-0-2	2	SEC	ESC
8	CY 103/ PH 104	Engineering Chemistry Lab/ Engineering Physics Lab	0-0-2	1	FC	BSC
9	CS 181/ EN 151	Computer Programming Lab/ Language Lab	0-0-2	1	SEC	ESC
10	EC 181/ EE 104	Basic Electronics Engineering Lab/ Basic Electrical Engineering Lab	0-0-2	1	FC	ESC
11	GP	General Proficiency		NC		
		Total Contact Hours/Credits	29	25		

II Semester						
S. No.	Course Code	Name of Course	L-T-P	Credits	UGC	AICTE
Theory Courses						
1	CY 101/ PH 102	Engineering Chemistry/ Engineering Physics	3-1-0	4	FC	BSC
2	MA 102	Engineering Mathematics –II	3-1-0	4	FC	BSC
3	EC 101/ EE 102	Basic Electronics Engineering/ Basic Electrical Engineering	3-1-0	4	FC	ESC
4	CS 101/ ME101	Fundamentals of Computer Programming/ Engineering Mechanics	3-1-0	4	SEC	ESC
5	ES 101	Environmental Studies	4-0-0	4	AECC	HSMC
Practical Courses						
6	CE103*/ ME 102	Engineering Graphics/ Workshop Practice	1-0-2	2	SEC	ESC
7	CY 103/ PH 104	Engineering Chemistry Lab/ Engineering Physics Lab	0-0-2	1	FC	BSC
8	CS 181/ EN 151	Computer Programming Lab/ Language Lab	0-0-2	1	SEC	ESC
9	EC 181/ EE 104	Basic Electronics Engineering Lab/ Basic Electrical Engineering Lab	0-0-2	1	FC	ESC
10	GP	General Proficiency		NC		
		Total Contact Hours/Credits	29	25		

**This is lab course*

4 Year B. Tech. (Electrical Engineering) Programme (For 2018-2022 batches onwards)
4+2 Year Dual Degree (Electrical Engineering) Programme (For 2020-24 batch)

SEMSTER -III					
S. No.	Subject Code	Course	L-T-P	Credit	Course Type
Theory Courses					
1	MA-201	Engineering Mathematics-III	3-1-0	4	CC/BSC
2	EE-201	Network Theory	3-1-0	4	CC/PCC
3	EE-203	Electrical Engineering Materials & Nano Materials	3-0-0	3	CC/PCC
4	EE-205	Electrical Measurement & Measuring Instruments (EMMI)	3-1-0	4	CC/PCC
5	EE-207	Electrical Machine-I	3-1-0	4	CC/PCC
6	CS-205	Data Structures and Algorithms	3-0-0	3	SEC/ESC
Practical Courses					
7	EE-211	Network Lab	0-0-2	1	CC/PCC
8	EE-213	EMMI Lab	0-0-2	1	CC/PCC
9	EE-215	Electrical Machine Lab-I	0-0-2	1	CC/PCC
10	GP	General Proficiency	-	NC	
		Total Contact Hours/Credits	29	25	

SEMSTER -IV					
S. No.	Subject Code	Course	L-T-P	Credit	Course Type
Theory Courses					
1	EE-202	Measurement and Instrumentation	3-0-0	3	CC/PCC
2	EE-204	Electronic Devices & Circuits	3-1-0	4	CC/PCC
3	EE-206	Signals & Systems	3-1-0	4	CC/PCC
4	EE-208	Elements of Power System	3-1-0	4	CC/PCC
5	EE-210	Electrical Machine-II	3-1-0	4	CC/PCC
6	-	Open Elective-I	3-0-0	3	AECC/HSMS
Practical Courses					
7	EE-214	Electronic Devices & Circuits Lab	0-0-2	1	CC/PCC
8	EE-216	Electrical Machine Lab- II	0-0-2	1	CC/PCC
9	EE-218	Simulation Lab	0-0-2	1	SEC/LC
10	-	General Proficiency		NC	
		Total Contact Hours/Credit	28	25	

4 Year B. Tech. (Electrical Engineering) Programme (For 2018-2022 batches onwards)
4+2 Year Dual Degree (Electrical Engineering) Programme (For 2020-24 batch)

SEMSTER -V					
S. No.	Subject Code	Course	L-T-P	Credit	Course Type
Theory Courses					
1	EE-301	Power System Analysis	3-1-0	4	CC/PCC
2	EE-303	Electromagnetic Field Theory	3-1-0	4	CC/PCC
3	EE-305	Control System-I	3-1-0	4	CC/PCC
4	EE-307	Power Electronics	3-1-0	4	CC/PCC
5	EE-309	Digital Electronics	3-1-0	4	CC/PCC
Practical Courses					
6	EE-311	Power System Lab	0-0-2	1	CC/PCC
7	EE-313	Control System Lab	0-0-2	1	CC/PCC
8	EE-315	Power Electronics Lab	0-0-2	1	CC/PCC
9	EE-317	Digital Electronic Lab	0-0-2	1	CC/PCC
10	EE-319	Industrial Training-I	-	1	SEC/PW
11	GP	General Proficiency	-	NC	
		Total Contact Hours/Credits	28	25	

**Students will do industrial training of four weeks after fourth semester and evaluation will be done in fifth semester.*

SEMSTER -VI					
S. No.	Subject Code	Course	L-T-P	Credit	Course Type
Theory Courses					
1	EE-302	Electric Drives	3-1-0	4	CC/PCC
2	EE-304	Switchgear and Protection	3-1-0	4	CC/PCC
3	EE-306	Control System-II	3-1-0	4	CC/PCC
4	EE-308	Digital Signal Processing	3-1-0	4	CC/PCC
5	EE-310	Microprocessor & Microcontrollers	3-1-0	4	CC/PCC
6	-	Open Elective- II	3-0-0	3	AECC/HSMS
Practical Courses					
7	EE-312	Electric Drives Lab	0-0-2	1	CC/PCC
8	EE-314	Switchgear and Protection Lab	0-0-2	1	CC/PCC
9	EE-316	Microprocessor & Microcontrollers Lab	0-0-2	1	CC/PCC
10	EE-318	Simulation Lab-II	0-0-2	1	SEC/LC
11	GP	General Proficiency	-	NC	GP
		Total Contact Hours/Credit	31	27	

**4 Year B. Tech. (Electrical Engineering) Programme (For 2018-2022 batches onwards)
4+2 Year Dual Degree (Electrical Engineering) Programme (For 2020-24 batch)**

EMESTER-VII					
S. No.	Subject Code	Courses	L-T-P	Credit	Course Type
Theory Courses					
1.	EE401/ EE405	Engineering Optimization/ Modeling & Simulation in Engineering	3-1-0	4	E-GE3
2.		Dept. Elective-I	3-0-0	3	EDSE1
3.		Dept. Elective-II	3-0-0	3	EDSE2
4.		Open Elective-III	3-0-0	3	EDSE3
Practical Courses					
5.	EE483	DSP Lab	0-0-2	1	CC/PCC
6.	EE485	Industrial Training-II	-	1	SEC/PW
7.	EE487	Seminar	0-0-3	2	SEC/PW
8.	EE497	Project-I	0-0-8	4	DP/PW
9.	GP	General Proficiency	-	NC	
		Total		22	
Total Contact Hours				26	

**Students will do industrial training of six weeks after sixth semester and evaluation will be done in seventh semester.*

SEMSTER -VIII					
S. No.	Subject Code	Course	L-T-P	Credit	Course Type
Theory Courses					
1.	--	Organization Behavior	3-0-0	3	OE/HSME
2.	--	Dept. Elective-III	3-0-0	3	CC/PCC
3.	--	Dept. Elective-IV	3-0-0	3	CC/PCC
4.	--	Open Elective-IV	3-0-0	3	CC/PCC
Practical Courses					
5.	EE-498	Project-I	0-0-16	8	CC/PCC
6.	GP	General Proficiency	-	NC	
Total Contact Hours /Credit			28	20	

- Any Dept. Elective will be run only when there will be 1/3 students of the total class strength.

Grand Total Credits of 4 Year B. Tech. Degree = 194

List of Electives

Dept. Elective-I

EE-407-Power System Operation and Control
EE-409 Digital Control
EE-411 Power Converters & Applications
EE-413 Industrial Instrumentation & Automation
EE-415 Industrial Process Control
EE-417 Introduction to AI & Neural Networks
EE-419 Computer Aided Machine Design

Open Elective-I

1. Analog Electronics
 2. Cyber Security
 3. Introduction to Bio-Technology
 4. Advance English Proficiency
- Any other subject offered from other dept.*

Dept. Elective-II

EE-421 Soft Computing Techniques
EE-423 Renewable Energy Sources
EE-425 Advance Control System
EE-427 Advance Instrumentation
EE-429 Digital Image Processing
EE-431 Power Quality
EE-433 Fundamentals of Robotics Engineering
EE-435 HVDC & FACTS
EE-437 Utilization of Electrical Engineering and Traction

Open Elective-II

1. Modeling & Simulation
 2. Fiber Optic Based Instrumentation
 3. Industrial Management
 4. OOPS using C++
 5. GST
 6. Basics of Analog and Digital Communication
- Any other subject offered from other dept.*

Dept. Elective-III& IV

EE-404 Non-Linear System
EE-406 Wavelet Application to Engineering
EE-408 PLC & SCADA
EE-410 Smart Transducers & Sensors
EE-412 Special Electrical Machine
EE-414 Conservation of Energy & Audit
EE-416 Power Plant Engineering
EE-418 Biomedical Instrumentation
EE-422 Robotics Analysis and Synthesis
EE-424 Intelligent Control
EE-426 Optimal Control
EE-428 Machine Learning
EE 432 Computer Applications to Electrical Engineering

Open Elective-III/IV

1. Entrepreneurship Development
 2. JAVA Programming
 3. Embedded System
 4. IOT
 5. IPR Law
 6. Disaster Management
 7. Industrial Management
 8. Language Culture and Society
- Any other subject offered from other dept.*

Open Elective-I, II, III & IV

- Any subject offered from other department.