Gautam Buddha University, School of Engineering, Electrical Engineering Department

5 Year Integrated B.Tech.+ M.Tceh./MBA Programme (Electrical Engineering) Batch 2021 onwards

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**		

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**	

**This is lab course*

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**	

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

11	GP	General Proficiency	-	NC	
		Total Contact Hours/Credits	**28**	**24**	

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**	

EMESTER-VII					
S. No.	**Subject Code**	**Courses**	**L-T-P**	**Credit**	**Course Type**
		THEORY			
1.	EE401	Engineering Optimization	3-1-0	4	E-GE3
2.	EE403	PLC & SCADA Systems	3-1-0	4	EGE4
3.		Dept. Elective-I	3-0-0	3	EDSE1
4.		Dept. Elective-II	3-0-0	3	EDSE2
5.		Open Elective-III	3-0-0	3	EDSE3
		PRACTICALS/PROJECT			
6.	EE481	PLC & SCADA Lab	0-0-2	1	C
7.	EE483	DSP Lab	0-0-2	1	C

8.	EE485	Industrial Training	-	1	SEC
9.	GP	General Proficiency	-	NC	
		Total		**20**	
		Total Contact Hours	**26**		

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

SUMMER SEMESTER (AFTER VIII SEMESTER)					**Course Type**
S. No.	**Subject Code**	**Courses**	**L-T-P**	**Credit**	
1.	EE600	Summer Project/Industrial Training	-	2	EDP-1
		Total		**2**	
		Total Contact Hours			

SEMESTER-VIII (Specialization in M. Tech. PS/PED/I&C)					**Course Type**
S. No.	**Subject Code**	**Courses**	**L-T-P**	**Credit**	
		Total		**23**	
		M. Tech. II semester curriculum			

SEMESTER-IX (Specialization in M. Tech. PS/PED/I&C)					**Course Type**
S. No.	**Subject Code**	**Courses**	**L-T-P**	**Credit**	
		Total		**22**	
		M. Tech. III semester curriculum			

SEMESTER-X (Specialization in M. Tech. PS/PED/I&C)					**Course Type**
S. No.	**Subject Code**	**Courses**	**L-T-P**	**Credit**	
		Total		**22**	
		M. Tech. IV semester curriculum			

Open Elective: Course offered from other school

List of Electives for Integrated B.Tech.+M.Tceh./MBA (EE)

Elective-I, II & III

1. EE407: Utilization of Electric Power & SCADA System (Credits:3-0-0)
2. EE423: Transducers in Instrumentation (Credits:3-0-0)
3. EE425: Ultrasonic, Laser and Fiber Optics based Instrumentation (Credits:3-0-0)
4. EE427: Microelectronics Technology (Credits:3-0-0)
5. EE581: Restructured Power System (Credits:3-0-0)
6. EE575: Renewable Energy Sources (Credits:3-0-0)
7. EE585: Power Converters and its Applications (Credits:3-0-0)
8. EE573: Power System Transients (Credits:3-0-0)
9. EE551: Introduction to MEMS (Credits:3-0-0)
10. EE543: Embedded System (Credits:3-0-0)
11. EE531: Advance Instrumentation (Credits:3-0-0)
12. EE535: Optimal Control Theory (Credits:3-0-0)
13. EE533: Advance Process Control (Credits:3-0-0)
14. EE501: Power Electronics Devices and Magnetics (Credits:3-0-0)
15. EE503: Modeling of Electrical Apparatus (Credits:3-0-0)
16. EE505: DC Power Converters (Credits:3-0-0)
17. EE437: Project Engineering & Management (Credits:3-0-0)
18. EE441: Low Power VLSI Circuits & Systems (Credits:3-0-0)
19. EE443: Introduction to VLSI (Credits:3-0-0)
20. EE445: Utilization of Electrical Energy and Traction (Credits:3-0-0)
21. EE453: High Voltage Engineering (Credits:3-0-0)

22. EE455: Computer Application to Electrical Engineering (Credits:3-0-0)
23. EE457: Research Methodology for Electrical Engineering (Credits:4-0-0)
24. EE577: Electric Power Generation System (Credits:3-0-0)
25. EE695: Distribution System Analysis & Control (Credits:3-0-0)
26. M. Tech. (Power System) Electives; M. Tech. (PED) Electives; M. Tech. (I &C) Electives Courses.