

Department of Electrical Engineering
School of Engineering, Gautam Buddha University
Course structure of 2 Year M. Tech. Programme in Renewable Energy Systems (2020-22)

SEMESTER-I					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
THEORY					
1.	MA406/ MA507/ MA402	Operation Research/Optimization Techniques/Modelling & Simulation	3-1-0	4	OE-R1
2.	EE575	Renewable Energy Sources	3-0-0	3	C-R1
3.	EE577	Electrical Power Generation System	3-0-0	3	C-R2
4.	EE571	Power System Analysis and Control	3-0-0	3	C-R3
5.	EE701	Distributed Energy Integration	3-0-0	3	C-R4
6.		Elective-I	3-0-0	3	
PRACTICALS/PROJECT					
7.	EE591	Power System Lab	0-0-3	2	C-R4
8.	EE597	Seminar	0-0-3	2	SEC1
9.	GP	General Proficiency	-	NC	
		Total		23	
Total Contact Hours				25	

Open Elective: Course offered from other school

SEMESTER-II					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
THEORY					
1.	EE702	Solar Energy Systems	3-0-0	3	C-R5
2.	EE704	Wind Energy Systems	3-0-0	3	C-R6
3.	EE706	Energy Audit and Management	3-0-0	3	C-R7
4.	EE572	Advance Power System Protection	3-0-0	3	C-R8
5.		Specialized Elective- I	3-0-0	3	EDSE-R1
6.		PRACTICALS/PROJECT			
	EE598	Project	0-0-10	5	EDP-R1
7.	EE588	Power System Simulation Lab	0-0-3	2	C-R9
8.	GP	General Proficiency	-	NC	
		Total		22	
Total Contact Hours				28	

SEMESTER-III					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
THEORY					
1.	EE695	Distribution System Analysis and Control	3-0-0	3	C-R10
2.	EE683	Distributed Generation and Micro-grids	3-0-0	3	C-R11
3.		Specialized Elective-II	3-0-0	3	C-R12
4.		Specialized Elective-III	3-0-0	3	EDSE-R2
PRACTICALS/PROJECT					
6.	EE723	Renewable Energy Systems Lab	0-0-3	2	C-R13
7.	EE699	Dissertation-I	6*-0-3	8	EDP-R2
8.	GP	General Proficiency	-	NC	
		Total	-	22	
		Total Contact Hours	24		

**This will not be a usual lecture session, but this is one to one interaction of each student with the concerned faculty member*

SEMESTER-IV					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
PRACTICALS/PROJECT					
1.	EE698	Dissertation-II	-	22	EDP-R3
2.	GP	General Proficiency	-	NC	
		Total	-	22	
		Total Contact Hours	22		

Grand Total Credits = 90

List of Electives for M. Tech. (Renewable Energy Sources)

Elective-I:

1. EE709: Energy Policy & Planning
2. EE711: Industrial Waste Management and Recycling
3. EE713: Electric Vehicle
4. EE715: Pollution Control in Power Plants
5. EE717: AI Techniques in Power Systems
6. EE719: Industrial and Commercial Applications of Renewable Energy Sources
7. M.Tech. (PS, PED and I&C)-I Sem and Int. B.Tech.+M.Tech./MBA-VII Sem Electives

Specialized Elective-I:

1. EE708: Energy Storage Technology
2. EE710: Hydrogen Energy and Fuel cell
3. EE712: Solid Waste Management
4. EE714: Integrated Energy Systems
5. EE574: Power System Planning and Reliability
6. Specialized Electives-I of M. Tech. (PS, PED and I&C)

Specialized Elective-II and III:

1. EE725: Energy Efficient Materials
2. EE727: SCADA and PMU
3. EE729: Hybrid System of Conventional Energies
4. EE731: Rural Electrification & its Management
5. EE733: Smart Energy Management System
6. EE735: Power Substation Engineering
7. EE737: Electric Power Vehicle
7. EE739: Economics and Financing of Renewable Energy Systems
8. EE741: Special Topics in Power Systems
9. EE743: Sustainable Energy Sources
10. Specialized Electives-II of M. Tech. (PS, PED and I&C)

Open Elective :

Environment Engineering

Environmental Regulations

Any other subject offered from other department

Nomenclature:

1. AEC: Ability Enhancement Courses
 - AEC-C: Ability Enhancement Courses Compulsory
 - SEC: Skill Enhancement Courses
2. CC: Core Courses
3. Elective Courses
 - E-DSE: Discipline Specific Elective
 - E-GE: Generic Elective
 - E-DP: Dissertation and Project