## Gautam Buddha University School of Engineering Department of Electrical Engineering

# Course structure of 2 Year M. Tech. Programme in Renewable Energy Systems (2019-21)

SEMESTER-I				
S. No.	Subject Code	Courses	L-T-P	Credi t
1.	EE775	Renewable Energy Sources	3-0-0	3
2.	EE781	Electrical Power Generation Systems	3-0-0	3
3.	EE571	Power System Analysis and Control	3-0-0	3
4.	EEM107	Distributed Energy Integration	3-0-0	3
5.	MA402	Modelling & Simulation	3-1-0	4
6.		Elective-I	3-0-0	3
7.	EE591	Power System Lab	0-0-3	2
8.	EE597	Seminar	0-0-3	2
9.	GP	General Proficiency	-	NC
		Total		23
		Total Contact Hours	25	

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S. No.	Subject Code	Courses	L-T-P	Credi t
1.	EEM102	Solar Energy Systems	3-0-0	3
2.	EEM104	Wind Energy Systems	3-0-0	3
3.	EEM106	Energy Audit and Management	3-0-0	3
4.	EE572	Advance Power System Protection	3-0-0	3
5.		Specialized Elective-I	3-0-0	3
6.	EE598	Project	0-0-10	5
7.	EE588	Power System Simulation Lab	0-0-3	2
8.	GP	General Proficiency	-	NC
		Total		22
		Total Contact Hours	28	

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		SEMESTER-III		
S. No	Subject Code	Courses	L-T-P	Credi t
1.	EE695	Distribution System Analysis and Control	3-0-0	3
2.	EE683	Distributed Generation and Micro-grids	3-0-0	3
3.	EEM20	Economics and Financing of Renewable Energy Systems	3-0-0	3
4.		Specialized Elective-II	3-0-0	3
5.	EEM21	Renewable Energy Systems Lab	0-0-3	2
6.	EE699	Dissertation-I	6-0-3	8
7.	GP	General Proficiency	-	NC
		Total	-	22
		Total Contact Hours	24	

SEMESTER-IV					
S. No.	Subject Code	Courses	L-T-P	Credit	
1.	EEP-698	Dissertation-II	-	23	
2.	GP	General Proficiency	-	NC	
		Total	-	23	
		Total Contact Hours	2	23	

**Grand Total Credits = 90** 

### **Elective-I:**

- 1. EEM109: Energy Policy & Planning
- 2. EEM111: Industrial Waste Management and Recycling
- 3. EEM113: Environment Engineering
- 4. EEM115: Environmental Regulation
- 5. EEM117: Pollution Control in Power Plants
- 6. EEM119/EE574: Power System Planning and Reliability

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- 7. EEM121: Industrial and Commercial Applications of Renewable Energy Sources
- 8. EEM123/EE784: AI Techniques in Power Systems
- 9. EEM125: Electric Vehicle

### **Specialized Elective-I:**

- 1. EEM108: Energy Storage Technology
- 2. EEM110/EE778: Electric Vehicle Charging Substation
- 3. EEM112: Hydrogen Energy and Fuel cell
- 4. EEM114: Solid Waste Management
- 5. EEM116: Integrated Energy Systems

#### **Specialized Elective-II:**

- 1. EEM201: Energy Efficient Materials
- 2. EEM203: EE685: SCADA and PMU
- 3. EEM205Hybrid System of Conventional Energies
- 4. EEM207/EE779: Micro-Grids Systems
- 5. EEM209: Rural Electrification & its Management
- 6. EEM211: Smart Energy Management System

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