DISCIPLINE– ELECTRICAL ENGG	SEMESTER- 3RD	NAME OF THE TEACHING FACULTY- JYOTIRMAYEE SETHY, LECT (ELECT)	
SUB- RENEWABLE ENERGY POWER PLANTS(REPP)	NO OF CLASSES/ WEEK – 3P	TIME PERIOD- 14.07.2025 TO 15.11.2025 NO OF WEEKS- 18	REMARK
1	1ST DAY 2ND DAY 3RD DAY	**1.SOLAR PV AND CONCENTRATED SOLAR POWER PLANTS** 1.1 Solar Map of India: Global solar power radiation, Solar PV	
2	1ST DAY 2ND DAY 3RD DAY	1.2 Concentrated Solar Power (CSP) plants, construction and working of: Power Tower, Parabolic Trough, Parabolic Dish, Fresnel Reflectors	
3	1ST DAY 2ND DAY 3RD DAY	1.3 Solar Photovoltaic (PV) power plant: components layout, construction, working. Roof top solar PV power system	
4	1ST DAY 2ND DAY 3RD DAY	**2.LARGE WIND POWER PLANTS** 2.1 Wind Map of India: Wind power density in watts per square meter Lift and drag principle; long path theory.	
5	1ST DAY 2ND DAY 3RD DAY	2.2 Geared type wind power plants: components, layout and working. Direct drive type wind power plants: components, layout and working.	
6	1ST DAY 2ND DAY 3RD DAY	2.3 Constant Speed Electric Generators: Squirrel Cage Induction Generators (SCIG),	
7	1ST DAY 2ND DAY 3RD DAY	2.4 Wound Rotor Induction Generator (WRIG); Variable Speed Electric Generators: Doubly-fed induction generator (DFIG), wound rotor synchronous generator (WRSG), permanent magnet synchronous generator (PMSG).	
8	1ST DAY 2ND DAY 3RD DAY	**3.SMALL WIND TURBINES** 3.1 Horizon axis small wind turbine: direct drive type, components and working Horizontal axis small wind turbine: geared type, components and working	
9	1ST DAY 2ND DAY 3RD DAY	3.2 Vertical axis small wind turbine: direct drive and geared, components and Working Types of towers and installation of small wind turbines on rooftops and open fields.	
10	1ST DAY 2ND DAY 3RD DAY	3.3 Electric generators used in small wind power plants **INTERNAL 2**	
11	1ST DAY 2ND DAY 3RD DAY	**4.BIOMASS-BASED POWER PLANTS** 4.1 Properties of solid fuel for biomass power plants: bagasse, wood chips, rice husk, municipal waste	
12	1ST DAY 2ND DAY 3RD DAY	4.2 Properties of liquid and gaseous fuel for bio mass power plants: Jatropha, bio-diesel gobar gas	
13	1ST DAY 2ND DAY 3RD DAY	4.3 Layout of a Bio-chemical based (e.g. biogas) power plant:	
14	1ST DAY 2ND DAY 3RD DAY	4.4 Layout of a Thermo-chemical based (e.g. Municipal waste) power plant	
15	1ST DAY 2ND DAY 3RD DAY	4.5 Layout of a Agro-chemical based (e.g.bio-diesel) power plant	
16	1ST DAY 2ND DAY 3RD DAY	REVISION **INTERNAL 2**	
17	1ST DAY 2ND DAY 3RD DAY	**REVISION**	
18	1ST DAY 2ND DAY 3RD DAY	**REVISION** **VST**	

11/7/25