GIET

GIETPOLYTECHNIC,JAGATPUR,CUTTACK

LESSONPLAN

DISCIPLINE:- ELECTRICAL ENGINEERING	SEMESTER:- 3rd	NAME OF THE TEACHING FACULTY: PRATIK MOHANTY
SUBJECT- RENEWABLE ENERGY POWER PLANTS(EEPC209 TH:5)	NO. OF DAYS/PER WEEK CLASS ALLOTTED:- 3	SEMESTER FROM DATE:- 14-07-2025 TO DATE :-15 - 11 -2025

Week	Class day	Theory
1st	1st	**Solar PV and Concentrated Solar Power Plants** 1.1 Solar Map of India: Global solar power radiation
	2nd	1.1 Solar Map of India: Solar PV
	3rd	1.2 Concentrated Solar Power (CSP) plants
2nd	1st	1.2 Construction and working of: Power Tower, Parabolic Trough, Parabolic Dish, Fresnel Reflectors
	2nd	1.2 Construction and working of: Power Tower, Parabolic Trough, Parabolic Dish, Fresnel Reflector
	3rd	1.2 Construction and working of: Power Tower, Parabolic Trough, Parabolic Dish, Fresnel Reflector
3rd	1st	1.3 Solar Photovoltaic (PV) power plant: components layout, construction, working.
	2nd	1.3 Solar Photovoltaic (PV) power plant: components layout, construction, working.
	3rd	1.3 Solar Photovoltaic (PV) power plant: components layout, construction, working.
4th	1st	1.3 Solar Photovoltaic (PV) power plant: Roof top solar PV power system
	2nd	1.3 Solar Photovoltaic (PV) power plant: Roof top solar PV power system
	3rd	1.3 Solar Photovoltaic (PV) power plant: Roof top solar PV power system
5th	1st	**Large Wind Power Plants** 2.1 Wind Map of India: Wind power density in watts per square meter Lift
	2nd	Large Wind Power Plants 2.1 Wind Map of India: Drag principle
	3rd	Large Wind Power Plants 2.1 Wind Map of India: long path theory.
6th	1st	2.2 Geared type wind power plants: components, layout and working
	2nd	2.2 Geared type wind power plants: components, layout and working.
	3rd	2.2 Direct drive type wind power plants: components, layout and working.
7th	1st	2.3 Constant Speed Electric Generators: Squirrel Cage Induction Generators(SCIG),
	2nd	2.3 Constant Speed Electric Generators: Squirrel Cage Induction Generators(SCIG),.
	3rd	2.3 Constant Speed Electric Generators: Squirrel Cage Induction Generators(SCIG),.
8th	1st	2.4 Wound Rotor Induction Generator (WRIG); Variable Speed Electric Generators
	2nd	2.4 Wound Rotor Induction Generator (WRIG); Doubly-fed induction generator (DFIG),
	3rd	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).

	1st	**Small Wind Turbines** 3.1 Horizon axis small wind turbine: direct drive type, components working
	2nd	3.1Horizontal axis small wind turbine: geared type, components and working
	3rd	3.1Horizontal axis small wind turbine: geared type, components and working
10th	1st	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.
	2nd	3.2Working Types of towers and installation of small wind turbines on rooftops and open fields.
	3rd	3.2Working Types of towers and installation of small wind turbines on rooftops and open fields.
11th	1st	3.3 Electric generators used in small wind power plants
	2nd	3.3 Electric generators used in small wind power plants
	3rd	3.3 Electric generators used in small wind power plants
12th	1st	**Biomass-based Power Plants** 4.1 Properties of solid fuel for biomass power plants: bagasse, wood chips, rice husk, municipal waste
	2nd	4.1 Properties of solid fuel for biomass power plants: bagasse, wood chips, rice husk, municipal waste
	3rd	4.2 Properties of liquid and gaseous fuel for bio mass power plants: Jatropha, bio-diesel gobar gas
13th	1st	4.2 Properties of liquid and gaseous fuel for bio mass power plants: Jatropha, bio-diesel gobar gas
	2nd	4.3 Layout of a Bio-chemical based (e.g. biogas) power plant:
	3rd	4.3 Layout of a Bio-chemical based (e.g. biogas) power plant:
14th	1st	4.4 Layout of a Thermo-chemical based (e.g. Municipal waste) power plant
	2nd	4.4 Layout of a Thermo-chemical based (e.g. Municipal waste) power plant
	3rd	4.4 Layout of a Thermo-chemical based (e.g. Municipal waste) power plant
15th	1st	4.5 Layout of a Agro-chemical based (e.g.bio-diesel) power plant
	2nd	4.5 Layout of a Agro-chemical based (e.g.bio-diesel) power plant
	3rd	4.5 Layout of a Agro-chemical based (e.g.bio-diesel) power plant

Pratik Mohanty 10/7/25
Signature of faculty

10/7/25
Signature of sr lecturer
Head of Dept. (HOD)
Electrical & ETC Engg.
G.I.E.T (POLY), [illegible]

10/7/25
Signature of principal