

C. V. RAMAN POLYTECHNIC, BHUBANESWAR

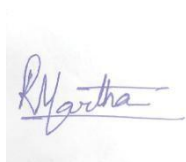
LESSON PLAN Session (2026-2027)

Discipline: ELECTRICAL ENGINEERING	Semester: 3 RD Semester, Winter/2026	Name of the Faculty: RASHMI RANJAN MARTHA ASST.PROF Email ID: Rashmi.martha@cvrp.edu.in
Subject Name with code: RENEWABLE ENERGY POWER PLANTS (EEPC209)	No. of Days/week: 03 Total No. of Class (Required): 45	Start Date: 01.07.2026 End Date: 05.11.2026

Week	Class Day	Brief description of the Topic/Chapter to be taught
1st	1 st	1. Solar PV and Concentrated Solar Power Plants Solar Map of India
	2 nd	Global solar power radiation
	3 rd	Solar PV
2nd	1st	Concentrated Solar Power (CSP) plants
	2 nd	construction and working of: Power Tower
	3 rd	Parabolic Trough
3rd	1st	Parabolic Dish
	2 nd	Fresnel Reflectors
	3 rd	Solar Photovoltaic (PV) power plant: components layout
4th	1st	construction, working
	2 nd	Roof top solar PV power system
	3 rd	Revision
5th	1st	2. Large Wind Power Plants Wind Map of India
	2 nd	Wind power density in watts per square meter Lift and drag principle

	3 rd	long path theory
6th	1st	Geared type wind power plants: components, layout and working
	2 nd	Direct drive type wind power plants: components, layout and working
	3 rd	Direct drive type wind power plants: components, layout and working
7th	1st	Constant Speed Electric Generators: Squirrel Cage Induction Generators(SCIG)
	2 nd	Constant Speed Electric Generators: Squirrel Cage Induction Generators(SCIG)
	3 rd	Wound Rotor Induction Generator (WRIG)
8th	1st	Variable Speed Electric Generators: Doubly-fed induction generator (DFIG)
	2 nd	wound rotor synchronous generator (WRSG)
	3 rd	Permanent magnet synchronous generator (PMSG).
9th	1st	3. Small Wind Turbines Horizon axis small wind turbine: direct drive type
	2 nd	components and working
	3 rd	Horizontal axis small wind turbine: geared type, components and working
10th	1st	Horizontal axis small wind turbine: geared type, components and working
	2 nd	Vertical axis small wind turbine: direct drive and geared, components and Working
	3 rd	Types of towers and installation of small wind turbines on rooftops and open fields.
11th	1st	Electric generators used in small wind power plants
	2 nd	Revision
	3 rd	Quiz
12th	1st	4. Biomass-based Power Plants Properties of solid fuel for biomass power plants
	2 nd	bagasse, wood chips, rice husk
	3 rd	municipal waste
13th	1st	Properties of liquid and gaseous fuel for bio mass power plants: Jatropha, bio-diesel gobar gas
	2 nd	Properties of liquid and gaseous fuel for bio mass power plants: Jatropha, bio-diesel gobar gas
	3 rd	Layout of a Bio-chemical based (e.g. biogas) power plant
14th	1st	Layout of a Bio-chemical based (e.g. biogas) power plant
	2 nd	Layout of a Thermo-chemical based (e.g. Municipal waste) power plant

	3 rd	Layout of a Thermo-chemical based (e.g. Municipal waste) power plant
15th	1st	Layout of a Agro-chemical based (e.g.bio-diesel) power plant
	2 nd	Question Discussion
	3 rd	Question Discussion



Signature of the Faculty



Signature of the H.O.D