

Discipline:		Semester:		Name of the Teaching Faculty:	
MECHANICAL		4th		Er. DEVI PRASAD ACHARYA	
Subject:		No. of days/per week class allotted: 3 Periods		Semester From date: 22/12/2025	
RENEWABLE ENERGY TECHNOLOGIES				To date: 18/04/2026	
				No of weeks: 15	
Month	Week	Availability of Classes	Class Day	Theory Topics to be covered	
DECEMBER	1	2	24.12.2025	Energy scenario: Conventional vs. RE sources; Needs and limitations of RE.	
	2	2	31.12.2026	Solar radiation: Spectral distribution; Geometry and earth-sun relationship.	
JANUARY		3	1	01.01.2027	Solar measurement instruments;
	2		07.01.2026	Empirical equations for radiation prediction.	
	4	1	08.01.2026	Solar collectors:	
		1	15.01.2026	Flat plate, evacuated, and concentrated types;	
	5	2	21.01.2026	Solar collectors: Thermal analysis.	
		1	22.01.2026	Solar Applications:	
	6	2	28.01.2026	Pumping, cooking, PV systems (cells, modules, and arrays).	
		1	29.01.2026	Basics of lift and drag;	
FEBRUARY	7	1	04.02.2026	Wind speed effects and energy availability.	
		1	05.02.2026	Rotor types:	
	8	2	11.02.2026	Horizontal vs. Vertical axes; Torque and power coefficients.	
		2	12.02.2026	Tip speed ratio;	
	9	2	18.02.2026	Solidity; Performance curves; Site selection for wind farms.	
		1	19.02.2026	Biogas generation:	
	10	2	25.02.2026	Types of plants and factors affecting generation.	
		1	26.02.2026	Biomass energy;	
MARCH	11	1	05.03.2026	Gasifiers (types/applications);	
	12	2	11.03.2026	Concept of Green Energy.	
		1	12.03.2026	OTEC:	
	13	2	18.03.2026	Open, closed, and hybrid cycle principles.	
		1	19.03.2026	Tidal Power:	
	14	2	25.03.2026	Single and double basin plants; Estimation of power.	
		1	26.03.2026	Wave Energy: Conversion devices;	

APRIL	15	1	02.04.2026	Advantages and site requirements.
	16	2	08.04.2026	Vapor/Liquid dominated systems;
		1	09.04.2026	Binary cycles; Magma and hot dry rock.
	17	2	15.04.2026	Applications and limitations of Geothermal;
		1	16.04.2026	Course Revision and Mock Test.

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