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		PE	3	0	0	
COURS	E OBJ	ECTIVES	U	U	v	U
1	Fo learn	and study the radiation principles with respective solar energy estimation.				
2	Fo under	stand PV technology principles and techniques of various solar cells / materials for	energ	y con	versi	on
3	Γo under	stand the fundamentals of wind energy and its conversion system.				
4	Гo under	stand the aerodynamics and types of loads, generators in wind turbines				
5	Γo learn	and study the radiation principles with respective solar energy estimation.				
				0	0	0 0
	I D. 1	SOLAR RADIATION AND COLLECTORS	.	9	0	0 9
Sun angi thermal a	es–Kadia nalysis -	ation-extra-terrestrial characteristics -estimation on norizontal and tilted surfaces	- Hat	plate	coll aram	ector
- compou	ind paral	polic concentrators - parabolic trough concentrators -Heliostats.	orma	lee p	urum	eters
	_					
UNIT	Π	SOLAR THERMAL TECHNOLOGIES		9	0	0 9
Principle	of work	ing, types, design and operation of- Solar heating and cooling systems – Thermal H	Energ	v stoi	rage	veten
			0.	/	0	system
– Solar D	esalinati	ion – Solar cooker: domestic, community – Solar Pond – Solar drying.	8.	,	U	system
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COUR Upon c	Bloom Taxonomy Mapped			
C01	Classify and describe solar radiation and collectors.	Understand		
<i>CO2</i>	Describe the principle and design the solar heating, cooling and other solar applications.	Understand		
<i>CO3</i>	Explain the principle, working, design optimization of PV system for different applications.	Understand		
<i>CO4</i>	Describe the basics and measurements of wind energy.	Understand		
<i>CO5</i>	Explain the aerodynamic constructional details of wind turbine.	Understand		

COURSE ARTICULATION MATRIX															
COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	1	0	0	0	0	0	0	0	0	0	3	1	0
CO2	3	1	2	1	0	0	0	0	0	0	0	0	3	2	0
CO3	3	2	2	0	1	0	0	0	0	1	0	0	3	2	2
CO4	3	2	0	1	0	1	0	0	0	0	0	0	3	2	0
CO5	3	2	0	0	1	1	0	0	0	0	0	0	3	2	0
Avg	3	1.8	1	0.6	0.5	0.4	0	0	0	0.2	0	0	3	1.8	0.4
3/2/1 – indicates strength of correlation (3 – high, 2- medium, 1- low)															