

Course Number and Name												
BEE043 & Solar Energy Utilization												
Credits and Contact Hours												
3 & 45												
Course Coordinator's Name												
Mrs.V.Sumathi												
Text Books and References												
Text Books:												
1. Sukhatme.K, Suhas P. Sukhatme, "Solar energy: Principles of thermal collection and storage", Tata McGraw Hill publishing Co. Ltd, 8th edition,2008.												
2. Soteris A. Kalogiru, "Solar Energy Engineering: Processes and systems", 1 st edition, Academic press, 2009.												
References:												
1. Duffie.J.A, &Beckman.W.A, "Solar Engineering of Thermal Processes", 3 rd edition, John Wiley & Sons, Inc., 2006.												
2. Martin A. Green, "Third generation Photovoltaics: Advanced energy conversion", 1st edition, 2005.												
3. Garg.H.P, Prakash.J, "Solar energy fundamentals and applications", Tata McGraw Hill publishing Co. Ltd, 2006.												
4. http://nptel.ac.in/courses/112105051/22												
Course Description												
To enable the students to acquire knowledge of solar energy fundamentals and various applications.												
Prerequisites						Co-requisites						
Renewable Energy Sources						NIL						
required, elective, or selected elective (as per Table 5-1)												
Required												
Course Outcomes (COs)												
CO1: Analyze Solar radiation data and its measurement												
CO2: Understand Operation of solar thermal energy systems												
CO3: Understand the working of solar concentrators and their applications to produce energy												
CO4: Understand the photovoltaic theory and implementation process												
CO5: Understand the design of Solar conscious buildings												
Student Outcomes (SOs) from Criterion 3 covered by this Course												
COs/SOs	a	b	c	d	e	f	g	h	i	j	k	l
CO1	M	H	H	H	H			M	M	H		
CO2			M	M	M					M		
CO3	M		M	M					M			
CO4		M	M				M	M				
CO5			M		M	M	M					
List of Topics Covered												
UNIT I SOLAR RADIATION											9	
Sun and earth geometry, solar radiation-beam and diffuse radiations, measurement of solar radiation –												

