

Department of Liberal Education
Era University, Lucknow
Course Outline
Effective From: 2023-24

Name of the Program	B.A. / B.Sc. (LIBERAL EDUCATION)			Year/ Semester:	3rd / 5th
Course Name	Practical on Renewable Energy	Course Code:	EVA301P	Type:	Practical
Credits	01			Total Practical Hours:	30 Hours
Evaluation Spread	Internal Continuous Assessment:	10 Marks		End Term Exam:	15 Marks
Type of Course	<input type="radio"/> Compulsory	<input checked="" type="radio"/> Core	<input type="radio"/> Creative	<input type="radio"/> Life Skill	
Course Objectives	<ol style="list-style-type: none"> Understand human energy needs in routine life. Learn approaches to assess impact of carbon-intensive lifestyles on the environment. Learn about various government initiatives to promote use of renewable energy resources. 				
Course Outcomes (CO): <i>After the successful course completion, learners will develop following attributes:</i>					
Course Outcome (CO)	Attributes				
CO1	Students will be able to identify and estimate the energy consumption needs.				
CO2	Students will be able to recognize willingness of consumers to access renewable energy resources in routine life.				
CO3	Students can estimate the contribution of an individual in carbon emission.				
CO4	Learn various initiatives undertaken by government to channelize renewable energy for sustainable consumption.				
Pedagogy	Interactive, discussion-based, student-centered, program outputs				
Internal Evaluation Mode	Experiment- Writing and Conductance File maintenance/Laboratory record Continuous Attendance and Participation				
Practical No.	Experiments			Contact Hours	Mapped CO
1	To calculate and estimate the electricity consumption per day in your department.			06	CO1
2	To assess the adoption of EV vehicles and solar appliances by common people through survey.			06	CO2
3	To track your daily carbon footprints.			06	CO3
4	Visit website of Ministry of Renewable Energy , Government of India: http://mnre.gov.in/ and make a study on ‘Developmental Impact and Sustainable Governance aspects of Renewable Energy Projects’			06	CO4
5	Visit (UP NEDA training center, Lucknow)/Virtual demonstration of renewable energy programs in India and report preparation.			06	CO4

CO-PO and PSO Mapping														
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1			3				3	1	3			1		
CO2			3				3		1				2	
CO3			3				3	1	3		2			
CO4				3	3				3		1	1	1	1
<i>Strong contribution-3, Average contribution-2, Low contribution-1,</i>														
Suggested Readings:														
Reference Books	1. Renewable Energy Technologies: A Practical Guide for Beginners by Chetan Singh Solanki. 2008. Prentice Hall India Learning Private Limited.													
E-Resource	1. https://www.endesa.com/en/blogs/endesa-s-blog/light/calculate-electricity-house-consumption#:~:text=To%20calculate%20consumption%2C%20you%20multiply,per%20week%20or%20per%20month. 2. http://mnre.gov.in/ 3. https://justenergy.com/blog/how-to-calculate-your-carbon-footprint/ 4. https://upneda.org.in/													
Internal Practical Evaluation:														
Component					Marks									
Experiment- Writing and Conductance					05									
File maintenance/ Laboratory record					02									
Continuous Attendance and Participation					01									
Viva-Voce					02									
Total Marks					10									

Course created by: Dr. Swati Sachdev
Signature:

Approved by: Prof. Venkatesh Dutta
Signature: