

Course Details:

Name of the Course: - **Solar Energy**

Course Code – EEO1

Course Offered to - EE & ECE

Course Duration — 36 Hours

Course Coordinator: -Mr. Pankaj Tripathi

OBJECTIVE:

The entire objective of workshop is to setup a comprehensive capacity — building mechanism for professionals entering or established in the solar photovoltaic power sector. Purpose of the workshop was to provide cutting edge education to transform professionals into 'Solar' professionals. The idea was, not only provide room for perceptive thinking but also to make the professionals employ these skills in their respective work domains, The curriculum had been carefully crafted to make the technical, theoretical and practical ends meet. With the testimonies and feedbacks we have been able to evolve and set new benchmarks and achieve new heights in content development and course delivery,

PRE-REQUISITE(s):

Basic Knowledge of Solar cell.

OVERVIEW:


Solar energy is generated by nuclear reactions within the body of the sun. This energy reaches the surface of the earth in the form of electromagnetic radiation. The amount of energy carried by solar radiation is normally expressed in terms of the solar constant which measures the quantity of solar energy passing through one square meter of space perpendicular to the direction of travel of the radiation at the average distance of the earth from the sun. According to the World Energy Council, the value of this constant is 1367 W/m^2 . When absorption and scattering are taken into account, the total solar flux reaching the surface of the earth is estimated to be $1.08 \times 10^8 \text{ GW}$ and the total amount of energy reaching the surface of the earth each year is 3,400,000 EL This is between 7000 and 8000 times annual global primary energy consumption. If 0.1 % of this energy was converted into electricity with 10% efficiency; it would provide an equivalent of a round 1 GW of generating capacity. The global total is around 6000 GW.

Why take this course?

- Make educated decisions for implementing solar photovoltaic power projects
- Access site potential and suitability for establishing a plant
- Selection of Various PV Modules, Inverter and other Technologies
- Appreciate the details for installing a solar power plant
- Theoretically deduce the plant performance and output and ensures best practices in terms of safety and quality


Registrar
Invertis University
Bareilly


Head
Department of ECE/EE
Invertis University
Bareilly-243123, UP


Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP

What you will learn in this course:

Learn and Build a project on Solar and Smart Energy using Embedded System in this course. This includes practical exposure to solar energy production along with the real-life application of charging a battery. Students also learn the concepts of Smart energy and other industry trends like green energy, smart building, smart grid and energy harvesting technologies. In today's time it's a need to switch to renewable energy sources to save our climate, save non-renewable energy, reduce pollution, money saving etc. In this workshop student will I earn about the benefits of renewable sources like Solar Energy with practical exposure on how to use solar energy and convert it to smart energy with some real time projects.

Who this course is for:

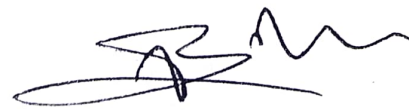
To help participants learn about the efficient use of electrical energy, a prototype Smart Traffic Control System is executed as project outcome

To practical exposure of solar energy production along with real-life application of charging mobile devices

Course Outline

	Topic	No. of hours allocated
Module I	Introductory	6
Module 2	Solar Radiation Basics and Measurement	6
Module 3	PV System Concept and Components	6
Module 4	PV System Design	6
Module 5	Advance Topics	6
Module 6	Troubleshooting of PV systems Safety	6


Head
Department of ECE/ET
Invertis University
Bareilly-243123, UP


Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP


Registrar
Invertis University
Bareilly

Department of Electrical Engineering

15-Jan-2021

CIRCULAR

VALUE ADDED COURSE (Solar Energy) - B.Tech. EE/EC


Students of B.Tech. (EE/EC) all years are hereby informed that value added course "Solar Energy" is scheduled from 1 February 2021 in your respective classroom, Academic Block-II.

Schedule:

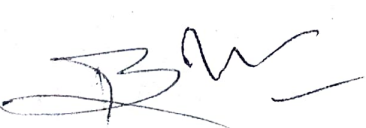
- Time Slot: 03:00 PM to 05:00 PM
- Key Speaker: Prof. G N Tiwari
- Duration: 2 hrs

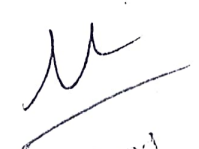
Program Overview:

The entire objective of workshop is to setup a comprehensive capacity — building mechanism for professionals entering or established in the solar photovoltaic power sector. Purpose of the workshop was to provide cutting edge education to transform professionals into 'Solar' professionals. The idea was, not only provide room for perceptive thinking but also to make the professionals employ these skills in their respective work domains, The curriculum had been carefully crafted to make the technical, theoretical and practical ends meet. With the testimonies and feedbacks we have been able to evolve and set new benchmarks and achieve new heights in content development and course delivery.


Mr. Mon Prakash Upadhyay

(HOD)


De.
Faculty of Engineering
Invertis University
Bareilly-243123, UP

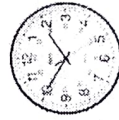

Head
Department of ECE/EE
Invertis University
Bareilly-243123, UP


Registrar
Invertis University
Bareilly

VALUE ADDED COURSE (Solar Energy)



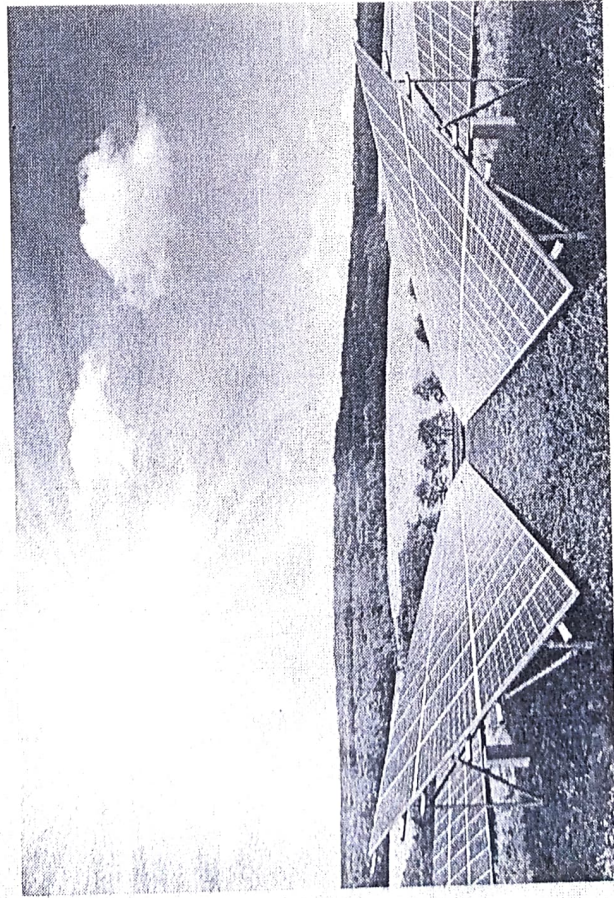
Program:-B. TECH.



03:00 PM TO 05:00 PM




1 February 2022 - 25
February 2021




Registrar
Invertis University
Bareilly

HOD:
MR. MON PRAKASH UPADHYAY


Head of ECE DEPT
Department of Engineering & Technology
Invertis University Bareilly
Bareilly-243122, UP

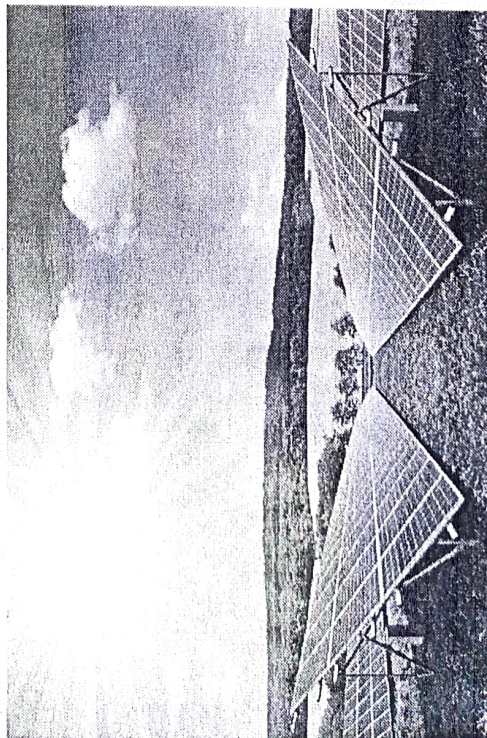

Dean & Technical
Officer
Department of Engineering & Technology
Invertis University Bareilly
Bareilly-243122, UP

KEY SPEAKER :
Prof. G N Tiwari


VALUE ADDED COURSE (Solar Energy)


PROGRAM OVERVIEW:

The entire objective of workshop is to setup a comprehensive capacity — building mechanism for professionals entering or established in the solar photovoltaic power sector. Purpose of the workshop was to provide cutting edge education to transform professionals into 'Solar' professionals. The idea was, not only provide room for perceptive thinking but also to make the professionals employ these skills in their respective work domains, The curriculum had been carefully crafted to make the technical, theoretical and practical ends meet. With the testimonies and feedbacks we have been able to evolve and set new benchmarks and achieve new heights in content development and course delivery.




Registrar
Invertis University
Bareilly


Head of Department
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP


Head of Department
Department of
Invertis University
Bareilly-243123, UP