National Institute of Electronics & Information Technology
Gorakhpur – Extension Centre Lucknow
(Ministry of Electronics and Information Technology, Government of India)
MMMUT Campus, Deoria Road, Gorakhpur-273010
http://www.nielit.gov.in/gorakhpur/

Solar Power Installation, Operation & Maintenance

Solar Power Installation, Operation & Maintenance

4 Weeks In-Campus Course

Duration: - 4 Weeks (40 Hours)
Batch Size: 30
Medium of Instruction: Bilingual (English & Hindi)

Objective

To make the participants familiar with the concept, installation procedure and maintenance aspect of SPV System.

Eligibility

10+2 with basic knowledge of electronic components

Prerequisites

Candidate must have basic knowledge of electronic components.

Course Fees

Rs. 4720/- incl. GST & all other charges.

Certificate

Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

Methodology

- ✓ Instructor-led offline classes.
- ✓ Instructor-led hands-on lab sessions.
- ✓ Content Access through e-Learning portal.
- ✓ Assessment and Certification

How to Apply?

Step-1: Read the course structure & course requirements carefully.

Step-2: Visit the Registration portal (https://regn.nielitvte.edu.in/) and click on apply button.

Step-3: Create your login credentials and fill up all the details, see the preview and submit the form.

Step-4: Login with your credentials to verify the mobile number, email ID and then upload the documents, Lock the profile and Pay the Fees online, using ATM-Debit Card / Credit Card / Internet Banking / UPI etc.

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Course Content

Day	Topic
Day#01	Introduction to Solar Energy and applications, Renewable and Non-renewable sources.
Day#02	Electromagnetic spectrum of solar radiation, advantage and disadvantage of solar power system.
Day#03	Solar energy utilization, solar photovoltaic, solar power terminology.
Day#04	Incoming solar radiation, solar constant, concept of Peak sun hour(PSH), solar insolation, factors affecting Insolation, sun rays and latitude.
Day#05	Solar PV cell and its types; Monocrystaline and Polycrystalline.
Day#06	Solar PV module; its Electrical and mechanical characteristics.
Day#07	Thermal characteristics of solar PV module, ambient temperature, STC, I-V curve variation with temperature.
Day#08	various types of SPV module; Thin film, Amorphous, cadmium telluride and copper indium gallium selenide solar cell.
Day#09	Measurement of electrical quantities; Voltage, Current, Energy and Power, Estimating KWh from appliances.
Day#10	Backup time calculation requirement, Factors affecting SPV module energy output.
Day#11	Introduction to Solar PV System; its block diagram and types.
Day#12	Stand-alone SPV system and grid-connected SPV system, inverter, Charge controller and MPPT.
Day#13	Introduction to basic electronic components.
Day#14	Resistor, Capacitor, Inductor, Transformers, Diode, Transistor, ICs etc.
Day#15	Introduction to Battery, Types of; Lead-Acid Battery, Valve Regulated Lead-Acid Battery.
Day#16	Battery parameter and characteristics, Battery comparison.
Day#17	Design methodology of SPV System; Site selection.
Day#18	Array sizing, battery sizing, Inverter sizing and selection, Cable sizing.
Day#19	Installation and Troubleshooting of Solar PV System.
Day#20	Precautions and Maintenance of Solar PV System.

Course Coordinator
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CLICK HERE FOR REGISTRATION

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