

COURSE PROSPECTUS

Name of the Group: **PEG**

Name of the Course: **Solar Power Plant Installation (Off-Line)**

Course Code: **SPI 103**

Starting Date: **01/07/2024**

Duration: **5 Days**

Course Coordinator: **C. MOHAN**

Whatsup : 9487981147

No. of Seats: **10**

Preamble:

The course deals with alternative energy sources that uses Solar power as an alternative to nuclear material for power system. This course will give a preview on the viability of Solar Power to charge Electric Vehicle used in transportation. It will evaluate Solar Power role on various criteria: Photo Voltaic properties, production methods, storage, conversion to usable energy, costs, drivers for market penetration, and safety issues. Thus, this course will provide understanding and knowledge of the importance of Solar Power as an alternative source of energy, implementation.

Objective of the Course: In this course we will learn about production of Solar PV Cell, Solar Power Module, Lead Acid Battery, Integration of Solar Power Plant in Series and Parallel combination and Integration of Battery in Series and Parallel combination. Battery Charging and maintenance. Solar PV module power rating selection and learning data sheet of Solar PV module. Various types of Solar Inverter. MPPT operating principle. Site location and angle-direction for Solar PV installation.

Outcome of the Course: After studying this course, you should be able to:

- Explain the principles that underlie the ability of Solar PV Module to deliver solar energy
- How to integrate the technologies that are used to harness the power of solar energy
- Discuss the positive and negative aspects of solar energy in relation to natural and human aspects of the environment.

Expected Job Roles: Solar PV Engineer/Technician/Solar PV Designer, Marketing Engineer.

Course Structure:

| Sl. No | Module Title | Duration (Hours) | | |
|------------------------------|---|------------------|-----------|-----------|
| | | Theory | Lab | Total |
| 1 | Understanding solar cell parameter, PV data sheet | 2 | 2 | 4 |
| 2 | Solar Battery, Solar Panel Integration | 3 | 3 | 6 |
| 3 | Balance-of-System (BOS) of solar Power Plant | 3 | 2 | 5 |
| 4 | Solar System Protection (Earthing & Grounding) | 2 | 3 | 5 |
| 5 | 40KW Case studies | 0 | 5 | 5 |
| Total Duration/Credit | | 10 | 15 | 25 |

Other Contents

- Course Fees: **Course fee is Rs. 10,000/- + GST**
Course fee will not be refunded except for the following condition
- Course postponed and new date is not convenient for the student
Course canceled in advance, well before the admission date

Module wise Course Fee: **Not Applicable for this course**

Registration Fee: Not Applicable; Full Course Fee should be paid at the time registration.

*Above fees is inclusive of CGST 9% and SGST 9%, and revision, if any by Government shall be applicable at the time of payment.

- Eligibility: **ITI, 10th standard and above.**
- Number of Seats : **10**
- Selection of candidates : *First come First Serve*
- Test/Interview : **Not Applicable** *Date(s) of test/interview : Not Applicable*
- Counseling/Admission : **01st July 2024**
- Important Dates (if applicable) :
Last date for registration & payment : 1st July 2024
Intimation to students : 28th June 2024
- Course Timings : **10AM to 3PM**

- Placement : *Not Applicable*
- Lab Facilities : *Necessary instruments will be used during the course*
- **Course Contents** : Discussion of solar cell parameter, Solar PV Module data sheet, Solar Battery capacity and its meaning in relation to Charging. Types of Battery used in Solar Street light, Solar Lantern, Off grid Solar Power Plant. On grid Solar Power Plant, Series and Parallel connection of Battery, Solar Cell, Solar PV Module, MPPT Solar Charger, Solar Inverter, String connection, DC/AC combiner box, Earthing and Grounding of solar inverter, Solar Module, Lightning Protection, Design of Solar Power Plant a case studies. Study of 40 KW ongrid and 800 W Solar Power plant.

[Click here for General Terms and Conditions – Applicable to all courses](#)