

3 Month add-on
Short term course on
**" SOLAR TECHNOLOGY :
INSTALLATION TO
BUSINESS"**

Dec 2019 - Feb 2020



Swami Shraddhanand College
University of Delhi,
Alipur, Delhi 110036



MGICCC
Mahatma Gandhi Institute for Combating Climate Change
Joint venture of NCT Delhi & Govt. of INDIA

**Collaborative programmes to be jointly conducted by
MGICCC (Govt. of NCT of Delhi), Bakoli, Delhi & SSN College (DU), Alipur, Delhi**

Curriculum

BASIC OF ENERGY SYSTEMS& ENVIRONMENTS: (2 Hours)

1. Conventional energy resources, renewable energy resources, introduction to solar thermal & photovoltaic system.
2. Concept / role of solar technology for-environment, climate change and sustainable development .

SOLAR TECHNOLOGIES - (3 Hours)

1. Solar photovoltaic technologies & solar thermal technologies for domestic use
2. Solar photovoltaic technologies & thermal technologies for industrial applications.
3. Concept of solar building design.

SOLAR TECHNOLOGIES COMPONENT FAMILARATIONS: (4 Hours)

1. Solar radiation and material characterization, passive and active heating , photoelectric effect, solar cell technology , defining of components like pv cell, module, panel and arrays etc.
2. Measuring the requirement of pv module for a particular load, factors influencing the output of a pv module ,basics about batteries and selectionof batteries forpv systems .
3. Functions, working, types and features of solar charge controller/regulator and its role, maximum power point tracking (mppt) charge controller,
4. Introduction to inverters & wires and their role in SPV power.

SOLAR BUSINESS :(4 Hours)

1. Solar system load calculations, design, precautions and safety measures
2. Important factor for solar business planning to installation .

3. ENERGY SAFETY& ENVIRONMENTAL ISSUES :(4 Hours)

1. Concept / role of solar technology for-environment, climate change and sustainable development .
2. Principal of energy audit, Energy planning and management
3. Innovative approach to energy conservation ,
4. Environmental issues: social & scientific approach ,

5. Innovative approach to waste managements

Practical Sessions - (4 Hours)

1. Connect and test solar panel to the Inverter and run the load,
2. Mount a solar panel to a roof, Wire a solar controller to a solar to a battery storage station,
3. Connect storage batteries to a power inverter, Wire a power inverter to an electrical service panel,
4. Test circuits of voltages and other troubleshooting
5. Installation of Solar Inverter etc.

FIELD VISIT - (15 Hours)

Visit of trainees to the nearest biodiversity park, solar power installation to demonstrate various aspects to cover skills as specified above.

PROJECT WORK (5 Hours)

Project work to cover skills as specified above.

NOTE : Certificate will be provided to those who successfully complete the project work .

List of participants

S NO.	NAME	SNO.	NAME
1	MOHIT	16	TEJESH KUMAR
2	POOJA	17	SURYA RAGHAV
3	DHARAMVEER YADAV	18	JALAJ DIGGAL
4	MOHIT KUMAR	19	ABHISHEK
5	ABHISHEK	20	ADITYA THAKUR
6	ALOK KUMAR	21	NEHA
7	PRACHI	22	MANSI GUPTA
8	GAGAN	23	SHUBHAM
9	MOHIT GANGWAR	24	BRIJINDER DAHIYA
10	ADITI PUNETHA	25	RAHUL
11	GAURAV KUMAR		
12	SOURAV		
13	MADHU		
14	BHAVYA DUTT BHARDWAJ		
15	KUMAR SHANTANU		