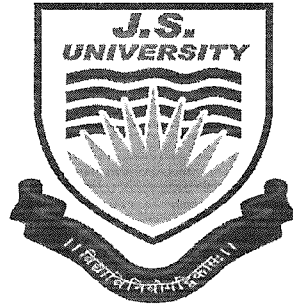


J.S. University, Shikohabad

Established by UP Govt. Act No. 07 of 2015

Recognized by U.G.C. under section 2 (f) of Act-1956




Value Added Course

[VAC-085]

Estimation and Establishment of Solar Power Plant

Faculty of Engineering

Department of Electrical and Electronics Engineering

	J.S. University, Shikohabad Faculty of Engineering	Value Added Course
		AY: 2022-23

Estimation and Establishment of Solar Plant

[VAC-085]

Learning Outcome:

This course will add skill to utilize renewable energy resources.

Duration: 30 Hours. (Theory and Practical)

Course Outcomes: -

Maximum Exposure has to be given on Practical Oriented

After completion of the course the student shall be able to:-

1. Understand Solar Energy and its integration in electrical grid
2. Understand the electrical power circuits and conversion
3. Install the solar PV module and Batteries
4. Estimate the Solar power module as per demand of electrical power
5. Design the solar power module as per requirement



J.S. University, Shikohabad
Faculty of Engineering

Value Added Course

AY: 2022-23

Syllabus Outline

1. Module-1 Introduction to Renewable Energy

Energy, Different Sources of Energy, Storage of Energy, Applications of Solar Energy, Solar energy Programme in India, Measurement of solar radiation and sun path

2. Module-2 Basics of Electricity

Basic Concepts of Electricity, Water tank analogy, Electrical Terminology, Unit consumption calculator, DC and AC power, Series and Parallel electrical circuits

3. Module-3 Solar cells and Modules


Solar cells (PV cells), Peak Power Point (maximum power), Solar PV Modules, Rating of PV modules, PV module parameters, Hot spot in a module, Solar charge controller, MPPT


4. Module-4 Solar Inverters and Batteries


Types of Solar inverter, types of grid tied solar inverters, comparison between String inverters and Central inverters, types of solar batteries, Battery storage capacity

5. Module-5 Solar site assessment and Audit

Solar site assessment: Solar PV Module, Batteries selection, GI infra and site expenses estimation, audit of electricity bill


Course Coordinator
Mr. Rami
Pachun


Dear Academics
Dr. Akhilesh


A.O.D
Dr. Sandeep
Kumar