

Centre for Electronic Governance  
**Solar Energy Summer Training Program**

**Duration: 45 Days(Diploma)/60 Days(Engineering)**

**Fee : 5000 INR(Diploma)/ 10000 INR(Engineering)**

- Concept of Renewable Energy
    - Types of Renewable Energy
      - Solar Energy
      - Wind Energy
      - Wave Tidal Energy
      - Hydro Energy
      - BioMass Energy
      - GeoThermal Energy
  - Solar Energy at a Glance
    - Global in Solar
    - India in Solar
    - Rajasthan in Solar
  - Electric Power Scenario in India
  - Reasons to Switch to Solar Energy
  - What is MNRE, SECI, IREDA, Nodal Agencies
  - Rating Agencies
  - Basics of Electricity & Electrical Engineering
  - Solar PV System
    - PV Technology
    - Solar Panels
    - Solar Cells
    - Solar Modules
    - Solar Array
  - Components of Solar Photovoltaic System
    - Batteries
    - Charge Controller
    - DC-AC Inverters
    - DC-DC Converters
    - Wiring & Installation Practice
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- Appliances
  - Solar PV Applications
    - Solar Home System Design & Installation (Off-Grid Roof-Top System)
      - Design of Solar Home Systems
      - Sizing of Solar Off-Grid System
      - Installation of Solar Module
      - Installation of Charge Controller
      - Installation of Battery
      - Wiring of Solar Off-Grid Home System Components
      - Power Socket Installation Procedure
      - Component Assembly of Solar Home System
      - Complete Installation, Commissioning and Testing
    - Solar On-Grid Roof-Top System
      - Design of Solar On-Grid Roof-Top System
      - Sizing of Solar On-Grid System
      - Components of On-Grid Roof-Top System
      - Load Calculations
      - Sizing of Solar Module / Array
      - Sizing of Storage Batteries
      - Sizing of Charge Controller, Wires / Cables
      - Sizing of Inverter
      - Sizing of DC-DC Converter
      - Complete Installation, Commissioning & Testing of Solar On-Grid Roof-Top System
      - Safety & Protection
    - Solar Street Lighting System
      - Design of Solar Street Lighting System
      - Components of Solar Street Light
      - Sizing of Lighting System :LED, Lamps, Tube Lights etc.
      - Sizing of PV Module
      - Sizing of Storage Batteries
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- Sizing of Charge Controller, Wires / Cables •Pole
  - Complete Installation, Commissioning & Testing of Solar Street Light System
  - Solar Water Pump System
    - Design of Solar Water Pump
    - Water Pump & Motors
    - Integrated Pump / Motor Machines
    - Power Conditioning Circuitry
    - Array Wiring & Mounting of Water Pumps
    - Water Pumping System Design
    - Installation Line Diagram
    - Complete Installation, Commissioning & Testing of Solar Water Pump System
  - Repair & Maintenance of Components of Solar PV Systems
    - Solar Module
    - Batteries
    - Charge Controller
    - Solar Lamps
    - DC-AC Inverter
    - DC-DC Converter
    - Demonstration of Various Components, Their Testing & Repairing Procedures
  - Socio-Techno & Economic Perspectives
    - Exploring Customers Needs
    - Energy Demand Analysis
    - Financial Analysis
    - Pay Back Calculations
    - ROI Calculations
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