



*Training Course:
Solar Photovoltaic (PV) Technology*

*21 - 25 March 2027
Cairo (Egypt)*

Training Course: Solar Photovoltaic (PV) Technology

Training Course code: EN234721 From: 21 - 25 March 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Introduction

Solar Photovoltaic PV technology is a key enabler of the global transition toward clean and sustainable energy. By converting sunlight directly into electricity, PV systems provide reliable, scalable solutions for residential, commercial, and utility-scale applications. Understanding PV principles, system components, and performance factors is essential for effective deployment and optimization.

This program, designed by Global Horizon Training Center, equips participants with the technical knowledge and practical insights required to design, install, operate, and maintain solar PV systems in accordance with industry standards.

Course Objectives

By the end of this program, participants will be able to:

- Understand the principles of solar energy and photovoltaic conversion
- Identify PV system components and configurations
- Design and size solar PV systems based on energy requirements
- Select appropriate modules, inverters, and balance-of-system components
- Apply best practices for installation and system integration
- Evaluate system performance and energy output
- Perform basic maintenance and troubleshooting
- Ensure compliance with safety and regulatory standards

Target Audience

This program is designed for:

- Electrical and Renewable Energy Engineers
- Solar Installation Technicians
- Project Engineers in renewable energy
- Facility and Energy Managers
- Maintenance and Operations Personnel
- Professionals interested in solar energy technologies

Outline

Day 1: Fundamentals of Solar PV Technology

- Introduction to solar energy and PV principles
- Types of PV cells and modules
- Solar radiation and site assessment
- PV system types grid-tied, off-grid, hybrid
- Components of PV systems

Day 2: PV System Design and Sizing

- Load analysis and energy demand assessment
- System sizing and configuration
- Selection of PV modules and inverters
- Electrical design and wiring considerations
- Design software tools and applications

Day 3: Installation Practices and Safety

- Site preparation and mounting systems
- Panel installation and alignment
- Electrical connections and grounding
- Safety standards and procedures
- Quality control during installation

Day 4: System Performance and Monitoring

- Performance evaluation and energy output analysis
- Monitoring systems and data analysis
- Identifying performance issues
- Maintenance strategies
- Troubleshooting PV systems

Day 5: Integration, Storage, and Advanced Applications

- Integration with energy storage systems
- Grid connection and net metering
- Smart PV systems and digital tools
- Energy efficiency and optimization
- Case studies and real-world applications

Registration form on the Training Course: Solar Photovoltaic (PV) Technology

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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