

## PV 201: Intermediate Grid-Direct Photovoltaic Solar Energy System Design and Installation

Contact Hours: 40 PHD  
Louisiana Solar and Energy Lab



### Course Description:

PV201 focuses on residential and commercial-scale systems. We are going to learn in depth the national standards in the industry, as well as other best practices related to designing safe and efficient grid-direct PV system. These code requirements, design parameters, and best practices are applicable to all types and sizes of PV installations, including utility-scale. Detailed lessons address requirements for disconnects, overcurrent protection, and wire sizing; interconnection requirements and calculations; grounding, ground-faults, and surge protection; calculations and examples for system sizing, inverter selection, and electrical configuration; ground and roof mount details; and labeling and data acquisition systems.

**Prerequisite Course:** Before participating in PV 201, trainees MUST complete PV101.

### Who can attend?

This course is focused on technicians, field managers, renewable energy professionals, owners, engineers and other people interested in enhancing their understanding of renewable energy. This course is basic training for those new to the field, also for those who are looking to make a career change.

### Topics:

- Learn the purposes of the National Electrical Code (NEC)
- Differentiate NEC terminology used to describe PV equipment
- Determine procedures for proper installation of equipment and conductors
- List minimum requirements for working space about electrical equipment
- Determine where expansion fittings are required
- Examine methods for PV wire management

### What you get from this Course:

- Procedures for proper installation of equipment and conductors, and working space requirements
- PV wire management expansion fittings when are required
- Describe and identify electrical services, like split-phase and three-phase Wye (Y) and Delta ( $\Delta$ )
- Evaluate electrical service details to collect and record during solar site evaluation
- Identify code-compliant methods for connecting an inverter to an existing AC feeder
- Calculate PV module voltage based on temperature, check compatibility with system components
- Define inverter grounding configurations
- Evaluate inverter choices and system configurations and module level power electronics (MLPE)
- Identify and described common causes of ground-faults and arc-faults.

### How can I attend this course?

For more information about this course, please contact:

[lilliam.norat-david1@louisiana.edu](mailto:lilliam.norat-david1@louisiana.edu)

Click on this link to request a **scholarship** for this course:

<https://forms.office.com/r/uxZnsPYWgU>

Energy Efficiency and  
Sustainability Professional  
Development Courses Intake Form



Use this QR code to fill out the  
application for enrollment