

## PV 350: Tools and Techniques for Operations and Maintenance

Contact Hours: 40 PHD  
Louisiana Solar and Energy Lab



### Course Description:

As more and more PV systems come online, the operations and maintenance (O&M) field is rapidly expanding. This course trains PV technicians to safely and effectively perform O&M tasks, including inspections, commissioning, performance verification, and troubleshooting. Students will become familiar with a wide range of advanced analytical tools, meters, and techniques – such as insulation resistance testers, I-V curve tracers, and infrared cameras. Learn the theory and practical applications from instructors with real-world experience, using curricula developed by an industry-leading team of experts. This course is applicable to all sizes of grid-direct PV systems including residential, commercial, and large-scale; it does not cover battery maintenance or medium voltage-specific O&M.

**PREREQUISITE COURSE:** Before participating in the PV 350 course, students **MUST** complete PV101.

### Who can attend?

This course is focused on technicians, field managers, renewable energy employees, engineers and other people interested in enhancing their understanding of renewable energy. Fleet operations and system data managers will also find this course challenging and valuable.

### Topics:

- Operations and Maintenance
- Principles of PV System Performance
- Safe Working Practice
- Visual Inspection and Preventive Maintenance
- DMMs, Clamp-on meters, and On-site Testing
- De- and Re-Commissioning
- I-V Curves
- Thermal Imaging
- Insulation Resistance Testing
- Other Tests/Tools of the Trade
- Data Monitoring and Analytics
- Troubleshooting

### What you get from this Course:

- Discuss preventative and reactive maintenance plans and activities
- Summarize safety procedures and PPE requirements for O&M technicians.
- Describe the field procedures required to evaluate the performance of PV systems
- List appropriate requirements for meters, tools, and other equipment used in O&M activities
- Define the theory, procedures, and processes behind insulation resistance testing, IV curve tracing, infrared cameras and thermal imaging, and other tools of the trade
- Analyze test results to determine performance, compare baseline data, and pinpoint system issues
- Describe inspection requirements for preventative maintenance inspections
- Illustrate methods for locating and troubleshooting common PV array and system faults using appropriate methodologies and testing tools

### 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>



Use this QR code to fill out the application for enrollment