



# Solar Training Academy

## Course Description



MREA  
**Solar Academy**  
Milwaukee

January 11-May 4, 2014



MREA  
**Solar Academy**  
Twin Cities

January 25-May 18, 2014

The MREA's Solar Training Academy is a series of weekend classes that will walk students through the PV design and installation process. The format of the Solar Training Academy will be MREA's class progression that will include Basic Photovoltaics, PV Site Assessor, Intermediate PV, PV Design Lab and PV Sales and Finance.

Classes will be held one weekend each month beginning in January and concluding in early May.

## Course Objectives

Upon completion of this course, participants will be able to:

- Define photovoltaics and how they work
- Diagram the four system types
- Identify and describe different PV module types and their output ratings
- Identify and describe different inverters and their recommended uses
- Identify and describe the remaining Balance of System components and their functions.
- Design and diagram a system to meet the needs of case study home.
- Size and design a system to satisfy consumer demands, site specifics, and the NEC
- Diagram a high-voltage AC grid intertie system and battery-based DC system
- Use site assessment tools
- Identify and recommend steps for energy efficiency

- Identify and recommend array placement options
- Quantify the solar resource
- Provide a general cost estimate
- Write a PV site assessment report
- Correctly mount and ground PV modules
- Properly wire and connect a high-voltage AC grid intertie system PV system
- Identify factors used to calculate conduit and conductor types and sizes
- Demonstrate basic mechanical and electrical installation techniques.
- Define commissioning, operation and maintenance procedures for different systems
- Demonstrate proper safety procedures when installing a PV system
- Complete a testing protocol and activate a high-voltage AC grid interactive system

**Upon successful completion of the Solar Training Academy, students will qualify for:**

- Completion of 63 hours of classroom training for NABCEP PV Installation and NABCEP PV Technical Sales Professional
- Sit for the NABCEP Entry Level Exam
- Sit for the MREA PV Site Assessor Exam\*

\* To sit for the MREA PV Site Assessor Exam, students will need to complete two practiced site assessments outside of class.

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