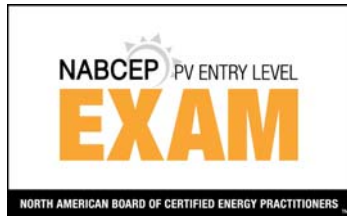


NABCEP Solar PV Entry Level Exam Prep Course
Offered by Lane Community College and Northwest Energy Education Institute



Date and Location

March 17th - 19th
Northcoast Electric
2424 8th Ave South
Seattle, WA 98134

Brief Description of the Course

This course is designed for individuals who have a working knowledge of general electrical concepts and photovoltaics. This intensive two and a half-day class is structured to prepare participants to take the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Certificate of Knowledge exam. This certificate of knowledge allows individuals to meet of the technical requirements of the Oregon Department of Energy's Tax Credit Certified Technician (TCCT) program. Those seeking TCCT status will need to attend an additional state-sponsored training on specific program requirements. The NABCEP Entry Level Certificate of Knowledge will be granted to those who successfully participate in the course and pass the two-hour, 60-question exam that will be administered at the end of the course.

Prerequisites: This is not a course to train participants as PV installers; students should know basic electrical concepts and terminology, be able to use a digital multi-meter, calculate simple circuit calculations and describe general safety procedures when working with electrical systems. Participants will be provided with NABCEP Entry Level Learning Objectives upon registering for the course. In addition, a short assignment will be provided before class to familiarize the participants with fundamental concepts and terminology. This material will be drawn from and referenced to the text book listed below.

Materials: Photovoltaic Systems Text (to be supplied prior to attending class) from ATP Publishers www.go2atp.com. Additional course materials are provided by instructor to reinforce learning objectives.

Registration

www.northcoastelectric.com/nabcep
888-528-1610

\$465 includes lunch each day, textbook and test fee

Final Day to Register is March 12, 2010

Course Outline

Day 1 8:00 am - 5:00 pm (1-hour lunch break)

Solar Energy Fundamentals	1.5 hrs
Performance Analysis and Troubleshooting	0.5hrs
PV Module Fundamentals	2.5 hrs
System Components	1 hr
System Design	2 hrs

Day 2 8:00 am - 5:00 pm (1-hour lunch break)

System Design	1 hr
In class Design Exercises	2 hrs
PV System Sizing and Performance	1.5 hrs
Battery Based Systems	1.5 hrs
PV Electrical Integration	1.5 hrs

Day 3 8:00 am – 11:00 am; 12:30 pm-2:30 pm (test)

PV Mechanical Design	1.5 hr
NEC and Safety Basics	1 hr
NABCEP Task Analysis Review	0.5hrs

Course Objective: To prepare students for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Certificate of Knowledge exam. By passing this exam, a candidate has demonstrated basic knowledge, comprehension and application of key terms and concepts of photovoltaic (solar electric) system operations. The Entry Level course and exam are not prerequisites for individual to sit for NABCEP's Certified PV Installer exam.

Learning Outcomes: Students who complete this course will have knowledge in the following areas: PV markets and applications, safety basics, solar energy fundamentals, system components, PV system sizing, PV system electrical design, PV system mechanical design and performance analysis and troubleshooting.

Instructor

Ryan Mayfield is a NABCEP Certified PV Installer who currently teaches PV courses at Lane Community College in Eugene, Oregon and is the founder and principal of Renewable Energy Associates, a consulting, design and educational firm focused on photovoltaics, small wind and micro-hydro projects. He also teaches courses for Solar Oregon, Oregon Solar Energy Industries Association, and Solar Energy International. He earned a Bachelor of Science degree in Environmental Resource Engineering with an emphasis on Energy from Humboldt State University in Arcata, CA in 1998. His career includes positions as a Solar Energy Installer, Technical Sales and Support for a renewable energy based business, Engineering Manager for a renewable energy distributor, and an Engineer in Training in Electrical Engineering focusing on solar system design. Ryan is known throughout Oregon and the Northwest as a leader in photovoltaic training.