

CLEAN ENERGY TECHNOLOGY

Solar Photovoltaic (PV) Installers Occupational Outlook Information

>>>> WHAT PV INSTALLERS DO



- Assemble, install, or maintain solar panel systems on roofs or other structures

>>>> SKILLS



- Customer Service
- Mechanical Skills
- Physical Stamina & Strength
- Detail Oriented

>>>> HOW TO BECOME A PV INSTALLER



- High School Diploma
- On-the-Job Training
- Course at a technical school or community college
- Apprenticeship program

>>>> WORK ENVIRONMENT



- Outdoors
- Attics and crawl spaces
- Travel to job sites
- Full-time during regular business hours, some are required to be on-call for emergencies

>>>> PAY



The median annual wage was \$40,020 in May 2014. Entry-level wages are often lower than the median.

>>>> JOB OUTLOOK



Employment is projected to grow 24% from 2014 to 2024 for qualified individuals, particularly those who complete a photovoltaic training course at a community college or technical school.

Source: www.bls.gov March 2016

CERTIFICATIONS & DEGREES TO BOOST YOUR BUSINESS

Certifications provide a standard that sets you apart so employers and customers know that you can demonstrate a specific set of knowledge and skills. Many pathways exist for training and certification, and it pays to plan your direction. Whether you are at an entry level or are an experienced contractor with your own company, training and certification can increase the quality and value of your work. Significant on the job learning is usually required to become proficient in the skills taught during a course. For those working as or for contractors in the renewable energy field, the North American Board of Energy Practitioners provides a well-established set of nationally recognized certificates at an entry level training opportunity as well as certifications for skilled professionals.

ELECTRICAL THEORY I BASICS

This course includes components of the atom, electron flow through conductors, conductivity, series and parallel circuits, tracing circuits, trouble shooting, voltage and current resistance, AC and DC voltage, single phase, three phase, and Ohm's Law. The course includes a lab component. **Instructor: K. Crawford**
DCB 1947-31 W 9/20-10/18 4:30-7:30pm KSU \$199

ELECTRICAL DISTRIBUTION SYSTEMS

DCB 1631 Offered Spring 2018

PHOTOVOLTAICS (PV) SYSTEMS – RECOGNIZED BY NABCEP

Prerequisite: Electrical Theory and Electrical Distribution Systems. Required text: *Photovoltaic Systems* (ISBN-13: 978-0826913081) DCB 1795 Offered spring 2018

NABCEP PV ASSOCIATES EXAM

DCB 1950 by appointment

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UB ELECTRICAL THEORY FOR RENEWABLE ENERGY (SOLAR PV)

This is a required class that will provide the student with an understanding of basic principles of electricity to include alternating and direct current and Ohm's Law, with an emphasis on DC theory. This course is required for anyone who plans to take Solar PV Concepts and Systems and does not have the prerequisite knowledge of electrical theory. **Instructor: G. Goodstal**

PV103-0918CT M/W 9/18-10/11 5:30-7:30pm CT \$399

UB SOLAR PV CONCEPTS & SYSTEMS

This course will give a student the theoretical basis for understanding the various types of solar electric systems. Training will cover the history of solar electricity, current markets and industry status, and other considerations necessary to understand how solar electric systems function. Detailed study of system components as well as the proper and safe electrical interconnection of these components will include hands-on training exercises and experiments. This class will also meet on Saturday 10/21 and 11/4 for offsite tours of public and private solar (PV) systems. **Instructor: J. Novak**

PV202-1016CT M/W/S 10/16-11/8 6-9:30pm CT \$539

UB SOLAR PV SYSTEMS INSTALLATION

Students will develop the comprehensive knowledge and practical skills needed to install utility connected and offgrid Solar PV systems. Systems electric load analysis, system component design and sizing, system siting, shading, electrical and mechanical system configuration, safety, and electrical and building code compliance will be supplemented with hands-on system installation. Prerequisites: Solar Concepts and Systems. This class will also meet on Saturday November 18, and December 2 for off site tours of public and private solar (PV) sites and hands-on installation practical experience when scheduled.

Instructor: E. Yavne

PV203-1113CT M/W/S 11/13-12/11 5:30-9pm CT \$539

UB SOLAR PV PROJECT MANAGEMENT

As the solar industry grows, so does the role of the professional PV installer, requiring technical knowledge in many areas as well as the ability to manage multiple aspects of both residential and commercial PV projects. Solar PV Project Management follows the requirements of the NABCEP PV Installation Professional Job Task Analysis (JTA) and covers the critical areas of permitting and utility interconnection, on site safety and site preparation, material and personnel management, customer relationships, and system commissioning, testing, monitoring, troubleshooting and maintenance. **Instructor: L. Hoffstatter**

PV204-1218CT M/W 12/18-1/17/2018 5:30-8:30pm CT \$299

