

Solar Photovoltaic (PV) Technology Training

The Systems of our Future



Solar energy programs provide the training graduates need to enter the rapidly emerging “green” technology fields.

Ranken is dedicated to training students with the most up-to-date technology and equipment. Solar technology is the wave of the future and Ranken is providing students with the necessary skills to stay on the edge of this new revolution in sustainable energy.

Solar Photovoltaic (PV) Technology Training

Ranken Course #: SEG 100C

Students learn the basic types of photovoltaic systems and their applications for both stand-alone (battery backup) and utility interactive systems (grid tied). Students will learn about the PV system install, design, size calculations and installation safety. The student will be able to draw one-line electrical diagrams for interactive and standalone PV systems showing all major components and subsystems, and indicate the locations of the PV source and output circuits, inverter input and output circuits, charge controller and battery circuits. This course is taught in accordance with the NABCEP PV entry level learning objectives and prepares students to take the NABCEP certification exam. At the end of the course, the student will be able to build a complete system from ground up. Lastly, the course covers the business side of the solar industry and helps the student understand what they need to know to run a solar business.

Ranken partners to offer comprehensive training in issues related to solar photovoltaic technology. These courses run regularly throughout the year and are offered on a for-credit and non-credit basis as part of our broader **Industrial Technology** program.

Coursework Includes:

- » Basics of Electricity
- » Wiring Methods
- » Introduction to Motor Controls
- » PV system types and applications
- » PV system install, design, calculations and safety
- » Business aspects of owning a solar business

Why Solar PV Technology?

According to the US Department of Energy, Photovoltaic (PV) technology is a young, growing high-tech industry that is going to create jobs and strengthen the economy. PV makes use of the abundant energy of the sun and has little or no negative impact on our environment. It can be used in a wide range of products, from small consumer items to large commercial solar electric systems. Within the next 10 years, PV electricity will be competitive in price with traditional sources of electricity and will become widely utilized. With only 30,000 solar technicians in the country today, the solar PV profession is bound to burst wide open as more people want to increase the energy efficiency in their homes. According to American Home Inspectors, solar technician jobs are expected to increase an astounding 267% by 2018 with well over 100,000 available jobs. The average annual salary for solar technicians, according to the Bureau of Labor Statistics, is around \$61,000. Now is the time to learn how to work with this important new technology and help reduce the world's carbon footprint.

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