

THE SOLAR INSTITUTE OF NEVADA
4100 W. FLAMINGO BLVD
LAS VEGAS, NV 89103

(LICENSED BY NEVADA COMMISSION ON POSTSECONDARY EDUCATION)



Office Hours 10:00am to 3:00pm
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Course Catalog for Photovoltaic Systems
September 25, 2011

Photovoltaic Systems is an accelerated course to learn to design, integrate, and install photovoltaic systems, including stand alone, grid tie, and hybrid systems. The course is fast-paced, designed for those ready to find a new career in the exploding “green” market. This intensive 5-day workshop facilitates your successful learning through a combination of lecture, labs, and hands-on construction and installation of a working photovoltaic system.

You will become competent in:

- Solar cell history
- Understanding the development of solar cell modules and arrays
- Solar system site surveys
- Solar system preplanning
- How to size and select solar system components
- Mechanical integration to solar systems
- Electrical integration to solar systems
- Utility interconnection to solar systems
- Permitting of solar systems
- Inspection of solar systems
- Maintenance of solar systems
- Troubleshooting of solar systems
- Performing an economic analysis of a solar system

Course Schedule

Photovoltaic Systems is a one week, 40 hour, course scheduled Monday through Friday from 8 a.m. to 5 p.m. No unexcused absences are allowed to successfully complete the course. No courses will be scheduled for weeks that have legal holidays.

Each day consists of lecture, discussion, hands-on lab work, and tests. Lunch is one hour. Day 5 includes three hours of review of the course material prior to the final three hour test.

Course Content

Day 1

- Introduction to Photovoltaic Systems
- Solar Radiation
- Lab: Use of Personal Safety Equipment and Job Site Safety
- Site Surveys and Preplanning
- System Components and Configurations

Day 2

- Cells, Modules, and Arrays
- Batteries
- Lab: Use of Pyranometer, Compass, and Sun Path Calculator
- Charge Controllers
- Inverters

Day 3

- System Sizing
- Mechanical Integration
- Lab: Use of Multi-meter, Series and Parallel Circuits Electrical Integration
- Utility Interconnection

Day 4

- Permitting and Inspection
- Commissioning, Maintenance, and Troubleshooting
- Lab: Assemble and Test Full Size Photovoltaic System

Day 5

- Economic Analysis
 - Open Forum on Solar Energy
 - Review Course Material
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Fees

A registration fee of \$800.00 and \$100 for the textbook, total of \$900, paid a minimum of two weeks prior to the course covers all instruction, materials, and books for the course. The textbook and CD-ROM will be mailed to you when payment is complete. Payment in full enrolls you in a course. Partial payment does not reserve placement in a scheduled course.

Refund Policy

A refund will be given if a student cancels enrollment for a course at least 48 hours prior to the course start. The refund will be \$900 minus the cost of the textbook, \$100, and a processing fee of \$50 resulting in \$750 returned to the customer.

A full refund will be given if the course described in this catalog is not the course that is delivered.

If a student withdraws or is expelled after the start of the course and before completion of more than 60% of the program, the Solar Institute shall refund a pro-rated amount of the registration fee based on the proportion of the course completed minus the cost of the textbook, \$100, and a processing fee of \$50.

If a student withdraws or is expelled after the start of the course and after completion of more than 60% of the program, the Solar Institute shall not issue any refund for the course.

Any refund shall be returned within 15 days of cancellation, withdrawal, or expulsion.

Philosophy

The Solar Institute of Nevada is designed to help you take advantage of the new “green” jobs expected to be created in this country. We are a prime player in the instruction and training of the people who will fill those jobs in the emerging “green” industries.

The Solar Institute is committed to providing exceptional vocational, technical, hands-on training that will prepare you to take the OSHA test for a Nevada State Photovoltaic Installers License. This is an entry level license that allows you to work for a licensed photovoltaic contractor. You also will be prepared for the entry level North American Board of Certified Energy Practitioners (NABCEP) certification test to achieve national recognition of your qualifications. As one of the first VoTech schools to offer photovoltaic system design, integration and installation, the Solar Institute is centrally located in the prime solar area in the country. This one-of-a-kind course will draw students from across the nation.

Grades and Successful Completion

The course is operated on a pass/fail basis. Passing the course is achieved by receiving a grade of 70% or greater on each of the fifteen chapter tests and the final exam. Each chapter test equals 4% of the final grade, each lab equals 5% of the final grade, and the final exam equals 20% of the final grade. A student is allowed to retake an exam, by appointment, to improve a test score. Students with an excused absence may take a make-up exam. A failed student is allowed to retake the course one time.

The labs are also pass/fail with a pass being the student demonstrating to the instructor the proper use of the instrumentation and safety equipment and the successful assembling of the full-size photovoltaic system by the whole class.

Faculty

The instructor and owner of the Solar Institute of Nevada is Donald Beckman. Don has more than 18 years of experience as an electrician and instructor. His vision is to provide exceptional training and certification opportunities in the solar industry. Current electricians, building contractors, even private home owners will benefit from the classroom, and “hands-on” instruction.

Facilities

The Solar Institute of Nevada is located at 4100 S. Flamingo Blvd on the second floor next to the Gold Coast Casino and across from the Palms Casino. There is a lecture/lab room with stations set up for hands-on learning. The lab also has a 6’ x 12’ model of a roof where students will install a .7KW solar array and connect it to all required electrical devices and equipment to build a complete grid tie photovoltaic system.

Contract for training

By sending payment for this course, the student agrees that they have read and understood this catalog description. The student also agrees that they have received a copy of this catalog and understand that it is part of the enrollment agreement.

Attendance at similar training does not qualify the student for any reduction in the cost or length of this course. There are no unexcused absences allowed during the course. Absence is defined as missing more than one section of class on any day. Causes for expulsion are disruptive behavior, substance abuse, or criminal acts.

Placement in a job or a passing grade on any certification exam is not guaranteed nor promised as a result of successful completion of this course.

This course does not fulfill the required OSHA 10/30 class required of contractors and construction workers in the state of Nevada.

Catalog Enrollment Agreement Student Information

Student Name: _____

Student Address: _____

City/State/Zip Code: _____

Student Signature: _____ Date: _____

Date of Course: _____

School Official: _____ Date: _____