Online Courses

Solar Energy International's PV Design & Solar Home Design

Reviewed by Linda Pinkham

©2004 Linda Pinkham

Four years ago, I thought "RE" was an abbreviation for real estate, not renewable energy. Today, I have a 2.1 KW, grid-intertied photovoltaic (PV) array in my backyard.

When *Home Power* hired me as an editor, I had an extensive background in the publishing industry, but my knowledge of renewable energy was limited. While words are words, I found that it was impossible to even correctly punctuate some sentences if I wasn't familiar with the topic.

PV Design Online

I needed to come up to speed quickly, but my work schedule seemed to continually overlap the hands-on workshop opportunities available. The solution was to sign up for Solar Energy International's (SEI) PV Design Online course. The six-week course covered all the basics

for PV system design, including basic electrical principles, solar site analysis, electrical load calculation, how to select equipment, and sizing a PV system.

The course is designed to let people work on their own schedule via the World Wide Web and through e-mail. It is a good choice for anyone who wants training for a professional career in the solar energy industry, as well as for people who want to install solar-electric systems on their own homes.

Course materials included a textbook, *Home Power* CDs, articles and reading materials on the SEI Web site, and access to a bulletin board forum for questions and discussion with course instructor Justine Sanchez and fellow class members.

Weekly lessons, posted on the course Web site, consisted of reading assignments, homework exercises, and a quiz at the end of each section. Quizzes were promptly graded by Justine and accompanied by lengthy

explanations for any incorrect responses. The course is paced to cover two sections each week.

The only thing the course can't provide is hands-on experience, but online students receive a discount to attend hands-on courses. For me, the course covered exactly what I needed, since my job doesn't involve wrenches and screwdrivers, but a red pen and a computer keyboard. For aspiring installers, the PV online course counts for sixty hours towards North American Board of Certified Energy Practitioners (NABCEP) certification.

The only reservation that I had about the PV design course was the textbook, which through numerous revisions had become choppy to my editor's eye. I am delighted to now say that the best and most comprehensive textbook on PV system design has undergone a complete facelift and revision.

The table of contents Web page from SEI's Solar Home Design Online course.



media review

Solar Home Design Online

The PV Design Online course was so useful that when the *Home Power* crew decided to increase the number of green building articles published in the magazine, I immediately signed up for the Solar Home Design Online course taught by Rachel Ware.

The text materials for the solar home design course are located almost entirely online in a well designed, attractive, and user-friendly Web interface. The graphics embedded in the course materials are interactive, and key terms are hyperlinked to an online glossary. Supplementary, hard-copy reference materials from various sources are included in a three-ring binder.

The six-week course covers solar home design strategies, principles of heat transfer, site analysis, building envelope construction techniques, ventilation, heating and cooling, super-insulation, natural and healthy building materials, energy efficiency, and more. Weekly assignments included reading the text and supplementary assignments, and answering one of two thought-provoking essay questions each week.

Our class decided to post our homework essays on the bulletin board so that we all could learn from each other's ideas and Rachel's insightful responses to the essays. Not only was I able to apply the textbook knowledge to my own circumstances, but I also vicariously experienced everyone else's plans and dreams for a solar home. Once again, the hands-on component was missing, but the same offer for a discount applies to online students who attend a hands-on workshop.

Get Moving into RE

Getting an RE education is a big job no matter how you do it. If you want to move towards a more sustainable lifestyle quickly, and understand more about RE and what's in the pages of *Home Power*, SEI's online courses are a good place to start.

Access

Solar Energy International, PO Box 715, Carbondale, CO 81623 • 970-963-8855 • Fax: 970-963-8866 • sei@solarenergy.org • www.solarenergy.org • Online courses & *Photovoltaics: Design & Installation Manual*, 2004, published by New Society Publishers, US\$60

Linda Pinkham, c/o *Home Power* magazine, PO Box 520, Ashland, OR 97520 • linda.pinkham@homepower.com

