



Renewable Energy/Energy Efficiency

Summer 2009

Credit and Credit-Free Courses

Education and Workforce Development

<p>Introduction to Photovoltaic (Solar Electric) Technology SCI 121(NL) (3 cr) CSW 391 (45 hours) Credit Free Monday through Friday, 6/1 – 6/5 8:00am to 5:30pm Room: S338 Instructor: Richard Gottlieb</p>	<p>An introduction to photovoltaic (solar electric) technology for students with a strong personal interest in Photovoltaic (PV) technology as well as those considering a career in solar electric technology. This course provides students with the theoretical basis for understanding the various types of solar electric systems. The course covers the history of solar electricity, current markets and industry status, basic electrical theory, and other considerations necessary for solar electric systems. Topics include a detailed study of system components as well as the proper and safe electrical interconnection of these components and includes hands-on training exercises and experiments. Local visits to PV related facilities, and assembly of real world system examples reinforces classroom learning.</p> <p><i>(Prerequisite: MAT 090 or satisfactory placement test score.)</i></p>
<p>Solar Domestic Hot Water SCI 122 (NL) (1cr) CSW 396 (15 hours) Credit Free Wednesdays, 5/20 to 6/10 6:00pm to 8:50pm Saturday 6/13 - 9:00am to 1:00pm Room:S338 Instructor: Peter Talmage</p>	<p>An examination of solar hot water systems for heating water for residences. Topics include the environmental benefits and economics of solar hot water systems, siting and sizing of systems, choosing appropriate equipment, descriptions of all components as well as their assembly and function. Students assemble a solar system to heat water.</p> <p><i>(Prerequisite: MAT 090 or satisfactory placement test score.)</i></p>
<p>Residential Energy Efficiency and Energy Auditing SCI 126 (NL) (3 cr) CSW 383 (45 hours) Credit Free Tuesday/Thursdays, 6/2 to 7/9 6:00pm to 8:50pm Saturday 6/20 - 1:30pm to 5:30pm or Saturday 6/27 – 9:00am to 1:30 pm Room: S338 Instructor: Staff</p>	<p>An exploration of the methods and skills required to perform energy audits of residential buildings. Topics include methods of energy conservation; elements and steps of energy auditing; energy conservation; insulation of walls, foundations and attics; door and window infiltration reduction; lighting and electrical efficiency; heating system analysis and efficiency; energy monitoring equipment; energy audit reporting; and sustainable energy systems. Students will shadow an expert energy auditor doing an actual audit.</p> <p><i>(Prerequisite: MAT 090 or satisfactory placement test score.)</i></p>
<p>Photovoltaic (Solar Electric) Installation SCI 221 (X) (3 cr) CSW392 (45 hours) Credit Free Monday through Friday, 7/20 to 7/24 8:00am to 5:30pm Room: S338 Instructor: Richard Gottlieb</p>	<p>An examination of the practical skills needed to install utility-connected and off-grid Photovoltaic (PV) systems. Topics include the study of electric load analysis, system and component design and sizing, system siting, shading, electrical and mechanical system configuration, and safety and electrical and building code compliance supplemented with hands-on system installation. Successful completion of this course enables the student to sit the NABCEP (North American Board of Certified Energy Practitioners) PV Entry Level Certificate. With additional education, training and installation experience, this certificate can lead to becoming a NABCEP Certified PV Solar Installer.</p> <p><i>(Prerequisite: SCI 121/CSW 391; MAT 090 or satisfactory placement test score.)</i></p>

If you currently work in the construction or Renewable Energy/Energy Efficiency sector, you may take these courses Credit Free.