REGISTERED PROVIDERS for the NABCEP® SOLAR HEATING ENTRY LEVEL EXAM

Please Note: This list is in alphabetical order BY STATE/Territory

There are currently: 212 Students who have passed the NABCEP Solar Heating Entry Level Exam

034 Providers of the Solar Heating Entry Level Exam

Please contact the provider(s) for more information about any course(s) listed below.

FACILITY/INSTITUTION	COURSE NAME(S)
ALABAMA, Auburn Smart North America 570 Devall Drive, Suite 303 Auburn, AL 36832 Contact: Ruth Page-Nelson e-mail: sgna@smartgridnorthamerica.com	Course Description Pending
Tele. (800) 764-3085 www.smartgridnorthamerica.com Provider # 0451	
CALIFORNIA, Cotati Sun Pirate, Inc. 442 Larkspur Ct. Cotati, CA 94931	Entry Level Solar Heating Program (Online) Sun Pirate's Entry Level Solar Heating Program consists of the completion of our IREC/ISPQ accredited, self paced Solar Heating System Design & Installation Online Course (60 contact hours). The student has the option to add the Entry Level SH Program which includes the initial testing fee and administration of the
Contact: Roger Coghlan e-mail: ret-training@sunpirate.com Tele. (707) 792-6929 www.sunpirate.com	NABCEP SH Entry Level Exam at a Computer Based Testing (CBT) center. The SHSDI online course concentrates on the basics of installing solar heating systems. Students will learn practical design criteria, installation guidelines, safety issues, maintenance, and legal considerations. This is a self paced, instructor mentored online course. Primary
Provider # 0223	Text Solar Domestic Water Heating by Chris Laughton is included. Our instructor Roger Coghlan is an ISPQ Certified Instructor.

CALIFORNIA, Eureka

College of the Redwoods

7351 Tompkins Hill Road Eureka, CA 95501

Contact: Julia Peterson, Director Business

Training Center

e-mail: julia-peterson@redwoods.edu

Tele. (707) 269-4000

www.redwoods.edu

Provider # 0271

Introduction to Solar Thermal Systems

A course designed to provide students with essential information to work with solar thermal systems including system design & sizing residential projects, system components, estimating installation costs & return on investments, system maintenance & building codes. Students will be given the opportunity to sit for the NABCEP Entry Level Exam at the conclusion of the course.

CALIFORNIA – Lompoc

Allan Hancock College

One Hancock Drive Lompoc, CA 93436-2755

Contact: Rick Rantz, Dean

Email: rrantz@hancockcollege.edu **Tele.** (805) 735-3366, ext. 5203

www.hancockcollege.edu

Provider #0415

Design & Installation of Solar Thermal Systems

This course involves various solar thermal components, concepts and systems. Learning objectives include understanding solar energy availability and differences between PV and Solar Thermal technologies. This course also addresses some basic plumbing and low voltage wiring skills. It prepares students for a supervised, entry level position with a dealer and/or installer of solar thermal systems. It will also prepare properly licensed contractors to design and install solar thermal systems as an expansion of their existing business model.

CALIFORNIA – San Francisco

City College of San Francisco

1400 Evens Avenue San Francisco, CA 94124

Contact: Gerald Bernstein, Director

Email: gbernste@ccsf.edu **Tele.** (415) 550-4437

www.ccsf.edu/ATT

Provider #0172

CNST 104: Solar Thermal installation

Training for installers of solar water heating systems. Emphasis in on system components, design, installation, troubleshooting and safety. Components of active/passing and direct/indirect systems are taught, as are techniques to optimize installation. Particular focus is on installation and mounting of solar collectors, water heater and storage tanks and piping. System check-out techniques are practiced.

CANADA -BRITISH COLOMBIA - Victoria

Camosun College

4461 Interurban Road Victoria, BC, Canada V9E 2C1

Contact: Ybo Plante

Email: yplante@camosun.bc.ca

Tele. (250) 370-4221

www.camosun.ca/ce

Provider #0585

CANADA – PRINCE EDWARD ISLAND -Charlottetown

Holland College

Prince of Wales Campus, Centre for Applied Science and Technology 140 Weymouth St.
Charlottetown, PE, Canada, C1A 4Z1

Contact: Blair Arsenault

Email: bparsenault@hollandcollege.com

Tele. (902) 566-9330

www.hollandcollege.com

Provider #0448

COLORADO, Paonia and Carbondale

Solar Energy International

39845 Matthews Lane Paonia, CO 81428

Contact: Tawnya Parker, Workshop

Coordinator

e-mail: tparker@solarenergy.org **Tele.** (970) 527-7657 x206

http://www.solarenergy.org/

Provider # 0129

Solar Thermal Entry Level

This course covers the basic skills and fundamentals of solar thermal technology. Students will learn how to: identify soar thermal components; conduct steps in solar site analysis; ensure safe practices and risk management; identify systems for specific climates; and determine methods to install and maintain systems. Through a series of lectures and hands-on solar labs, students will have acquired the foundation needed for entry-level in the field of solar thermal and domestic hot water heating. This course will be of interest to installers, pipefitters, engineers, inspectors, as well as do-ityourselfers considering their own installation. This course is based on the NABCEP Entry Level Learning Objectives and Job Task Analysis for Installers. Participants are encouraged to also take "Fall Protection" training (course TTCE 211V) Prior trades experience is recommended.

Energy Systems Engineering Technology

During the two years of this program, students will learn about Energy in terms of Renewables and energy efficiency. They will learn the theory as well as getting hands on experiences.

ST101: Solar Training - Solar Hot Water Design and Installation

Participants in this workshop will learn the theory, design considerations and installation strategies necessary to install and maintain a solar domestic hot water system. Passive solar water heaters, drainback systems, antifreeze systems, and photovoltaic powered systems are discussed in depth, as well as an introduction to pool and space heating systems. The workshop will include some hands-on labs and tours of solar hot water systems.

CONNECTICUT, North Haven

Gateway Community College – Center for a Sustainable Future

88 Bassett Road North Haven, CT 06473

Contact: Theresa Kasun

Email: tkasun@gwcc.commnet.edu

Tele. (203) 285-2448

http://www.gwcc.commnet.edu/

Provider # 0185

Solar Heating Entry Level

Solar Heating Entry Level follows the task analysis and learning objectives by NABCEP. This course covers site assessment, identification of solar thermal systems and components, learning and performing appropriate installation techniques, system adaptations, start-up, troubleshooting, and workplace safety. This course will help experienced contractors, plumbers and pipefitters, and individuals with basic tool skills to learn entry level technologies for installation of solar thermal hot water and space heating equipment. This course also serves as a comprehensive review for the Connecticut proficiency exam. The technical skills training component of this course takes place in the college's new state-of-the-art solar photovoltaic and solar thermal lab. Twelve 4-hour sessions and one Saturday field trip.

FLORIDA, Gainesville

Gainesville Job Corps Center

5301 NE 40th Terrace Gainesville, FL 32609

Contact: Erick Green, Solar Instructor

Email: green.erick@jobcorps.org
Tele. (352) 377-2555 ext 364

www.gainesville.jobcorps.gov

Provider # 0336

Solar Photovoltaic & Thermal Installation:

In Depth training in the installation of Solar Thermal. We train students in all aspects of Solar Thermal to include but not limited to flat-plate collectors, thermosyphon systems, roof mounting, track mounting, and theories behind thermal fluid movement, Solar pool heating and the installation of hot water holding tanks.

GEORGIA, Macon

Central Georgia Technical College

3300 Macon Tech Drive Macon, GA, 31206

Contact: Rebecca Lee, Vice President

Email: <u>blee@centralgatech.edu</u>

Tele. (478) 757-3551

www.centralgatech.edu

Provider # 0445

Entry Level Solar heating Knowledge

The Central Georgia Technical College noncredit Entry Level Solar Heating Knowledge course offer s training to prepare adults for entry-level jobs in the solar thermal industry. The course provides and important first step in preparing students to become skilled, qualified professionals in solar heating careers. The 64-hour course provides 48 contact hours on on-site interactive classroom and lab instruction, including a 2-hour exam. 16 hours of online instruction; and out-of-class assignments. The course offers basic knowledge of solar heating systems and prepares course completers for the NABCEP entry level solar heating Exam.

KANSAS, Chanute

Neosho County Community College

800 W. 14th Street Chanute, KS 66720

Contact: Brenda Krumm

The Solar Pathway

The Solar Pathway teaches competencies developed by NABCEP. These skills prepare students to sit for NABCEP PV Entry Level and the NABCEP Solar Heating Entry Level Exams.

SUST 104 – PV Systems

Tele. (620) 431-2820 ext. 234

Email: bkrumm@neosho.edu

www.neosho.edu

Provider # 0587

SUST 106 – PV Systems Installation SUST 108 – PV Systems Troubleshooting

SUST 204- Solar Hot Water & Heating Systems

SUST 206 – SHW & Heating Installation SUST 208 – SHW & Heating Troubleshooting

MAINE, Fairfield

Kennebec Valley Community College

92 Western Avenue Fairfield, ME 04937

Contact: Vaughan Woodruff, Adjunct Instructor

e-mail: vwoodruff@kvcc.me.edu

Tele. (207) 659-1054

www.kvcc.me.edu

http://www.kvcc.me.edu/Pages/Energy-Services-Center/Re

Provider # 0119

Solar Heating for the Entry Level Candidate

This course is geared toward individuals who have limited experience with solar heating systems and are interested in expanding their understanding of solar heating technology. Upon completion, students will be eligible to take the NABCEP Solar Heating Entry Level Exam Successful completion of this course and a passing score on the NABCEP exam will provide a required credential for professionals who want to install systems that qualify for the Efficiency Maine Trust Solar Heating rebate program. Students will be expected to have basic plumbing and electrical skills, and basic knowledge of roofing materials and construction.

MARYLAND, Odenton

IEC Chesapeake

1424 Odenton Rd. Suite E Odenton, MD 21113

Contact: Alice Haines

Email: ahaines@iec-chesapeake.com

Tele. (301) 621-9545 x 104

http://www.iec-chesapeake.com/

Provider # 0181

Solar Thermal Entry Level Training

The solar thermal training consists of 28 hours of lecture and 12 hours of hand-on lab work. The course syllabus follows the NABCEP Solar heating Entry Level Learning Objectives and will be weighted according to the exam blueprint at the end of the learning objectives. Lab work will consist of two exercises. The first is the design and mock installation of a working glycol-based solar domestic hot water heating system including (2) 4x6 Heliodyne flat plate collectors, a HelioPack 16 heat exchange appliance and a 65 gallon Bradford White solar storage tank. A second lab exercise will include the design and mock installation of Heliocol solar pool heating system with motorized actuator valve and controller.

MASSACHUSETTS, Greenfield

Greenfield Community College

One College Drive Greenfield, MA 01301

Contact: Christine Copeland Email: copelandc@gcc.mass.edu

Tele. (413) 775-1000

www.gcc.mass.edu

Provider #0115

Renewable Energy/Energy Efficiency

The Program provides students with a comprehensive introduction to renewable energy and energy efficiency. With knowledge and skills needed for entry level employment in the RE/EE field. Provides students already employed in the trades with knowledge & skills relevant to specific RE/EE technologies, as well as broader understanding of the scientific, economic, and political context of the industry; and provides students with the knowledge and skills needed for continued learning in the RE/EE field, including transfer to an AA program and other higher education opportunities.

MICHIGAN, Ann Arbor

HeatSpring Learning Institute

401 Stadium Blvd. Ann Arbor, MI 48104

Contact: Brian Hayden, Director of Education

Email: bhayden@heatspring.com Tele. (800) 393-2044 ext. 44

Website link.

Provider # 0255

MICHIGAN, Traverse City

Northwestern Michigan College

NMC-EES

1701 E. Front St.

Traverse City, MI 49686

Contact: Bill Queen

Email: BQueen@nmc.edu

Tele. (231) 995-1701

www.nmc.edu/ees

Provider # 0138

Solar Thermal Systems -Online

This 40-hour online training teaches the fundamentals of solar thermal design and installation. Videos, reading, webinar, homework, quizzes and discussion provide a range of media for varying learning styles. Instructor Bob Ramlow is an ISPQ Certified Independent Master Trainer – his book, *Solar Water Heating*, provides the backbone of the material. The course prepares students for the NABCEP Solar Heating Entry level Exam.

Solar Thermal Systems –Blended Learning Option This 40-hour training, is also taught by ISPQ Certified Independent Master Trainer, Bob Ramlow.

- Days 1 & 2 (16 hours) will be conducted online in an interactive distance-learning format.
 Reading worksheets, quizzes and discussion will focus heavily on SHW fundamentals, safety, and markets.
- Days 3, 4 & 5 (24 hours) will be conducted in the classroom. The existing course will be modified to go deeper in critical topics to compliment the online instruction.

Solar Hot Water Heating Systems – One Week Intensive EEVE139

Jump start your career selling or installing solar hot water heating systems by attending this one-week workshop. Work with flat plate and evacuated tube solar collectors, storage tanks, pumps, piping, and controls and learn essentials to building a system. Content integrates the solar thermal core competencies outlined by NABCEP and will cover the following topics:

Conducting site analysis, including load analysis Identifying solar hot water safety practices, standards, codes & clarification

Identifying systems for specific climates and applications

Identifying proper orientation and installation methods Identifying proper use of balance of system components and materials

Identifying common SH maintenance items

Designed for builders, plumbers, architects, code officials, construction and energy related business owners, anyone who needs technical literacy in solar thermal energy.

NEW MEXICO, Albuquerque

Central New Mexico Community College Workforce Training Center

5600 Eagle Rock Ave. NE Albuquerque, NM 87113

Contact: Evelyn Dow-Simpson, Assoc. Director

WTC

Email: evdow@cnm.edu Tele. (505) 224-5217

www.cnm.edu/wtc

Provider # 0234

Intro to Solar and Solar Thermal Fundamentals/Solar Thermal Installation

The intent of the intro class is to equip the student with the knowledge and skills needed to design, install, and operate and maintain the most common types of solar thermal systems. The class will present an overview of solar thermal applications, provide basic information on the principles of solar energy, and review solar thermal technologies.

The installation class will cover both solar hot water and solar pool heating systems. This theory, code, and hands on training is designed for industry professionals wanting to add solar thermal systems to their offerings and for individuals seeing certification for career advancement with the solar industry. The course blends

theory with applied practice.

NEW YORK, Canton

SUNY Canton

34 Cornell Dr. Canton, NY 13617

Contact: Art Garno

Email: garnoa@canton.edu **Tele.** (315) 386-7197

http://www.canton.edu/

Provider # 0150

Course Area 321, Solar Utilization

This course is offered on a semester basis as part of the 4 year degree in Alternative Renewable Energy at SUNY Canton. It includes hands-on, design and follows the NABCEP Installer Job Task Analysis.

NEW YORK, Kingston

SUNY Ulster, **Ulster County Community College**

One Development Ct. Kingston, NY 12401

Contact: Barbara Reer Email: reerb@sunyulster.edu

Tele. (845) 339-2025

http://www.sunyulster.edu/

Provider # 0132

Solar Hot Water Installation & Design

This course covers equipment such as collectors, tanks, pumps, piping, and controllers and reviews major system designs such as "closed loop pressurized" and "drain back" as well as solar pool heating designs. This course is an 18 hour hands-on training for trades people, engineers, architects, HVAC practitioners and other professionals.

NEW YORK, Rochester

Monroe Community College

2485 West Henrietta Road Rochester, NY 14623

Contact: Kevin M. French email: kfrench@monroecc.edu

Tele. (585) 292-3739

www.monroecc.edu

Provider # 0403

Solar Thermal Certificate Program:

This program is designed for the student who is seeking an entry level position as a Solar Thermal Installer and Service Technician, and those currently employed in the field of heating, ventilation, and air-conditioning or related areas. The Solar Thermal Certificate Program provides the student with essential information and training to install and work with solar thermal systems. The coursework includes fundamentals of collecting and transferring solar heat, the national Electric, Plumbing, Mechanical, and Building Code, and teaches the principles of a solar thermal system. This entry level certificate will prepare students to take the NABCEP Solar Heating Entry Level Exam.

Requirements:

HVA 101 Basic Refrigeration Theory 3 credits

HVA 102 Air Conditioning Theory 3 credits

HVA 103 Heating Systems 3 credits

HVA 104 Commercial AC and Heat Pumps 3 credits

HVA 105 Electric & Motor Controls 3 credits

HVA 202 Boiler Systems 3 credits

MTH 135 Intro to Technical Math 4 credits

PHY 100 Preparatory Physics 4 credits

STT 101 Intro to Solar Thermal 3 credits

STT 102 Solar Thermal Installation Practices 3 credits

STT 201 Troubleshooting and Preventative Maintenance

for Solar Thermal Systems 3 credits

Total Credits = 35

NORTH CAROLINA, Boone

Appalachian State University

Department of Technology & Environmental Design

Harper Hall, 397 Rivers Street

Boone, NC 28608

Contact: Jeff Tiller, Chair **email**: tillerjs@appstate.edu

Tele. (828) 262-6351

Provider # 0101

TEC 4628: Solar Thermal Technology

This course will introduce students to the basic concepts, tools, materials and techniques needed to convert solar energy into heat. Specific technologies to be studied include: domestic solar water heating systems, solar pool heating systems, solar cookers, solar dryers, solar water pasteurization/distillation, solar greenhouses/cold frames, and some house heating systems. The course will enable students to develop skills in the use of tools, materials and processes which effectively and efficiently capture and convert the sun's energy into thermal energy. The course ill include traditional classroom and "hands-on" design, construction and testing activities.

NORTH CAROLINA, Candler

Asheville-Buncombe Technical Community College (A-B Tech)

Global Institute for Sustainability Technology (GIST)

1463 Sand Hill Road Candler, NC 28715

Fundamentals of Entry Level Solar Heating System Design & Construction:

Day One: Course Overview, Intro to Solar Thermal, Solar Resource & Site Assessment.

Day Two: Solar Site Assessment Activity, Basic Concepts & Load Assessment, Mounting and Applications, Evaluate Mounting Structural Integrity, Intro to System Configuration.

Day Three: Glycol vs Drainback, Freeze Protection, Active vs Passive Solar Thermal, Pool Heating, Space Heating with Solar Thermal.

Contact: Haven Hanford email: hhanford@abtech.edu
Tele. (828) 254-1921 x5858

Provider # 0399

Day Four: System Design & Configuration, Standard Piping/Plumbing Practices, Proper use of Components Day Five: Safety Practices, Code Issues, Permitting, Tour of Working System, System Maintenance Day Six: Financial Incentives, Test Review, NABCEP SH Entry Level Exam

NORTH CAROLINA, Castle Hayne

Cape Fear Community College North Campus

4500 Blue Clay Rd. Castle Hayne, NC 28429

Contact: John Wojciechowski
Email: jwojciechowski@cgcc.edu

Tele. 910-362-7761

Provider #0406

www.cfcc.edu/voc/sustainability-technologies/

ALT 250 Thermal Systems

This course introduces concepts, tools, techniques, and materials used to convert thermal energy into a viable, renewable energy resource. Topics include forced convection, heat flow and exchange, radiation, the various elements of thermal system design, regulations, and system installation and maintenance. Upon completion, students should be able to demonstrate an understanding of solar thermal systems and corresponding regulations.

NORTH CAROLINA, Charlotte

National Solar Trainers, LLC

115 West 7th Street, Suite 300 Charlotte, NC 28202

Contact: Edlin Kim

Email: edlin@nationalsolartrainers.com

Tele. (646) 915-5308

www.nationalsolartraining.com

Provider # 0359

Solar Thermal Entry Level Program

Total course hours: 40

Number of Hands-on hours: 16

Lecture hours: 24 *Or* Online hours: 24

Solar Thermal Fundamentals Outline – 8 hours

Solar Thermal Sales Outline – 8 hours

 $\begin{tabular}{ll} \textbf{Solar Thermal Installation Outline} - 16 \ hours \\ \textbf{Solar Thermal Sizing and Design Outline} - 8 \ hours \\ \end{tabular}$

NORTH CAROLINA, Huntersville

Everblue

8936 Northpointe Executive Park Dr., Suite 140 Huntersville, NC 28078

Contact: Vince DiFrancesco
Email: vdifrancesco@everblue.edu

Tele. (704) 340-4095

www.everblue.edu

Provider # 0373

Solar Thermal Associate

This 40 hour course examines the fundamentals of solar thermal technology with primary focus on heating domestic water. Students will learn how to conduct a site evaluation, identify solar thermal components, properly install and maintain a system, as well as how to model system performance. After completing the solar thermal boot camp, students will have acquired the foundation of knowledge needed to work in the field as well as advance to the installer level certification course.

NORTH CAROLINA, Pittsboro

Central Carolina Community College

764 West Street Pittsboro, NC 27312

Contact: Laura Lauffer Email: llauffer@cccc.edu Tele. (919) 545-8032

www.cccc.edu

Provider # 0145

ALT 250 Thermal Systems

This course introduces concepts, tools, techniques and materials used to convert thermal energy into a viable, renewable energy resource. Topics include forces convection, heat flow, and exchange, radiation, and various elements of thermal design, regulations, and system installation and maintenance. Upon completion, students should be able to demonstrate an understanding of geothermal and solar thermal systems and corresponding regulation.

NORTH CAROLINA, Raleigh

North Carolina Solar Center at NC State University

1101 Gorman St. Raleigh, NC 27606

Contact: Maria O'Farrell

Email: maria_ofarrell@ncsu.edu

Tele. (919) 538-8287

www.ncsc.edu

Provider # 0123

Renewable Energy Technologies Diploma Series: REST: Basic of Business and Technology of Solar Thermal

This workshop, instructed by industry leader, Bill Guiney, focuses on domestic solar hot water systems but will include discussions on different solar thermal applications and types. Includes a hands-on installation day. *Credits 4 and 40 continuing credit hours for CBCI*, *PEs and AIAs*.

NORTH CAROLINA, Supply

Brunswick Community College

Continuing Education Department P.O. Box 30 Supply, NC, 28462

Contact: Marilyn Graham, Coordinator, Green

Information Training Center

e-mail: grahamm@brunswickcc.edu

Tele. (910) 755-8561

www.brunswickcc.edu

Solar Installer Certificate (From Brunswick CC)

This is a continuing education program designed to prepare students to understand the installation, function and repair of solar PV and solar thermal systems; to train students to safely install equipment using a combination of lecture, demonstration, discussion and hands-on lab work; and guide students to plan for job placement. The Solar Installer certificate includes: employment readiness, OSHA, basic building skills in carpentry, electricity and plumbing, and two separate solar modules: Solar Photovoltaic and Solar Thermal. This program prepares the student for the NABCEP PV Entry Level Exam.

OREGON, Eugene

Lane Community College Northwest Energy Education Institute

4000 East 30th Avenue Eugene, Oregon 97405

Solar Water heating Tech Training

A four day training which will include classroom instruction, and some hands-on experience with solar water heating system components, system design, and site analysis, as well as job safety and system maintenance. This course is designed as a complete introduction to solar water heating, covering all the NABCEP Solar Heating Entry Level Learning

Contact: Roger Ebbage, Director Email: ebbager@lanecc.edu

Tele. (541) 463-3977

www.nweei.org

Objectives, plus best practices, local code and program requirements.

Provider # 0120

PENNSYLVANIA, Harrisburg

Harrisburg Area Community College

1523 N. 4th Street Harrisburg, PA 17102

Contact: Cheryleen Deitz, WFT Coordinator

Email: chdeitz@hacc.edu
Tele. (717) 221-1338

www.hacc.edu

Provider # 0243

PENNSYLVANIA - Philadelphia

Infinite Solar, Inc

2880 Comly Rd

Philadelphia, PA 19154

Contact: Ivan Svedov, Admissions Counselor

e-mail: ivan@infinite-solar.com

Tele. (215) 464-6460

www.solarschoolpa.com

Entry Level Solar Heating

This class is designed to provide the participant with a working knowledge of what solar thermal generation technology is and how it works. Solar thermal systems can provide domestic hot water and/or pool heating. Training begins with the fundamentals of solar hot water, defining the solar thermal market, understanding the solar resource and performing site assessments. Solar basics like sun path, angle of incidence, and heat transfer topics follow next. Different systems types will then be reviewed and examined in lab, such as Active, Passive, Direct, Indirect, Pressurized, Drainback, Swimming pool systems, Flat Plate, Evacuated tube and other collectors. Mounting considerations will be reviewed in the lab and with sample system photos. This includes electrical and plumbing connections. System sizing will be reviewed for all climates in N. America. Computer models will be used in lab for the sizing, generation, and economics of the system. Commissioning and troubleshooting topics will conclude the course in preparation for the NABCEP solar Heating Entry Level Exam.

5 Day Entry Level Solar Thermal Design and Installation Course:

This course incorporates instructor-led lectures, presentations and hands-on labs, including the use of site-assessment tools in the design of solar thermal systems. Topics covered: collector orientation, design & function, solar thermal applications (pool, space & water heating), open & closed loop systems; Service & troubleshooting; Hands-on installation labs (flush-mount & rail mount), pump & tank selection and configuration. Residential & commercial attachments.

SOUTH CAROLINA, Greenville

Greenville Technical College

216 S. Pleasantburg Drive, Mail Stop 5011 Greenville, SC 29607

Contact: Gene Wilson

Email: Gene.Wilson@gvltec.edu

Tele. (864) 250-8251

SOL 230 Solar Thermal Design and Installation

This course is a study of solar thermal specific design, cost analysis, and installation requirements. Students will be required to perform two thermal installs as part of their lab work. Students should be prepared to purchase tools and equipment necessary to perform thermal installs. The ability to climb and lift equipment and solar components is required.

Prerequisite: SOL 202 or equivalent

http://gvltec.edu/cet/

Provider # 0390

WISCONSIN, Custer

The Midwest Renewable Energy Association (MREA)

7558 Deer Road Custer, WI 54423

Contact: Amiee Wetmore

Email: Amieew@midwestrenew.org

Tele. (715) 592-6595

www.midwestrenew.org

Provider # 0167

ST 101 – Solar Domestic Hot Water

Or

STO 101 - Solar Domestic Hot Water Online

And

ST 301 – Solar Hot Water Installation Lab

Students will attend two separate workshops. Students must complete ST 101, either online or in person, and then attend a 3-day Solar Hot Water Installation Lab. Students will learn all aspects of site analysis, system design, installation, safety, code, and troubleshooting & maintenance. Total course length is 32 hours. Courses are a mixture of lecture and hands-on.