1980 Solar Energy Technical Training Directory

Second Edition
September 1980
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Front Cover: Photographs provided by SERI and the Solar Energy Applications Laboratory of Colorado State University. We wish to thank Hyperion Solar Energy Specialists and the Solar Hot Water Company for their assistance.

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1980 Solar Energy Technical Training Directory

Second Edition
September 1980
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Prepared by the
Academic and University Programs Branch
and the Information Systems Division, SERI,
in cooperation with the
Office of U.S. Congressman George E. Brown, Jr.
and the Congressional Solar Coalition.

A Product of the
Solar Energy Information Data Bank

Managed by the
Solar Energy Research Institute
1617 Cole Boulevard, Golden, Colorado 80401

Operated for the U.S. Department of Energy by the Midwest Research Institute.
The 1980 Solar Energy Technical Training Directory, Second Edition is based on information gathered from a nationwide survey of post-secondary educational institutions, begun in June, 1978 and updated during 1979. This survey was conducted by the Office of U.S. Congressman George E. Brown, Jr. in cooperation with the Congressional Solar Coalition.

Survey data was processed and maintained by the Academic and University Programs Branch, and the Information Systems Division of the Solar Energy Research Institute (SERI). This information was used to create the Educational Data Base, one of many computerized data bases comprising the Solar Energy Information Data Bank (SEIDB).

The Solar Energy Information Data Bank is a national network created by Congress to gather and disseminate information on the developing solar energy technologies.

- A listing of all solar educational programs and courses included in the survey data can be found in the 1980 National Solar Energy Education Directory, Second Edition. See page v for ordering information.

** Solar Energy Research, Development, and Demonstration Act (1974)
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Introduction

What is solar energy technical training? We defined this to include all programs or courses offered by post-secondary educational institutions that lead to a degree or substantial training skill in a solar or solar-related field. Technical skills range from design and installation to the maintenance of solar energy systems or components.

How were programs selected? This directory lists all schools which offer a technical degree—usually a certificate, associate, or equivalent—in a solar or solar energy-related area. In most cases, the institutions offering these programs consisted of vocational/technical schools and junior or community colleges.

How current is the data? All schools listed in the 1980 Directory have responded at least once in the last two years to the national solar education survey. Data which is over one year-old is marked with an asterisk (*) after the course or program listing.

In all, the 1980 Solar Energy Technical Training Directory contains information from over 150 schools.

How to Use this Directory. All schools are listed alphabetically by state. Please note that the amount of information contained in each listing will vary depending on the completeness of the school's survey response. To help you locate solar technical training opportunities that will best suit your needs, we have classified the listings as follows:

Solar Energy or Solar-Related Programs include course sequences which lead to a certificate or degree. Program categories include:

* Solar Curriculum: programs offering an academic degree or diploma in a specific solar energy field.

* Curriculum with Solar Study: programs in which the student receives solar education while working on an academic degree or diploma in a solar-related field.

* Solar Technical Training: programs offering non-academic degrees or certificates in a solar energy or solar-related field.

Solar Energy or Solar-Related Courses include lectures, workshops, seminars, research projects, on-the-job training, and other activities. Where information was available, we have listed the course C.E.U.'s (Continuing Education Units), defined as the number of credits granted to students enrolled in non-degree courses.

Sample Listings

MARICOPA TECHNICAL COMMUNITY COLLEGE
106 East Washington Street
Phoenix, AZ 85004
(602)258-7251

Survey ID Number

$08303

Tuition Information

Tuition (Full Time):
Resident: $50.00 Non Resident: $870.00

Program Category

Solar Technical Training

Program Title

Solar Technology

Program Categories

Associate, Certificate
Industrial Technology
Refrigeration
Controls, Design, Maintenance, Do-It-Yourself/Home Installation

Course Category

Solar Related Courses

Course Title

Solar Energy Technology

Instructor:
Palmer, John
(602)723-4141 EXT. 254

Department:
Technology

Student Level:
All Levels

Academic Credits:
3.0 (Semester)

Duration:
No. of weeks: 16.0
Hrs. per week: 4.0

Contact Hours:
64.0

Classroom:
16.0

Job:
48.0

Offered:
Weekend

Course Fee:
Resident: $21.00
Non Resident: $21.00

Prerequisites:
No

Topics Covered Extensively:
Appropriate Technology;
Centralized Solar Power Systems; Components-Solar;
Distributed Solar Power Systems; Introduction to Solar Energy; Materials; Photoconversion; Sheet Metal Techniques; Solar Cooling; Solar Domestic Hot Water;

A Few Words on…

Prospects for future jobs and careers in solar and solar-energy-related fields look promising. Although the industry is still struggling in its infancy, most experts agree that, with proper tax incentives for both the industry and consumer, the solar field will blossom. However, if the solar industry is to gain public confidence, it is necessary that a well-trained workforce be available, capable of properly installing and maintaining a variety of solar applications.

A great variety of jobs and skills will be required if America is to meet its goal of obtaining 20% of its energy from solar and other renewable sources by the year 2000. According to the President's 1978 Domestic Policy Review, between 150-200,000 solar and solar-related jobs could be created annually through the end of the century.

Jobs & Training

Where will you find solar jobs? In the beginning, most of them will be in domestic hot water and space heating, in both active and passive applications. However, the number of jobs available in the passive area will depend on how well home builders accept this new construction technique. In the long run, it is likely that jobs will open up as wind energy systems, photovoltaic (solar cell) applications, solar thermal electric power, space cooling and other solar applications become commercial.

Though most of the solar energy technologies are still new, the skills they will require are traditional ones, such as plumbing, carpentry, electrical masonry, and sheet metal, to name a few. Skilled technicians will be needed to design, fabricate, install, maintain, and wholesale these systems.

What kind of solar education should you be seeking? Unfortunately, firm counseling in this area is not possible—but some general cautions and recommendations can be made. For instance, while the installation of solar hot water and space heating systems won't require any basic new skills, most people will need additional solar knowledge if they are to install these systems properly. Therefore, it is recommended that you pursue major training in a traditional building trade area with a solar emphasis.
Solar Skills to be in demand

Will a trained solar installer be more employable than a plumber or sheet metal worker who has been updated in the solar field? At this time, the answer is uncertain. However, the upcoming mandatory offering of energy conservation and solar audits as part of the Residential Conservation Service will, no doubt, create a demand for skilled technicians knowledgeable in the solar field. This, coupled with the 40% federal solar tax credit and additional incentives now available in many states, and of course, rising energy prices, will help create the pressure to make the industry boom.

Is Solar Education Available?

It is, but in varying degrees of quality and depth. Across the country, over 760 schools offer at least one solar course. Overall, these schools offer more than 1700 courses and 240 programs, with degree awards ranging from certificate to doctorate.

When pursuing solar energy technical training, you should talk to both faculty and students involved in the course or program you are considering, before you enroll. Also, try to contact local solar companies (see the yellow pages of the phone directory) to find out what skills they require and whether it is likely they will need more people.

Hopefully, the 1980 Solar Energy Technical Training Directory will help point you in the right direction and provide you some guidance and caution in your pursuit of a solar education.


** A complete listing of all solar educational offerings may be found in the 1980 National Solar Energy Education Directory, Second Edition. See page v.
Please help us keep the Solar Energy Technical Training Directory up-to-date. Revisions or additions to be included in future editions may be sent to:

Academic and University Programs Branch
Solar Energy Research Institute
1617 Cole Boulevard
Golden, Colorado 80401

Attn: Education Data Base

Important! When forwarding us new information, please include your school's survey identification number, listed in parentheses on the right of its directory listing.
Alabama

BESEMER STATE TECHNICAL COLLEGE
P O Box 308
Bessemer, AL 35020
(205)428-6391

Tuition (Full Time):
Resident: $78.00

Solar Related Courses
Special Systems
Instructor: Knight, Andy
(205)428-6391 EXT.54
Department: Air Conditioning and Refrigeration
Student Level: Skilled Labor
Academic Credits: 5.0 (Quarter)
Duration: No. of weeks: 16.0
Cost: Contact Hours: 250.0
Classroom: 125.0
Independent Study: 75.0
Lab: 75.0
Offered: Evening
Course Fee: Resident: $40.00
Prerequisites: No

CARVER STATE TECHNICAL COLLEGE
414 Stanton Street
Mobile, AL 36617
(205)473-8692

Tuition (Full Time):
Resident: $75.00 Non Resident: $150.00

Solar Technical Training
Plumbing and Pipefitting - Solar Specialization
Degree: Certificate
Department: Plumbing and Pipefitting
Contact: Loria, John W.
(205)473-8692 EXT.22
Program Training: Solar Energy Education; Scientific Research and Development in Solar Energy; Mechanical/ Electrical Contracting-Solar Specialization; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology- Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization; Plumbing-Solar Specialization

Program and Curriculum Related Courses
Solar Technology Industrial Operator
Instructor: Loria, John W.
(205)473-8692 EXT.22
Department: Plumbing and Pipefitting
Program: Plumbing and Pipefitting - Solar Specialization
Student Level: Skilled Labor
Duration: No. of weeks: 24.0
Cost: Contact Hours: 144.0
Offered: Day
Course Fee: Resident: $75.00
Non Resident: $150.00

Arizona

CENTRAL ARIZONA COLLEGE
Woodruff at Overfield Road
Coolidge, AZ 85228
(602)723-4141

Tuition (Full Time):
Resident: $96.00 Non Resident: $936.00

Solar Related Courses
Solar Energy Technology
Instructor: Palmer, John
(602)723-4141 EXT.254
Department: Technology
Student Level: All Levels
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 16.0
Cost: Contact Hours: 64.0
Classroom: 16.0
Job: 48.0
Offered: Weekend
Course Fee: Resident: $21.00
Non Resident: $21.00
Prerequisites: No

MARICOPA TECHNICAL COMMUNITY COLLEGE
106 East Washington Street
Phoenix, AZ 85004
(602)258-7251

Tuition (Full Time):
Resident: $50.00 Non Resident: $870.00

Solar Technical Training
Solar Technology
Degree: Associate, Certificate
Industrial Technology
Department: Refrigeration
Program Training: Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Do-It-Yourself/Home installation

Program and Curriculum Related Courses
Solar I, Introduction to Solar Energy
Course Number: RF 119
Instructor: Carico, Keith E.
(602)276-8500 EXT.445
Department: Refrigeration
Program: Solar Technology
Student Level: College Freshman/Sophomore; Managerial; Professional; Skilled Labor: Layperson
Academic Credits: 3.0 (Semester)
C.E.U.'s: 3.0
Duration: No. of weeks: 16.0
Cost: Contact Hours: 48.0
Classroom: 48.0
Program and Curriculum Related Courses

**Air Conditioning, Refrigeration, Heating, Solar Energy, and Sheet Metal**

**Program:** Air Conditioning, Refrigeration, Heating, Solar Energy, and Sheet Metal

**Student Level:** Skilled Labor; Professional

**Contact Hours:** 60.0

**Offered:** Day

**Topics Covered Extensively:** Introduction to Solar Energy

**UNIVERSAL TECHNICAL INSTITUTE**
3121 West Weldon Avenue
Phoenix, AZ 85017
(602)264-4164
(908051)

**Tuition (Full Time):** Resident: $3,465.00 Non Resident: $3,465.00

**Solar Technical Training**

**Refrigeration, Air Conditioning, Heating, and Solar Energy**

**Degree:** Certificate

**Program:** Commercial Refriger., Air Cond., Heating and Solar Systems

**Contact:**
- Greggore, Joseph (602)264-4164 EXT.34

**Program Training:** Heating, Ventilation, Air Conditioning-Solar Specialist; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization; Plumbing-Solar Specialization; Do-it-Yourself/Home Installation

**Program and Curriculum Related Courses**

**Refrigeration, Air Conditioning, Heating, and Solar Energy**

**Course Number:** 401

**Instructor:** Greggore, Joseph (602)264-4164 EXT.34

**Department:** Refrigeration

**Program:** Refrigeration, Air Conditioning, Heating, and Solar Energy

**Student Level:** Skilled Labor

**Duration:** No. of weeks: 33.0 Hrs. per week: 30.0

**Contact Hours:**
- 990.0
- 366.0
- 495.0
- 99.0

**Offered:** Day; Evening

**Course Fee:** Resident: $3,465.00 Non Resident: $3,465.00

**Prerequisites:**
- No

**Topics Covered Extensively:** Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Introduction to Solar Energy; Materials; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

**Solar Greenhouse**

**Course Number:** PHS 107

**Instructor:** Minkler, Lyle (602)2445-7300

**Department:** Science

**Program:** Solar Energy Technology

**Academic Credits:** 1.0

**Duration:** No. of weeks: 5.0 Hrs. per week: 3.0

**Contact Hours:** 15.0

**Topics Covered Extensively:** Appropriate Technology; Components-Solar Energy Storage Systems; Heat and Energy Transfer; Passive Solar Systems; Solar Systems Design; Solar Heating

**Solar Heating, Air and Water Systems**

**Course Number:** PHS 101

**Instructor:** Minkler, Lyle (602)2445-7304

**Department:** Science

**Program:** Solar Energy Technology

**Academic Credits:** 1.0

**Duration:** No. of weeks: 5.0 Hrs. per week: 3.0

**Contact Hours:** 15.0

**Topics Covered Extensively:** Appropriate Technology; Components-Solar Energy Storage Systems; Heat and Energy Transfer; Passive Solar Systems; Solar Systems Design; Solar Heating

**YAVAPAI COLLEGE**
Prescott, AZ 86301
(602)445-7300
(001079)
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 5.0  
Hrs. per week: 3.0  
Contact Hours: 15.0  
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Passive Solar Systems; Solar Heating; Solar Home Construction; Solar Systems Design  

Solar Heating, Retrofit Systems *  
Course Number: PHS 104  
Instructor: Minkler, Lyle  
Department: Science  
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 5.0  
Hrs. per week: 3.0  
Contact Hours: 15.0  
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Solar Heating; Solar Law/Legislation; Solar Marketing/Economic Analysis; Solar Systems Design  

Solar Hot Water *  
Course Number: PHS 103  
Instructor: Beverly, Gary  
Department: Science  
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 5.0  
Hrs. per week: 3.0  
Contact Hours: 15.0  
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Plumbing Techniques; Solar Domestic Hot Water; Solar Marketing/Economic Analysis; Solar Systems Design  

Solar Laboratory 124 *  
Course Number: PHS 124  
Instructor: Minkler, Lyle  
Department: Science  
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 6.0  
Hrs. per week: 4.5  
Contact Hours: 27.0  
Classroom: 6.0  
Lab: 21.0  
Topics Covered Extensively: Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/ Evaluation  

Solar Laboratory 125 *  
Course Number: PHS 125  
Instructor: Minkler, Lyle  
Department: Science  
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 6.0  
Hrs. per week: 4.5  
Contact Hours: 27.0  
Classroom: 6.0  
Lab: 21.0  
Topics Covered Extensively: Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/ Evaluation  

Solar Laboratory 121 *  
Course Number: PHS 121  
Instructor: Minkler, Lyle  
Department: Science  
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 6.0  
Hrs. per week: 4.5  
Contact Hours: 27.0  
Classroom: 6.0  
Lab: 21.0  
Topics Covered Extensively: Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/ Evaluation  

Solar Laboratory 122 *  
Course Number: PHS 122  
Instructor: Minkler, Lyle  
Department: Science  
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 6.0  
Hrs. per week: 4.5  
Contact Hours: 27.0  
Classroom: 6.0  
Lab: 21.0  
Independent Study: 21.0  
Topics Covered Extensively: Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/ Evaluation  

Solar Laboratory 123 *  
Course Number: PHS 123  
Instructor: Minkler, Lyle  
Department: Science  
Program: Solar Energy Technology *  
Academic Credits: 1.0  
Duration: No. of weeks: 6.0  
Hrs. per week: 4.5  
Contact Hours: 27.0  
Classroom: 6.0  
Lab: 21.0  
Topics Covered Extensively: Energy Storage Systems  

Arkansas  
MISSISSIPPI COUNTY COMMUNITY COLLEGE  
P O Box 1109  
Blytheville, AR 72315  
(501)782-1020  
(012880)  

Solar Curriculum  
Solar Technology  
Degree: Associate  
Program: Solar Energy Technology, Photovoltaics  
Contact: Benson, Christopher M.  
Program Training: Engineering-Solar Specialization; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization  

Program and Curriculum Related Courses  
Cooperative Education  
Course Number: SOLR 5897  
Program: Solar Technology  
Academic Credits: 3.0 (Semester)  
Topics Covered Extensively: Photovoltaics and Solar Cells  

Electronics, Instrumentation, and Electrical Storage  
Course Number: 587  
Instructor: Benson, C. M.  
Program: Solar Technology  
Student Level: College Freshman/Sophomore; Menagerial; Skilled Labor  
Academic Credits: 1.0 (Semester)  
Duration: No. of weeks: 15.0  
Hrs. per week: 1.0  
Contact Hours: 15.0  
Lab: 15.0  
Offered: Day  
Course Fee: Resident: $12.00  
Non Resident: $23.00  
Topics Covered Extensively: Energy Storage Systems  

Heating and Air Conditioning Fundamentals  
Course Number: SOLR 58002  
Instructor: Benson, C. M.  
Program: Solar Technology  
Student Level: College Freshman/Sophomore; Menagerial; Skilled Labor  
Academic Credits: 3.0 (Semester)  
Duration: No. of weeks: 15.0  
Hrs. per week: 3.0  
Contact Hours: 45.0  
Classroom: 30.0  
Lab: 15.0  
Offered: Day  
Course Fee: Resident: $36.00  
Non Resident: $69.00  
Prerequisites: Yes  
Topics Covered Extensively: Heat and Energy Transfer; Solar Cooling; Solar Heating  

Solar Technology I  
Course Number: SOLR 58003  
Instructor: Benson, C. M.  
Program: Solar Technology  
Student Level: College Freshman/Sophomore; Menagerial; Skilled Labor
Applications of Solar Energy in Agriculture
Course Number: SET 56
Instructor: Merrill, Richard (408)425-6256
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Layperson
Academic Credits: 2.0 (Semester )
C.E.U.'s: 2.0
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Contact Hours: 64.0
Classroom: 64.0
Lab: 48.0
Offered: Day
Course Fee: Resident: $5.00
Non Resident: $102.00
Prerequisites: No

Topics Covered Extensively:
- Components-Solar; Energy Storage Systems; Hybrid Systems; Passive Solar Systems; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Energy in Agriculture
Course Number: SET 57
Instructor: Merrill, Richard (408)425-6256
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Skilled Labor; Layperson
Academic Credits: 4.0 (Semester )
C.E.U.'s: 4.0
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Contact Hours: 64.0
Classroom: 64.0
Lab: 32.0
Offered: Day
Course Fee: Resident: $5.00
Non Resident: $204.00
Prerequisites: Yes

Topics Covered Extensively:
- Components-Solar; Energy Storage Systems; Hybrid Systems; Passive Solar Systems; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Field Studies
Course Number: SET 62
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Layperson
Academic Credits: 3.0 (Semester )
C.E.U.'s: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 48.0
Offered: Evening
Course Fee: Resident: $5.00
Non Resident: $183.00
Prerequisites: No

Topics Covered Extensively:
- Components-Solar; Energy Storage Systems; Hybrid Systems; Passive Solar Systems; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Architecture
Course Number: SET 54
Instructor: Riordan, Michael (415)321-2449
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor
Academic Credits: 3.0 (Semester )
C.E.U.'s: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 48.0
Workshop: 48.0
Offered: Day
Course Fee: Resident: $5.00
Non Resident: $153.00
Prerequisites: Yes

Topics Covered Extensively:
- Hybrid Systems; Solar Cooling; Solar Heating; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Electronics
Course Number: SET 59
Instructor: Brown, Douglas (408)425-9328
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Skilled Labor; Layperson
Academic Credits: 2.0 (Semester )
C.E.U.'s: 2.0
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Contact Hours: 64.0
Classroom: 64.0
Lab: 32.0
Offered: Day
Course Fee: Resident: $5.00
Non Resident: $102.00
Prerequisites: No

Topics Covered Extensively:
- Appropriate Technology; Solar Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Introduction to Solar Energy; Materials; Passive Solar Systems; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Remodeling I
Course Number: SET 55
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor
Academic Credits: 4.0 (Semester )
C.E.U.'s: 4.0
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 48.0
Lab: 48.0
Independent Study: 24.0
Offered: Day
Course Fee: Resident: $5.00
Non Resident: $102.00
Prerequisites: No

Topics Covered Extensively:
- Hybrid Systems; Solar Cooling; Solar Heating; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Technology and Fabrication I
Course Number: SET 61
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor
Academic Credits: 4.0 (Semester )
C.E.U.'s: 4.0
Duration: No. of weeks: 16.0
Hrs. per week: 8.0
Contact Hours: 96.0
Classroom: 48.0
Lab: 48.0
Offered: Day
Course Fee: Resident: $5.00
Non Resident: $204.00
Prerequisites: No

Topics Covered Extensively:
Program and Curriculum Related Courses

Alternate Energy Systems, Solar Technology
Course Number: CET60A-BCD
Instructor: Burton, David
(408)425-6452
Department: Solar Energy

Program: Solar Energy Technology
Academic Credits: 8.0 (Semester)

Duration: No. of weeks: 16.0
Hrs. per week: 15.0

Contact Hours: 240.0
Classroom: 80.0
Lab: 160.0

Offered: Day; Evening
Prerequisites: No

Applications of Solar Energy in Agriculture
Course Number: SET 98
Instructor: Marrill, Richard
(408)425-6256
Department: Solar Energy

Program: Solar Energy Technology
Student Level: All Levels; Layperson
Academic Credits: 2.0 (Semester)

C.E.U.'s: 2.0

Duration: No. of weeks: 16.0
Hrs. per week: 6.0

Contact Hours: 96.0
Workshop: 96.0

Offered: Day
Course Fee: Resident: $5.00
Non Resident: $102.00

Prerequisites: Yes

Fundamentals of Solar Energy
Course Number: SET 50
Instructor: Rorden, Michael
(415)321-2449
Department: Solar Energy

Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor; Layperson

Academic Credits: 3.0 (Semester)

C.E.U.'s: 3.0

Duration: No. of weeks: 16.0
Hrs. per week: 3.0

Contact Hours: 48.0
Classroom: 48.0

Offered: Evening
Course Fee: Resident: $5.00
Non Resident: $153.00

Prerequisites: No

Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Heat Transfer; Introduction to Solar Energy

Solar Architecture
Course Number: SET 54
Instructor: Rorden, Michael
(415)321-2449
Department: Solar Energy

Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor

Academic Credits: 3.0 (Semester)

C.E.U.'s: 3.0

Duration: No. of weeks: 16.0
Hrs. per week: 5.0

Contact Hours: 80.0
Classroom: 32.0
Workshop: 48.0

Offered: Evening
Course Fee: Resident: $5.00
Non Resident: $153.00

Prerequisites: Yes

Solar Technical Training

Solar Energy Technology
Degree: Certificate
Solar Energy
Instructor: Burton, David
(408)425-6452

Program: Architectural-Solar Specialization
Solar Energy Education; General Contracting-Specialization in Solar Design/Installation; Electricity-Solar Specialization; Solar System Installation-Maintenance; Solar Technology; Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization; Do-It-Yourself/Home Installation

Special Studies

Course Number: SET 95
Instructor: Burton, David
(408)425-6452
Department: Solar Energy

Program: Solar Energy Technology
Academic Credits: 2.0 (Semester)

Duration: No. of weeks: 16.0
Hrs. per week: 6.0

Contact Hours: 96.0
Independent Study: 96.0

Course Fee: Resident: $5.00
Non Resident: $102.00

Prerequisites: Yes

Traveling Solar Energy Show
Course Number: SET 61
Instructor: Burton, David
(408)425-6452
Woodworth, David
Department: Solar Energy

Program: Solar Energy Technology
Student Level: All Levels
Academic Credits: 2.0 (Semester)

C.E.U.'s: 2.0

Duration: No. of weeks: 16.0
Hrs. per week: 6.0

Contact Hours: 96.0
Classroom: 10.0
Independent Study: 6.0
Job: 70.0
Lab: 10.0

Offered: Day
Course Fee: Resident: $5.00
Non Resident: $102.00

Prerequisites: Yes

Wind Energy
Course Number: SET 60
Instructor: Stayton, Bob
(408)426-7828

Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Layperson
Academic Credits: 2.0 (Semester)

C.E.U.'s: 2.0

Duration: No. of weeks: 16.0
Hrs. per week: 4.0

Contact Hours: 64.0
Classroom: 16.0
Lab: 48.0

Offered: Day
Course Fee: Resident: $5.00
Non Resident: $102.00

Prerequisites: No

Topics Covered Extensively: Wind Energy Conversion Systems

Solar Technical Training

Solar Energy Technology
Degree: Certificate
Solar Energy
Instructor: Burton, David
(408)425-6452

Program: Architectural-Solar Specialization
Solar Energy Education; General Contracting-Specialization in Solar Design/Installation; Electricity-Solar Specialization; Solar System Installation-Maintenance; Solar Technology; Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization; Do-It-Yourself/Home Installation

Solar Electronics
Course Number: SET 59
Instructor: Brown, Douglas
(408)425-6328

Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Skilled Labor
Academic Credits: 2.0 (Semester)

C.E.U.'s: 2.0

Duration: No. of weeks: 16.0
Hrs. per week: 4.0

Contact Hours: 64.0
Classroom: 16.0
Lab: 48.0

Offered: Day
Course Fee: Resident: $5.00
Non Resident: $102.00

Prerequisites: Yes

Topics Covered Extensively: Components-Solar; Energy Storage Systems; Photovoltaics and Solar Cells; Solar Systems Design/Evaluation

Solar Energy in Agriculture
Course Number: SET 57
Instructor: Marrill, Richard
(408)425-6256

Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Skilled Labor; Layperson
Academic Credits: 4.0 (Semester)

C.E.U.'s: 4.0

Duration: No. of weeks: 16.0
Hrs. per week: 4.0

Contact Hours: 64.0
Classroom: 32.0
Lab: 32.0

Offered: Day
Course Fee: Resident: $5.00
Non Resident: $204.00

Prerequisites: Yes

Topics Covered Extensively: Alternate Energy Sources; Biocconversion; Energy Conservation; Energy Storage Systems; Greenhouse Techniques; Hybrid Systems; Passive Solar Systems; Photoconversion; Solar Heating; Solar Law/Legislation; Solar Systems Design; Thermochemical Conversion

Solar Field Studies
Course Number: SET 62
Instructor: Burton, David
(408)425-6452

Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Layperson
Academic Credits: 3.0 (Semester)

Prerequisites: No

Solar Home Design
Course Number: SET 53
Instructor: Rorden, Michael
(415)321-2449

Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)

C.E.U.'s: 3.0

Duration: No. of weeks: 16.0
Hrs. per week: 3.0

Contact Hours: 48.0
Classroom: 48.0

Offered: Evening
Course Fee: Resident: $5.00
Non Resident: $153.00

Prerequisites: No

Topics Covered Extensively: Appropriately Appropriate Technology; Energy Conservation; Energy Storage Systems; Greenhouse Techniques; Heat and Energy Transfer; Hybrid Systems; Introduction to Solar Energy; Passive Solar Systems; Solar Heating; Solar Home Construction; Solar Systems Design

California
Solar Remodeling I
Course Number: SET 55
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Skilled Labor; Layperson
Academic Credits: 2.0 (Semester)
C.E.U.: 2.0
Duration: 16.0 weeks
Contact Hours: 4.0
Course Fee: Resident: $5.00 Non Resident: $204.00
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Introduction to Solar Energy; Materials; Passive Solar Systems; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Special Studies
Course Number: SET 95
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Academic Credits: 2.0 (Semester)
C.E.U.: 2.0
Duration: 16.0 weeks
Contact Hours: 4.0
Course Fee: Resident: $5.00 Non Resident: $102.00
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Materials; Passive Solar Systems; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Remodeling II
Course Number: SET 56
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor
Academic Credits: 2.0 (Semester)
C.E.U.: 2.0
Duration: 16.0 weeks
Contact Hours: 4.0
Course Fee: Resident: $5.00 Non Resident: $102.00
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Materials; Passive Solar Systems; Plumbing Techniques; Sheet Metal Techniques; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Technology and Fabrication I
Course Number: SET 51
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor
Academic Credits: 4.0 (Semester)
C.E.U.: 4.0
Duration: 16.0 weeks
Contact Hours: 6.0
Course Fee: Resident: $5.00 Non Resident: $204.00
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Introduction to Solar Energy; Materials; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance

Solar Technology and Fabrication II
Course Number: SET 52
Instructor: Burton, David (408)425-6452
Department: Solar Energy
Program: Solar Energy Technology
Student Level: All Levels; Professional; Skilled Labor
Academic Credits: 4.0 (Semester)
C.E.U.: 4.0
Duration: 16.0 weeks
Contact Hours: 6.0
Course Fee: Resident: $5.00 Non Resident: $204.00
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Introduction to Solar Energy; Materials; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance

CERRITOS COLLEGE
11110 Alondra Boulevard
Norwalk, CA 90650
(213)860-2451 (001161)

Tuition (Full Time):
Resident: $0.00

Solar Related Courses
Solar Heating and Design
Course Number: Solar II
Instructor: Hartman, Claude
(213)860-2451 EXT.316
Student Level: College Junior/Senior
Academic Credits: 3.0 (Semester)
C.E.U.: 3.0
Duration: 18.0 weeks
Contact Hours: 3.0
Course Fee: Resident: $0.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Materials; Plumbing Techniques; Process Heat; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Introduction to Solar Energy

Solar Heating Installation
Course Number: Solar I
Instructor: Hartman, Claude
(213)880-2451 EXT.316
Department: Earth Science
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: 18.0 weeks
Contact Hours: 3.0
Course Fee: Resident: $0.00
Prerequisites: No
Topics Covered Extensively: Introduction to Solar Energy; Passive Solar Systems; Plumbing Techniques; Solar Systems Design

CERRO COSO COMMUNITY COLLEGE
College Heights Boulevard
Ridgecrest, CA 93555
(714)375-5001 (010111)

Solar Curriculum
Air Conditioning and Refrigeration, Solar Option
Degree: Associate
Program: Air Conditioning and Refrigeration
Contact: Takacs, Robert L.
(714)375-5001 EXT.65

Program Training:
Solar Energy Education; Heating, Ventilation, Air Conditioning-Solar; Payment; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Collectors and Energy Storage
Course Number: AC/RP 56
Instructor: Takacs, Robert L.
(714)375-5001 EXT.65
Department: Air Conditioning and Refrigeration
Program: Air Conditioning and Refrigeration
Student Level: College Freshman/Sophomore

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California

Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 5.0
Contact Hours: 90.0
Classroom: 36.0
Lab: 54.0
Offered: Day; Evening; Weekend
Course Fee: Non Resident: $153.00
Prerequisites: Yes

Economics, Codes, Legal, Consumerism
Course Number: AC/RF 64
Instructor: Takacs, Robert L.
(714)437-5001 EXT.55
Department: Air Conditioning and Refrigeration
Program: Air Conditioning and Refrigeration, Solar Option
Student Level: College Freshman/ Sophomore, Professional
Academic Credits: 2.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 5.0
Contact Hours: 36.0
Classroom: 36.0
Offered: Day; Evening; Weekend
Course Fee: Non Resident: $102.00
Prerequisites: Yes

Introduction to Solar Energy
Course Number: AC/RF 58
Instructor: Takacs, Robert L.
(714)437-5001 EXT.55
Department: Air Conditioning and Refrigeration
Program: Air Conditioning and Refrigeration, Solar Option
Student Level: College Freshman/ Sophomore, Professional
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 5.0
Contact Hours: 90.0
Classroom: 36.0
Lab: 54.0
Offered: Day; Evening; Weekend
Course Fee: Non Resident: $102.00
Prerequisites: Yes

Non-Residential Applications and Future Technology
Course Number: AC/RF 62
Instructor: Takacs, Robert L.
(714)437-5001 EXT.55
Department: Air Conditioning and Refrigeration
Program: Air Conditioning and Refrigeration, Solar Option
Student Level: College Freshman/ Sophomore, Professional
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 5.0
Contact Hours: 90.0
Classroom: 36.0
Lab: 54.0
Offered: Day; Evening; Weekend
Course Fee: Non Resident: $153.00
Prerequisites: Yes

CHAFFEY COLLEGE
5885 Haven Ave.
Alta Loma, CA 91701
(714)987-1737

Solar Curriculum
Solar Technology
Degree: Associate
Contact: Hunt, William D.
Program Training: Solar Technology
Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Blueprint Reading
Course Number: ST 524
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 2.0
Duration: No. of weeks: 15.0
Hrs. per week: 4.0
Contact Hours: 60.0
Classroom: 15.0
Lab: 45.0

Introduction to Solar Technology
Course Number: ST 500
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 4.0
Duration: No. of weeks: 15.0
Hrs. per week: 4.0
Contact Hours: 60.0
Classroom: 60.0
Prerequisites: No
Topics Covered Extensively: Alternate Energy Sources; Bioconversion; Energy Conservation; Ocean Systems; Wind Energy Conversion Systems

Solar Air Systems
Course Number: ST 504
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 2.0
Duration: No. of weeks: 15.0
Hrs. per week: 6.0
Contact Hours: 90.0
Classroom: 30.0
Lab: 60.0
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Solar Cooling; Solar Heating; Solar Systems Installation/Maintenance

Solar Energy Seminar
Course Number: ST 526
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 2.0
Duration: No. of weeks: 15.0
Hrs. per week: 2.0
Contact Hours: 30.0
Classroom: 30.0
Prerequisites: Yes

Solar Heat Transfer
Course Number: ST 520
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 4.0
Duration: No. of weeks: 15.0
Hrs. per week: 4.0
Contact Hours: 60.0
Classroom: 60.0
Prerequisites: Yes
Topics Covered Extensively: Heat and Energy Transfer

Solar Hydronic Systems
Course Number: ST 502
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 3.0
Duration: No. of weeks: 15.0
Hrs. per week: 6.0
Contact Hours: 90.0
Classroom: 30.0
Lab: 60.0

Operational Diagnosis
Course Number: AC/RF 59
Instructor: Takacs, Robert L.
(714)437-5001 EXT.55
Department: Air Conditioning and Refrigeration, Solar Option
Program: Air Conditioning and Refrigeration, Solar Option
Student Level: College Freshman/ Sophomore, Professional
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 5.0
Contact Hours: 90.0
Classroom: 36.0
Lab: 54.0
Offered: Day; Evening; Weekend
Course Fee: Non Resident: $153.00
Prerequisites: Yes

Solar Sizing, Design and Retrofit
Course Number: AC/RF 57
Instructor: Takacs, Robert L.
(714)437-5001 EXT.55
Department: Air Conditioning and Refrigeration, Solar Option
Program: Air Conditioning and Refrigeration, Solar Option
Student Level: College Freshman/ Sophomore, Professional
Academic Credits: 2.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 2.0
Contact Hours: 36.0
Classroom: 36.0
Offered: Day; Evening; Weekend
Course Fee: Non Resident: $102.00
Prerequisites: Yes

Technical Survey of Energy Sources
Course Number: AC/RF 63
Instructor: Takacs, Robert L.
(714)437-5001 EXT.55
Department: Air Conditioning and Refrigeration, Solar Option
Program: Air Conditioning and Refrigeration, Solar Option
Student Level: College Freshman/ Sophomore, Professional
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 20.0
Hrs. per week: 2.0
Contact Hours: 90.0
Classroom: 36.0
Offered: Day; Evening; Weekend
Course Fee: Non Resident: $120.00
Prerequisites: Yes

Solar Technical Training
Air Conditioning and Refrigeration, Solar Option
Degree: Certificate
Contact: Takacs, Robert L.
(714)437-5001 EXT.55
Program Training: Solar Energy Education; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization; Do-It-Yourself/Home Installation
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Plumbing Techniques; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Installation/Maintenance

Solar Sizing
Course Number: ST 522
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 4.0
Duration: No. of weeks: 15.0 Hrs. per week: 4.0
Contact Hours: 60.0 Classroom: 60.0
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Design

Solar Technical Training
Solar Technology
Degree: Certificate
Contact: Hunt, William D.
Program Training: Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Introduction to Solar Technology
Course Number: ST 500
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 4.0
Duration: No. of weeks: 15.0 Hrs. per week: 4.0
Contact Hours: 60.0 Classroom: 60.0
Prerequisites: No
Topics Covered Extensively: Alternate Energy Sources; Bioconversion; Energy Conservation; Ocean Systems; Wind Energy Conversion Systems

Solar Air Systems
Course Number: ST 504
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 3.0
Duration: No. of weeks: 15.0 Hrs. per week: 6.0
Contact Hours: 90.0 Classroom: 30.0 Lab: 60.0
Prerequisites: Yes
Topics Covered Extensively: Components-Solar: Energy Storage Systems; Solar Cooling; Solar Heating; Solar Systems Installation/Maintenance

Solar Hydraclic Systems
Course Number: ST 502
Instructor: Hunt, William D.
Program: Solar Technology
Academic Credits: 3.0
Duration: No. of weeks: 15.0 Hrs. per week: 6.0
Contact Hours: 90.0 Classroom: 30.0 Lab: 60.0
Prerequisites: Yes
Topics Covered Extensively: Components-Solar: Energy Storage Systems; Plumbing Techniques; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Installation/Maintenance

COLLEGE OF THE REDWOODS
Eureka, CA 95501
(707)443-8411

Solar Related Courses
Solar Heating A *
Course Number: ENSC 20A

Instructor: Mills, David
Department: Environmental Science
Academic Credits: 1.0
Duration: No. of weeks: 12.0 Hrs. per week: 1.0
Contact Hours: 12.0 Classrooms: 12.0

Solar Heating B *
Course Number: ENSC 20B
Instructor: Mills, David
Department: Environmental Science
Student Level: All Levels
Academic Credits: 1.0 Duration: No. of weeks: 12.0 Hrs. per week: 1.0
Contact Hours: 12.0 Classrooms: 12.0

Solar Heating C *
Course Number: ENSC 20C
Instructor: Mills, David
Department: Environmental Science
Student Level: All Levels
Academic Credits: 1.0
Duration: No. of weeks: 12.0 Hrs. per week: 1.0
Contact Hours: 12.0 Classrooms: 12.0

COSUMNES RIVER COLLEGE
8401 Center Parkway
Sacramento, CA 95823
(916)421-1000

Curriculum with Solar Study
Solar and Alternate Energy Systems
Degree: Associate, Certificate
Department: Environmental Design
Contact: House, Harold
Program Training: Architecture-Solar Specialization; Solar System Installation/Design/Installation; Do-It-Yourself/ Home Installation

Program and Curriculum Related Courses
Alternate Energy Systems
Course Number: ED 47
Instructor: House, Harold
Department: Environmental Design

Introduction to Solar Energy Systems
Course Number: ED 31
Instructor: House, Harold
Department: Design
Program: Solar and Alternate Energy Systems
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 ( Semester )
Duration: No. of weeks: 18.0 Hrs. per week: 4.0
Contact Hours: 72.0 Classroom: 66.0 Field Trips: 6.0
Prerequisites: Yes
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Introduction to Solar Energy; Passive Solar Systems; Solar Home Construction

Residential Energy Conservation
Course Number: ED 46
Instructor: House, Harold
Department: Environmental Design
Program: Solar and Alternate Energy Systems
Student Level: College Freshman/Sophomore
Academic Credits: 1.5 ( Semester )
Duration: No. of weeks: 8.0 Hrs. per week: 1.5
Contact Hours: 12.0 Classroom: 12.0 Offered: Day, Evening
Prerequisites: No
Topics Covered Extensively: Energy Conservation; Materials; Solar Home Construction

Solar Energy Appliances Construction and Installation
Course Number: ED 71
Instructor: House, Harold
Department: Environmental Design
Program: Solar and Alternate Energy Systems
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 ( Semester )
Duration: No. of weeks: 16.0 Hrs. per week: 5.0
Contact Hours: 80.0 Classroom: 48.0 Workshop: 48.0
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Materials; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Design; Solar Systems Installation/Maintenance

Solar Heated Water Systems
Course Number: ED 32
Instructor: House, Harold
Department: Environmental Design
California

Program: Solar and Alternate Energy Systems
Student Level: College Freshman/Sophomore; Skilled Labor; Layperson
Academic Credits: 2.0 (Semester)
C.E.U.'s: 2.0
Duration: No. of weeks: 16.0 Hrs. per week: 4.0
Contact Hours: 64.0
Classroom: 16.0
Workshop: 48.0
Offered: Day; Evening
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Systems Design; Solar Systems Installation/Maintenance

CUESTA COLLEGE
San Luis Obispo, CA 93406
(805)544-2943

Solar Related Courses
Application of Solar Energy Systems
Course Number: CT 60
Instructor: Legomarsino, Peter (805)543-2943
Department: Construction Technology
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 18.0 Hrs. per week: 6.0
Contact Hours: 108.0
Classroom: 54.0
Lab: 54.0
Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems: Introduction to Solar Energy; Components-Solar; Solar Domestic Hot Water; Solar Heating; Solar Cooling

DE ANZA COLLEGE
Cupertino, CA 95014
(408)996-4567

Solar Related Courses
Design of Solar Energy Systems - Heating and Cooling A
Course Number: 379A
Instructor: Wedel, R. (408)849-4411
Department: Engineering
Student Level: All Levels
Academic Credits: 2.0
Duration: No. of weeks: 12.0 Hrs. per week: 2.0
Contact Hours: 24.0
Classroom: 24.0

Design of Solar Energy Systems - Heating and Cooling B
Course Number: 379B
Instructor: Wedel, R. (408)849-4411
Department: Engineering
Student Level: All Levels
Academic Credits: 2.0
Duration: No. of weeks: 12.0 Hrs. per week: 2.0
Contact Hours: 24.0
Classroom: 24.0
Topics Covered Extensively: Solar Marketing/Economic Analysis; Solar Systems Design

FRESNO CITY COLLEGE
1101 E. University
Fresno, CA 93704
(209)442-4600

Tuition (Full Time):
Resident: $2.00 Non Resident: $300.00

Curriculum with Solar Study

Department: Engineering
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 12.0 Hrs. per week: 3.0
Contact Hours: 36.0
Classroom: 18.0
Lab: 18.0

FRESNO CITY COLLEGE
1101 E. University
Fresno, CA 93704
(209)442-4600

Program Training:
Heating, Ventilation, Air Conditioning-Solar Specialization

Program and Curriculum Related Courses
Solar Systems
Course Number: AC 55
Instructor: Wash, Dennis C. (209)442-4650 EXT 8523
Department: Technical and Industrial
Program: Heating, Ventilation, Air Conditioning
Student Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0 Hrs. per week: 4.0
Contact Hours: 72.0
Classroom: 36.0
Lab: 36.0
Offered: Day
Course Fee: Resident: $2.00 Non Resident: $300.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Plumbing Techniques

GAVILAN COLLEGE
5055 Santa Teresa Boulevard
Gilroy, CA 95020
(408)847-1400

Solar Related Courses
Principles of Solar Energy System Installation
Course Number: 68A
Instructor: Hanson, John
Department: Occupational Education
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 12.0 Hrs. per week: 5.0
Contact Hours: 60.0
Classroom: 24.0
Lab: 36.0
Prerequisites: No
Topics Covered Extensively: Components-Solar; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Marketing/Economic Analysis; Solar Swimming Pool Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Heating Systems
Course Number: 68B
Instructor: Hanson, John
Department: Occupational Education
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 12.0 Hrs. per week: 5.0
Contact Hours: 60.0
Classroom: 24.0
Lab: 36.0
Prerequisites: No

DE ANZA COLLEGE
Cupertino, CA 95014
(408)986-4567

Solar Related Courses
Design of Solar Energy Systems - Heating and Cooling A
Course Number: 379A
Instructor: Wedel, R. (408)849-4411
Department: Engineering
Student Level: All Levels
Academic Credits: 2.0
Duration: No. of weeks: 12.0 Hrs. per week: 2.0
Contact Hours: 24.0
Classroom: 24.0
Topics Covered Extensively: Solar Marketing/Economic Analysis; Solar Systems Design

FRESNO CITY COLLEGE
1101 E. University
Fresno, CA 93704
(209)442-4600

Program Training:
Heating, Ventilation, Air Conditioning-Solar Specialization

Program and Curriculum Related Courses
Solar Systems
Course Number: AC 55
Instructor: Wash, Dennis C. (209)442-4650 EXT 8523
Department: Technical and Industrial
Program: Heating, Ventilation, Air Conditioning
Student Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0 Hrs. per week: 4.0
Contact Hours: 72.0
Classroom: 36.0
Lab: 36.0
Offered: Day
Course Fee: Resident: $2.00 Non Resident: $300.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Plumbing Techniques

HARBOR OCCUPATIONAL CENTER
740 North Pacific Avenue
San Pedro, CA 90731
(213)547-5551

Tuition (Full Time):
Resident: $30.50

Solar Technical Training
Solar Energy
Degree: Certificate
Department: Refrigeration and Air Conditioning
Contact: Rohr, Gene
Program Training: Architecture-Solar Specialization; Solar Energy Education; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization; Plumbing-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Solar Energy
Course Number: 29-27-21
Instructor: Knuth, R. A.
Program: Solar Energy
Student Level: All Levels; Skilled Labor; Layperson
Academic Credits: 5.0 (Quinnmester )
G.E.U.'s: 5.0
Duration: No. of weeks: 19.0
Hrs. per week: 15.0
Contact Hours: 218.0
Classroom: 90.0
Workshop: 186.0
Field Trips: 6.0
Offered: Day
Course Fee: Resident: $30.50
Prerequisites: No
Topics Covered Extensively: Components-Solar;
Energy Storage Systems; Heat and Energy Transfer;
Introduction to Solar Energy; Plumbing Techniques; Solar
Domestic Hot Water; Solar Heating; Solar Home
Construction; Solar Marketing/Economic Analysis; Solar
Systems Design; Solar Systems Installation/Maintenance;
Solar Systems Testing/Evaluation

LOS ANGELES TRADE TECHNICAL COLLEGE
400 West Washington Boulevard
Los Angeles, CA 90015
(213)746-0800

Tuition (Full Time):
Resident: $0.00 Non Resident: $0.00

Curriculum with Solar Study
Air Conditioning and Refrigeration Technology
Degree: Associate, Certificate
Air Conditioning and Refrigeration Technology
Program: Mechanical; Electrical
Contact: Alarich, Walter
(213)746-0800 EXT.267

Program: Heating, Ventilation, Air
Conditioning-Solar Specialization

Program and Curriculum Related Courses
Energy Management in Buildings
Course Number: 189
Instructor: Adams, N.
(213)746-0800 EXT.273

Department: Mechanical; Electrical
Program: Air Conditioning and Refrigeration Technology
Student Level: College Freshman/ Sophomore; Professional; Skilled Labor
Academic Credits: 3.0 (Semester )
Duration: No. of weeks: 18.0
Hrs. per week: 3.0
Contact Hours: 54.0
Classroom: 54.0
Offered: Evening
Course Fee: Resident: $0.00
Non Resident: $0.00
Prerequisites: Yes
Topics Covered Extensively: Energy Conservation;
Heat and Energy Transfer

Solar Energy
Course Number: 188
Instructor: Adams, N.
(213)746-0800 EXT.273

Program: Mechanical; Electrical
Program: Air Conditioning and Refrigeration Technology
Student Level: College Freshman/ Sophomore; Professional; Skilled Labor
Academic Credits: 3.0 (Semester )
Duration: No. of weeks: 18.0
Hrs. per week: 3.0
Contact Hours: 54.0
Classroom: 54.0

Offered: Evening
Course Fee: Resident: $0.00
Non Resident: $0.00
Prerequisites: Yes
Topics Covered Extensively: Components-Solar;
Energy Storage Systems; Heat and Energy Transfer;
Introduction to Solar Energy; Plumbing Techniques; Solar
Domestic Hot Water; Solar Heating; Solar Home
Construction; Solar Marketing/Economic Analysis; Solar
Systems Design; Solar Systems Installation/Maintenance;
Solar Systems Testing/Evaluation

MODESTO JUNIOR COLLEGE
Modesto, CA 95350
(209)526-2000

Solar Technical Training
External - Project Sunrise *
Department: Physical Science; Agriculture;
Community Services
Contact: Wilson, E. William
(209)526-2000

Program and Curriculum Related Courses
Solar Energy Applications *
Course Number: PS 368
Instructor: Wilson, E. William
(209)526-2000

Department: Engineering, Physical Science and Mathematics
Program: External - Project Sunrise *
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 42.0
Lab: 6.0

Topics Covered Extensively: Alternate Energy Sources;
Energy Conservation; Energy Storage Systems;
Solar Marketing/Economic Analysis; Passive Solar
Systems; Components-Solar; Solar Home Construction;
Solar Domestic Hot Water; Solar Heating; Solar Cooling;
Wind Energy Conversion Systems

MOUNT SAN ANTONIO COLLEGE
Walnut, CA 91789
(714)594-2811

Curriculum with Solar Study
Air Conditioning, Heating, and Ventilating *
Degree: Associate
Air Conditioning, Heating, and Refrigeration
Department: Electronics
Contact: Dillon, Clifford
(714)594-5611

Program: Electricity-Solar Specialization;
Solar Technology-Instrumentation, Controls, Design;
Maintenance; Solar System Installation-Residential; Solar
System Installation-Industrial/Commercial; Plumbing-Solar
Specialization

Program and Curriculum Related Courses
Solar and Alternate Energy Sources *
Course Number: 70
Instructor: Bormann, Jay
(714)594-5611

Department: Electronics
Program: Air Conditioning, Heating, and Ventilating *
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 54.0
Classroom: 54.0
Lab: 54.0

Topics Covered Extensively: Alternate Energy Sources;
Appropriate Technology; Energy Conservation;
Heat and Energy Transfer; Introduction to Solar Energy;
Solar Marketing/Economic Analysis; Plumbing Techniques;
Components-Solar; Solar Systems Installation;
Maintenance; Solar Systems Testing/Evaluation; Solar
Heating

Solar Energy Systems Installation *
Course Number: 71/71L
Instructor: Bormann, Jay
(714)594-5611

Department: Electronics
Program: Air Conditioning, Heating, and Ventilating *
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 108.0
Classroom: 54.0
Lab: 54.0

Topics Covered Extensively: Solar Systems Design;
Solar Systems Installation/Maintenance; Solar Systems
Testing/Evaluation

MONTICELLO COLLEGE
21400 Highway 79
San Jacinto, CA 92538
(714)654-7321

Curriculum with Solar Study
Solar Collector Design
Course Number: Engr 6
Instructor: Caldwell, Benton
(714)654-7321

Non Resident: $700.00

Program Related Courses
Solar Collector Design

Program: Solar Collector Fabrication *
**California**

**Academic Credits:** 3.0 (Semester)
**Duration:** No. of weeks: 18.0
**Contact Hours:** 54.0
**Classroom:** 54.0
**Offered:** Evening

**Course Fee:** Non Resident: $140.00

**Prerequisites:** Yes
**Topics Covered Extensively:** Heat and Energy Transfer; Hybrid Systems; Materials; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

### Solar Energy Applications

**Course Number:** Engr 4
**Instructor:** Caldwell, Benton
(714)654-7321

**Department:** Vocational Education
**Student Level:** College Freshman/ Sophomore, Skilled Labor
**Contact Hours:** 54.0
**Classroom:** 54.0
**Offered:** Evening

**Course Fee:** Non Resident: $140.00

**Prerequisites:** No
**Topics Covered Extensively:** Distributed Solar Power Systems; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; introduction to Solar Energy; Materials; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Home Construction

### Solar System Design

**Course Number:** Engr 7
**Instructor:** Caldwell, Benton
(714)654-7321

**Department:** Vocational Education
**Student Level:** College Freshman/ Sophomore, Skilled Labor
**Contact Hours:** 54.0
**Classroom:** 54.0
**Offered:** Evening

**Course Fee:** Non Resident: $140.00

**Prerequisites:** No
**Topics Covered Extensively:** Centralized Solar Power Systems; Distributed Solar Power Systems; Energy Storage Systems; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; introduction to Solar Energy; Materials; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Home Construction

## ORANGE COAST COLLEGE

2701 Fairview Road
Costa Mesa, CA 92628
(714)558-5651

### Curriculum with Solar Study

**Power Engineering**

**Degree:** Certificate, Associate
**Department:** Power Engineering, Air Conditioning
**Contact:** Abernathy, Bill
(714)558-5812

**Program Training:** Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential

### Program and Curriculum Related Courses

**Solar Heating and Air Conditioning**

**Course Number:** Solar 115
**Instructor:** Abernathy, Bill
(714)558-5812
**Department:** Technology

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**San Diego City College**

1313 12th Avenue
San Diego, CA 92101
(619)238-1181

### Curriculum with Solar Study

**Air Conditioning, Heating, and Refrigeration Technology**

**Degree:** Associate, Certificate
**Contact:** Warnock, Charles
(619)238-1181

**Program Training:** Mechanical; Electrical; Contracting-Solar Specialization; Heating; Ventilation; Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance

### Program and Curriculum Related Courses

**Solar Heating and Air Conditioning**

**Course Number:** Solar 115
**Instructor:** Abernathy, Bill
(714)558-5812

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**San Diego Community College - Evening College**

San Diego, CA 92101
(714)238-1181

### Solar Technical Training

**Air Conditioning, Heating, Refrigeration, and Solar Technology**

**Degree:** Certificate, Associate
**Contact:** Bill, Lorene
(714)238-1181

**Program:** Air Conditioning, Heating, Refrigeration, Solar Technology

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**San Jose City College**

2100 Moorpark Avenue
San Jose, CA 95128
(408)298-2181

### Tuition (Full Time):

Resident: $5.00 Non Resident: $840.00
Solar Technical Training

Solar Technology

Degree: Associate, Certificate
Science

Department: Natural and Applied Science; Air Conditioning and Refrigeration

Contact: Haley, J. P.
(408)239-2181 EXT.417

Program Training: Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Architecture-Solar Specialization; Solar Energy Education; Electricity-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses

Solar Energy, Industrial Applications

Course Number: SOLAR 114
Instructor: Haley, J. P.
(408)239-2181 EXT.417

Program: Solar Technology

Student Level: Professional; Layperson; Skilled Labor; College

Freshman/Sophomore

C.E.U.'s: 0.3

Duration: No. of weeks: 17.0

Hours per week: 6.0

Contact Hours: 102.0

Classroom: 34.0

Lab: 68.0

Offered: Day, Evening

Course Fee: Resident: $5.00

Non Resident: $168.00

Prerequisites: Yes

Topics Covered Extensively: Alternate Energy Sources; Energy Storage Systems; Greenhouse Techniques; Heat and Energy Transfer

Solar Energy, Residential Applications

Course Number: SOLAR 113
Instructor: Haley, J. P.
(408)239-2181 EXT.417

Program: Solar Technology

Student Level: Professional; Layperson; Skilled Labor; College Freshman/Sophomore

C.E.U.'s: 3.0

Duration: No. of weeks: 17.0

Hours per week: 6.0

Contact Hours: 102.0

Classroom: 34.0

Lab: 68.0

Offered: Day, Evening

Course Fee: Resident: $5.00

Non Resident: $168.00

Prerequisites: Yes

Topics Covered Extensively: Components-Solar; Introduction to Solar Energy

THE OWNER BUILDER CENTER

1824 Fourth Street
Berkeley, CA 94710
(415)848-5951

Tuition (Full Time):
Resident: $150.00

Solar Related Courses

Advanced Housebuilding

Instructor: Roarkind, Robert
(415)848-5950

Student Level: Layperson

Duration: No. of weeks: 16.0

Hours per week: 3.0

Contact Hours: 48.0

Classroom: 48.0

Offered: Evening

Course Fee: Resident: $200.00

Non Resident: $200.00

Prerequisites: No

Housebuilding Course

Instructor: Roarkind, Robert
(415)848-5950

Student Level: Owner Builder Center

Department: Solar Technology

Contact Hours: 180.0

Classroom: 90.0

Lab: 90.0

Offered: Day; Evening; Weekend

Course Fee: Resident: $600.00

Prerequisites: No

Residence Housebuilding

Instructor: Roarkind, Robert
(415)848-5951

Student Level: Layperson

Contact Hours: 7.0

Classroom: 7.0

Offered: Day; Weekend

Course Fee: Resident: $25.00

Prerequisites: No

Seminar: Passive Solar Design

Instructor: Roarkind, Robert
(415)848-5951

Student Level: Layperson

Contact Hours: 7.0

Classroom: 7.0

Seminar: 7.0

Offered: Day; Weekend

Course Fee: Resident: $125.00

Seminar: Solar Hot Water Heating Systems

Instructor: Roarkind, Robert
(415)848-5951

Student Level: Layperson

Contact Hours: 7.0

Seminar: 7.0

Offered: Day; Weekend

Course Fee: Resident: $125.00

Seminar: The Solar Tax Credits and Energy Efficiency in Buildings

Instructor: Roarkind, Robert
(415)848-5951

Student Level: Layperson

Contact Hours: 7.0

Seminar: 7.0

Offered: Day; Weekend

Course Fee: Resident: $25.00

Prerequisites: No

Colorado

AIMS COMMUNITY COLLEGE
P O Box 69
Greeley, CO 80631
(303)353-8008

Tuition (Full Time):
Resident: $80.00 Non Resident: $120.00

Solar Related Courses

Introduction to the Principles of Solar Energy

Course Number: SCI 106
Instructor: Compentine, Frank
(303)353-8008 EXT.252

Department: Science, Mathematics

Student Level: College Freshman/Sophomore

Academic Credits: 3.0 (Quarter)

Hours: 10.0

Contact Hours: 10.0

Classroom: 20.0

Field Trips: 10.0

Offered: Evening

Course Fee: Resident: $10.00

Non Resident: $20.00

Prerequisites: No

Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Solar Home Construction; Solar Systems Design

Solar Air Heater

Course Number: VTR 116A
Instructor: Troyn, Varn
(303)454-3618

Student Level: All Levels; Layperson

Academic Credits: 1.0 (Quarter)

Contact Hours: 10.0

Seminar: 10.0

Offered: Evening; Weekend

Course Fee: Resident: $6.00

Non Resident: $32.00

Prerequisites: No

Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Introduction to Solar Energy; Materials; Solar Heating; Solar Systems Installation/Maintenance

Solar Water Collector

Course Number: VTR 117A
Instructor: Troyn, Varn
(303)454-3618

Student Level: All Levels; Layperson

Academic Credits: 1.0 (Quarter)

Contact Hours: 10.0

Seminar: 10.0

Offered: Evening; Weekend

Course Fee: Resident: $6.00

Non Resident: $32.00

Prerequisites: No

Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Introduction to Solar Energy; Materials; Solar Heating; Solar Systems Installation/Maintenance

COLORADO MOUNTAIN COLLEGE
WEST CAMPUS
Glenwood Springs, CO 81601
(303)945-7481

Solar Related Courses

Solar Architecture

Course Number: BLO 204 A3-5
Department: General Studies

Student Level: All Levels

Academic Credits: 5.0

C.E.U.'s: 5.0
Colorado Technical College
655 Elton Drive
Colorado Springs, CO 80907
(303)598-0200
(010148)

Tuition (Full Time):
Resident: $755.00 Non Resident: $875.00

Solar Engineering Technology
Degree: Bachelor, Associate
Program: Applied Science
Contact: Christensen, Edward
(303)598-0200
Program Training:
Engineering-Solar Specialization; Heating, Ventilation, Air Conditioning-Solar Specialization;
Solar System Installation-Residential; Solar Technology- Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Associate Seminar
Course Number: SOL 250
Instructor: Mueller, Donald
(303)598-0200

Department: Solar Engineering Technology
Program: Solar Engineering Technology
Student Level: College Freshman/Sophomore
Academic Credits: 1.0 (Quarter)
Duration: No. of weeks: 11.0
Hrs. per week: 1.0
Contact Hours: 11.0
Semester: 11.0
Offered: Day
Prerequisites: Yes

Directed Practice
Course Number: SOL 289
Instructor: Christensen, Edward
(303)598-0200

Department: Solar Engineering Technology
Program: Solar Engineering Technology
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 11.0
Hrs. per week: 3.0
Contact Hours: 33.0
Classroom: 33.0
Offered: Day, Evening
Prerequisites: Yes
Topics Covered Extensively: Introduction to Solar Energy
Solar Science II

Course Number: SOL 404
Instructor: Mueller, Donald
Department: Solar Engineering Technology
Program: Solar Engineering Technology
Student Level: College Junior/Senior; Professional
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 11.0
Classroom: 30.0
Lab: 30.0
Offered: Evening
Course Fee: Resident: $48.60
Prerequisites: Yes

Topics Covered Extensively: Heat and Energy Transfer; Solar Heating; Solar Systems Design

COMMUNITY COLLEGE OF DENVER, RED ROCKS CAMPUS
12600 West 6th Avenue
Golden, CO 80401
(303)988-6160

Tuition (Full Time):
Resident: $194.50 Non Resident: $876.50

Solar Curriculum
Solar Energy-Installation and Maintenance
Degree: Associate
Department: Industrial Occupations
Contact: Hilton, Craig
Program Training:
- Architecture-Solar Specialization; Solar Energy Education; Solar Energy Administration/Policy; Scientific Research and Development in Solar Energy; Engineering-Solar Specialization; General
- Contracting-Specialization in Solar Design/Installation
- Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Advanced Passive Solar Systems
Course Number: SOM 240
Instructor: Tarnove, Steve
Department: Industrial Occupations, Building Machine Trades
Program: Solar Energy-Installation and Maintenance
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Contact Hours: 60.0
Classroom: 45.0
Lab: 15.0
Offered: Evening
Course Fee: Resident: $52.00 Non Resident: $232.00
Prerequisites: Yes

Topics Covered Extensively: Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Materials; Passive Solar Systems; Solar Heating; Solar Home Construction; Solar Systems Design; Solar Marketing/Economic Analysis

Advanced Solar Controls
Course Number: SOM 236
Instructor: Klima, John
Department: Industrial Occupations
Program: Solar Energy-Installation and Maintenance
Course Number: SOM 238
Instructor: Hilton, Robert
Program: Solar Energy-Installation and Maintenance
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 15.0
Contact Hours: 60.0
Classroom: 30.0
Lab: 30.0
Offered: Evening
Course Fee: Resident: $70.00 Non Resident: $310.00
Prerequisites: Yes

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Solar Systems Design

Agricultural Applications of Renewable Energy Resources
Course Number: SOM 238
Instructor: Park, M. A. S.
Department: Industrial Occupations
Program: Solar Energy-Installation and Maintenance
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 15.0
Contact Hours: 60.0
Classroom: 30.0
Lab: 16.0
Offered: Evening
Course Fee: Resident: $48.60
Prerequisites: Yes

Topics Covered Extensively: Components-Solar; Materials; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Basic Solar Controls
Course Number: SOM 235
Instructor: Klima, John
Department: Industrial Occupations
Program: Solar Energy-Installation and Maintenance
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Contact Hours: 60.0
Classroom: 15.0
Lab: 45.0
Offered: Evening
Course Fee: Resident: $48.60
Prerequisites: No

Topics Covered Extensively: Components-Solar; Materials; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Basic Solar Systems
Course Number: SOM 220
Instructor: Hilton, Craig
Department: Industrial Occupations, Building Construction trades
Program: Solar Energy-Installation and Maintenance
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Contact Hours: 60.0
Classroom: 15.0
Lab: 45.0
Offered: Day; Evening
Course Fee: Resident: $52.00 Non Resident: $232.00
Prerequisites: No

Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Introduction to Solar Energy; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Installation/Maintenance; Solar Home Construction

Blueprint Reading for Construction Trades
Course Number: BTR 126
Instructor: Feister, Clarence
Department: Industrial Occupations
Program: Solar Energy-Installation and Maintenance
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 15.0
Contact Hours: 45.0
Classroom: 23.0
Lab: 22.0
Offered: Day; Evening
Course Fee: Resident: $54.80 Non Resident: $232.20
Prerequisites: No

Topics Covered Extensively: Solar Home Construction

Carpentry for Construction Trades
Course Number: CAR 125
Instructor: Hira, Tim
Department: Industrial Occupations
Program: Solar Energy-Installation and Maintenance
Course Number: CAR 125
Instructor: Hira, Tim
Department: Industrial Occupations
Program: Solar Energy-Installation and Maintenance
Course Number: CAR 125
Instructor: Hira, Tim
Department: Industrial Occupations
Program: Solar Energy-Installation and Maintenance
**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
3.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 4.0

**Contact Hours:**
60.0

**Classroom:**
15.0

**Lab:**
45.0

**Offered:**
Day; Evening

**Course Fee:**
Resident: $52.00
Non Resident: $219.15

**Prerequisites:**
No

**Topics Covered Extensively:** Components-Solar; Solar Home Construction

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**Computer & Calculator Techniques for Solar Energy**

**Course Number:** SOM 260

**Instructor:** Davis, Mary

(303)988-8160 EXT.369

**Department:** Building & Machine Trades

**Program:** Solar Energy-Installation and Maintenance

**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
2.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 2.0

**Contact Hours:**
30.0

**Lab:**
30.0

**Offered:**
Day; Evening

**Course Fee:**
Resident: $35.00
Non Resident: $155.00

**Prerequisites:**
No

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**Sun Energy**

**Course Number:** SOM 249

**Instructor:** Hilton, Craig

(303)988-8160 EXT.369

**Department:** Building & Machine Trades

**Program:** Solar Energy-Installation and Maintenance

**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
4.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 4.5

**Contact Hours:**
68.0

**Classroom:**
45.0

**Lab:**
23.0

**Offered:**
Day; Evening

**Course Fee:**
Resident: $70.00
Non Resident: $310.00

**Prerequisites:**
Yes

**Topics Covered Extensively:** Materials; Passive Solar Systems; Solar Home Construction

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**Greenhouses**

**Course Number:** SOM 245

**Instructor:** Mark, M. A. S.

(303)988-8160 EXT.225

**Department:** Industrial Occupations, Building Machine Trades

**Program:** Solar Energy-Installation and Maintenance

**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
4.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 4.5

**Contact Hours:**
68.0

**Classroom:**
45.0

**Lab:**
23.0

**Offered:**
Evening

**Course Fee:**
Resident: $70.00
Non Resident: $310.00

**Prerequisites:**
Yes

**Topics Covered Extensively:** Greenhouse Techniques; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation; Heat and Energy Transfer; Materials; Solar Systems Design

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**Solar Hot Water Heating - Installation and Maintenance**

**Course Number:** PLU 206

**Instructor:** Hilton, Robert

(303)988-9160

**Department:** Industrial Occupations

**Program:** Solar Energy-Installation and Maintenance

**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
3.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 4.0

**Contact Hours:**
60.0

**Classroom:**
15.0

**Lab:**
10.0

**Offered:**
Day; Evening

**Course Fee:**
Resident: $53.60
Non Resident: $219.15

**Prerequisites:**
Yes

**Topics Covered Extensively:** Plumbing Techniques

---

**Site Built Solar Systems**

**Course Number:** SOM 247

**Instructor:** Hilton, Craig

(303)988-9160 EXT.369

**Department:** Building & Machine Trades

**Program:** Solar Energy-Installation and Maintenance

**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
3.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 4.0

**Contact Hours:**
60.0

**Classroom:**
15.0

**Lab:**
45.0

**Offered:**
Day; Evening

**Course Fee:**
Resident: $52.00
Non Resident: $232.00

**Prerequisites:**
Yes

**Topics Covered Extensively:** Components-Solar; Materials; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

---

**Solar Domestic Hot Water**

**Course Number:** SOM 237

**Instructor:** Haugseth, Larry

(303)988-8160

**Department:** Industrial Occupations

**Program:** Solar Energy-Installation and Maintenance

**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
4.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 4.5

**Contact Hours:**
68.0

**Classroom:**
45.0

**Lab:**
23.0

**Offered:**
Evening

**Course Fee:**
Resident: $64.80
Non Resident: $292.20

**Prerequisites:**
Yes

---

**Solar Engineering Technology I**

**Course Number:** SOM 321

**Instructor:** Haugseth, Larry

(303)988-8160

**Department:** Industrial Occupations

**Program:** Solar Energy-Installation and Maintenance

**Student Level:**
All Levels: Managerial; Professional; Skilled Labor; Layperson

**Academic Credits:**
4.0 (Semester)

**Duration:**
No. of weeks: 15.0
Hrs. per week: 4.5

**Contact Hours:**
68.0

**Classroom:**
45.0

**Lab:**
23.0

**Offered:**
Evening

**Course Fee:**
Resident: $52.00
Non Resident: $232.00

**Prerequisites:**
Yes

**Topics Covered Extensively:** Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Materials; Plumbing Techniques; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th>Instructor</th>
<th>Department</th>
<th>Program</th>
<th>Student Level</th>
<th>Academic Credits</th>
<th>Duration</th>
<th>Contact Hours</th>
<th>Room</th>
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<tr>
<td>Solar Engineering Technology II</td>
<td>SOM 222</td>
<td>Dahl, Mike</td>
<td>Industrial Occupations</td>
<td>Solar Energy-Installation and Maintenance</td>
<td>All Levels; Managerial; Professional; Skilled Labor; Layperson</td>
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<td>SOM 248</td>
<td>Hilton, Craig</td>
<td>Building &amp; Machine Trades</td>
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<td>All Levels; Managerial; Professional; Skilled Labor; Layperson</td>
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<td>SOM 226</td>
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<td>Solar System Estimating and Maintenance Techniques</td>
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<td>SOM 220</td>
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### Program Description
- **Solar Engineering Technology II**
  - Duration: 60.0
  - Program: Solar Engineering-Installation and Maintenance
  - Instructor: Dahl, Mike
  - Contact Hours: 15.0
  - Prerequisites: Yes

- **Solar Greenhouse Construction**
  - Duration: 60.0
  - Program: Solar Energy-Installation and Maintenance
  - Instructor: Hilton, Craig
  - Contact Hours: 15.0
  - Prerequisites: Yes

- **Solar Lab**
  - Duration: 240.0
  - Program: Solar Energy-Installation and Maintenance
  - Instructor: Hilton, Robert
  - Contact Hours: 15.0
  - Prerequisites: Yes

- **Solar Panel Arrays**
  - Duration: 30.0 (Semester)
  - Program: Solar Energy-Installation and Maintenance
  - Instructor: Hilton, Robert
  - Contact Hours: 30.0
  - Prerequisites: Yes

- **Solar System Design and Layout**
  - Duration: 30.0 (Semester)
  - Program: Solar Energy-Installation and Maintenance
  - Instructor: Hilton, Robert
  - Contact Hours: 30.0
  - Prerequisites: Yes

- **Solar System Estimating and Maintenance Techniques**
  - Duration: 30.0 (Semester)
  - Program: Solar Energy-Installation and Maintenance
  - Instructor: Hilton, Robert
  - Contact Hours: 30.0
  - Prerequisites: Yes

- **Water Piping Methods**
  - Duration: 30.0 (Semester)
  - Program: Solar Energy-Installation and Maintenance
  - Instructor: Hilton, Robert
  - Contact Hours: 30.0
  - Prerequisites: Yes

- **Basic Solar Systems**
  - Duration: 30.0 (Semester)
  - Program: Solar Energy-Installation and Maintenance
  - Instructor: Hilton, Robert
  - Contact Hours: 30.0
  - Prerequisites: Yes
**Department:** Industrial Occupations  
**Program:** Building Construction Trades  
**Student Level:** All Levels; Managerial; Professional; Skilled Labor; Layperson  
**Academic Credits:** 3.0 (Semester)  
**Duration:** No. of weeks: 15.0  
**Contact Hours:** 60.0  
**Classroom:** 15.0  
**Lab:** 45.0  
**Offered:** Day; Evening  
**Course Fee:** Resident: $52.00  
**Non Resident: $232.00  
**Prerequisites:**  
**Topics Covered Extensively:** Solar Energy; Solar Heating; Solar Systems Installation/Maintenance; Solar Home Construction  

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Instructor</th>
<th>Credit Hours</th>
<th>Total Fee</th>
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<tr>
<td>DRI 206</td>
<td>Industrial Piping and Utility Consideration</td>
<td>Deaver, Larry</td>
<td>3.0</td>
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<td>DRI 116</td>
<td>Introduction to Architectural Drafting-Frame Construction</td>
<td>Deaver, Larry</td>
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<td>DRC 196</td>
<td>Perspective Drawing</td>
<td>Deaver, Larry</td>
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<td>DRC 200</td>
<td>Site Built Solar Systems</td>
<td>Deaver, Larry</td>
<td>3.0</td>
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<td>DRS 210</td>
<td>Solar Drafting Technical Project</td>
<td>Deaver, Larry</td>
<td>3.0</td>
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**Department:** Industrial Occupations  
**Program:** Building & Machine Trades  
**Student Level:** All Levels; Managerial; Professional; Skilled Labor; Layperson  
**Academic Credits:** 3.0 (Semester)  
**Duration:** No. of weeks: 15.0  
**Contact Hours:** 60.0  
**Classroom:** 15.0  
**Lab:** 45.0  
**Offered:** Day; Evening  
**Course Fee:** Resident: $52.00  
**Non Resident: $232.00  
**Prerequisites:**  
**Topics Covered Extensively:** Solar Energy; Solar Heating; Solar Systems Installation/Maintenance; Solar Home Construction  

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**Department:** Industrial Occupations  
**Program:** Building & Machine Trades  
**Student Level:** All Levels; Managerial; Professional; Skilled Labor; Layperson  
**Academic Credits:** 3.0 (Semester)  
**Duration:** No. of weeks: 15.0  
**Contact Hours:** 60.0  
**Classroom:** 15.0  
**Lab:** 45.0  
**Offered:** Day; Evening  
**Course Fee:** Resident: $52.00  
**Non Resident: $232.00  
**Prerequisites:**  
**Topics Covered Extensively:** Solar Energy; Solar Heating; Solar Systems Installation/Maintenance; Solar Home Construction  

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**Department:** Industrial Occupations  
**Program:** Building & Machine Trades  
**Student Level:** All Levels; Managerial; Professional; Skilled Labor; Layperson  
**Academic Credits:** 3.0 (Semester)  
**Duration:** No. of weeks: 15.0  
**Contact Hours:** 60.0  
**Classroom:** 15.0  
**Lab:** 45.0  
**Offered:** Day; Evening  
**Course Fee:** Resident: $52.00  
**Non Resident: $232.00  
**Prerequisites:**  
**Topics Covered Extensively:** Solar Energy; Solar Heating; Solar Systems Installation/Maintenance; Solar Home Construction  

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Solar Greenhouse Construction
Course Number: SOM 248
Instructor: Hilton, Craig
(303)988-6160 EXT.369
Hilton, Robert
Department: Science & Technology
Program: Passive Solar Energy Drafting & Design
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Accreditation: 6.0 (Semester )
Duration: No. of weeks: 15.0
Hrs. per week: 8.0
Contact Hours: 120.0
Classroom: 120.0
Offered: Day; Evening
Course Fee: Resident: $105.00
Non Resident: $465.00
Prerequisites: Yes
Topics Covered Extensively: Materials; Passive Solar Systems; Solar Home Construction; Solar Systems Design
Solar Technical Training
Degree: Certificate
Department: Industrial Occupations
Contact: Hilton, Craig
Hilton, Robert
(303)988-6161
Program and Curriculum Related Courses
Program: Solar Energy - Installation and Maintenance
Solar Related Courses
Energy Conservation Methods
Course Number: SOM 217
Instructor: Reed, Ken
(303)988-6160 EXT.260
Department: Community Services
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Accreditation: 1.0 (Semester )
Duration: No. of weeks: 1.0
Hrs. per week: 8.0
Contact Hours: 16.0
Classroom: 16.0
Offered: Day; Weekend
Course Fee: Resident: $16.00
Non Resident: $76.00
Prerequisites: No
Topics Covered Extensively: Energy Conservation; Solar Law/Legislation
Introduction to Passive Solar Energy
Course Number: SOM 218
Instructor: Snowden, Will
(303)988-6160 EXT.260
Department: Community Services
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Accreditation: 1.0 (Semester )
Duration: No. of weeks: 1.0
Hrs. per week: 8.0
Contact Hours: 16.0
Classroom: 16.0
Offered: Day; Weekend
Course Fee: Resident: $16.00
Non Resident: $76.00
Prerequisites: No
Topics Covered Extensively: Passive Solar Systems; Solar Law/Legislation
Bricklaying for Solar Energy
Course Number: BRI 125
Instructor: Rudden, Dick
(303)988-6160 EXT.225
Department: Industrial Occupations
Program: Passive Solar Energy Drafting & Design
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Accreditation: 3.0 (Semester )
Duration: No. of weeks: 15.0
Hrs. per week: 4.0
Contact Hours: 60.0
Classroom: 60.0
Lab: 45.0
Offered: Day; Evening
Course Fee: Resident: $52.00
Non Resident: $232.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Materials; Passive Solar Systems; Solar Home Construction
Refrigeration, Air Conditioning, and Heating
Degree: Certificate
Department: Technical Occupations
Contact: White, Croy
(303)672-8218 EXT.239
Program Training: Heating, Ventilation, Air Conditioning-Solar Specialization
Program and Curriculum Related Courses
Refrigeration, Air Conditioning, and Heating
Course Number: TE 738
Instructor: William, John
(303)672-8218 EXT.239
Department: Technical Occupations
Program: Refrigeration, Air Conditioning, and Heating
Student Level: Skilled Labor; Layperson
Duration: No. of weeks: 38.0
Hrs. per week: 30.0
Contact Hours: 1080.0
Classroom: 432.0
Lab: 648.0
Offered: Day; Evening
Prerequisites: No
Topics Covered Extensively: Heat and Energy Transfer; Solar Domestic Hot Water
**MESA COLLEGE**
Box 2647
Grand Junction, CO 81501
(303)248-1476 (001358)

**Solar Technical Training**

**Solar Power**
- Engineering, Continuing Education
- Department: Continuing Education
- Contact: Ramsey, Woodrow
- Program Training: Do-It-Yourself/Home Installation

**Program and Curriculum Related Courses**

**Advanced Solar**
- Instructor: Ramsey, Woodrow
- Department: Engineering, Continuing Education
- Program: Solar Power
- Student Level: Layperson
- Academic Credits: 2.0 (Semester)
- Duration: No. of weeks: 10.0
  - Hrs. per week: 3.0
- Contact Hours:
  - Classroom: 30.0
  - Lab: 20.0
- Offered: Evening
- Course Fee: Resident: $27.00 Non Resident: $27.00

**Beginning Solar Power**
- Instructor: Ramsey, Woodrow
- Department: Engineering, Continuing Education
- Program: Solar Power
- Student Level: Layperson
- C.E.U.'s: 1.0
- Duration: No. of weeks: 10.0
  - Hrs. per week: 3.0
- Contact Hours:
  - Classroom: 30.0
  - Lab: 20.0
- Offered: Evening
- Course Fee: Resident: $27.00 Non Resident: $27.00

**Solar Practicum**
- Instructor: Ramsey, Woodrow
- Department: Engineering, Continuing Education
- Program: Solar Power
- Student Level: Layperson
- Duration: No. of weeks: 10.0
  - Hrs. per week: 3.0
- Contact Hours:
  - Offered: Evening
  - Course Fee: Resident: $27.00 Non Resident: $27.00

**SOLAR CORPORATION**

**Curriculum with Solar Study**

**Architectural Technology - Solar Heating**
- Option: Associate
- Degree: Applied Science
- Department: Construction, Manufacturing
- Contact: Nilsen, E. W.
- Program: Solar Technology-Instrumentation, Controls, Design, Maintenance

**Program and Curriculum Related Courses**

**Architectural Technology - Solar Heating**
- Instructor: Nilsen, E. W.
- Department: Construction and Manufacturing
- Program: Architectural Technology - Solar Heating Option
- Student Level: College Freshman/Sophomore
- Duration: No. of weeks: 30.0
  - Hrs. per week: 12.0
- Contact Hours: 350.0

**Topics Covered Extensively:**
- Energy Storage Systems
- Solar Energy Storage Systems

**Program Related Courses**

**Solaron Solar Center Programs**
- Instructor: Meeker, John G.
- Department: Solaron Corporation
- Program: Solaron Corporation

**SUNY}**

**TRINIDAD STATE JUNIOR COLLEGE**

600 Prospect Street
Trinidad, CO 81082
(303)846-5531 (001368)

**Program:**
- Resident: $130.00 Non Resident: $480.00

**Solar Technical Training**

**Building Trades Shop**
- Degree: Certificate
- Department: Building Trades
- Contact: Furia, Nick
- Brunelli, Roger F.
- Program: Solaron Solar Center Programs

**Program and Curriculum Related Courses**

**Solar Home Construction**
- Course Number: 601
- Instructor: Brunelli, Roger F.
- Department: Building Trades
- Program: Building Trades Shop
- Student Level: All Levels: Professional
- Academic Credits: 3.0 (Quarter)
- Duration: No. of weeks: 10.0
  - Hrs. per week: 3.0
- Contact Hours:
  - Classroom: 30.0
  - Lab: 30.0
- Offered: Evening
- Course Fee: Resident: $11.00 Non Resident: $40.00

**Prerequisites:**
- Yes

**Topics Covered Extensively:**
- Components-Solar; Energy Storage Systems; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

**SUNY**

**Colorado**

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Solar Related Courses

Practical Installation of Solar Heating and Domestic Water Systems

Instructor: Costello, A. J.
Department: Evening-Extension
Student Level: All Levels
Academic Credits: 3.0 (Trimester)
Duration: No. of weeks: 8.0
Hrs. per week: 3.0
Contact Hours: 24.0

Solar Energy Heating Systems

Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Trimester)
Duration: No. of weeks: 8.0
Hrs. per week: 3.0
Contact Hours: 24.0

Topics Covered Extensively:
- Solar Heating
- Solar Domestic Hot Water
- Solar Water Heating
- Solar Heating: Solar Water Heating

Program and Curriculum Related Courses

Solar Energy Fundamentals

Course Number: SH 101 Unit 4
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Components-Solar; Solar Systems Design

Solar Domestic Hot Water Systems

Course Number: SH 102 Unit 4
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Components-Solar; Solar Systems Design

Solar Energy Fundamentals Laboratory

Course Number: SH 101 Unit 6
Program: Solar Technology
Academic Credits: 1.0 (Trimester)
Topics Covered Extensively: Systems-Solar; Solar Systems Design

Solar Hot Water Installation Techniques

Course Number: SH 201 Unit 8
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Components-Solar

Solar Space Heating

Course Number: SH 202 Unit 4
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Components-Solar

Connecticut
MILDEN INSTITUTE INCORPORATED
447 Washington Avenue
North Haven, CT 06418
(203)239-2586
(090580)

Solar Technical Training

Solar Technology

Degree: Certificate
Contact: Milazzo, Pasquale
(203)239-2588
Program: Solar System Installation-Residential; Solar System Installation-Industrial/
Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Do-it-Yourself/Home Installation

Program and Curriculum Related Courses

Building and Construction Fundamentals

Course Number: SH 201 Unit 4
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Passive Solar Systems; Solar Home Construction; Solar Systems Design

Field Work

Course Number: SH 202 Unit 1
Program: Solar Technology
Academic Credits: 8.0 (Trimester)
Topics Covered Extensively: Passive Solar Systems; Solar Domestic Hot Water; Solar Heating: Solar Water Heating

Passive Solar Systems

Course Number: SH 202 Unit 2
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Solar Domestic Hot Water; Solar Heating: Solar Water Heating

Solar Domestic Hot Water Systems

Course Number: SH 102 Unit 4
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Solar Domestic Hot Water Systems Design; Solar Systems Installation/Maintenance

Solar Energy Fundamentals

Course Number: SH 201 Unit 3
Program: Solar Technology
Academic Credits: 3.0 (Trimester)
Topics Covered Extensively: Components-Solar; Solar Systems Design

Tuition (Full Time):
Resident: $337.00 Non Resident: $1,092.00

Program and Curriculum Related Courses

Energy Conservation

Course Number: SE 110
Instructor: Newton, Thomas J.
Department: Math, Science
Program: Solar Technology
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Trimester)
Duration: No. of weeks: 11.0
Hrs. per week: 3.0
Contact Hours: 33.0

Course Fee: Resident: $47.00

Prerequisites:
- Yes
- Topics Covered Extensively: Energy Conservation; Materials

Installation and Maintenance of Solar Systems

Course Number: SE 130
Instructor: Newton, Thomas J.
Department: Math, Science
Program: Solar Technology

SOLAR POWER INSTITUTE
P.O. BOX 450
Meriden, CT 06450
(203)235-2372
(080210)

Tuition (Full Time):
Resident: $540.00 Non Resident: $390.00

Solar Technical Training

National Solar Installation Training Course

Degree: Certificate
Contact: Rocapzione, Gerard
(203)235-2372
Program: National Solar Installation Training Course

Program Training: Architecture-Solar Specialization; Solar Energy Education; Solar Energy Administration/
Policy; Mechanical/Electrical Contracting-Solar
Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-
Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization

Program and Curriculum Related Courses

National Solar Installation Training Course

Instructor: Rocapzione, Gerard
Department: Central
Program: National Solar Installation Training Course

Student Level: College Graduate
Contact Hours: 36.0
Classroom: 24.0
Seminar: 2.0
Lab: 10.0
Offered: Day; Evening; Weekend
Prerequisites:
- Yes

NORWALK STATE TECHNICAL COLLEGE
181 Richards Avenue
Norwalk, CT 06854
(203)838-0601
(001490)

Tuition (Full Time):
Resident: $337.00 Non Resident: $1,092.00

Student Level:
College Freshman/ Sophomore

Academic Credits:
3.0 (Trimester)

Contact Hours:
33.0

Program:
Solar Technology

Offered:
Evening
ENERGY CONSERVATION AND SOLAR APPLICATION TRAINING CENTER
1703 School Lane
Wilmington, DE 19808
(302)995-6174

Solar Technical Training

Solar Applications
Degree: Certificate
Design, Installation, Maintenance
Contact: Paul, Charles A.
(302)995-6174

Program Training: Engineering-Solar Specialization;
Mechanical/Electrical Contracting-Solar Specialization;
General Contracting-Specialization in Solar Design/
Installation; Heating, Ventilation, Air Conditioning-Solar
Specialization; Solar System Installation-Residential; Solar
System Installation-Industrial/Commercial; Solar
Technology-Instrumentation, Controls, Design,
Development, Plumbing-Solar Specialization; Sheet Metal-
Solar Specialization; Do-It-Yourself/Home installation

Program and Curriculum Related Courses
Design of Systems
Course Number: ACR 320 SH
Instructor: Paul, Charles A.
(302)995-6174
Program: Solar Applications
Student Level: Professional
Duration: No. of weeks: 1.0
Hrs. per week: 40.0
Contact Hours: 40.0
Classroom: 30.0
Workshop: 10.0
Offered: Day
Course Fee: Resident: $350.00
Non Resident: $350.00

Topics Covered Extensively: Components-Solar;
Energy Storage Systems; Heat and Energy Transfer;
Introduction to Solar Energy; Plumbing Techniques; Sheet
Metal Techniques; Solar Domestic Hot Water; Solar
Heating; Solar Marketing/Economic Analysis; Solar
Systems Design; Solar Systems Installation/Maintenance

Solar Related Courses
Solar Installation Workshop for Vocational Educators
Instructor: Paul, Charles A.
(302)995-6174
Student Level: Skilled Labor
Academic Credits: 2.0 (Nine Terms Per Year)
Contact Hours: 40.0
Classroom: 12.0
Seminar: 6.0
Workshop: 24.0
Offered: Day
Course Fee: Resident: $0.00
Non Resident: $0.00

Topics Covered Extensively: Components-Solar;
Energy Storage Systems; Heat and Energy Transfer;
Introduction to Solar Energy; Plumbing Techniques; Sheet
Metal Techniques; Solar Domestic Hot Water; Solar
Heating; Solar Systems Design; Solar Systems Installation/
Maintenance

Building Solar Equipment
Course Number: ST
Instructor: Adams, Bob
(302)678-5401
Department: Continuing Education
Program: Energy Education and Awareness
Student Level: All Levels; Layperson
Contact Hours: 3.0
Workshop: 3.0
Offered: Day; Weekend
Course Fee: Resident: $0.00
Non Resident: $0.00

Topics Covered Extensively: Passive Solar Systems;
Solar Domestic Hot Water; Solar Heating

Solar Energy Clinic
Course Number: ST
Instructor: Adams, Bob
(302)678-5401
Department: Continuing Education
Program: Energy Education and Awareness
Student Level: All Levels; Layperson
Contact Hours: 3.0
Workshop: 3.0
Offered: Day; Weekend
Course Fee: Resident: $0.00
Non Resident: $0.00

Topics Covered Extensively: Passive Solar Systems;
Solar Domestic Hot Water; Solar Heating
Florida

DADE COMMUNITY COLLEGE AT MIAMI
Miami, FL 33176
(305)596-1211 (001508)

Curriculum with Solar Study
Air Conditioning Engineering Technology *
Degree: Associate Science
Department: Air Conditioning Engineering Technology
Contact: Succop, William
(305)685-4646

Program Training: Architecture-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Solar Energy Fundamentals *
Course Number: EMT 2706
Instructor: Clanden, George
(305)685-4206

Solar Energy Systems, Commercial
Program: Air Conditioning Engineering Technology
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 15.0 Hrs. per week: 4.0
Contact Hours: 60.0 Classroom: 30.0
Lab: 30.0

Solar Energy Systems, Residential *
Course Number: EMT 2756 C
Instructor: Clanden, George
(305)685-4206

Solar Energy Systems Design; Solar Systems Installation/Maintenance; Solar Domestic Hot Water; Solar Swimming Pool Heating

FLORIDA SOLAR ENERGY CENTER
300 State Rd. 401 Cape Canaveral, FL 32920 (900100)

Solar Technical Training
Energy Education for Educators
Program Training: Solar Energy Education

The Sun At Work Information Lecture Series
Program Training: Do-It-Yourself/Home Installation

PENSACOLA JUNIOR COLLEGE
Pensacola, FL 32504
(904)476-5410 (001813)

Solar Technical Training
Solar Energy Technology *
Degree: Associate Science
Department: Industrial Technology
Contact: Lowery, Stanley
(904)476-5410

Program and Curriculum Related Courses
Residential Design and Installation *
Instructor: Lowery, Stanley
(904)476-5410

PINELLAS VOCATIONAL TECHNICAL INSTITUTE
6100 154th Avenue North Clearwater, FL 33752
(813)531-3531 (090320)

Tuition (Full Time):
Resident: $39.00 Non Resident: $88.00

Solar Technical Training
Air Conditioning and Plumbing
Degree: Certificate
Department: Air Conditioning
Contact: Sprecher, Clarence
(813)531-3531 EXT.256

Program Training: Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Solar Energy
Course Number: 721
Course Number: (813)531-3531 EXT.256
Department: Air Conditioning
Program: Air Conditioning and Plumbing
Student Level: Skilled Labor; Layperson
Academic Credits: 3.0 (Quarter )
Duration: No. of weeks: 9.0 Hrs. per week: 10.0
Contact Hours: 86.0 Classroom: 50.0 Lab: 36.0
**Florida**

**SAINT AUGUSTINE TECHNICAL CENTER**
Collins Avenue At Delmonte Drive
St. Augustine, FL 32084
(904)824-4401
(904)824-4401 EXT.62

**Tuition (Full Time):**
Resident: $125.00

**Solar Technical Training**

**Solar Energy Technology**

**Program Training:**
- Architecture-Solar Specialization;
- Solar Energy Education; Solar Energy Administration/Policy; Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization

**Program and Curriculum Related Courses**

**Solar Energy Technology**

**Course Number:** 9923

**Instructor:** Stratmann, Charles
(904)824-4401 EXT.58

**Program:** Solar Energy Technology

**Duration:** No. of weeks: 72.0
Hrs. per week: 30.0

**Contact Hours:** 2160.0

**Course Fee:** Resident: $245.00

**Prerequisites:** No

**Topics Covered Extensively:** 

**SOUTH FLORIDA TECHNICAL INSTITUTE**
201 W. Sunrise Blvd.
Ft. Lauderdale, FL 33311
(305)764-3432
(305)764-3432

**Solar Technical Training**

**Energy Conversion Systems:**

**Department:** Training

**Contact:** Linne, William L.
(305)764-3432

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**Georgia**

**DEKALB COMMUNITY COLLEGE**
Clarkston, GA 30021
(404)292-3994
(404)292-3994 Ext.58

**Solar Technical Training**

**Solar Heating**

**Department:** Heating/Air Conditioning

**Program:** Solar Heating *

**Student Level:** All Levels

**Duration:** No. of weeks: 14.0
Hrs. per week: 24.0

**Contact Hours:** 336.0

**Classroom:** 220.0

**Lab:** 116.0

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**Topics Covered Extensively:** 
Illinois

BELLEVILLE AREA COLLEGE
2500 Carlyle Road
Belleville, IL 62221
(618)235-2700
(001636)

Tuition (Full Time):
Resident: $14.00

Curriculum with Solar Study
Air Conditioning, Heating and Refrigeration
Degree: Associate, Certificate
Department: Industrial
Contact: Becker, Albert
(618)235-2700 EXT.315
Program Training: Architecture-Solar Specialization;
Solar System Installation-Residential; Heating, Ventilation,
Air Conditioning-Solar Specialization

Program and Curriculum Related Courses
Air Conditioning and Heating II
Course Number: ACHR 252
Instructor: Becker, Albert
(618)235-2700 EXT.315
Department: Industrial
Program: Air Conditioning, Heating and Refrigeration
Student Level: College Junior/Senior;
Professional; Skilled Labor
Academic Credits: 4.0 ( Semester )
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 96.0
Offered: Day; Evening
Course Fee: Resident: $14.00
Prerequisites: Yes
Topics Covered Extensively: Energy Conservation;
Energy Storage Systems; Greenhouse Techniques; Heat
and Energy Transfer; Solar Cooling; Solar Heating; Solar
Systems Design

Commercial Refrigeration I
Course Number: ACHR 202
Instructor: Becker, Albert
(618)235-2700 EXT.315
Department: Industrial
Program: Air Conditioning, Heating and Refrigeration
Student Level: College Junior/Senior;
Professional; Skilled Labor
Academic Credits: 4.0 ( Semester )
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 96.0
Offered: Day; Evening
Course Fee: Resident: $14.00
Prerequisites: Yes
Topics Covered Extensively: Energy Conservation;
Greenhouse Techniques

Electrical Controls for Air Conditioning, Heating and Refrigeration
Course Number: ACHR 103
Instructor: Becker, Albert
(618)235-2700 EXT.315
Department: Industrial
Program: Air Conditioning, Heating and Refrigeration
Student Level: College Junior/Senior;
Professional; Skilled Labor
Academic Credits: 4.0 ( Semester )
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 96.0

Indiana

INDIANA VOCATIONAL TECHNICAL COLLEGE
8204 Highway 31 West
Sellersburg, IN 47172
(812)246-3301
(010109)

Tuition (Full Time):
Resident: $18.00 Non Resident: $25.00

Solar Related Courses
Solar Heating
Course Number: 7157
Instructor: Van Cleave, Billy J.
(812)246-3301 EXT.43
Department: Heating and Air Conditioning
Student Level: Professional; Skilled Labor;
Layperson
Academic Credits: 2.0 ( Quarter )
C.E.U.'s: 25.0
Duration: No. of weeks: 11.0
Hrs. per week: 3.0
Contact Hours: 33.0
Classroom: 18.0
Seminar: 3.0
Workshop: 12.0
Offered: Day; Evening
Course Fee: Resident: $15.00
Non Resident: $25.00
Prerequisites: No
Topics Covered Extensively: Components-Solar;
Energy Conservation; Energy Storage Systems; Heat and
Energy Transfer; Introduction to Solar Energy; Materials;
Solar Domestic Hot Water; Solar Heating; Solar Systems
Design; Solar Systems Installation/Maintenance

INTERSTATE TECHNICAL INSTITUTE
210 Marceil Drive
Fort Wayne, IN 46825
(219)484-2504
(080389)

Curriculum with Solar Study
Heating, Air Conditioning and Refrigeration
Degree: Certificate
Department: Heating, Air Cond., and Refrigeration
Contact: Dammann, Frank
(219)484-2504
Program Training: Solar System Installation-Residential;
Solar System Installation-Industrial/Commercial

Program and Curriculum Related Courses
Program: Heating, Air Conditioning and Refrigeration

ITT TECHNICAL INSTITUTE
1720 East 38th Street
Indianapolis, IN 46218
(317)545-2231
(080382)

Curriculum with Solar Study
Refrigeration, Heating and Air Conditioning
Degree: Certificate
Department: Refrigeration, Heating, and Air Cond.
Contact: Haag, J. A.
(317)545-2231 EXT.35

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**Iowa**

**DES MOINES AREA COMMUNITY COLLEGE**

2006 Ankeny Boulevard
Ankeny, IA 50021
(515) 296-2200

**Solar Technical Training**

**Solar Energy I and II**

- **Degree:** Certificate
- **Department:** Adult Education
- **Program:** Solar Energy I and II
- **Student Level:** All Levels
- **Duration:** No. of weeks: 10.0
  Hrs. per week: 3.0
- **Contact Hours:** 30.0
  Classroom: 27.0
  Field Trips: 3.0
- **Prerequisites:** No

**Program and Curriculum Related Courses**

**Solar Energy I - General Overview**

- **Course Number:** BLDG 519
- **Instructor:** Sidles, Paul
- **Department:** Adult Education
- **Program:** Solar Energy I and II
- **Student Level:** All Levels
- **Duration:** No. of weeks: 10.0
  Hrs. per week: 3.0
- **Contact Hours:** 30.0
  Classroom: 27.0
  Field Trips: 3.0
- **Prerequisites:** No

**Solar Energy II - Air Systems**

- **Course Number:** BLDG 522
- **Instructor:** Hummel, Myron
- **Department:** Adult Education
- **Program:** Solar Energy I and II
- **Student Level:** All Levels
- **Duration:** No. of weeks: 10.0
  Hrs. per week: 3.0
- **Contact Hours:** 30.0
  Classroom: 27.0
  Field Trips: 3.0
- **Prerequisites:** No

**Solar Related Courses**

**Man and Energy**

- **Course Number:** PHYS 110
- **Instructor:** Trumpy, Frank
- **Department:** Math, Science
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 3.0 (Quarter)
- **Duration:** No. of weeks: 12.0
  Hrs. per week: 3.0
- **Contact Hours:** 36.0
- **Offered:** Day
- **Course Fee:** Resident: $45.00
  Non Resident: $90.00
- **Prerequisites:** No

**Military**

- **Instructor:**
- **Department:**
- **Program:**
- **Duration:**
- **Contact Hours:**
- **Offered:**
- **Course Fee:**
- **Prerequisites:** No

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**SCOTT COMMUNITY COLLEGE**

Belmont Road
Bettendorf, IA 52722
(319) 359-7531

**Tuition (Full Time):**
Resident: $150.00 Non Resident: $225.00

**Solar Curriculm**

**Solar Energistics Technology**

- **Degree:** Associate
- **Department:** Industrial Division
- **Contact:** Hummel, Myron
- **Program Training:** Heating, Ventilation, Air Conditioning-Solar Specialization; Solar Technology-
Program and Curriculum Related Courses

Solar Energetics Technology
Instructor: Hummel, Myron
Department: Industrial Division
Program: Solar Energetics Technology
Duration: No. of weeks: 95.0
Hrs. per week: 30.0
Contact Hours: 2880.0
Classroom: 960.0
Workshop: 960.0
Lab: 960.0
Offered: Day
Prerequisites: No
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance

Solar System Maintenance
Program Number: 274-3013
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 6.0
Contact Hours: 60.0
Topics Covered Extensively: Solar Marketing/ Economic Analysis; Solar Systems Testing/Evaluation

Solar System Application I
Program Number: 274-3015
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 11.0
Contact Hours: 132.0
Topics Covered Extensively: Energy Storage Systems; Heat and Energy Transfer; Plumbing Techniques; Solar Systems Testing/Evaluation

Technical Mathematics
Program Number: 274-3016
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 5.0
Contact Hours: 60.0
Topics Covered Extensively: Solar Cooling; Solar Heating

Curriculum with Solar Study
Solar Systems Technology
Degree: Associate
Applied Science
Contact: Forsling, Melvin
Program Training: Solar Energy; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Industrial/Commercial; Solar Technology-instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization

Program and Curriculum Related Courses
Building Design for Solar Systems
Program Number: 274-3010
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 6.0
Contact Hours: 72.0

Integrated Solar Science I
Program Number: 274-3001
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 6.0
Contact Hours: 72.0
Topics Covered Extensively: Solar Heating; Solar Systems Testing/Evaluation

Integrated Solar Science II
Program Number: 274-3002
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 6.0
Contact Hours: 72.0
Topics Covered Extensively: Solar Cooling; Solar Heating; Thermochemical Conversion

Introduction to Solar Systems
Program Number: 274-3000
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 3.0
Contact Hours: 36.0
Topics Covered Extensively: Components-Solar; Introduction to Solar Energy

Solar Feasibility Cost Analysis
Program Number: 274-3012
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 5.0
Contact Hours: 60.0
Topics Covered Extensively: Components-Solar; Plumbing Techniques; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 6.0
Contact Hours: 132.0
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Plumbing Techniques; Solar Systems Testing/Evaluation

Technical Mathematics
Program Number: 274-3016
Program: Solar Systems Technology
Duration: No. of weeks: 12.0
Hrs. per week: 5.0
Contact Hours: 60.0
Topics Covered Extensively: Solar Cooling; Solar Heating

BARTON COUNTY COMMUNITY COLLEGE
Great Bend, KS 67530
(316)792-2701
(004608)

Solar Curriculum
Solar Energy Technology
Degree: Associate
Conventional Heat., Air Cond., and Solar Service Technician
Department: Solar
Contact: Greer, Nall
(316)792-2701 EXT. 149
Program Training: Solar Energy Education; Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization; Plumbing-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Solar Installation and Service
Program Number: 6940
Instructor: Greer, Nall
(316)792-2701 EXT. 149
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Course Fee: Resident: $55.00
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Technology and Applied Science I
Program Number: 6900
Instructor: Greer, Nall
(316)792-2701 EXT. 149
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Course Fee: Resident: $55.00
Prerequisites: No
Topics Covered Extensively: introduction to Solar Energy

Solar Technology and Applied Science II
Program Number: 6902
Instructor: Greer, Nall
(316)792-2701 EXT. 149
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Course Fee: Resident: $55.00
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Technology and Heat Pumps
Program Number: 6930
Instructor: Greer, Nall
(316)792-2701 EXT. 149
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Course Fee: Resident: $55.00
Prerequisites: Yes
GARDEN CITY COMMUNITY JUNIOR COLLEGE
801 Campus Drive
P O Box 977
Garden City, KS 67846
(316)276-7611

Tuition (Full Time):
Resident: $24.00 Non Resident: $500.00

Solar Related Courses

Alternate Solar Energy
Course Number: 711/501
Instructor: Hendley, Gerald W.
(316)276-7611
Department: Industrial Education, Agriculture
Student Level: College Jr/ Sr; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 17.0
Hrs. per week: 4.0
Contact Hours: 68.0
Classroom: 44.0
Lab: 24.0
Offered: Day; Evening
Course Fee: Resident: $50.00
Prerequisites: No
Topics Covered Extensively: Alternate Energy
Sources: Bioconversion; Energy Conservation; Solar Law; Legislation

Solar Energy
Course Number: 274/083
Instructor: Hendley, Gerald W.
(316)276-7611
Department: Industrial Education
Student Level: All Levels; Layperson
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 17.0
Hrs. per week: 4.0
Contact Hours: 68.0
Classroom: 34.0
Lab: 34.0
Offered: Day; Evening; Weekend
Course Fee: Resident: $50.00
Prerequisites: No
Topics Covered Extensively: Alternate Energy
Sources: Appropriate Technology; Bioconversion; Components-Solar; Energy Conservation; Introduction to Solar Energy; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Law/Legislation; Solar Systems Design; Wind Energy Conversion Systems

KANSAS TECHNICAL INSTITUTE
2409 Scanlan Avenue
Salina, KS 67401
(913)825-0275

Tuition (Full Time):
Resident: $173.00 Non Resident: $463.00

Curriculum with Solar Study
Solar Option
Degree: Associate
Department: Mechanical Engineering Technology
Contact: Ashburn, M. H.
(913)825-0275 EX. 29
Program Training: Engineering-Solar Specialization; Solar System Installation-Residential; Mechanical/Electrical Contracting-Solar Specialization; Solar System Installation-Industrial/Commercial; General Contracting-Solar Specialization

UNIVERSITY FOR MAN
1221 Thurston Avenue
Manhattan, KS 66502
(913)532-8566

Solar Technical Training
Appropriate Technology
Program Training: Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Program: Appropriate Technology

CORNERTONES, WING SCHOOL OF SHELTER TECHNOLOGY
54 Cumberland St.
Brunswick, ME 04011

Solar Technical Training
Cornerstones Owner - Builder School
Degree: Certificate
Program: Cornerstones Owner - Builder School
Student Level: Professional
Contact: Karg, Rick
(207)729-0540
Program Training: Architecture-Solar Specialization; Solar System Installation-Residential; General Contracting-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses

Advanced New House
Course Number: B
Instructor: Wing, Charles
(207)729-0540
Program: Cornerstones Owner - Builder School
Student Level: Professional
Contact Hours: 48.0
Classroom: 32.0
Job: 8.0
Offered: Day; Weekend
Course Fee: Resident: $360.00
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Solar Systems Design

Energy Auditing
Course Number: G
Instructor: Wing, Charles
(207)729-0540
Program: Cornerstones Owner - Builder School
Student Level: Professional
Contact Hours: 48.0
Classroom: 32.0
Job: 8.0
Offered: Day; Weekend
Course Fee: Resident: $360.00
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Energy Conservation; Passive Solar Systems

House Building For Women
Course Number: D
Instructor: Wing, Susan
(207)729-0540
Program: Cornerstones Owner - Builder School
Student Level: All Levels; Layperson
Contact Hours: 120.0
Classroom: 60.0
Job: 60.0
Offered: Day
Course Fee: Resident: $350.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Introduction to Solar Energy; Plumbing Technologies; Solar Heating; Solar Home Construction

Passive Solar Greenhouses
Course Number: E
Instructor: Karg, Rick
(207)729-0540
Program: Cornerstones Owner - Builder School
Student Level: All Levels; Layperson
Maryland

RETS ELECTRONIC SCHOOL
511 Russell Street
Baltimore, MD 21230
(301)727-6863

Tuition (Full Time):
Resident: $3,795.00

Curriculum with Solar Study
Refrigeration, Climate Control and Clean Air
Degree: Certificate
Department: BEI Division
Contact:
Tickler, Earl M.
(301)727-6863

Program Training:
Solar Energy Education; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Refrigeration, Climate Control, and Clean Air
Instructor: Tickler, Earl M.
(301)727-6863

Department:
Program:

Tuition (Full Time):
Resident: $275.00

Solar Related Courses
Solar Heating Systems Design
Course Number: HV 35
Instructor: O'Leary, Timothy J.
(617)828-5800 EXT.36
Department: Heating, Ventil. and Air Cond. Tech.
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 4.5
Contact Hours: 67.5
Classroom: 24.0
Lab: 33.5
Offered: Day
Course Fee: Resident: $44.00
Prerequisites: Yes

Topics Covered Extensively:
- Energy Conservation;
- Energy Storage Systems; Heat and Energy Transfer;
- Introduction to Solar Energy; Materials;
- Passive Solar Systems; Solar Heating; Solar Home Construction;
- Solar Systems Design

Maryland

Massachusetts

BLUE HILLS REGIONAL TECHNICAL INSTITUTE
100 Randolph Street
Canton, MA 02021
(617)828-5800

Tuition (Full Time):
Resident: $275.00

Solar Related Courses
Solar Heating Systems Design
Course Number: HV 35
Instructor: O'Leary, Timothy J.
(617)828-5800 EXT.36
Department: Heating, Ventil. and Air Cond. Tech.
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 18.0
Hrs. per week: 4.5
Contact Hours: 67.5
Classroom: 24.0
Lab: 33.5
Offered: Day
Course Fee: Resident: $44.00
Prerequisites: Yes

Topics Covered Extensively:
- Energy Conservation;
- Energy Storage Systems; Heat and Energy Transfer;
- Introduction to Solar Energy; Materials;
- Plumbing Techniques; Process Heat; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Home Construction; Solar Law/Legislation; Solar Marketing/Economic Analysis; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

CAPE COD COMMUNITY COLLEGE
Route 132
West Barnstable, MA 02668
(617)362-2131

Tuition (Full Time):
Resident: $160.00 Non Resident: $450.00

Curriculum with Solar Study
Energy Systems Technology
Degree: Associate
Contact: Panitz, Ted
(617)362-2131 EXT.456
Program Training: Solar Energy Administration/Policy; General Contracting-Specialization in Solar Design/Installation

Program and Curriculum Related Courses
Energy Systems I - Survey of Energy
Alternatives
Course Number: TE 130
Instructor: Panitz, Ted
(617)362-2131 EXT.456
Department: Industry Related Technologies
Program: Energy Systems Technology
Student Level: College Freshman/Sophomore; Managerial; Professional; Skilled Labor
Academic Credits: 3.0 (Semester)
C.E.U.'s: 60.0
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Massachusetts

Contact Hours: 60.0  
Classroom: 45.0  
Lab: 15.0  
Offered: Evening  
Course Fee: Resident: $100.00  
Prerequisites: No  
Topics Covered Extensively: Alternate Energy  
Sources: Energy Conservation

**Energy Systems II - Solar Energy I**

Course Number: TE 131  
Instructor: Panitz, Ted  
Department: Industry Related Technologies  
Program: Energy Systems Technology  
Student Level: College Freshman/Sophomore; Managerial; Professional; Skilled Labor  
Academic Credits: 4.0 (Semester)  
C.E.U.'s: 60.0  
Duration: No. of weeks: 15.0  
Hrs. per week: 4.0  
Contact Hours: 60.0  
Classroom: 45.0  
Lab: 15.0  
Offered: Evening  
Course Fee: Resident: $100.00  
Prerequisites: Yes  

HEARTWOOD OWNER-BUILDER SCHOOL INCORPORATED

Johnson Road  
Washington, MA 01235  
(413)623-6677  
(090210)

**Tuition (Full Time):**  
Resident: $500.00  
Non Resident: $300.00

**Solar Related Courses**

**Designing and Building Your Own Energy Efficient Home**

Instructor: Velonis, Elias  
Program: Energy Systems Technology  
Student Level: Layperson  
Duration: No. of weeks: 3.0  
Hrs. per week: 40.0  
Contact Hours: 120.0  
Classroom: 60.0  
Lab: 60.0  
Offered: Day; Evening  
Course Fee: Resident: $500.00  
Non Resident: $300.00  
Prerequisites: No  
Topics Covered Extensively: Energy Conservation; Greenhouse Techniques; Introduction to Solar Energy; Materials; Passive Solar Systems; Plumbing Techniques; Solar Heating; Solar Home Construction; Solar Systems Design

Energy Systems III - Solar Energy II

Course Number: TE 132  
Instructor: Panitz, Ted  
Department: Industry Related Technologies  
Program: Energy Systems Technology  
Student Level: College Freshman/Sophomore; Managerial; Professional; Skilled Labor  
Academic Credits: 4.0 (Semester)  
C.E.U.'s: 80.0  
Duration: No. of weeks: 15.0  
Hrs. per week: 4.0  
Contact Hours: 60.0  
Classroom: 45.0  
Lab: 15.0  
Offered: Evening  
Course Fee: Resident: $100.00  
Prerequisites: Yes  
Topics Covered Extensively: Components-Solar; Distributed Solar Power Systems; Energy Conservation; Energy Storage Systems; Greenhouse Techniques; Heat and Energy Transfer; Hybrid Systems; Introduction to Solar Energy; Materials; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Systems Design

**NORTHEAST INSTITUTE OF INDUSTRIAL TECHNOLOGY**

41 Phillips Street  
Boston, MA 02114  
(617)523-2813  
(090060)

**Tuition (Full Time):**  
Resident: $860.00

**Solar Technical Training**

**Installing Solar Water Heaters**

Degree: Certificate  
Department: Air Conditioning and Refrigeration  
Contact: Galen, G. M.  
(617)523-2813

Program Training: Architecture-Solar Specialization; Heating, Ventilation, Air Conditioning-Solar Specialization

**Program and Curriculum Related Courses**

**Installing Solar Water Heating**

Instructor: Smith, Robert O.  
(617)523-2813  
Lannon, E.

Department: Air Cond., Refrigeration Technol.  
Program: Installing Solar Water Heaters  
Student Level: Managerial; Skilled Labor  
Duration: No. of weeks: 15.0  
Hrs. per week: 2.0  
Contact Hours: 30.0  
Classroom: 30.0  
Offered: Day; Evening  
Course Fee: Resident: $125.00  
Prerequisites: No  
Topics Covered Extensively: Solar Thermal Water Heaters

FRANKLIN INSTITUTE OF BOSTON

Boston, MA 02116  
(617)423-4630  
(002181)

**Solar Related Courses**

**Solar and Alternative Energy Systems Design**

Course Number: ES 426  
Instructor: Rowe, William  
Department: Energy System Engineering  
Academic Credits: 4.0  
Duration: No. of weeks: 15.0  
Hrs. per week: 7.0  
Contact Hours: 105.0  
Classroom: 60.0  
Lab: 45.0  
Topics Covered Extensively: Alternate Energy  
Sources: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Passive Solar Systems; Plumbing Techniques; Solar Cooling; Solar Domestic Hot Water; Solar Energy Policy Development; Solar Heating; Solar Home Construction; Solar Law/Regulation; Solar Swimming Pool Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Wind Energy Conversion Systems

NORTH ENGLAND FUEL INSTITUTE

20 Summer Street  
Watertown, MA 02172  
(617)924-1000  
(090330)

**Solar Technical Training**

**Solar Heating Installation and Maintenance**

Degree: Certificate  
Department: Education  
Contact: Tavino, Ralph  
(617)924-1000

Program Training: Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance

**Program and Curriculum Related Courses**

**Solar Heating Installation and Maintenance Course**

Instructor: Tavino, Ralph  
(617)924-1000

Department: Education  
Program: Solar Heating installation and Maintenance  
Student Level: Professional; Skilled Labor  
Duration: No. of weeks: 4.0  
Hrs. per week: 40.0  
Contact Hours: 160.0  
Classroom: 80.0  
Lab: 80.0  
Offered: Day; Evening  
Course Fee: Resident: $500.00  
Non Resident: $500.00  
Prerequisites: No  
Topics Covered Extensively: Alternate Energy  
Sources: Appropriate Technology; Components-Solar; Energy Storage Systems; Greenhouse Techniques; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Passive Solar Systems; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Design; Solar Systems Installation/Maintenance

Solar Heating Technology Course

Instructor: Taylor, Robin  
(617)924-1000

Department: Education  
Program: Solar Heating Installation and Maintenance  
Student Level: Professional; Skilled Labor  
Duration: No. of weeks: 1.0  
Hrs. per week: 40.0  
Contact Hours: 40.0  
Classroom: 20.0  
Lab: 20.0  
Offered: Day; Evening  
Course Fee: Resident: $150.00  
Non Resident: $150.00  
Prerequisites: No  
Topics Covered Extensively: Alternate Energy  
Sources: Appropriate Technology; Components-Solar; Energy Storage Systems; Greenhouse Techniques; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Passive Solar Systems; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Swimming Pool Heating; Solar Systems Design; Solar Systems Installation/Maintenance
Michigan

FERRIS STATE COLLEGE
Big Rapids, MI 49307
(616)796-9971
(002260)

Tuition (Full Time):
Resident: $297.00 Non Resident: $710.00

Curriculum with Solar Study
Refrigeration, Heating and Air Conditioning Technology
Degree: Associate
Department: Technical and Applied Arts; Construction
Contact: Shary, James B. (616)796-9971
Program Training: Solar System Installation-Residential; Solar System Installation-Industrial; Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Advanced Air Conditioning
Course Number: RHA 263
Instructor: Nott, Joe (616)796-9971
Department: Construction
Program: Refrigeration, Heating and Air Conditioning Technology
Student Level: College Freshman/ Sophomore
Academic Credits: 9.0 (Quarter)
Duration: No. of weeks: 10.0 Hours per week: 20.0
Contact Hours: 200.0 Classroom: 50.0 Lab: 150.0 Offered: day
Prerequisites: Yes

Heating
Course Number: RHA 292
Instructor: Stevens, Russ (616)796-9971
Department: Construction
Program: Refrigeration, Heating and Air Conditioning Technology
Student Level: College Freshman/Sophomore
Academic Credits: 9.0 (Quater)
Duration: No. of weeks: 10.0 Hours per week: 20.0
Contact Hours: 200.0 Classroom: 50.0 Lab: 150.0 Offered: Day
Prerequisites: Yes

Solar Related Courses
Energy Conservation in Building Design
Course Number: A0302
Instructor: Kantor, Mel (616)796-9971
Department: Construction
Student Level: All Levels
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 10.0 Hours per week: 3.0
Contact Hours: 30.0 Classroom: 30.0 Offered: Day
Course Fee: Resident: $89.00 Non Resident: $213.00
Prerequisites: No
Topics Covered Extensively: Energy Conservation; Introduction to Solar Energy; Passive Solar Systems; Solar Heating; Solar Home Construction

Energy Use and Conservation
Course Number: BCT 302
Instructor: Erion, John (616)796-9971
Department: Construction
Student Level: All Levels
Academic Credits: 4.0 (Quarter)
Duration: No. of weeks: 10.0 Hours per week: 5.0
Contact Hours: 50.0 Classroom: 30.0 Lab: 20.0 Offered: Day
Course Fee: Resident: $119.00 Non Resident: $284.00
Prerequisites: No
Topics Covered Extensively: Energy Conservation; Introduction to Solar Energy; Solar Heating, Solar Home Construction

GENERAL MOTORS INSTITUTE
Flint, MI 48502
(002282)

Solar Technical Training
Solar Energy
Degree: Certificate
Contact: Mechanical Engineering
Department: Continuing Engineering Education
Instructor: Brin, Michael (313)765-6047
Program: Architecture-Solar Specialization
Program Training: Solar Energy Education; Scientific Research and Development in Solar Energy; Engineering-Solar Specialization

Program and Curriculum Related Courses
Solar Energy
Course Number: EIS 0310
Instructor: Brin, Michael (313)765-6047
Department: Mechanical Engineering
Program: Solar Energy
Student Level: College Graduate
Duration: No. of weeks: 1.0 Hours per week: 24.0
Contact Hours: 24.0 Classroom: 21.0 Lab: 3.0
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Process Heat; Solar Cooling; Solar Domestic Hot Water; Solar Systems Design

Solar Related Courses
Building and Facility Design
Course Number: L 500
Instructor: Brink, Michael (313)765-6047
Department: Mechanical Engineering
Student Level: College Junior/Senior
Academic Credits: 4.0
Duration: No. of weeks: 12.0 Hours per week: 6.0
Contact Hours: 72.0 Classroom: 36.0 Lab: 36.0 Offered: Day
Prerequisites: Yes
Topics Covered Extensively: Introduction to Solar Energy; Solar Heating; Solar Cooling; Solar Domestic Hot Water; Solar Heating

GRAND RAPIDS JUNIOR COLLEGE
143 Bostwick, NE
Grand Rapids, MI 49503
(616)456-4895
(002287)

Solar Related Courses
Solar Dwelling Design Concepts
Course Number: TE 243
Instructor: Larson, L. (616)456-4860
Department: Technology
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 16.0 Hours per week: 3.0
Contact Hours: 48.0 Classroom: 28.0 Independent Study: 16.0 Lab: 4.0
Offered: Day; Evening
Course Fee: Resident: $51.00 Non Resident: $85.00
Prerequisites: Yes
Topics Covered Extensively: Energy Conservation; Passive Solar Systems; Solar Heating; Solar Home Construction; Solar Systems Design

Solar Systems - Collector Design and Construction
Course Number: TE 245
Instructor: Larson, L. (616)456-4860
Department: Technology
Duration: No. of weeks: 16.0 Hours per week: 4.0
Contact Hours: 64.0 Classroom: 16.0 Job: 16.0 Lab: 32.0
Prerequisites: Yes
Topics Covered Extensively: Plumbing Techniques; Solar Systems Design; Solar Systems Installation/ Maintenance

Solar Theory and Design
Course Number: TE 142
Instructor: Larson, L. (616)456-4860
Department: Technology
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson

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Michigan

Academic Credits: 2.0 (Semester)
Duration: No. of weeks: 16.0
Hrs. per week: 2.0
Contact Hours: 32.0
Classroom: 26.0
Independent Study: 2.0
Lab: 4.0
Offered: Day; Evening; Weekend
Course Fee: Resident: $34.00
Non Resident: $57.00
Prerequisites: Topics Covered Extensively: Components-Solar; Heat and Energy Transfer; Introduction to Solar Energy; Solar Domestic Hot Water

JORDAN COLLEGE
360 West Pine Street
Cedar Springs, MI 49319
(616)696-1180

Tuition (Full Time):
Resident: $600.00 Non Resident: $600.00

Solar Curriculum
Alternate Energy
Degree: Bachelor
Alternate Energy
Contact: Sylkhouse, Thomas
No: No
Program Training: Solar Energy Education; Solar Energy Administration/Policy; Scientific Research and Development in Solar Energy; Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating; Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization

Program and Curriculum Related Courses
Advanced Design of Alternate Energy Systems
Course Number: AE 470
Instructor: Sylkhouse, Thomas
(616)696-5417
Department: Alternate Energy
Program: Alternate Energy
Student Level: College Junior/Senior; Professional
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 46.0
Classroom: 30.0
Seminar: 6.0
Independent Study: 10.0
Offered: Day; Evening
Course Fee: Resident: $150.00
Non Resident: $150.00
Prerequisites: Yes

Biomass
Course Number: 240
Instructor: Martin, Alan O.
(616)696-1180
Department: Alternate Energy
Program: Alternate Energy
Student Level: College Freshman/Sophomore; Lewrson, Thomas
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 30.0
Lab: 12.0
Field Trips: 3.0
Offered: Day; Evening
Course Fee: Resident: $150.00
Non Resident: $150.00
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Energy Storage Systems; Grounds Heating; Heat and Energy Transfer; Introduction to Solar Energy; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance

Design of Alternate Energy Systems
Course Number: 270
Instructor: Gates, Timothy
(616)696-1180
Department: Alternate Energy
Program: Alternate Energy
Student Level: College Freshman/Sophomore; Layerson, Thomas
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 30.0
Lab: 12.0
Field Trips: 3.0
Offered: Day; Evening
Course Fee: Resident: $150.00
Non Resident: $150.00
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Heat and Energy Transfer; Solar Systems; Solar Energy; Solar Technology-Analysis; Solar Systems Design

Geo-Physical Systems
Course Number: 330
Instructor: Gates, Tony
(616)696-1180
Department: Alternate Energy
Program: Alternate Energy
Student Level: College Freshman/Sophomore; Layerson, Thomas
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 30.0
Lab: 12.0
Field Trips: 3.0
Offered: Day; Evening
Course Fee: Resident: $150.00
Non Resident: $150.00
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources

Solar I
Course Number: 200
Instructor: Bregg, Gary
(616)696-1180
Department: Alternate Energy
Program: Alternate Energy
Student Level: College Junior/Senior; Layerson, Thomas
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 30.0
Lab: 12.0
Field Trips: 3.0
Offered: Day; Evening
Course Fee: Resident: $150.00
Non Resident: $150.00
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Energy Storage Systems; Grounds Heating; Heat and Energy Transfer; Introduction to Solar Energy; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance

Solar II
Course Number: AE 300
Instructor: Bregg, Gary
(616)696-5417
Department: Alternate Energy
Program: Alternate Energy

Wind Energy Conversion Systems
Course Number: 210
Instructor: Bregg, Gary
(616)696-1180
Department: Alternate Energy
Program: Alternate Energy
Student Level: College Freshman/Sophomore; Layerson, Thomas
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 30.0
Lab: 12.0
Field Trips: 3.0
Offered: Day; Evening
Course Fee: Resident: $150.00
Non Resident: $150.00
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Heat and Energy Transfer; Solar Systems; Solar Energy; Solar Technology-Analysis; Solar Systems Design

Curriculum with Solar Study
Appropriate Technology
Degree: Bachelor
Alternate Energy
Contact: Lewis, Russell E.
(616)696-2230
Program Training: Solar Energy Education; Solar Energy Administration/Policy

Program and Curriculum Related Courses
Appropriate Technology
Course Number: ID 430
Instructor: Lewis, Russell E.
(616)696-2230
Department: Inter-Departmental Offering
Program: Appropriate Technology
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 30.0
Independent Study: 10.0
Offered: Day; Evening
Course Fee: Resident: $150.00
Non Resident: $150.00
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Energy Storage Systems; Grounds Heating; Heat and Energy Transfer; Introduction to Solar Energy; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance

Energy Efficient Construction Design
Degree: Associate
Applied Science
Department: Environmental Science
Contact: Lewis, Russell E.
(616)696-2230
Program Training: Architectural-Solar Specialization; Do-It-Yourself/Home Installation

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Minnesota

RED WING AREA VOCATIONAL TECHNICAL INSTITUTE
Pioneer Road & Highway 58
Red Wing, MN 55066
(612)388-8271

Solar Technical Training
Solar Energy Technology

Degree: Certificate
Department: Solar Energy
Contact: Moore, Gary
(612)388-8271


Wind Energy Systems Technology

Degree: Certificate
Department: Wind Energy
Contact: (612)388-8271

Program Training: Solar Energy Education; Engineering-Solar Specialization; Solar Technology-Instrumentation, Controls, Design, Maintenance

Steampfitting - Pipefitting

Degree: Certificate
Contact: Steampfitter - Pipefitter
(612)221-1375

Program Training: Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization

Solar Related Courses

Energy Code for Building Inspectors, Contractors, and Tradesmen
Course Number: 1-04-728.2
Instructor: Nelson, Robert
(612)221-1307

Department: Construction Technology
Student Level: Managerial
C.E.U.'s: 3.0
Duration: No. of weeks: 10.0
Hrs. per week: 3.0

Contact Hours: 30.0
Classroom: 20.0
Lab: 10.0
Offered: Evening
Course Fee: Resident: $26.00
Non Resident: $26.00
Prerequisites: No
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Materials

SAINT PAUL TECHNICAL VOCATIONAL INSTITUTE
235 Marshall Avenue
St. Paul, MN 55102
(612)221-1336

Curriculum with Solar Study

Construction Technology

Degree: Certificate
Department: Construction Technology
Contact: Richner, George
(612)221-1375

Program Training: Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization

Program and Curriculum Related Courses

Industrial Controls

Degree: Certificate
Contact: Electronics
(612)221-1375

Program Training: Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization

Environmental Science

Degree: Associate
Department: Environmental Science
Contact: Lewis, Russell E.
(612)696-2230

Program Training: Solar Energy Administration/Policy

Farm Management

Degree: Associate
Department: Agriculture
Contact: Lewis, Russell E.
(612)696-2230

MID MICHIGAN COMMUNITY COLLEGE
Harrison, MI 48625
(617)386-7792

Tuition (Full Time):
Resident: $45.00 Non Resident: $63.00

Solar Related Courses

Alternate Energy Sources
Course Number: PSC 151
Instructor: Derscheid, Larry
(617)386-7792 EXT.248

Department: Physical Science
Student Level: All Levels
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 16.0
Hrs. per week: 3.0

Contact Hours: 48.0
Classroom: 42.0
Independent Study: 3.0
Lab: 3.0
Offered: Day, Evening
Course Fee: Resident: $45.00
Non Resident: $63.00
Prerequisites: No
Topics Covered Extensively: Alternate Energy Sources; Introduction to Solar Energy; Passive Solar Systems; Solar Heating

Solar Heating Systems
Course Number: HRA 175
Instructor: Hoyman, John E.
(617)386-7792 EXT.204

Department: Vocational
Student Level: All Levels, Skilled Labor
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 16.0
Hrs. per week: 4.0

Contact Hours: 64.0
Classroom: 32.0
Lab: 32.0
Offered: Evening
Course Fee: Resident: $45.00
Non Resident: $63.00
Prerequisites: No
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Passive Solar Systems; Process Heat; Solar Domestic Hot Water
Mississippi

NORTHWEST MISSISSIPPI JUNIOR COLLEGE
Highway 51 North
Senatobia, MS 38668
(601)562-5262

Tuition (Full Time):
Resident: $185.00 Non Resident: $485.00

Solar Curriculum
Solar and Environmental Engineering
Degree: Associate
Department: Science
Contact: Ross, J. D. (601)562-5262 EXT.227

Program Training: Solar Energy Education: Solar Energy Administration/Policy; Scientific Research and Development in Solar Energy; Engineering-Solar Specialization

Program and Curriculum Related Courses
Fundamentals of Solar Energy
Course Number: EGR 1113
Instructor: Ross, J. D. (601)562-5262 EXT.227
Department: Science
Program: Solar and Environmental Engineering
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0 Hrs. per week: 3.0
Contact Hours: 45.0 Classroom: 45.0
Offered: Day, Evening
Course Fee: Resident: $54.00 Non Resident: $135.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Solar Domestic Hot Water

Solar Devices
Course Number: EGR 1123
Instructor: Ross, J. D. (601)562-5262 EXT.227
Department: Science
Program: Solar and Environmental Engineering
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0 Hrs. per week: 4.0
Contact Hours: 60.0 Classroom: 30.0 Lab: 30.0
Offered: Day
Course Fee: Resident: $54.00 Non Resident: $135.00
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Photovoltaics and Solar Cells

Solar Energy Systems I
Course Number: EGR 2513
Instructor: Ross, J. D. (601)562-5262 EXT.227
Department: Science
Program: Solar and Environmental Engineering
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0 Hrs. per week: 4.0
Contact Hours: 60.0 Classroom: 30.0 Independent Study: 15.0 Lab: 15.0
Offered: Day
Course Fee: Resident: $54.00 Non Resident: $135.00
Prerequisites: Yes
Topics Covered Extensively: Centralized Solar Power Systems

Solar Energy Systems II
Course Number: EGR 2523
Instructor: Ross, J. D. (601)562-5262 EXT.227
Department: Science
Program: Solar and Environmental Engineering
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0 Hrs. per week: 4.0
Contact Hours: 60.0 Classroom: 30.0 Independent Study: 15.0 Lab: 15.0
Offered: Day
Course Fee: Resident: $54.00 Non Resident: $135.00
Prerequisites: Yes
Topics Covered Extensively: Hybrid Systems; Solar Systems Design; Solar Systems Testing/Evaluation

Mississippi

Nebraska

METROPOLITAN TECHNICAL COMMUNITY COLLEGE
30th and Fort
Omaha, NE 68137
(402)457-5100

Tuition (Full Time):
Resident: $23.00 Non Resident: $23.00

Solar Technical Training
Survey of Solar Energy
Degree: Certificate
Department: Continuing Education
Contact: Kafka, James (402)457-5100 EXT.206

Program Training: Solar Energy Education: Solar System Installation-Residential; Solar Technology- Instrumentation, Controls, Design, Maintenance; Do-it-Yourself/Home Installation

Program and Curriculum Related Courses
Introduction to Solar Energy and Alternate Energies
Instructor: Reinmuth, Larry (402)457-5100 EXT.190
Department: Continuing Education
Program: Survey of Solar Energy
Student Level: Leperson C.E.U.'s: 3.0
Duration: No. of weeks: 15.0 Hrs. per week: 2.0
Contact Hours: 20.0 Classroom: 20.0
Offered: Evening
Course Fee: Resident: $23.00 Non Resident: $23.00
Prerequisites: No
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Greenhouse Techniques; Introduction to Solar Energy; Materials; Passive Solar Systems; Solar Heating; Solar Systems Design; Wind Energy Conversion Systems
CLARK COUNTY COMMUNITY COLLEGE
Las Vegas, NV 89030
(702)643-6060

Solar Curriculum

Solar Energy Technology

Degree: Associate
Solar Energy Technology/ Applied Science

Program: Solar Energy Technology
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 15.0
Hrs. per week: 9.0
Contact Hours: 135.0
Classroom: 90.0
Lab: 45.0

Topics Covered Extensively: Solar Energy Sources; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Solar Marketing/Economic Analysis; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating; Solar Cooling

Program and Curriculum Related Courses

Advanced Solar Energy Technology
Course Number: SOL 201
Instructor: Comarow, David
(702)643-6060
Department: Science
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 15.0
Hrs. per week: 9.0
Contact Hours: 135.0
Classroom: 90.0
Lab: 45.0

Topics Covered Extensively: Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Solar Marketing/Economic Analysis; Materials: Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating; Solar Cooling

Introduction to Solar Technology
Course Number: SOL 119
Instructor: Comarow, David
(702)643-6060
Department: Science
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 15.0
Hrs. per week: 9.0
Contact Hours: 135.0
Classroom: 90.0
Lab: 45.0

Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Solar Marketing/Economic Analysis; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating; Solar Cooling

Passive Solar Heating and Cooling Technology
Course Number: SOL 130
Instructor: Comarow, David
(702)643-6060
Department: Science
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 15.0
Hrs. per week: 9.0
Contact Hours: 135.0
Classroom: 90.0
Lab: 45.0

Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems; Solar Marketing/Economic Analysis; Passive Solar Systems; Solar Home Construction; Solar Heating; Solar Cooling

Institute for Appropriate Technology

New Hampshire Vocational Technical College
Manchester, NH 03102
(603)668-6706

Solar Technical Training

Solar Energy Certificate Program

Energy Conservation - Principles and Practice
Course Number: M 941EV
Instructor: Magnon, David
(603)668-6706
Department: Evening
Program: Solar Energy Certificate
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 12.0
Hrs. per week: 3.0
Contact Hours: 36.0

Topics Covered Extensively: Energy Conservation

Energy Survey and Alternative Systems
Course Number: M 940EV

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Principles of Solar Design
Course Number: M 943E
Instructor: Magnon, David
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 12.0
Hrs. per week: 3.0
Contact Hours: 36.0
Topics Covered Extensively: Solar Home Construction; Solar Systems Design

Solar Construction and Installation Techniques
Course Number: M 944E
Instructor: Magnon, David
Student Level: All Levels
Academic Credits: 4.0
Duration: No. of weeks: 12.0
Hrs. per week: 4.0
Contact Hours: 48.0
Course Number: M 942E
Instructor: Magnon, David
Student Level: All Levels
Academic Credits: 4.0
Duration: No. of weeks: 12.0
Hrs. per week: 4.0
Contact Hours: 48.0

Solar Heating Systems
Course Number: 401
Instructor: Byrne, E.
Department: Heat, Ventilating, and Air Con.
Program: Solar Energy Certificate Program
Student Level: All Levels
Academic Credits: 4.0
Duration: No. of weeks: 12.0
Hrs. per week: 4.0
Contact Hours: 48.0
Topics Covered Extensively: Solar Energy and Heat Transfer; Solar Energy and Heat Transfer; Solar Heating Systems

Solar Seminar - Integrated Projects
Course Number: M945E
Instructor: Magnon, David
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 12.0
Hrs. per week: 3.0
Contact Hours: 36.0

Tuition (Full Time):
Resident: $0.00 Non Resident: $0.00

Energy Conservation - Solar Technicians Training Program
Degree: Certificate
Department: Community Services
Contact: Morgan, Charles T.
Program Training: Solar System Installation - Residential; Solar System Installation - Commercial; Solar Technology - Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization; Plumbing-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization

Program and Curriculum Related Courses
Energy Conservation, Solar Technicians Training Program
Course Number: 5168
Instructor: Torpey, James
Department: Community Services
Program: Energy Conservation - Solar Technicians Training Program
Student Level: Skilled Labor
Duration: No. of weeks: 20.0
Hrs. per week: 30.0
Contact Hours: 600.0
Classroom: 200.0
Workshop: 100.0
Job: 200.0
Lab: 100.0
Offered: Day
Course Fee: Resident: $0.00 Non Resident: $0.00
Prerequisites: Yes

Energy Technician Training Program
Degree: Certificate
Department: Community Services
Contact: Torpey, James
Program Training: General Contracting-Specialization in Solar Design/Installation; Solar System Installation - Residential; Solar Technology - Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Solar Energy For the Home
Instructor: Torpey, James
Department: Energy Technician Training Program
Program: Professional; Skilled Labor
Contact: Magnon, David
Program: Solar Energy Certificate Program
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 8.0
Hrs. per week: 2.0
Contact Hours: 36.0

Shadow: New Jersey OIC
Cape May Court House, NJ 08210 (609)465-3064

Solar Related Courses
Introduction to Energy Resources: Wind, Solar
Instructor: Steffen, Herbert
Department: Mechanical-Electrical Technology
Duration: No. of weeks: 10.0
Hrs. per week: 15.0
Contact Hours: 150.0
Classroom: 75.0
Independent Study: 25.0
Lab: 50.0
Offered: Day, Evening
Prerequisites: Yes

ESSEX COUNTY TECHNICAL CAREER CENTER
91 West Market St.
Newark, NJ 07103 (090390)

Solar Related Courses
Solar Energy
Instructor: Williams, Wayne R.
Department: Heating, Refrig. & Air Conditioning
Contact Hours: 100.0
Classroom: 250.0
Workbook: 125.0
Offered: Day, Evening
Prerequisites: Yes

SOUTHERN NEW JERSEY OIC
Camden, NJ 08104 (090070)
Solar Technical Training
Solar Energy Unit Installer Program *
Contact: Keene, Joseph P.  
(800)944-2545
Program Training: Solar System Installation-Residential
Program and Curriculum Related Courses
Solar Energy Installer *
Instructor: Keene, Joseph P.  
(800)986-2845
Program: Solar Energy Unit Installer Program *
Student Level: All Levels
Duration: No. of weeks: 26.0  
Hrs. per week: 5.0
Contact Hours: 130.0
Topics Covered Extensively: Appropriate Technology: Bioconversion; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Passive Solar Systems; Plumbing Techniques; Components-Solar; Solar Systems Installation/ Maintenance; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating

UNION COUNTY TECHNICAL INSTITUTE
Scotch Plains, NJ 07076  
(201)889-2000
(008139)
Solar Related Courses
Solar Heating I *
Course Number: HV 201-71
Instructor: Mai, Frank  
(201)889-2000
Department: Heating, Ventilating, Air Conditioning
Student Level: All Levels
Duration: No. of weeks: 15.0  
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 15.0
Lab: 30.0
Topics Covered Extensively: Alternate Energy Sources: Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Solar Marketing/Economic Analysis; Plumbing Techniques; Sheet Metal Techniques; Components-Solar; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/ Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating; Solar Cooling

New Mexico

COLLEGE OF SANTA FE
St. Michaels Drive
Santa Fe, NM 87501
(505)982-6011
(002648)
Tuition (Full Time): Resident: $35.00 Non Resident: $35.00
Solar Technical Training
Solar Energy
Degree: Certificate
Department: Continuing Education
Contact: Osborne, Alan C.
(505)982-6295
Program Training: Scientific Research and Development in Solar Energy; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Electricity-Solar Specialization; Plumbing-Solar Specialization; Do-It-Yourself/Home Installation
Program and Curriculum Related Courses
Electricity From the Wind
Instructor: Dankoff, Mark
(505)901-0723
Department: Continuing Education
Program: Solar Energy
Student Level: All Levels; Layperson
C.E.U.'s: 1.5
Duration: No. of weeks: 8.0  
Hrs. per week: 2.0
Contact Hours: 16.0
Classroom: 12.0
Job: 4.0
Offered: Evening
Course Fee: Resident: $35.00 Non Resident: $35.00
Prerequisites: No
Topics Covered Extensively: Appropriate Technology: Photovoltaics and Solar Cells; Wind Energy Conversion Systems
Solar Adobe Construction
Instructor: Chalom, Mark
(505)983-2256
Department: Continuing Education
Program: Solar Energy
Student Level: All Levels; Layperson
C.E.U.'s: 2.5
Duration: No. of weeks: 8.0  
Hrs. per week: 3.0
Contact Hours: 24.0
Classroom: 24.0
Offered: Evening
Course Fee: Resident: $35.00 Non Resident: $35.00
Prerequisites: No
Topics Covered Extensively: Passive Solar Systems; Plumbing Techniques; Process Heat; Solar Heating; Solar Home Construction
Solar Energy
Instructor: NM Solar Energy Assoc.
(505)983-1006
Department: Continuing Education
Program: Solar Energy
Student Level: All Levels; Layperson
C.E.U.'s: 1.5
Duration: No. of weeks: 8.0  
Hrs. per week: 2.0
Contact Hours: 16.0
Classroom: 12.0
Job: 4.0
Offered: Evening
Course Fee: Resident: $35.00 Non Resident: $35.00
Prerequisites: No

NEW MEXICO HIGHLANDS UNIVERSITY
Las Vegas, NM 87701
(505)425-7511
(002653)
Solar Technical Training
Solar Greenhouse Construction *
Contact: Martinez, E. Eloy
(505)426-7511
Program and Curriculum Related Courses
Solar Greenhouse Construction *
Instructor: Coca, Michael
Department: Industrial Education
Program: Solar Greenhouse Construction *
Student Level: All Levels
Duration: No. of weeks: 8.0  
Hrs. per week: 3.0
Contact Hours: 24.0
Topics Covered Extensively: Energy Storage Systems; Introduction to Solar Energy; Solar Home Construction; Solar Heating; Solar Cooling
Solar Related Courses
Introduction to Solar Heating *
Course Number: 135
Instructor: Yarger, Frederick L.
(505)425-7511
Department: Physics
Student Level: All Levels
Academic Credits: 2.0
Duration: No. of weeks: 10.0  
Hrs. per week: 2.0
Contact Hours: 20.0
Classroom: 20.0
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Passive Solar Systems; Solar Home Construction

NEW MEXICO STATE UNIVERSITY
P O Box 3450
Las Cruces, NM 88003
(505)646-2055
(002657)
Tuition (Full Time): Resident: $304.00 Non Resident: $872.00
Curriculum with Solar Study
Mechanical Engineering
Degree: Doctorate, Master
Mechanical Engineering

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**New Mexico**

**Department:** Mechanical Engineering  
**Contact:** Smith, Philip R. (505)646-3501  
**Program Training:** Scientific Research and Development in Solar Energy; Engineering-Solar Specialization

**Program and Curriculum Related Courses**

**Direct Energy Conversion**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>ME 465</th>
<th>Instructor: Smith, P. R. (505)646-3501</th>
<th>Department: Mechanical Engineering</th>
<th>Program: Mechanical Engineering</th>
<th>Student Level: College Junior/Senior</th>
<th>Academic Credits: 3.0 (Semester)</th>
<th>Duration: No. of weeks: 15.0 Hrs. per week: 3.0</th>
<th>Contact Hours: 45.0</th>
<th>Classroom: 45.0</th>
<th>Offered: Day</th>
<th>Course Fee: Resident: $75.00 Non Resident: $216.00</th>
</tr>
</thead>
</table>
| **Topics Covered Extensively:** Distributed Solar Power Systems

**Solar Technical Training**

**Heating, Refrigeration, Ventilation, and Air Conditioning**

<table>
<thead>
<tr>
<th>Degree: Certificate</th>
<th>Trades and Industrial Education</th>
<th>Department: Trades</th>
<th>Contact: Smith, Pete (505)646-3211</th>
<th>Program Training: Heating, Ventilation, Air Conditioning-Solar Specialization</th>
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</table>

**Program and Curriculum Related Courses**

**Introduction to Solar Energy**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>ME 555</th>
<th>Instructor: Smith, P. R. (505)646-3501</th>
<th>Department: Mechanical Engineering</th>
<th>Program: Mechanical Engineering</th>
<th>Student Level: College Graduate</th>
<th>Academic Credits: 3.0 (Semester)</th>
<th>Duration: No. of weeks: 15.0 Hrs. per week: 3.0</th>
<th>Contact Hours: 45.0</th>
<th>Classroom: 45.0</th>
<th>Offered: Day</th>
<th>Course Fee: Resident: $75.00 Non Resident: $216.00</th>
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</table>
| **Topics Covered Extensively:** Energy Conservation

**Solar Energy Utilization**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>ME 455</th>
<th>Instructor: Smith, P. R. (505)646-3501</th>
<th>Department: Mechanical Engineering</th>
<th>Program: Mechanical Engineering</th>
<th>Student Level: College Junior/Senior</th>
<th>Academic Credits: 3.0 (Semester)</th>
<th>Duration: No. of weeks: 15.0 Hrs. per week: 3.0</th>
<th>Contact Hours: 45.0</th>
<th>Classroom: 45.0</th>
<th>Offered: Day</th>
<th>Course Fee: Resident: $75.00 Non Resident: $216.00</th>
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</table>
| **Topics Covered Extensively:** Introduction to Solar Energy

**Solar Heating and Cooling**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>ME 565</th>
<th>Instructor: Smith, P. R. (505)646-3501</th>
<th>Department: Mechanical Engineering</th>
<th>Program: Mechanical Engineering</th>
<th>Student Level: College Graduate</th>
<th>Academic Credits: 3.0 (Semester)</th>
<th>Duration: No. of weeks: 15.0 Hrs. per week: 3.0</th>
<th>Contact Hours: 45.0</th>
<th>Classroom: 45.0</th>
<th>Offered: Day</th>
<th>Course Fee: Resident: $75.00 Non Resident: $216.00</th>
</tr>
</thead>
</table>
| **Topics Covered Extensively:** Solar Heating; Solar Cooling

**Solar Thermal Power**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>ME 57S</th>
<th>Instructor: Smith, P. R. (505)646-3501</th>
<th>Department: Mechanical Engineering</th>
<th>Program: Mechanical Engineering</th>
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</thead>
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**New York**

**ADIRONDACK COMMUNITY COLLEGE**

Glens Falls, NY 12801  
(518)793-4491  
(002880)

**Solar Technical Training**

**Seminar in Solar Energy**

<table>
<thead>
<tr>
<th>Department: Occupational Education</th>
<th>Contact: Harrington, Charles (518)747-0274</th>
</tr>
</thead>
</table>

**Program Training:** Solar Technology; Instrumentation, Controls, Design, Maintenance

**Program and Curriculum Related Courses**

**Seminar in Solar Energy**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>TECH 191</th>
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</thead>
<tbody>
<tr>
<td><strong>Instructor:</strong> Harrington, Charles (518)747-0274</td>
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</tbody>
</table>

**Solar Energy Technology**

<table>
<thead>
<tr>
<th>Degree: Certificate</th>
<th>Solar Energy Technology</th>
<th>Department: Science</th>
<th>Contact: Komackey, William (315)753-7945</th>
</tr>
</thead>
</table>

**Program Training:** Do-It-Yourself/Home Installation

**Program and Curriculum Related Courses**

**Solar Heating Energy**

| Instructor: Simkin, Robert (315)364-8065  |
|------------------------|------------------------------------------|

**Solar Energy Technology**

<table>
<thead>
<tr>
<th>Degree: Certificate</th>
<th>Solar Energy Technology</th>
<th>Department: Science</th>
<th>Contact: Komackey, William (315)753-7945</th>
</tr>
</thead>
</table>

**Program Training:** Do-It-Yourself/Home Installation

**Program and Curriculum Related Courses**

**Solar Heating Energy**

| Instructor: Simkin, Robert (315)364-8065  |
|------------------------|------------------------------------------|

**Solar Energy Technology**

<table>
<thead>
<tr>
<th>Degree: Certificate</th>
<th>Solar Energy Technology</th>
<th>Department: Science</th>
<th>Contact: Komackey, William (315)753-7945</th>
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</thead>
</table>

**Program Training:** Do-It-Yourself/Home Installation

**Program and Curriculum Related Courses**

**Solar Heating Energy**

| Instructor: Simkin, Robert (315)364-8065  |
|------------------------|------------------------------------------|

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Program and Curriculum Related Courses

Environmental Design I
Course Number: EC 110
Instructor: Farkas, Stanley
Department: Environmental Control Technology
Program: Environmental Control Technology
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 45.0
Offered: Day, Evening
Course Fee: Resident: $105.00
Non Resident: $185.00
Prerequisites: No

Environmental Design Laboratory
Course Number: EC 111
Instructor: Farkas, Stanley
Department: Environmental Control Technology
Program: Environmental Control Technology
Student Level: College Freshman/Sophomore; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 1.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 45.0
Offered: Day, Evening
Course Fee: Resident: $105.00
Non Resident: $185.00
Prerequisites: No

Topics Covered Extensively: Materials; Plumbing Techniques

Environmental System Design
Course Number: EC 430
Instructor: Finger, A.
Department: Environmental Control Technology
Program: Environmental Control Technology
Student Level: College Junior/Senior
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 6.0
Contact Hours: 90.0
Classroom: 30.0
Lab: 60.0
Offered: Day, Evening
Course Fee: Resident: $210.00
Non Resident: $330.00
Prerequisites: Yes

Programs Covered Extensively: Heat and Energy Transfer; Heat and Energy Transfer; Solar Energy Systems; Energy Storage Systems; Heat and Energy Transfer; Materials; Solar Domestic Hot Water; Solar Heating; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar III, Solar Energy Systems Design and Analysis
Course Number: 2991
Instructor: Dunning, Francis
Department: Physics and Engineering Science
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore; Skilled Labor
Academic Credits: 4.0 (Quarter)
C.E.U.'s: 4.0
Duration: No. of weeks: 10.0
Hrs. per week: 5.0
Contact Hours: 50.0
Classroom: 30.0
Lab: 20.0
Offered: Day, Evening
Course Fee: Resident: $68.00
Non Resident: $204.00
Prerequisites: Yes

Topics Covered Extensively: Appropriate Technology; Components-Solar; Distributed Solar Power Systems; Energy Storage Systems; Heat and Energy Transfer; Materials; Solar Domestic Hot Water; Solar Heating; Solar Home Construction; Solar Systems Design; Solar Systems Testing/Evaluation

Solar IV, Alternate Energy Sources
Course Number: 2994
Instructor: Dunning, Francis
Department: Physics and Engineering Science
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore; Layperson
Academic Credits: 4.0 (Quarter)
C.E.U.'s: 4.0
Duration: No. of weeks: 10.0
Hrs. per week: 5.0
Contact Hours: 50.0
Classroom: 30.0
Lab: 20.0
Offered: Day, Evening
Course Fee: Resident: $68.00
Non Resident: $204.00
Prerequisites: No

Topics Covered Extensively: Alternate Energy Sources; Bioremediation; Centrally Dumen Power Systems; Greenhouse Techniques; Ocean Systems; Photoconversion; Photovoltaics and Solar Cells; Wind Energy Conversion Systems

Solar System Fabrication
Course Number: 2992
Instructor: Dunning, Francis
Department: Physics and Engineering Science
Program: Solar Energy Technology
Student Level: College Freshman/Sophomore; Skilled Labor
Academic Credits: 3.0 (Quarter)
C.E.U.'s: 3.0
Duration: No. of weeks: 10.0
Hrs. per week: 5.0
Offered: Day, Evening
Course Fee: Resident: $68.00
Non Resident: $204.00
Prerequisites: Yes

Programs Covered Extensively: Alternate Energy Sources; Bioremediation; Centrally Dumen Power Systems; Greenhouse Techniques; Ocean Systems; Photoconversion; Photovoltaics and Solar Cells; Wind Energy Conversion Systems
North Carolina

CAPE FEAR TECHNICAL INSTITUTE
Wilmington, NC 28401
(919)343-0481

Curriculum with Solar Study

General Occupational Technologies *
Degree: Associate General Occupational Technologies

Department: Technical Division
Contact: Stiles, W. O.
(919)343-0481

Program and Curriculum Related Courses

Introduction to Energy Resources *
Course Number: T-EGY 101
Instructor: Bordeaux, Ralph
(919)343-0481

Department: Engineering Division
Program: General Occupational Technologies *
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 11.0 Hrs. per week: 9.0
Contact Hours: 33.0 Classroom: 33.0 Lab: 18.0

Introduction to Solar Energy Systems, Electrical *
Course Number: T-EGY 103
Instructor: Bordeaux, Ralph
(919)343-0481

Department: Engineering
Program: General Occupational Technologies *
Student Level: All Levels
Academic Credits: 5.0
Duration: No. of weeks: 11.0 Hrs. per week: 6.0
Contact Hours: 86.0 Classroom: 44.0 Lab: 22.0

Introduction to Solar Energy Systems, Thermal *
Course Number: T-EGY 102
Instructor: Stiles, Warren O.
(919)256-3146

Department: General Occupational Technologies
Program: General Occupational Technologies *
Student Level: All Levels
Academic Credits: 5.0
Duration: No. of weeks: 11.0 Hrs. per week: 6.0
Contact Hours: 66.0 Classroom: 44.0 Lab: 22.0

Topics Covered Extensively: Appropriate Technology; Sources; Energy Storage Systems; Wind Energy Conversion Systems

Program and Curriculum Related Courses

Fundamentals of Solar Heating
Course Number: AHR 1110
Instructor: Hewitt, Robert L.
(919)456-1221 EXT.264

Department: Air Conditioning, Heating and Refrigeration
Program: Air Conditioning, Heating and Refrigeration
Student Level: Skilled Labor
Academic Credits: 4.0 (Quarter )
Duration: No. of weeks: 11.0 Hrs. per week: 6.0
Contact Hours: 66.0 Classroom: 33.0 Lab: 33.0

Offered: Day
Course Fee: Resident: $13.00 Non Resident: $66.00
Prerequisites: Yes

COASTAL CAROLINA COMMUNITY COLLEGE
444 Western Boulevard
Jacksonville, NC 28540
(919)456-1221

Tuition (Full Time):
Resident: $44.00 Non Resident: $203.00

Curriculum with Solar Study

Air Conditioning, Heating and Refrigeration
Degree: Certificate

Program: Air Conditioning, Heating and Refrigeration
Contact: Rawls, Preston
(919)456-1221

Program Training: Solar System Installation-Residential; Heating, Ventilation, Air Conditioning-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses

Fundamentals of Solar Heating
Course Number: AHR 1110
Instructor: Hewitt, Robert L.
(919)456-1221 EXT.264

Department: Air Conditioning, Heating and Refrigeration
Program: Air Conditioning, Heating and Refrigeration
Student Level: Skilled Labor
Academic Credits: 4.0 (Quarter )
Duration: No. of weeks: 11.0 Hrs. per week: 6.0
Contact Hours: 66.0 Classroom: 33.0 Lab: 33.0

Offered: Day
Course Fee: Resident: $13.00 Non Resident: $66.00
Prerequisites: Yes
North Carolina

MAYLAND TECHNICAL INSTITUTE
P O Box 547
Spruce Pine, NC 28777
(704)765-7351

Tuition (Full Time):
Resident: $39.00 Non Resident: $198.00

CURRICULUM WITH SOLAR STUDY

Light Construction
Degree: Certificate
Program: Solar Application
Performance, Installation and Maintenance
Contact: Hensley, Robert M.
(704)765-7351 EXT.66

Program Training: Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Solar Applications and Performance
Course Number: EGY 1101
Instructor: Hensley, Robert M.
(704)765-7351 EXT.66
Department: Light Construction
Student Level: Skilled Labor
Program: Light Construction
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 11.0
Contact Hours: 44.0
Classroom: 22.0
Lab: 22.0
Offered: Day
Course Fee: Resident: $10.00 Non Resident: $52.00
Prerequisites:

Solar Related Courses
Solar Installation and Maintenance
Course Number: EGY 1102
Instructor: Hensley, Robert
(704)765-7351 EXT.66
Department: Light Construction
Student Level: Skilled Labor
Academic Credits: 0.4 (Quarter)
Duration: No. of weeks: 8.0
Contact Hours: 8.0
Classroom: 22.0
Workshop: 66.0
Offered: Day

SOUTHWESTERN TECHNICAL INSTITUTE
P O Box 95
Sylva, NC 28779
(704)586-4091

Tuition (Full Time):
Resident: $41.00 Non Resident: $200.00

Solar Technical Training
Solar Energy
Certificate
Department: Continuing Education
Contact: Prescott, Matthew
(919)249-1851
Program Training: Solar Energy Education; General Contracting-Specialization in Solar Design/Installation; Do-It-Yourself/Home Installation; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Solar Energy
Instructor: Whitehurst, Brooks
(919)249-1851
Department: Continuing Education
Program: Solar Energy
Student Level: All Levels
Duration: No. of weeks: 4.0
Contact Hours: 44.0
Classroom: 11.0
Lab: 33.0
Topics Covered Extensively: Solar Systems Installation/Maintenance; Solar Domestic Hot Water

SOLAR TECHNICAL TRAINING

Solar Technical Training
Solar Energy
Certificate
Department: Continuing Education
Contact: Prescott, Matthew
(919)249-1851
Program Training: Solar Energy Education; General Contracting-Specialization in Solar Design/Installation; Do-It-Yourself/Home Installation; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Solar Energy
Instructor: Whitehurst, Brooks
(919)249-1851
Department: Continuing Education
Program: Solar Energy
Student Level: All Levels
Duration: No. of weeks: 4.0
Contact Hours: 44.0
Classroom: 11.0
Lab: 33.0
Topics Covered Extensively: Solar Systems Installation/Maintenance; Solar Domestic Hot Water

Program and Curriculum Related Courses
Solar Applications and Performance
Course Number: EGY 1101
Instructor: Hensley, Robert M.
(704)765-7351 EXT.66
Department: Light Construction
Student Level: Skilled Labor
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 11.0
Contact Hours: 44.0
Classroom: 22.0
Lab: 22.0
Offered: Day
Course Fee: Resident: $10.00 Non Resident: $52.00
Prerequisites:

Solar Related Courses
Solar Installation and Maintenance
Course Number: EGY 1102
Instructor: Hensley, Robert
(704)765-7351 EXT.66
Department: Light Construction
Student Level: Skilled Labor
Academic Credits: 0.4 (Quarter)
Duration: No. of weeks: 8.0
Contact Hours: 8.0
Classroom: 22.0
Workshop: 66.0
Offered: Day

PAMLICO TECHNICAL INSTITUTE
Grantsboro, NC 28529
(919)249-1851

Fundamentals of Solar Energy
Course Number: EGY 1140
Instructor: Liming, Glenn
(704)586-4091 EXT.213
Department: Industrial and Vocational
Program: Solar Mechanics
Student Level: College Freshman/Sophomore
Academic Credits: 2.0 (Quarter)
Duration: No. of weeks: 11.0
Contact Hours: 22.0
Classroom: 22.0
Offered: Evening
Course Fee: Resident: $7.00 Non Resident: $33.00
Prerequisites:
Topics Covered Extensively: Introduction to Solar Energy; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating

Introduction to Solar Concepts
Course Number: EGY 1120
Instructor: Liming, Glenn
(704)586-4091 EXT.213
Department: Industrial and Vocational
Program: Solar Mechanics
Student Level: College Freshman/Sophomore
Academic Credits: 2.0 (Quarter)
Duration: No. of weeks: 11.0
Contact Hours: 22.0
Classroom: 22.0
Offered: Day
Course Fee: Resident: $10.00 Non Resident: $50.00
Prerequisites:
Topics Covered Extensively: Introduction to Solar Energy

Solar Technical Training
Solar Energy
Certificate
Department: Continuing Education
Contact: Prescott, Matthew
(919)249-1851
Program Training: Solar Energy Education; General Contracting-Specialization in Solar Design/Installation; Do-It-Yourself/Home Installation; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance
### Residential Energy Conservation

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Instructor</th>
<th>Department</th>
<th>Program</th>
<th>Student Level</th>
<th>Academic Credits</th>
<th>Duration:</th>
<th>Contact Hours:</th>
<th>Classroom:</th>
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<th>Course Fee:</th>
<th>Prerequisites:</th>
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<tbody>
<tr>
<td>EGY 1137</td>
<td>Liming, Glenn</td>
<td>Industrial and Vocational</td>
<td>Solar Mechanics</td>
<td>College Freshman/Sophomore</td>
<td>2.0 (Quarter)</td>
<td>No. of weeks:</td>
<td>11.0</td>
<td>22.0</td>
<td>Day</td>
<td>Resident: $7.00</td>
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<td></td>
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<td></td>
<td>Hrs. per week:</td>
<td>2.0</td>
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<td>Non Resident: $33.00</td>
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**Topics Covered Extensively:** Energy Conservation

### Solar Collectors

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Instructor</th>
<th>Department</th>
<th>Program</th>
<th>Student Level</th>
<th>Academic Credits</th>
<th>Duration:</th>
<th>Contact Hours:</th>
<th>Classroom:</th>
<th>Offered:</th>
<th>Course Fee:</th>
<th>Prerequisites:</th>
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<tbody>
<tr>
<td>EGY 1121</td>
<td>Liming, Glenn</td>
<td>Industrial and Vocational</td>
<td>Solar Mechanics</td>
<td>College Freshman/Sophomore</td>
<td>7.0 (Quarter)</td>
<td>No. of weeks:</td>
<td>11.0</td>
<td>12.0</td>
<td>Day</td>
<td>Resident: $23.00</td>
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<td>Hrs. per week:</td>
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<td>Non Resident: $115.00</td>
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**Topics Covered Extensively:** Components-Solar; Heat and Energy Transfer; Materials

### Solar Domestic Hot Water

<table>
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<tr>
<th>Course Number</th>
<th>Instructor</th>
<th>Department</th>
<th>Program</th>
<th>Student Level</th>
<th>Academic Credits</th>
<th>Duration:</th>
<th>Contact Hours:</th>
<th>Classroom:</th>
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<th>Course Fee:</th>
<th>Prerequisites:</th>
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<tbody>
<tr>
<td>EGY 1125</td>
<td>Liming, Glenn</td>
<td>Industrial and Vocational</td>
<td>Solar Mechanics</td>
<td>College Freshman/Sophomore</td>
<td>8.0 (Quarter)</td>
<td>No. of weeks:</td>
<td>11.0</td>
<td>154.0</td>
<td>Day</td>
<td>Resident: $27.00</td>
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<td></td>
<td></td>
<td></td>
<td>Hrs. per week:</td>
<td>14.0</td>
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<td>Non Resident: $133.00</td>
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**Topics Covered Extensively:** Components-Solar; Solar Domestic Hot Water

### Solar Greenhouses

<table>
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<tr>
<th>Course Number</th>
<th>Instructor</th>
<th>Department</th>
<th>Program</th>
<th>Student Level</th>
<th>Academic Credits</th>
<th>Duration:</th>
<th>Contact Hours:</th>
<th>Classroom:</th>
<th>Offered:</th>
<th>Course Fee:</th>
<th>Prerequisites:</th>
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<tbody>
<tr>
<td>EGY 1144</td>
<td>Liming, Glenn</td>
<td>Industrial and Vocational</td>
<td>Solar Mechanics</td>
<td>Layperson</td>
<td>2.0 (Quarter)</td>
<td>No. of weeks:</td>
<td>11.0</td>
<td>99.0</td>
<td>Day</td>
<td>Resident: $7.00</td>
<td>No</td>
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</tbody>
</table>

**Topics Covered Extensively:** Components-Solar; Solar Domestic Hot Water

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**North Dakota**

### NORTH DAKOTA STATE SCHOOL OF SCIENCE

**Solar Technical Training**

**Environmental Systems Design**

<table>
<thead>
<tr>
<th>Department</th>
<th>Contact</th>
<th>Program: Solar System Installation-Residential, Solar System Installation-Industrial/Commercial</th>
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<tbody>
<tr>
<td>Environmental Systems</td>
<td>Whitcomb, Lary</td>
<td>(701)671-2829</td>
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</table>

**Program Training**

**Program and Curriculum Related Courses**

**Systems and Equipment**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Instructor</th>
<th>Department</th>
<th>Program</th>
<th>Student Level</th>
<th>Academic Credits</th>
<th>Duration:</th>
<th>Contact Hours:</th>
<th>Classroom:</th>
<th>Offered:</th>
<th>Course Fee:</th>
<th>Prerequisites:</th>
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</thead>
<tbody>
<tr>
<td>ESD 203</td>
<td>Whitcomb, Lary</td>
<td>Environmental Systems</td>
<td>Solar Technical</td>
<td>College Freshman/Sophomore</td>
<td>3.0</td>
<td>No. of weeks:</td>
<td>12.0</td>
<td>60.0</td>
<td>Day</td>
<td>Resident: $23.00</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Topics Covered Extensively:** Alternate Energy Sources; Heat and Energy Transfer; Introduction to Solar Energy; Plumbing Techniques; Sheet Metal Techniques; Solar Home Construction; Solar Systems Installation/Maintenance

### Solar Related Courses

**Solar Energy Building**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Instructor</th>
<th>Department</th>
<th>Program</th>
<th>Student Level</th>
<th>Academic Credits</th>
<th>Duration:</th>
<th>Contact Hours:</th>
<th>Classroom:</th>
<th>Offered:</th>
<th>Course Fee:</th>
<th>Prerequisites:</th>
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<tbody>
<tr>
<td>AD 151</td>
<td>Jansen, Roger</td>
<td>Arch. Draft. &amp; Estimating Tech.</td>
<td>Solar Technical</td>
<td>College Freshman/Sophomore</td>
<td>2.0</td>
<td>No. of weeks:</td>
<td>12.0</td>
<td>24.0</td>
<td>Day</td>
<td>Resident: $23.00</td>
<td>Yes</td>
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</tbody>
</table>

**Topics Covered Extensively:** Energy Conservation; Passive Solar Systems; Solar Home Construction; Solar Systems Design
Ohio

COLUMBUS TECHNICAL INSTITUTE
550 East Spring Street
PO Box 1609
Columbus, OH 43216
(614)221-6743
(008887)

Solar Related Courses
Seminar on Solar Energy
Instructor: Jordan, Russell W. (614)227-2426
Student Level: Layperson
Contact Hours: 4.0
Seminar: 4.0
Offered: Weekend
Course Fee: Resident: $10.00 Non Resident: $10.00
Prerequisites: No
Topics Covered Extensively: Introduction to Solar Energy

Solar Energy
Instructor: Pierce, David (614)227-2576
Department: Energy Systems
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 11.0 Hrs. per week: 4.0
Contact Hours: 44.0
Classroom: 22.0
Lab: 22.0
Offered: Day
Course Fee: Resident: $57.00
Prerequisites: No

Solar Energy System Seminar for Contractors and Tradespeople
Instructor: Jordan, Russell W. (614)227-2426
Student Level: Professional; Skilled Labor
Contact Hours: 4.0
Seminar: 4.0
Offered: Weekend
Course Fee: Resident: $25.00
Prerequisites: No
Topics Covered Extensively: Solar Systems Installation/Maintenance

Solar Energy Workshop for Architects and Engineers
Instructor: Jordan, Russell W. (614)227-2426
Student Level: Professional
Contact Hours: 24.0
Classroom: 12.0
Workshop: 12.0
Offered: Day
Course Fee: Resident: $196.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Home Construction; Solar Systems Design

Solar Energy, Do-It-Yourself
Instructor: Jordan, Russell W. (614)227-2426
Student Level: Layperson
Duration: No. of weeks: 10.0 Hrs. per week: 2.0
Contact Hours: 20.0
Workshop: 20.0

Oregon

LINN-BENTON COMMUNITY COLLEGE
Albany, OR 97321
(503)928-2361
(008938)

Curriculum with Solar Study
Engineering Technology - Solar Energy Option *
Degree: Associate
Department: Engineering Technology
Program: Engineering Technology - Solar Energy Option
Student Level: College Freshman/Sophomore
Academic Credits: 6.0
Duration: No. of weeks: 11.0 Hrs. per week: 3.0
Contact Hours: 33.0
Classroom: 33.0
Topics Covered Extensively: Electrical Energy; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Components-Solar; Solar Systems Design; Distributed Solar Power Systems; Wind Energy Conversion Systems

Energy Systems Management *
Course Number: 6.220
Department: Engineering Technology
Program: Engineering Technology - Solar Energy Option
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 11.0 Hrs. per week: 3.0
Contact Hours: 33.0
Classroom: 33.0

Solar Energy *
Course Number: 6.221
Department: Engineering Technology
Program: Engineering Technology - Solar Energy Option
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 11.0 Hrs. per week: 3.0
Contact Hours: 33.0
Classroom: 33.0

Topics Covered Extensively: Bioconversion; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Solar Marketing/Economic Analysis; Components-Solar; Solar Systems Installation/Maintenance; Centralized Solar Power Systems; Distributed Solar Power Systems; Process Heat; Solar Heating; Solar Cooling; Wind Energy Conversion Systems

NORTH AMERICAN HEATING AND AIR CONDITIONING WHOLESALERS
1661 West Henderson Road
Columbus, OH 43220
(614)459-2100
(090400)

Solar Related Courses
Fundamentals of Solar Heating
Instructor: Heath, James H. (614)459-2100
Department: NHAW Home Study Institute
Student Level: Skilled Labor
C.E.U.'s: 4.0
Course Fee: Resident: $125.00 Non Resident: $125.00
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance

Alternative Energy Sources *
Course Number: 3.523
Department: Engineering Technology
Program: Engineering Technology - Solar Energy Option
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 11.0 Hrs. per week: 6.0
Contact Hours: 33.0
Classroom: 33.0

Solar Energy *
Course Number: 6.220
Department: Engineering Technology
Program: Engineering Technology - Solar Energy Option
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 11.0 Hrs. per week: 3.0
Contact Hours: 33.0
Classroom: 33.0

Topics Covered Extensively: Alternative Energy Sources; Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Components-Solar; Solar Systems Design; Distributed Solar Power Systems; Wind Energy Conversion Systems
Solar Related Courses

Natural Energy Conservation, Domestic Solar Water Heater

Course Number: 642
Instructor: Lilly, Joseph
Department: Science and Small Farm Management
Student Level: All Levels
Academic Credits: 3.0
Duration: No. of weeks: 14.0
Hrs. per week: 5.0
Contact Hours: 70.0

Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Solar Marketing/Economic Analysis; Passive Solar Systems; Solar Energy Policy Development; Components-Solar; Solar Law/Legislation; Solar Systems Installation/Maintenance; Solar Domestic Hot Water; Solar Heating

UMPUQA COMMUNITY COLLEGE
P O Box 967
Roseburg, OR 97470
(503)672-5571

Solar Technical Training

Solar Technical Training

Degree: Certificate
Department: Community Education
Contact: Wells, Sherri L.
(503)672-5571 EXT.38
Program Training: Solar Energy Education; Do-It-Yourself/Home Installation

Pennsylvania

DELAWARE COUNTY COMMUNITY COLLEGE

Media Line Road
Media, PA 19063
(215)353-5400

Solar Technical Training

Solar Technology

Degree: Associate
Department: Engineering and Technologies
Contact: Szalai, Imre A.
(215)353-5400 EXT.288
Program Training: Solar System installation-Residential; Solar System installation/Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Heating, Ventilation, Air Conditioning-Solar Specialization; Do-It-Yourself/Home Installation

Solar Related Courses

Conserving Energy Saves Consumer Dollars

Instructor: Matrey, Marzine
(215)353-5400
Department: Community Education
Student Level: All Levels; Layperson
Duration: No. of weeks: 2.0
Hrs. per week: 10.0
Contact Hours: 20.0
Classroom: 20.0
Offered: Day, Evening
Prerequisites: No
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation

Solar Energy Concepts

Course Number: PHY 2991
Instructor: Szalai, Imre A.
(215)353-5400 EXT.288
Department: Engineering and Technology
Student Level: All Levels
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 30.0
Seminar: 6.0
Independent Study: 10.0
Offered: Day
Course Fee: Resident: $78.00
Prerequisites: Yes
Topics Covered Extensively: Bioconversion; Centralized Solar Power Systems; Conventional-Solar; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Ocean Systems; Passive Solar Systems; Photoconversion; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Wind Energy Conversion Systems

LEHIGH COUNTY COMMUNITY COLLEGE

2370 Main Street
Schnecksville, PA 18078
(215)799-2121

Tuition (Full Time):
Resident: $435.00 Non Resident: $1,305.00

Solar Curriculum

Alternate Energy Technologies

Degree: Associate
Department: Solar, Wind Electric
Contact: Walker, J. Robert
(215)799-2121 EXT.1500
Program Training: Architecture-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses

Alternate Energy Technologies

Course Number: PHY 102
Instructor: Walker, J. Robert
(215)799-1515
Department: Physics
Program: Alternate Energy Technologies
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 6.0
Contact Hours: 90.0
Classroom: 45.0
Lab: 45.0
Offered: Day, Evening
Course Fee: Resident: $116.00
Non Resident: $348.00
Prerequisites: No
Topics Covered Extensively: Alternate Energy Sources; Components-Solar; Energy Conservation; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Solar Heating; Thermochemical Conversion

Basic Solar Systems

Instructor: Walker, J. Robert
(215)799-2121 EXT.1500
Department: Physics
Program: Alternate Energy Technologies
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 6.0
Contact Hours: 90.0
Classroom: 45.0
Lab: 45.0
Offered: Day, Evening
Course Fee: Resident: $15.00
Non Resident: $15.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Solar Domestic Hot Water; Solar Heating; Solar Marketing/Economic Analysis; Solar Systems Design

Energy Systems I

Course Number: AET 203
Instructor: Walker, J. Robert
(215)799-2121 EXT.1500
Department: Physics
Program: Alternate Energy Technologies
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 15.0
Hrs. per week: 6.0
Contact Hours: 90.0
Classroom: 45.0
Lab: 45.0
Offered: Day, Evening
Course Fee: Resident: $29.00
Non Resident: $58.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Plumbing Techniques; Solar Heating; Solar Marketing/Economic Analysis; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Energy Systems II

Course Number: AET 205
Instructor: Walker, J. Robert
(215)799-2121 EXT.1500
Department: Physics
Program: Alternate Energy Technologies
Student Level: College Freshman/Sophomore
Academic Credits: 4.0 (Semester )
Duration: No. of weeks: 15.0
Contact Hours: 45.0
Course Fee: Resident: $29.00
Non Resident: $58.00
Prerequisites: No

Passive Solar Systems
Course Number: AET 206
 Instructor: Walker, J. Robert
 Department: Physics
 Program: Alternate Energy Technologies
 Student Level: College Freshman/Sophomore
 Academic Credits: 3.0 (Semester)
 Duration: No. of weeks: 15.0
 Contact Hours: 45.0
 Offered: Day; Evening
 Course Fee: Resident: $29.00
 Non Resident: $58.00

Photovoltaic and Wind Electric Systems
Course Number: AET 210
 Instructor: Walker, J. Robert
 Department: Physics
 Program: Alternate Energy Technologies
 Student Level: College Freshman/Sophomore
 Academic Credits: 3.0 (Semester)
 Duration: No. of weeks: 15.0
 Contact Hours: 45.0
 Offered: Day; Evening
 Course Fee: Resident: $29.00
 Non Resident: $58.00

Solar Control Systems
Course Number: AET 208
 Instructor: Walker, J. Robert
 Department: Physics
 Program: Alternate Energy Technologies
 Student Level: College Freshman/Sophomore
 Academic Credits: 3.0 (Semester)
 Duration: No. of weeks: 15.0
 Contact Hours: 45.0
 Offered: Day; Evening
 Course Fee: Resident: $29.00
 Non Resident: $58.00

Program and Curriculum Related Courses
Advanced Solar Design
Course Number: 365
 Instructor: Thomas, Richard
 Department: Energy Technology
 Program: Engineering-Solar Specialization
 Student Level: College Freshman/Sophomore
 Academic Credits: 3.0 (Quarter)
 Duration: No. of weeks: 12.0
 Contact Hours: 48.0
 Offered: Day; Evening
 Course Fee: Resident: $115.00
 Non Resident: $115.00

Photovoltaic Conversion Systems
Course Number: 360
 Instructor: Thomas, Richard
 Department: Energy Technology
 Program: Engineering-Solar Specialization
 Student Level: College Freshman/Sophomore
 Academic Credits: 4.0 (Quarter)
 Duration: No. of weeks: 12.0
 Contact Hours: 60.0
 Offered: Day; Evening
 Course Fee: Resident: $115.00
 Non Resident: $115.00

Solar Photovoltaic Conversion Systems
Course Number: 360
 Instructor: Thomas, Richard
 Department: Energy Technology
 Program: Engineering-Solar Specialization
 Student Level: College Freshman/Sophomore
 Academic Credits: 4.0 (Quarter)
 Duration: No. of weeks: 12.0
 Contact Hours: 60.0
 Offered: Day; Evening
 Course Fee: Resident: $115.00
 Non Resident: $115.00

Solar Control Systems
Course Number: 360
 Instructor: Thomas, Richard
 Department: Energy Technology
 Program: Engineering-Solar Specialization
 Student Level: College Freshman/Sophomore
 Academic Credits: 4.0 (Quarter)
 Duration: No. of weeks: 12.0
 Contact Hours: 60.0
 Offered: Day; Evening
 Course Fee: Resident: $115.00
 Non Resident: $115.00

Passive Solar Systems
Course Number: 360
 Instructor: Thomas, Richard
 Department: Energy Technology
 Program: Engineering-Solar Specialization
 Student Level: College Freshman/Sophomore
 Academic Credits: 4.0 (Quarter)
 Duration: No. of weeks: 12.0
 Contact Hours: 60.0
 Offered: Day; Evening
 Course Fee: Resident: $115.00
 Non Resident: $115.00

Pennsylvania State University
FAYETTE CAMPUS
P.O. Box 519
Unisitown PA 15401
(412)437-2801
(033396)

Tuition (Full Time):
Resident: $293.00 Non Resident: $916.00

Solar Curriculum
Solar Heating and Cooling Technology
Degree: Associate
Program: Solar Heating and Cooling Technology
Student Level: All Levels
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 10.0
Contact Hours: 60.0
Lab: 50.0
Offered: Day
Course Fee: Resident: $129.00
Non Resident: $345.00

Prerequisites:
No

Related Courses
Analysis of Solar Heating and Cooling Systems
Course Number: ST 808
 Instructor: Meredith, David B.
 Department: Engineering
 Program: Solar Heating and Cooling Technology
 Student Level: All Levels
 Academic Credits: 3.0 (Semester)
 Duration: No. of weeks: 10.0
 Hrs. per week: 6.0
 Contact Hours: 60.0
 Lab: 50.0
 Offered: Day
 Course Fee: Resident: $129.00
 Non Resident: $345.00

Prerequisites:
No

Solar Heating and Cooling Technology
Degree: Associate
Program: Solar Heating and Cooling Technology
Student Level: All Levels
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 10.0
Hrs. per week: 6.0
Contact Hours: 60.0
Lab: 50.0
Offered: Day
Course Fee: Resident: $129.00
Non Resident: $345.00

Prerequisites:
No
Introduction to Solar Technology

Course Number: ST 801
Instructor: Meredith, David B. (412)437-2801 EXT. 76
Department: Engineering
Program: Solar Heating and Cooling Technology
Student Level: All Levels
Academic Credits: 2.0 (Semester)
Duration: No. of weeks: 10.0
Hrs. per week: 3.0
Contact Hours: 30.0
Classroom: 20.0
Lab: 10.0
Offered: Day
Course Fee: Resident: $129.00
Non Resident: $345.00
Prerequisites: No
Topics Covered Extensively: Introduction to Solar Energy

WILLIAMSPORT AREA COMMUNITY COLLEGE

Williamport, PA 17701
(717)326-3761 (003395)

Solar Technical Training

Plumbing and Heating
Department: Building Technology
Contact: Krause, George C.
(717)326-3761

Program: Solar System Installation-Residential

Program and Curriculum Related Courses

Plumbing and Heating
Course Number: 842
Instructor: Baetsy, Franklin P.
Department: Building Technology
Program: Plumbing and Heating
Student Level: College Freshman/Sophomore
Duration: No. of weeks: 8.0
Hrs. per week: 25.0
Contact Hours: 200.0
Classroom: 64.0
Lab: 136.0

Puerto Rico

UNIVERSITY OF PUERTO RICO, BAYAMON REGIONAL COLLEGE
Box 4296 Bayamón Gardens Station
Bayamón, PR 00619
(809)763-1600

Solar Related Courses

Energy Management
Course Number: COEN 201
Instructor: Crouch, Alfred J. (809)751-2145
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Contact Hours: 64.0
Classroom: 64.0
Prerequisites: Yes
Topics Covered Extensively: Energy Conservation; Heat and Energy Transfer; Solar Systems Testing/Evaluation

Energy Production, Its Technology & the Environment
Course Number: COEN 241
Instructor: Crouch, Alfred J. (809)751-2145
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Contact Hours: 48.0
Classroom: 48.0
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Bioconversion; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer

Solar Energy Technology Laboratory
Course Number: LCOEN 261
Instructor: Crouch, Alfred J. (809)751-2145
Student Level: College Junior/Senior
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 16.0
Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 48.0
Lab: 48.0
Prerequisites: Yes
Topics Covered Extensively: Components-Solar; Passive Solar Systems; Photovoltaics and Solar Cells; Solar Systems Design; Solar Systems Testing/Evaluation

Solar Energy Technology
Course Number: COEN 261
Instructor: Crouch, Alfred J. (809)751-2145
Department: Physics, Chemistry
Student Level: College Freshman/Sophomore
Academic Credits: 4.0 (Semester)
Duration: No. of weeks: 16.0
Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 48.0
Lab: 48.0
Prerequisites: Yes
Topics Covered Extensively: Appropriate Technology; Components-Solar; Introduction to Solar Energy; Solar Domestic Hot Water; Solar Heating

Triang Institute of Technology

635 Smithfield Street
Pittsburgh, PA 15222
(412)755-6170 (890110)

Tuition (Full Time):
Resident: $1,500.00 Non Resident: $1,500.00

Curriculum with Solar Study

Refrigeration, Heating, Ventilating, and Air Conditioning with Solar Systems

Degree: Associate

Special Technology

Department: Refrigeration, Heating, Ventilation, and Air Conditioning

Contact: Gould, James (412)255-6170

Program Training: Solar Energy Education; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Education; Plumbing-Solar Specialization; Sheet Metal-Solar Specialization

Program and Curriculum Related Courses

Solar Energy Systems, Theory and Lab
South Carolina

BEAUFORT TECHNICAL COLLEGE
100 South Ribaut Road
Beaufort, SC 29902
(803)524-3380
(009910)
Tuition (Full Time):
Resident: $120.00 Non Resident: $120.00

Solar Related Courses
Solar Energy Applications
Course Number: ACR 240
Instructor: Spivey, Philip W.
(803)662-8151
Brouillette
Department: ACR
Student Level: All Levels
Academic Credits: 4.0 (Quarter)
C.E.U.'s: 11.0
Duration: No. of weeks: 13.0 Hrs. per week: 6.0
Contact Hours: 78.0
Classroom: 39.0
Lab: 39.0
Offered: Day, Evening
Course Fee: Resident: $48.00 Non Resident: $48.00
Topics Covered Extensively: Centralized Solar Power
Systems; Components-Solar; Distributed Solar Power
Systems; Energy Storage Systems: Heat and Energy
Transfer; Introduction to Solar Energy; Materials; Passive
Solar Systems; Plumbing Techniques; Process Heat; Solar
Domestic Hot Water; Solar Heating; Solar Systems
Design; Solar Systems Installation/Maintenance; Solar
Systems Testing/Evaluation

FLORENCE DARLINGTON TECHNICAL COLLEGE
P O Drawer F-8000
Florence, SC 29501
(803)662-8151
(003990)
Tuition (Full Time):
Resident: $115.00 Non Resident: $140.00

Solar Related Courses
Conversion of Solar Energy
Course Number: ACR 204
Instructor: Jackson, Edward Jr.
(803)662-8151 EXT. 299
Department: Climate Control Technology
Student Level: College Freshman/Sophomore
Academic Credits: 4.0 (Quarter)
Duration: No. of weeks: 11.0 Hrs. per week: 6.0
Contact Hours: 66.0
Classroom: 33.0
Lab: 33.0
Offered: Day, Evening
Course Fee: Resident: $10.00 Non Resident: $12.00
Topics Covered Extensively: Centralized Solar Power
Systems; Components-Solar; Distributed Solar Power
Systems; Introduction to Solar Energy; Plumbing
Techniques; Solar Domestic Hot Water; Solar Heating;
Solar Swimming Pool Heating; Solar Systems Design;
Solar Systems Installation/Maintenance

TRIDENT TECHNICAL COLLEGE
P O Box 10367
Charleston, SC 29411
(803)553-2375
(008818)
Tuition (Full Time):
Resident: $90.00 Non Resident: $180.00
Solar Related Courses
Conversion of Solar Energy
Course Number: ACR 204
Instructor: White, Lacy H.
(803)324-3130 EXT. 287
Department: Air Conditioning, Heating and
Refrig.
Student Level: All Levels; Skilled Labor
Academic Credits: 4.0 (Quarter)
C.E.U.'s: 1.0
Duration: No. of weeks: 11.0 Hrs. per week: 8.0
Contact Hours: 88.0
Classroom: 22.0
Lab: 66.0
Offered: Day
Course Fee: Resident: $29.00 Non Resident: $68.00
Prerequisites: No
Topics Covered Extensively: Energy Storage Systems;
Solar Heating; Solar Systems Installation/Maintenance

YORK TECHNICAL COLLEGE
U S 21 Bypass
Rock Hill, SC 29730
(803)328-3843
(003996)
South Dakota

MITCHELL VOCATIONAL TECHNICAL SCHOOL
821 North Capital
Mitchell, SD 57301
(605)996-6671

Solar Technical Training
Solar Water Heating
Degree: Certificate
Department: Heating and Air Conditioning
Contact: Hunstad, Carroll
(605)996-6671 EXT.125

Program Training: Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential

Program and Curriculum Related Courses
Program: Solar Water Heating

Tennessee

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
4501 Amnicola Highway
Chattanooga, TN 37406
(615)622-6262

Tuition (Full Time):
Resident: $84.00 Non Resident: $396.00

Curriculum with Solar Study
Heating, Ventilation, and Air Conditioning Technology
Degree: Associate
Department: Mechanical Engineering
Contact: Townsend, Terry E.
(615)622-6262 EXT.258


Program and Curriculum Related Courses
Alternate Energy Technology
Course Number: MD 293
Instructor: Townsend, Terry E.
(615)622-6262 EXT.258

Department: Mechanical Engineering
Program: Heating, Ventilation, and Air Conditioning Technology
Student Level: All Levels
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 10.0
Hrs. per week: 5.0
Contact Hours: 50.0
Classroom: 20.0
Lab: 30.0
Offered: Day
Course Fee: Resident: $21.00 Non Resident: $99.00
Prerequisites: None
Topics Covered Extensively: Alternate Energy Sources; Centralized Solar Power Systems; Ocean Systems; Photoconversion; Photovoltaics and Solar Cells; Wind Energy Conversion Systems

Fundamentals of Solar Energy Technology
Course Number: MD 290
Instructor: Townsend, Terry E.
(615)622-6262 EXT.258

Department: Mechanical Engineering
Program: Heating, Ventilation, and Air Conditioning Technology
Student Level: All Levels
Academic Credits: 3.0 (Quarter)
Duration: No. of weeks: 10.0
Hrs. per week: 5.0
Contact Hours: 50.0
Classroom: 20.0
Lab: 30.0
Offered: Day; Evening
Course Fee: Resident: $21.00 Non Resident: $99.00
Prerequisites: None
Topics Covered Extensively: Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Solar Heating

SOLAR INSTALLATION CERTIFICATION PROGRAM
Department: Mechanical Engineering
Contact: Townsend, Terry E.
(615)622-6262 EXT.258

Program Training: Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology- Instrumentation, Controls, Design, Maintenance; Plumbing Solar Specialization; Do-It-Yourself/Home Installation
**Curriculum with Solar Study**

**Energy Engineering Technology**
- **Degree:** Associate
- **Program:** Energy Engineering Technology - Energy Engineering Emphasis

**Program:** Solar System Installation-Residential; Solar Energy; Solar Technology-Instrumentation, Controls, Design, Maintenance

**Program and Curriculum Related Courses**

**Solar Energy Applications**
- **Course Number:** ERG 205
- **Instructor:** Lowndes, Richard
- **Department:** Career Education
- **Program:** Energy Engineering Technology

**Student Level:** All Levels
- **Academic Credits:** 3.0
- **Duration:** No. of weeks: 10.0
  - Hrs. per week: 5.0
- **Contact Hours:**
  - Lab: 20.0
  - Offered: Day, Evening
- **Course Fee:** Resident: $28.00
- **No Resident:** $121.00
- **Topics Covered Extensively:** Components-Solar; Energy Conversion; Hybrid Systems

**Legal Aspects of Solar Applications**
- **Course Number:** MD 297
  - **Instructor:** Townsend, Terry E.
  - **Department:** Mechanical Engineering
  - **Program:** Solar Installation Certification

**Solar Energy System Design**
- **Course Number:** MD 298
  - **Instructor:** Townsend, Terry E.
  - **Department:** Mechanical Engineering
  - **Program:** Solar Installation Certification

**Cranford State Community College**

Cleveland, TN 37311
(615)472-7141 (003999)

**Solar Technical Training**

**Faculty Development Workshop in Energy Alternatives**
- **Department:** Community Services;
  - Continuing Education
- **Contact:** Guy, Buford
  - **Program Training:** Solar Energy Education

**Program and Curriculum Related Courses**

**Workshop in Energy Alternatives**
- **Instructor:** Guy, Buford
  - **Department:** Community Services;
    - Continuing Education
  - **Program:** Faculty Development Workshop in Energy Alternatives

**State Technical Institute at Knoxville**

3435 Division Street
Knoxville, TN 37919
(615)637-4262 (012693)

**Curriculum with Solar Study**

**Alternate Energy Specialization**
- **Department:** Mechanical Engineering
- **Contact:** Magnuson, Dwight

**Program and Curriculum Related Courses**

**Active Solar Design**
- **Course Number:** ME 274
  - **Instructor:** Magnuson, Dwight
  - **Department:** Mechanical Engineering
  - **Program:** Alternate Energy Specialization
Tennessee

Academic Credits: 4.0
Prerequisites: Yes
Topics Covered Extensively: Solar Systems Design; Solar Systems Installation/Maintenance

Alternative Fuels and Systems
Course Number: ME 278
Instructor: Magnuson, Dwight
Department: Mechanical Engineering
Program: Alternate Energy
Academic Credits: 4.0
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy
Sources: Bioconversion

Introduction to Solar Energy and Conservation
Course Number: ME 271
Instructor: Magnuson, Dwight
Department: Mechanical Engineering
Program: Alternate Energy
Academic Credits: 4.0
Prerequisites: Yes
Topics Covered Extensively: Passive Solar Systems; Solar Systems Design; Solar Heating

Passive Solar Design
Course Number: ME 273
Instructor: Magnuson, Dwight
Department: Mechanical Engineering
Program: Alternate Energy
Academic Credits: 4.0
Prerequisites: Yes
Topics Covered Extensively: Passive Solar Systems; Solar Home Construction; Solar Systems Design

Wind and Water Power Systems
Course Number: ME 272
Instructor: Magnuson, Dwight
Department: Mechanical Engineering
Program: Alternate Energy
Academic Credits: 4.0
Prerequisites: Yes

Texas

AMARILLO COLLEGE
P O Box 447
Amarillo, TX 79178
(806)376-5111

Tuition (Full Time):
Resident: $16.50 Non Resident: $63.25

Solar Related Courses

Alternative Energy Sources
Course Number: 2089
Instructor: Silas, Clifford w.
Department: Continuing Education, Adult Vocational Education
Student Level: Layperson
C.E.U.'s: 4.5
Duration: No. of weeks: 15.0 Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 25.0
Workshop: 5.0
Lab: 10.0
Offered: Day; Evening; Weekend
Course Fee: Resident: $25.00 Non Resident: $25.00
Prerequisites: No

Solar Systems, Design and Installation
Course Number: 2090
Instructor: Silas, Clifford w.
Department: Continuing Education, Adult Vocational Education
Student Level: Layperson
C.E.U.'s: 4.5
Duration: No. of weeks: 15.0 Hrs. per week: 3.0
Contact Hours: 45.0
Classroom: 25.0
Workshop: 5.0
Lab: 10.0
Offered: Day; Evening; Weekend
Course Fee: Resident: $25.00 Non Resident: $25.00
Prerequisites: No
Topics Covered Extensively: Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Passive Solar Systems; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Home Construction; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Energy Systems Technology *
Degree: Associate
Contact: Tustin, Clarence
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0 Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 48.0

Topics Covered Extensively: Introduction to Solar Energy

Solar Cooling Systems *
Course Number: SESY 241
Instructor: Tustin, Clarence
Department: Industrial Technology
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 16.0 Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 48.0
Lab: 48.0

Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Energy Special Projects *
Course Number: SESY 231
Instructor: Tustin, Clarence
Department: Industrial Technology
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0 Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 16.0
Lab: 80.0

Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating; Solar Cooling

Solar Heating Systems *
Course Number: SESY 141
Instructor: Tustin, Clarence
Department: Industrial Technology
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 16.0 Hrs. per week: 6.0

Program and Curriculum Related Courses

Central Texas College
Killeen, TX 76541
(817)526-1211

Cerranet Texas College

Curriculum with Solar Study

Solar Energy Systems Technology *
Degree: Associate
Contact: Tustin, Clarence
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0 Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 48.0

Topics Covered Extensively: Introduction to Solar Energy

Solar Cooling Systems *
Course Number: SESY 241
Instructor: Tustin, Clarence
Department: Industrial Technology
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 16.0 Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 48.0
Lab: 48.0

Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation

Solar Energy Special Projects *
Course Number: SESY 231
Instructor: Tustin, Clarence
Department: Industrial Technology
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0 Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 16.0
Lab: 80.0

Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating; Solar Cooling

Solar Heating Systems *
Course Number: SESY 141
Instructor: Tustin, Clarence
Department: Industrial Technology
Program: Solar Energy Systems Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 16.0 Hrs. per week: 6.0
Solar Technical Training

Solar Energy Systems Specialist
- **Department:** Industrial Technology
- **Contact:** Treoler, Clarence (817)752-1236
- **Program Training:** Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses

**Principles of Solar Energy**
- **Course Number:** SE5Y 1314
- **Instructor:** Treoler, Clarence (817)752-1236
- **Department:** Industrial Technology
- **Program:** Solar Energy Systems Specialist
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 3.0
- **Duration:** No. of weeks: 12.0
- **Contact Hours:** 48.0
- **Topics Covered Extensively:** Introduction to Solar Energy

**Solar Heating Systems**
- **Course Number:** SE5Y 141
- **Instructor:** Treoler, Clarence (817)752-1236
- **Department:** Industrial Technology
- **Program:** Solar Energy Systems Specialist
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 4.0
- **Duration:** No. of weeks: 12.0
- **Contact Hours:** 48.0
- **Topics Covered Extensively:** Heat and Energy Transfer; Energy Storage Systems; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Testing/Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating

NAVARRO COLLEGE
P O Box 1170
Corsicana, TX 75110
(214)874-6501
(00395)

**Tuition (Full Time):**
- Resident: $200.00 Non Resident: $300.00

**Solar Curriculum**

**Solar Energy Technician**
- **Degree:** Associate
- **Department:** Career Education
- **Contact:** Boyd, Herman Alan (214)874-6501 EXT.200
- **Program:** Architecture-Solar Specialization; Solar Energy Education; Solar Energy Administration/Policy; Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization

**Program and Curriculum Related Courses**

**Collectors and Energy Storage**
- **Course Number:** SE 1154
- **Instructor:** Boyd, H. Alan (214)874-6501 EXT.200
- **Department:** Career Education
- **Program:** Solar Energy Technician
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 4.0 (Semester)
- **Duration:** No. of weeks: 16.0
- **Contact Hours:** 96.0
- **Classroom:** 32.0
- **Lab:** 64.0
- **Offered:** Day; Evening
- **Course Fee:** Resident: $38.00 Non Resident: $76.00
- **Topics Covered Extensively:** Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Materials: Passive Solar Systems; Solar Domestic Hot Water; Solar Systems Design; Solar Systems Testing/Evaluation

**Economics, Codes, Legal Consumerism**
- **Course Number:** SE 2142
- **Instructor:** Boyd, H. Alan (214)874-6501 EXT.200
- **Department:** Career Education
- **Program:** Solar Energy Technician
- **Student Level:** Sophomore; Laperson
- **Academic Credits:** 3.0 (Semester)
- **Duration:** No. of weeks: 16.0
- **Contact Hours:** 80.0
- **Classroom:** 16.0
- **Lab:** 64.0
- **Offered:** Day; Evening
- **Course Fee:** Resident: $33.00 Non Resident: $58.00
- **Topics Covered Extensively:** Materials: Plumbing Techniques; Sheet Metal Techniques; Solar Systems Installation/Maintenance

**Non-Residential Applications and Future Technology**
- **Course Number:** SE 2153
- **Instructor:** Boyd, H. Alan (214)874-6501 EXT.200
- **Department:** Career Education
- **Program:** Solar Energy Technician
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 3.0 (Semester)

Texas

**Program:** Solar Technical Training

**Department:** Industrial Technology

**Contact:** Treoler, Clarence (817)752-1236

**Program Training:** Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance

**Principles of Solar Energy**
- **Course Number:** SE5Y 1314
- **Instructor:** Treoler, Clarence (817)752-1236
- **Department:** Industrial Technology
- **Program:** Solar Energy Systems Specialist
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 3.0
- **Duration:** No. of weeks: 12.0
- **Contact Hours:** 48.0
- **Topics Covered Extensively:** Introduction to Solar Energy

**Solar Heating Systems**
- **Course Number:** SE5Y 141
- **Instructor:** Treoler, Clarence (817)752-1236
- **Department:** Industrial Technology
- **Program:** Solar Energy Systems Specialist
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 4.0
- **Duration:** No. of weeks: 12.0
- **Contact Hours:** 48.0
- **Topics Covered Extensively:** Heat and Energy Transfer; Energy Storage Systems; Plumbing Techniques; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Testing/Evaluation; Solar Domestic Hot Water; Solar Swimming Pool Heating; Solar Heating

**NAVARRO COLLEGE**

P O Box 1170
Corsicana, TX 75110
(214)874-6501

**Tuition (Full Time):**
- Resident: $200.00 Non Resident: $300.00

**Solar Curriculum**

**Solar Energy Technician**
- **Degree:** Associate
- **Department:** Career Education
- **Contact:** Boyd, Herman Alan (214)874-6501 EXT.200
- **Program:** Architecture-Solar Specialization; Solar Energy Education; Solar Energy Administration/Policy; Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Electricity-Solar Specialization

**Program and Curriculum Related Courses**

**Collectors and Energy Storage**
- **Course Number:** SE 1154
- **Instructor:** Boyd, H. Alan (214)874-6501 EXT.200
- **Department:** Career Education
- **Program:** Solar Energy Technician
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 4.0 (Semester)
- **Duration:** No. of weeks: 16.0
- **Contact Hours:** 96.0
- **Classroom:** 32.0
- **Lab:** 64.0
- **Offered:** Day; Evening
- **Course Fee:** Resident: $38.00 Non Resident: $76.00
- **Topics Covered Extensively:** Components-Solar; Energy Storage Systems; Heat and Energy Transfer; Materials: Passive Solar Systems; Solar Domestic Hot Water; Solar Systems Design; Solar Systems Testing/Evaluation

**Economics, Codes, Legal Consumerism**
- **Course Number:** SE 2142
- **Instructor:** Boyd, H. Alan (214)874-6501 EXT.200
- **Department:** Career Education
- **Program:** Solar Energy Technician
- **Student Level:** Sophomore; Laperson
- **Academic Credits:** 3.0 (Semester)
- **Duration:** No. of weeks: 16.0
- **Contact Hours:** 80.0
- **Classroom:** 16.0
- **Lab:** 64.0
- **Offered:** Day; Evening
- **Course Fee:** Resident: $33.00 Non Resident: $58.00
- **Topics Covered Extensively:** Components-Solar; Energy Conservation; Introduction to Solar Energy

**Materials and Material Handling**
- **Course Number:** SE 1123
- **Instructor:** Boyd, H. Alan (214)874-6501 EXT.200
- **Department:** Career Education
- **Program:** Solar Energy Technician
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 3.0 (Semester)
- **Duration:** No. of weeks: 16.0
- **Contact Hours:** 80.0
- **Classroom:** 16.0
- **Lab:** 64.0
- **Offered:** Day; Evening
- **Course Fee:** Resident: $33.00 Non Resident: $58.00
- **Topics Covered Extensively:** Components-Solar; Energy Conservation; Introduction to Solar Energy

**Non-Residential Applications and Future Technology**
- **Course Number:** SE 2153
- **Instructor:** Boyd, H. Alan (214)874-6501 EXT.200
- **Department:** Career Education
- **Program:** Solar Energy Technician
- **Student Level:** College Freshman/Sophomore
- **Academic Credits:** 3.0 (Semester)
Texas

Duration: 16.0 No. of weeks
Contact Hours: 5.0 Hrs. per week
Contact Hours: 80.0
Classroom: 32.0
Lab: 48.0
Offered: Day, Evening
Course Fee: Resident: $33.00
Non Resident: $58.00
Operational Diagnosis
Course Number: SE 2133
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 3.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 5.0 Hrs. per week
Contact Hours: 80.0
Classroom: 32.0
Lab: 48.0
Offered: Day, Evening
Course Fee: Resident: $33.00
Non Resident: $58.00
Topics Covered Extensively: Components-Solar; Process Heat; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
Sizing, Design and Retrofit
Course Number: SE 2114
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 4.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 6.0 Hrs. per week
Contact Hours: 96.0
Classroom: 48.0
Lab: 48.0
Offered: Day, Evening
Course Fee: Resident: $38.00
Non Resident: $76.00
Solar Practicum
Course Number: SE 2163
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 3.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 9.0 Hrs. per week
Contact Hours: 144.0
Lab: 144.0
Offered: Day
Course Fee: Resident: $33.00
Non Resident: $58.00
Topics Covered Extensively: Components-Solar; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Marketing/Economic Analysis; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
Technical Survey of Energy Sources
Course Number: SE 2123
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 4.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 3.0 Hrs. per week
Contact Hours: 48.0
Classroom: 48.0
Offered: Day, Evening
Course Fee: Resident: $25.00
Non Resident: $50.00
Topics Covered Extensively: Alternating Energy Sources; Appropriate Technology; Bioconversion; Centralized Solar Power Systems; Distributed Solar Power Systems; Energy Conservation; Ocean Systems; Photovoltaics and Solar Cells; Satellite Solar Power Systems; Wind Energy Conversion Systems
Solar Technical Training
Solar Energy - Installers, Mechanics
Degree: Certificate
Department: Career Education
Contact: Kasprzyk, Ernest
Program: Solar Energy - Installers, Mechanic
Academic Credits: 4.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 6.0 Hrs. per week
Contact Hours: 96.0
Classroom: 32.0
Lab: 64.0
Offered: Day, Evening
Course Fee: Resident: $38.00
Non Resident: $76.00
Topics Covered Extensively: Components-Solar; Materials; Plumbing Techniques; Sheet Metal Techniques; Solar Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
Materials and Fabrication II
Course Number: SE 1074
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy - Installers, Mechanic
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 4.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 6.0 Hrs. per week
Contact Hours: 96.0
Classroom: 32.0
Lab: 64.0
Offered: Day, Evening
Course Fee: Resident: $38.00
Non Resident: $76.00
Topics Covered Extensively: Components-Solar; Materials; Plumbing Techniques; Sheet Metal Techniques; Solar Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
Solar Heating and Cooling Systems I
Course Number: SE 1064
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy - Installers, Mechanics
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 4.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 6.0 Hrs. per week
Contact Hours: 96.0
Classroom: 32.0
Lab: 64.0
Offered: Day, Evening
Course Fee: Resident: $38.00
Non Resident: $76.00
Topics Covered Extensively: Components-Solar; Materials; Plumbing Techniques; Sheet Metal Techniques; Solar Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
Solar Heating and Cooling Systems II
Course Number: SE 1084
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy - Installers, Mechanics
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 4.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 6.0 Hrs. per week
Contact Hours: 96.0
Classroom: 32.0
Lab: 64.0
Offered: Day, Evening
Course Fee: Resident: $38.00
Non Resident: $76.00
Topics Covered Extensively: Components-Solar; Materials; Plumbing Techniques; Sheet Metal Techniques;Solar Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
Materials and Fabrication I
Course Number: SE 1034
Instructor: Boyd, H. Alan
Department: Career Education
Program: Solar Energy - Installers, Mechanic
Student Level: College Freshman/Sophomore: Layperson
Academic Credits: 4.0 (Semester )
Duration: 16.0 No. of weeks
Contact Hours: 6.0 Hrs. per week
Contact Hours: 96.0
Classroom: 32.0
Lab: 64.0
Offered: Day, Evening
Course Fee: Resident: $38.00
Non Resident: $76.00
Topics Covered Extensively: Components-Solar; Materials; Plumbing Techniques; Sheet Metal Techniques; Solar Energy Storage Systems; Heat and Energy Transfer; Hybrid Systems; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation
NORTH LAKE COLLEGE
Irving, TX 75062
(214)659-5327
(020966)

Solar Curriculum
Solar Energy Technician
Degree: Associate
Department: Science, Math, Technology
Contact: Knowles, Jim
(214)225-5260
Program Training: Solar Technology
Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Collectors and Storage
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 40.0
Lab: 56.0
Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems

Energy Science I
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 4.0
Duration: No. of weeks: 16.0
Hrs. per week: 6.0
Contact Hours: 96.0
Classroom: 40.0
Lab: 56.0

Future Technology
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 3.0
Contact Hours: 48.0
Classroom: 48.0
Lab: 48.0
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Solar Domestic Hot Water; Solar Swimming Pool Heating; Centralized Solar Power Systems; Distributed Solar Power Systems; Process Heat; Solar Cooling

Introduction to Solar
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 2.0
Duration: No. of weeks: 16.0
Hrs. per week: 2.0
Contact Hours: 32.0
Classroom: 32.0
Lab: 32.0
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Passive Solar Systems

Materials, Material Handling

Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 5.0
Contact Hours: 80.0
Classroom: 16.0
Lab: 64.0
Topics Covered Extensively: Plumbing Techniques; Sheet Metal Techniques

Operational Diagnosis
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Contact Hours: 64.0
Classroom: 32.0
Lab: 32.0

Sizing Design and Retrofit
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 5.0
Duration: No. of weeks: 12.0
Hrs. per week: 7.0
Contact Hours: 112.0
Classroom: 48.0
Lab: 64.0

Solar Codes and Consumerism
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 2.0
Duration: No. of weeks: 16.0
Hrs. per week: 2.0
Contact Hours: 32.0
Classroom: 32.0
Lab: 48.0
Topics Covered Extensively: Solar Marketing; Economic Analysis; Solar Energy Policy Development

Solar Practice
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 6.0
Duration: No. of weeks: 16.0
Hrs. per week: 5.0
Contact Hours: 80.0
Job: 80.0

Technical Survey of Energy Sources
Instructor: Knowles, Jim
(214)225-5260
Department: Science/Math/Technology
Program: Solar Energy Technician
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 5.0
Contact Hours: 80.0
Classroom: 16.0
Lab: 64.0

Texas

ODESSA COLLEGE
P.O. Box 3752
Odessa, TX 79760
(915)387-3581
(003596)

Tuition (Full Time):
Resident: $65.00 Non Resident: $200.00

Solar Related Courses
Solar Power
Course Number: RAC 2300
Instructor: Withers, Norman
(915)387-3581
Department: Refrigeration and Air Conditioning
Student Level: College Freshman/Sophomore
Academic Credits: 6.0 (Quarter)
Duration: No. of weeks: 16.0
Hrs. per week: 10.0
Contact Hours: 150.0
Classroom: 48.0
Lab: 112.0
Offered: Day; Evening
Course Fee: Resident: $65.00 Non Resident: $200.00

Prerequisites:
Solar Covered Extensively: Components-Solar; Energy Storage Systems; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Design; Solar Systems Installation/Maintenance

RANGER JUNIOR COLLEGE
Ranger, TX 76470
(817)847-3234
(003603)

Tuition (Full Time):
Resident: $176.00 Non Resident: $312.00

Curriculum with Solar Study
Air Conditioning and Refrigeration
Degree: Associate
Department: Air Conditioning and Refrigeration
Contact: Stiles, Alton
(817)847-3334
Program Training: Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Fundamentals of Solar Heating and Cooling
Course Number: AR 263
Instructor: Stiles, Alton
(817)829-3234
Department: Vocational - Technical
Program: Air Conditioning and Refrigeration
Student Level: All Levels; Skilled Labor
Academic Credits: 3.0 (Semester)
Duration: No. of weeks: 12.0
Hrs. per week: 8.0
Contact Hours: 96.0
Classroom: 24.0
Lab: 72.0
Offered: Evening
Course Fee: Resident: $74.00 Non Resident: $100.00

Prerequisites:
Yes

Solar Thermal Energy Systems
Course Number: AR 264

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Texas

Instructor: Stiles, Alton  
(817)984-3234

Department: Vocational - Technical  
Program: Air Conditioning and Refrigeration

Student Level: College Freshman/Sophomore  
Skills Labor  
Academic Credits: 3.0 (Semester)

Duration: No. of weeks: 12.0  
Hrs. per week: 8.0

Contact Hours: 96.0  
Classroom: 24.0  
Lab: 72.0

Offered: Evening  
Course Fee: Resident: $74.00  
Non Resident: $100.00

Prerequisites: Yes  

TAMAL STATE TECHNICAL INSTITUTE
Waco Campus  
Waco, TX 76705  
(817)739-3611

(003834)

Tuition (Full Time):
Resident: $82.00  
Non Resident: $262.00

Solar Curriculum

Solar Energy Technology

Degree: Associate  
Department: Solar Energy Technology  
Contact: Pierpont, Jerry  
(817)739-3611 EXT.368

Program Training: Mechanical/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses

Air Distribution

Course Number: SOL 206  
Instructor: Pierpont, Jerry  
(817)984-3234

Department: Solar Energy Technology  
Program: Solar Energy Technology  
Student Level: College Freshman/Sophomore  
Academic Credits: 4.0 (Quarter)

Duration: No. of weeks: 12.0  
Hrs. per week: 6.0

Contact Hours: 72.0  
Classroom: 36.0  
Lab: 36.0

Offered: Day  
Course Fee: Resident: $28.00  
Non Resident: $88.00

Prerequisites: Yes  
Topics Covered Extensively: Solar Systems Design

Commercial Load Calculations

Course Number: SOL 316  
Instructor: Pierpont, Jerry  
(817)984-3234

Department: Solar Energy Technology  
Program: Solar Energy Technology  
Student Level: College Freshman/Sophomore  
Academic Credits: 4.0 (Quarter)

Duration: No. of weeks: 12.0  
Hrs. per week: 6.0

Contact Hours: 72.0  
Classroom: 36.0  
Lab: 36.0

Offered: Day  
Course Fee: Resident: $28.00  
Non Resident: $88.00

Prerequisites: Yes  
Topics Covered Extensively: Energy Conservation: Solar Home Construction

Heat Storage

Course Number: SOL 106  
Instructor: Pierpont, Jerry  
(817)984-3234

Department: Solar Energy Technology  
Program: Solar Energy Technology  
Student Level: College Freshman/Sophomore  
Academic Credits: 4.0 (Quarter)

Duration: No. of weeks: 12.0  
Hrs. per week: 6.0

Contact Hours: 60.0  
Classroom: 24.0  
Lab: 36.0

Offered: Day  
Course Fee: Resident: $21.00  
Non Resident: $66.00

Prerequisites: Yes  
Topics Covered Extensively: Solar Energy Systems Installation, Maintenance, and Troubleshooting

Solar Controls

Course Number: SOL 306  
Instructor: Pierpont, Jerry  
(817)984-3234

Department: Solar Energy Technology  
Program: Solar Energy Technology  
Student Level: College Freshman/Sophomore  
Academic Credits: 3.0 (Quarter)

Duration: No. of weeks: 12.0  
Hrs. per week: 6.0

Contact Hours: 60.0  
Classroom: 24.0  
Lab: 36.0

Offered: Day  
Course Fee: Resident: $28.00  
Non Resident: $88.00

Prerequisites: Yes  
Topics Covered Extensively: Solar Systems Design
### Solar Economics

**Course Number:** SOL 310  
**Instructor:** Pierpont, Jerry  
(817)799-3611 EXT. 368  
**Department:** Solar Energy Technology  
**Program:** Solar Energy Technology  
**Student Level:** College Freshman/Sophomore  
**Academic Credits:** 4.0 (Quarter)  
**Duration:** 12.0 Hrs. per week  
**Contact Hours:** 72.0  
**Classroom:** 36.0  
**Lab:** 36.0  
**Offered:** Day  
**Course Fee:** Resident: $28.00  
Non Resident: $88.00  
**Prerequisites:** Yes  
**Topics Covered Extensively:** Solar Marketing/ Economic Analysis

### Solar Radiation and Collectors

**Course Number:** SOL 202  
**Instructor:** Pierpont, Jerry  
(817)799-3611 EXT. 368  
**Department:** Solar Energy Technology  
**Program:** Solar Energy Technology  
**Student Level:** College Freshman/Sophomore  
**Academic Credits:** 4.0 (Quarter)  
**Duration:** 12.0 Hrs. per week  
**Contact Hours:** 72.0  
**Classroom:** 36.0  
**Lab:** 36.0  
**Offered:** Day  
**Course Fee:** Resident: $28.00  
Non Resident: $88.00  
**Prerequisites:** Yes  
**Topics Covered Extensively:** Components-Solar; Solar Systems Design

### System Design

**Course Number:** SOL 314  
**Instructor:** Pierpont, Jerry  
(817)799-3611 EXT. 368  
**Department:** Solar Energy Technology  
**Program:** Solar Energy Technology  
**Student Level:** College Freshman/Sophomore  
**Academic Credits:** 5.0 (Quarter)  
**Duration:** 12.0 Hrs. per week  
**Contact Hours:** 108.0  
**Classroom:** 36.0  
**Lab:** 72.0  
**Offered:** Day  
**Course Fee:** Resident: $35.00  
Non Resident: $110.00  
**Prerequisites:** Yes  
**Topics Covered Extensively:** Solar Systems Design

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### Texas

**TYLER JUNIOR COLLEGE**

East 5th Street  
Tyler, TX 75701  
(214)597-4281  
(003648)

**Tuition (Full Time):**  
Resident: $56.00  
Non Resident: $105.00

**Curriculum with Solar Study**

**Air Conditioning and Refrigeration**  
**Degree:** Associate  
**Department:** Air Conditioning and Refrigeration  
**Contact:** Robinson, C. T.  
(214)953-2872

**Program Training:** Solar System Installation-Residential

**Program and Curriculum Related Courses**

**Introduction to Solar Systems**

**Course Number:** AC 113 S  
**Instructor:** Robinson, C. T.  
(214)953-2872  
**Department:** Air Conditioning and Refrigeration  
**Program:** Air Conditioning and Refrigeration  
**Student Level:** College Junior/Senior  
**Academic Credits:** 4.0 (Semester)  
**Duration:** 16.0 Hrs. per week  
**Course Fee:** Resident: $25.00  
Non Resident: $34.00  
**Prerequisites:** No  
**Topics Covered Extensively:** Components-Solar; Energy Conservation; Energy Storage Systems; Hybrid Systems; Solar Cooling; Solar Domestic Hot Water; Solar Heating

**Solar System Sizing and Installation**

**Course Number:** AC 223 S  
**Instructor:** Robinson, C. T.  
(214)953-2872  
**Department:** Air Conditioning and Refrigeration  
**Program:** Air Conditioning and Refrigeration

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**Logan, UT**

Yourself/Home Installation

Specialization:

- D. gr. Des.
- C. enr. Eng.

**Center**

Utah

Installation;

Contract:

Department:

Academic Student Instructor:

Courses Contact:

- (801)753-0682

**Program Training:**

- Architecture-Solar Specialization;
- General Contracting-Specialization in Solar Design/Installation; Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Electricity-Solar Specialization; Plumbing-Solar Specialization; Do-It-Yourself/Home Installation

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**Utah**

**DIXIE COLLEGE**

Saint George, UT 84770

(801)870-4811

(003871)

**Solar Technical Training**

**Solar Technology**

- Department: Business and Trades
- Contact: Hocking, John (801)873-4811

**Program and Curriculum Related Courses**

**Introduction to Applied Solar Energy**

- Course Number: ST 150
- Instructor: Tait, Don
- Department: Engineering Technology
- Program: Solar Technology
- Student Level: College Freshman/Sophomore
- Academic Credits: 4.0
- Duration: No. of weeks: 11.0
- Contact Hours: 5.0
  - Classroom: 5.0

**Solar Energy - Home Use Applications**

- Course Number: ST 123
- Instructor: Tait, Don
- Department: Engineering Technology
- Program: Solar Technology
- Student Level: College Freshman/Sophomore
- Academic Credits: 3.0
- Duration: No. of weeks: 11.0
- Contact Hours: 33.0
  - Classroom: 16.0
  - Lab: 16.0

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**Vermont**

**COMMUNITY COLLEGE OF VERMONT**

P O Box 81
Montpelier, VT 05602

(802)328-2401

(011167)

**Tuition (Full Time):**

- Resident: $200.00
- Non Resident: $400.00

**Solar Related Courses**

**Alternative Energy**

- Student Level: All Levels
- Duration: No. of weeks: 15.0
  - Hrs. per week: 2.0
- Contact Hours: 37.5
- Classroom: 37.5
- Offered: Evening
- Course Fee:
  - Resident: $40.00
  - Non Resident: $80.00
- Prerequisites: No

**Topics Covered Extensively:**


**Community Energy Planning**

- Instructor: Fischer, Howard
- Student Level: All Levels
- Duration: No. of weeks: 15.0
  - Hrs. per week: 2.5
- Contact Hours: 37.5
- Classroom: 37.5
- Offered: Evening
- Course Fee:
  - Resident: $70.00
  - Non Resident: $140.00
- Prerequisites: No

**Topics Covered Extensively:**


**Independent Studies in Water Power and Solar House Construction**

- Instructor: Fischer, Howard
- Student Level: All Levels
- Duration: No. of weeks: 11.0
  - Hrs. per week: 3.5
- Contact Hours: 37.5
- Classroom: 27.5
- Lab: 10.0
- Offered: Evening; Weekend
- Course Fee:
  - Resident: $40.00
  - Non Resident: $80.00
- Prerequisites: No

**Topics Covered Extensively:**

- Solar Greenhouse Design and Management

**Practical Applications of Solar Energy Today**

- Instructor: Spier, Jill
- Student Level: All Levels
- Duration: No. of weeks: 11.0
  - Hrs. per week: 3.5
- Contact Hours: 37.5
- Classroom: 27.5
- Lab: 10.0
- Offered: Evening; Weekend
- Course Fee:
  - Resident: $40.00
  - Non Resident: $80.00
- Prerequisites: No

**Topics Covered Extensively:**

- Compost and Composting: Organic Waste Composting; Food Waste Composting; Tool materials; Process Design; Waste Conversion Systems

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Virginia

NORTHERN VIRGINIA COMMUNITY COLLEGE
8333 Little River Turnpike
Annandale, VA 22003
(703)323-3000
(003727)

Tuition (Full Time):
Resident: $100.00 Non Resident: $335.00

Curriculum with Solar Study

Supervised Study - Solar Energy

Air Conditioning and Refrigeration
With Solar Option

Department:
Environmental and Natural Science

Contact:
Barbaro, R. D.
Nasser, K.
(703)870-2191 EXT.250

Program Training:
Mechanics/Electrical Contracting-Solar Specialization; General Contracting-Specialization in Solar Design/Installation; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance; Plumbing-Solar Specialization; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses

Supervised Study - Solar Energy I

Course Number:
AIRC 298

Instructor:
Nasser, K.
(703)870-2191 EXT.250

Department:
Environmental and Natural Science

Program:
Supervised Study - Solar Energy

Student Level:
College Junior/Senior

Academic Credits:
3.0 (Quarter)

Duration:
No. of weeks: 10.0
Hrs. per week: 4.0
Contact Hours:
Classroom: 40.0
Independent Study: 10.0
Job: 20.0

Offered:
Evening

Course Fee:
Resident: $25.00
Non Resident: $84.00

Prerequisites:
No

Topics Covered Extensively:
Heat and Energy
Transfer; Introduction to Solar Energy; Photovoltaics and Solar Cells; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/ Maintenance

Supervised Study - Solar Energy II

Course Number:
AIRC 298

Instructor:
Nasser, K.
(703)870-2191 EXT.250

Department:
Environmental and Natural Science

Program:
Supervised Study - Solar Energy

Student Level:
College Junior/Senior

Academic Credits:
3.0 (Quarter)

Duration:
No. of weeks: 10.0
Hrs. per week: 4.0
Contact Hours:
Classroom: 40.0
Independent Study: 10.0
Job: 20.0

Offered:
Evening

Course Fee:
Resident: $25.00
Non Resident: $84.00

Prerequisites:
No

Topics Covered Extensively:
Heat and Energy
Transfer; Introduction to Solar Energy; Photovoltaics and Solar Cells; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/ Maintenance

Supervised Study - Solar Energy III

Course Number:
AIRC 198

Department:
Environmental and Natural Science

Program:
Supervised Study - Solar Energy

Student Level:
College Junior/Senior

Academic Credits:
3.0 (Quarter)

Duration:
No. of weeks: 10.0
Hrs. per week: 4.0
Contact Hours:
Classroom: 10.0
Independent Study: 10.0
Job: 20.0

Offered:
Evening

Course Fee:
Resident: $25.00
Non Resident: $84.00

Prerequisites:
No

Topics Covered Extensively:
Heat and Energy
Transfer; Introduction to Solar Energy; Photovoltaics and Solar Cells; Plumbing Techniques; Solar Domestic Hot Water; Solar Heating; Solar Systems Installation/ Maintenance

Solar Related Courses

Building Mechanical Equipment

Course Number:
ARCH 237

Instructor:
Lewis, Thomas F.
(703)323-4230

Department:
Visual Arts and Engineering

Program:
Solar Technical Training

Student Level:
College freshman/sophomore

Academic Credits:
3.0 (Quarter)

Duration:
No. of weeks: 10.0
Hrs. per week: 3.0
Contact Hours:
Classroom: 30.0

Offered:
Day; Evening

Course Fee:
Resident: $25.00
Non Resident: $84.00

Prerequisites:
No

Topics Covered Extensively:
Appropriate Technology; Plumbing Techniques; Process Heat

SOUTHSIDE VIRGINIA COMMUNITY COLLEGE
Alberta, VA 23868
(804)494-7111
(008881)

Tuition (Full Time):
Resident: $120.00

Curriculum with Solar Study

Air Conditioning, Heating and Refrigeration

Degree:
Certificate

Department:
Technology

Program:
Solar Technical Training

Student Level:
All Levels

Course Number:
AIRC 198

Instructor:
Fugue, Norm
(804)494-7111 EXT. 134

Department:
Technology

Program:
Air Conditioning, Heating and Refrigeration

Student Level:
All Levels

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Washington

NORTH SEATTLE COMMUNITY COLLEGE
9600 College Way North
Seattle, WA 98103
(206)634-4444

Curriculum with Solar Study

Heating, Air Conditioning and Refrigeration Technology

Degree: Associate
Department: Engineering Related Technology
Contact: Musgrove, William R.
(206)634-4700

Program Training: Heating, Ventilation, Air Conditioning-Solar Specialization

Program and Curriculum Related Courses

Solar Technology

Course Number: ECT 207
Instructor: Steenick, Ivan C.
(206)634-4700

Department: Engineering Technologies
Program: Heating, Air Conditioning and Refrigeration Technology
Student Level: All Levels
Duration: No. of weeks: 12.0
Hrs. per week: 3.0

Contact Hours: 36.0
Classroom: 18.0
Lab: 18.0
Offered: Day
Prerequisites: Yes

Topics Covered Extensively: Components-Solar;
Distributed Solar Power Systems; Energy Conservation;
Energy Storage Systems; Heat and Energy Transfer;
Introduction to Solar Energy; Solar Domestic Hot Water;

SEATTLE OPPORTUNITIES INDUSTRIALIZATION CENTER INCORPORATED
315 22nd Avenue South
Seattle, WA 98144
(206)223-2814

Tuition (Full Time):
Resident: $2,600.00

Solar Technical Training

Solar Installer’s Training

Degree: Certificate
Department: Vocational Programs
Program Training: Solar System Installation-Residential; Plumbing-Solar Specialization

Program and Curriculum Related Courses

Solar Installation Training

Degree: Certificate
Department: Vocational Programs
Program: Solar Installer’s Training
Duration: No. of weeks: 8.0
Hrs. per week: 32.0
West Virginia

PARKERSBURG COMMUNITY COLLEGE
Route 5
P O Box 167A
Parkersburg, WV 26101
(304)424-8000
Non Resident: $13.00

Solar Technical Training
Air Conditioning and Refrigeration
Degree: Certificate
Program: Applied Sciences
Departments: Air Conditioning and Refrigeration

Program Training: Solar System Installation/Residential; Mechanical/Electrical Contracting-Solar Specialization; Heating, Ventilation, Air Conditioning-Solar Specialization; Solar Technology- Instrumentation, Controls, Design, Maintenance

Program and Curriculum Related Courses
Solar Heat
Course Number: ACR 299
Instructor: Schmidt, L. G. (304)424-8251
Program: Air Conditioning and Refrigeration
Student Level: College Freshman/Sophomore
Academic Credits: 3.0 (Semester)
Hours per week: 18.0
Contact Hours: 108.0
Offered: Day, Evening
Prerequisites: None
Topics Covered Extensively: Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Passive Solar Systems; Solar Cooling; Solar Domestic Hot Water; Solar Heating; Solar Systems Design

MORAYNE PARK TECHNICAL INSTITUTE
Fond Du Lac, WI 54935
(414)922-8611

Solar Technical Training
Solar Energy
Department: Community Services
Contact: Pasch, Rodney (414)922-8611
Program Training: General Contracting-Specialization in Solar Design/Installation; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Solar Applications for the Construction Industry
Course Number: 401/479
Instructor: Pasch, Rodney (414)922-8611
Program: Solar Energy
Student Level: All Levels
Academic Credits: 2.0
Hours per week: 6.0
Contact Hours: 6.0
Topics Covered Extensively: Introduction to Solar Energy; Solar Home Construction
Solar Energy - Air Handling Systems
Course Number: 401/483
Instructor: Pasch, Rodney (414)922-8611
Program: Solar Energy

Wisconsin

DISTRICT ONE TECHNICAL INSTITUTE
Eau Claire, WI 54701
(715)835-3975

Solar Related Courses
Alternate Energy Systems
Instructor: Dougherty, Thomas A. (706)835-2628
Department: Air Conditioning Technology
Student Level: All Levels
Academic Credits: 3.0
Hours per week: 18.0
Contact Hours: 72.0
Labs: 36.0
Topics Covered Extensively: Alternate Energy Sources; Energy Conservation; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Solar Marketing/Economic Analysis; Passive Solar Systems; Components-Solar; Solar Home Construction; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Domestic Hot Water; Solar Heating; Solar Cooling

Solar Energy
Department: Evening College
Student Level: All Levels
Hours per week: 2.0
Contact Hours: 12.0
Topics Covered Extensively: Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Passive Solar Systems; Components-Solar; Solar Systems Design

MORAINE PARK TECHNICAL INSTITUTE
Fond Du Lac, WI 54935
(414)922-8611

Solar Technical Training
Solar Energy
Department: Community Services
Contact: Pasch, Rodney (414)922-8611
Program Training: General Contracting-Specialization in Solar Design/Installation; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses
Solar Applications for the Construction Industry
Course Number: 401/479
Instructor: Pasch, Rodney (414)922-8611
Program: Solar Energy
Student Level: All Levels
Academic Credits: 6.0
Hours per week: 1.0
Contact Hours: 6.0
Topics Covered Extensively: Introduction to Solar Energy; Solar Home Construction
Solar Energy - Air Handling Systems
Course Number: 401/483
Instructor: Pasch, Rodney (414)922-8611
Program: Solar Energy

WEST CENTRAL WISCONSIN COMMUNITY ACTION AGENCY
525 Second Street
Glenwood City, WI 54013
(715)235-4248

Solar Technical Training
Solar Training
Degree: Certificate
Program: Residential Installation - Active and Passive
Department: Solar Util., Econ. Dev. and Employment
Contact: Hewitt, David C. (715)235-4248
Program Training: Solar System Installation-Residential; Solar Technology-Instrumentation, Controls, Design, Maintenance; Do-It-Yourself/Home Installation

Wisconsin

Solar Energy for Realtors
Course Number: 401/425
Instructor: Pasch, Rodney (414)922-8611
Program: Trade and Technical
Student Level: All Levels
Academic Credits: 3.0
Hours per week: 2.0
Contact Hours: 10.0
Topics Covered Extensively: Alternate Energy Sources
Solar Energy Seminar
Course Number: 401/482
Instructor: Pasch, Rodney (414)922-8611
Program: Trade and Technical
Student Level: All Levels
Academic Credits: 5.0
Hours per week: 1.0
Contact Hours: 2.0
Topics Covered Extensively: Solar Heating; Wind Energy Conversion Systems

Wind Energy Applications
Course Number: 401/484
Instructor: Pasch, Rodney (414)922-8611
Program: Trade and Technical
Student Level: All Levels
Academic Credits: 2.0
Hours per week: 1.0
Contact Hours: 6.0
Topics Covered Extensively: Distributed Solar Power Systems; Wind Energy Conversion Systems
Wisconsin

Program and Curriculum Related Courses

Program: Solar Training

Solar Training
Instructor: Hewitt, David
(715)236-4248
Department: SUEDE
Program: Solar Training
Student Level: All Levels
Duration: No. of weeks: 38.0
Contact Hours: 152.0
Classroom: 280.0
Independent Study: 40.0
Workshop: 80.0
Job: 999.0
Lab: 120.0
Offered: Day
Prerequisites: No
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Components-Solar; Energy Conservation; Greenhouse Techniques; Heat and Energy Transfer; Introduction to Solar Energy; Materials; Passive Solar Systems; Solar Domestic Hot Water; Solar Heating; Solar Home Construction; Solar Systems Installation/Maintenance

WISCONSIN INDIANHEAD TECHNICAL INSTITUTE AT SUPERIOR
600 North 21st Street
Superior, WI 54880
(715)395-6677

Solar Related Courses

Energy Alternatives
Course Number: 606/170
Instructor: Ziewer, Arton
(715)395-6677 EXT.259
Department: Trade and Industry
Student Level: All Levels; Managerial; Professional; Skilled Labor; Layperson
Academic Credits: 3.0 (Semester)
C.E.U.'s: 3.0
Duration: No. of weeks: 18.0
Hrs. per week: 5.0
Contact Hours: 90.0
Classroom: 18.0
Lab: 72.0
Offered: Day; Evening
Course Fee: Resident: $30.00
Prerequisites: Yes
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Components-Solar; Energy Conservation; Energy Storage Systems; Heat and Energy Transfer; Introduction to Solar Energy; Plumbing Techniques; Sheet Metal Techniques; Solar Domestic Hot Water; Solar Systems Testing/Evaluation

Wyoming

Program and Curriculum Related Courses

Program: Solar Energy Technology *
Student Level: College Freshman/Sophomore
Topics Covered Extensively: Wind Energy Conversion Systems

SHERIDAN COLLEGE
Sheridan, WY 82801 (003930)

Curriculum with Solar Study
Solar Energy Technology *

Degree: Associate Engineering Technology - Solar Option
Department: Career - Technology
Contact: Ohm, Kenneth R.
(307)674-6446

Program Training: Solar System Installation-Residential; Solar System Installation-Industrial/Commercial; Solar Technology-Instrumentation, Controls, Design, Maintenance; Do-It-Yourself/Home Installation

Program and Curriculum Related Courses

Energy Storage *
Course Number: 152
Program: Solar Energy Technology *
Student Level: College Freshman/Sophomore
Topics Covered Extensively: Energy Storage Systems; Photovoltaics and Solar Cells; Wind Energy Conversion Systems

Installation and Service - Solar System *
Course Number: 168
Program: Solar Energy Technology *
Student Level: College Freshman/Sophomore
Topics Covered Extensively: Components-Solar; Solar Systems Design; Solar Systems Installation/Maintenance; Solar Systems Testing/Evaluation; Solar Heating; Solar Cooling

Introduction to Solar Heating and Cooling *
Course Number: 150
Program: Solar Energy Technology *
Student Level: College Freshman/Sophomore
Topics Covered Extensively: Introduction to Solar Energy; Materials; Components-Solar; Solar Systems Design; Solar Domestic Hot Water; Distributed Solar Power Systems; Solar Heating; Solar Cooling

Solar Collectors *
Course Number: 151
Program: Solar Energy Technology *
Student Level: College Freshman/Sophomore
Topics Covered Extensively: Components-Solar; Solar Systems Design; Solar Systems Testing/Evaluation

Solar Energy Fundamentals *
Course Number: 19/190
Instructor: Ohm, Kenneth R.
(307)674-6446
Department: Career/Technology
Program: Solar Energy Technology *
Student Level: College Freshman/Sophomore
Academic Credits: 3.0
Duration: No. of weeks: 16.0
Hrs. per week: 4.0
Contact Hours: 60.0
Classroom: 48.0
Lab: 12.0
Topics Covered Extensively: Alternate Energy Sources; Appropriate Technology; Heat and Energy Transfer; Energy Storage Systems; Introduction to Solar Energy; Solar Systems Installation/Maintenance; Solar Domestic Hot Water; Process Heat; Solar Heating; Solar Cooling; Wind Energy Conversion Systems

Solar Heating and Cooling Systems *
Course Number: 155
Program: Solar Energy Technology *
Student Level: College Freshman/Sophomore
Topics Covered Extensively: Energy Storage Systems; Components-Solar; Solar Systems Design; Solar Domestic Hot Water; Process Heat; Solar Heating; Solar Cooling
Adirondack Community College, 38
Aims Community College, 13
Amarillo College, 50
Barton County Community College, 27-28
Beaufort Technical College, 47
Belleville Area College, 25
Bergen Community College, 36
Bessemer State Technical College, 1
Blue Hills Regional Technical Institute, 29
Bridgerland Area Vocational Center, 56
Butte College, 4
Cabrillo College, 4-7
Cape Cod Community College, 29-30
Cape Fear Technical Institute, 40
Cape May County Vocational Technical Center, 36
Carteret Technical Institute, 40
Carver State Technical College, 1
Cayuga County Community College, 38
Central Arizona College, 1
Central Texas College, 50-51
Cerritos College, 7
Cerro Coso Community College, 7-8
Chaffey College, 8-9
Chattanooga State Technical Community College, 48-49
City University of New York, New York City Community College, 39
Clark County Community College, 35
Cleveland State Community College, 49
Coastal Carolina Community College, 40-41
College of Santa Fe, 37
College of the Redwoods, 9
Colorado Mountain College, West Campus, 13
Colorado State University, 14
Colorado Technical College, 14
Columbus Technical Institute, 43
Community College of Denver, Red Rocks Campus, 15-19
Community College of Vermont, 56-57
Cornerstones, Wing School of Shelter Technology, 28-29
Cosumnes River College, 9-10
Cuesta College, 10
Dade Community College at Miami, 23
De Anza College, 10
Dekalb Community College, 24
Delaware County Community College, 44
Delaware Technical and Community College, Terry Campus, 22
Des Moines Area Community College, 26
District One Technical Institute, 59
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Franklin Institute of Boston, 30
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Garden City Community Junior College, 28
Gavilan College, 10
General Motors Institute, 31
Grand Rapids Junior College, 31-22
Gulf Coast Community College, 23
Harbor Occupational Center, 10-11
Heartwood Owner-BUILDER School, Incorporated, 30
Indiana Vocational Technical College, 25
Institute For Appropriate Technology, 35
Interstate Technical Institute, 25
ITT Technical Institute, 25
Jordan College, 32-33
Kansas Technical Institute, 28
Lehigh County Community College, 44-45
Linn-Benton Community College, 43
Los Angeles Trade Technical College, 11
Maricopa Technical Community College, 1-2
Maryland Technical Institute, 41
Mesa College, 20
Metropolitan Technical Community College, 34
Mid Michigan Community College, 33
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1980 Solar energy technical training directory.